

SFG 2023*

QUES + ANSWER

(English Medium)

 **ForumIAS**

Q.1) Which of the following provisions of the Indian Constitution shows that India is a Secular State?

1. The State shall endeavour to secure for all the citizens a Uniform Civil Code.
2. Religious instructions shall be provided in educational institution maintained by the State.
3. Religious denomination shall have the right to manage its own religious affairs.
4. Citizens shall not be discriminated on ground of religion in respect of employment under the State.

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 3 and 4 only
- c) 1, 3 and 4 only
- d) 1 and 4 only

Ans) c

Exp) Option c is the correct answer.

The Constitution of India stands for a Secular State. Hence, it does not uphold any particular religion as the official religion of the Indian State. The following provisions of the Constitution reveal the secular character of the Indian State:

Statement 1 is correct: The Article 44, provides for the State to secure for all the citizens a Uniform Civil Code. It indicates that India is a Secular state.

Statement 2 is incorrect: Article 28 provides that **no religious instruction shall be provided in any educational institution maintained by the State.** Also, Article 27 provides that no person shall be compelled to pay any taxes for the promotion of a particular religion.

Statement 3 is correct: According to Indian Constitution, every person has the right to freely profess, practice and propagate any religion. They are also equally entitled to freedom of conscience. **The Article 26 of Indian Constitution talks about the religious denomination and ensures their rights to manage its own religious affairs. Article 26 reflects secular character of Indian Constitution.**

Statement 4 is correct: Article 16 of the Indian Constitution provides that there shall be **equality of opportunity for all citizens** in matters relating to **employment or appointment** to any office under the State. Article 16 (2) says that No citizen shall, on grounds only of religion, race, caste, sex, descent, place of birth, residence or any of them, be ineligible for, or discriminated against in respect or, any employment or office under the State". It indicates secular character of Indian Constitution.

Source: Chapter 3 – Salient features of Constitution of India of M. Laxmikanth

Q.2) Consider the following pairs with reference to the First Cabinet of Independent India (1947):

Member	Portfolio
1. Jawaharlal Nehru	Home Affairs
2. Sardar Vallabhbhai Patel	Information and Broadcasting
3. Rajkumari Amrit Kaur	Health
4. Dr. Rajendra Prasad	Education

Which of the pairs given above are correct?

- a) 1, 2 and 3 only
- b) 2 and 3 only
- c) 1 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

At the stroke of midnight of 14-15 August, 1947, the British rule came to an end and power was transferred to the two new independent Dominions of India and Pakistan. Jawaharlal Nehru became the first Prime Minister of independent India and the new Cabinet started functioning from August 15, 1947.

Pair 1 is incorrect. Home Affairs was under the charge of **Sardar Vallabhbhai Patel (not Jawaharlal Nehru)**. Jawaharlal Nehru was the first Prime Minister and in charge of External Affairs and Commonwealth Relations; Scientific Research.

Pair 2 is correct. Sardar Vallabhbhai Patel was in charge of Home; Information and Broadcasting; States.

Pair 3 is correct. Rajkumari Amrit Kaur was given the 'Health' portfolio.

Pair 4 is incorrect. **Maulana Abul Kalam Azad was given the charge of Education** while Dr Rajendra Prasad had Food and agriculture portfolio.

Knowledge Base:

Other Members and their portfolios:

- 1) Dr John Matthai: Railways and Transport.
- 2) Sardar Baldev Singh: Defence.
- 3) Shri Jagjivan Ram: Labour.
- 4) Mr C.H. Bhabha: Commerce.
- 5) Mr Rafi Ahmad Kidwai: Communications.
- 6) Dr B.R Ambedkar: Law.
- 7) Shri R.K. Shanmukham Chetty: Finance.
- 8) Dr. Syama Prasad Mukherji: Industries and Supplies.
- 9) Shri N. V. Gadgil: Works, Mines and Power.

Source: Indian Polity, M. Laxmikanth, Chapter-1

Q.3) Consider the following statements:

1. The Act dropped the title of Emperor of India from the royal titles of the King of England.
2. The Act ended the British rule in India and declared India as an independent and sovereign state.
3. The Act provided for the appointment of some civil servants by the Secretary of State for India.

Which of the above statements is/are correct about the Indian Independence Act of 1947?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

On February 20, 1947, the British Prime Minister Clement Atlee declared that the British rule in India would end by June 30, 1948; after which the power would be transferred to responsible Indian hands. On June 3, 1947, Lord Mountbatten, the viceroy of India, put forth the partition plan, known as the Mountbatten Plan. The plan was accepted by the Congress and the Muslim League. **Immediate effect was given to the plan by enacting the Indian Independence Act.**

Statement 1 is correct: The act dropped the title of 'Emperor of India' from the royal titles of the king of England. It proclaimed the lapse of British paramountcy over the Indian princely states and treaty relations with tribal areas from August 15, 1947.

Statement 2 is correct: The act ended the British rule in India and declared India as an independent and sovereign state.

Statement 3 is incorrect: The act **abolished the office of the secretary of state for India**. It discontinued the appointment to civil services and reservation of posts by the secretary of state for India. The members of the civil services appointed before August 15, 1947 would continue to enjoy all benefits that they were entitled to till that time.

Knowledge Base:

Other provisions of Indian Independence Act of 1947:

- 1) It provided for the partition of India and creation of two independent dominions of India and Pakistan with the right to secede from the British Commonwealth.
- 2) It abolished the office of viceroy and provided, for each dominion, a governor-general, who was to be appointed by the British King on the advice of the dominion cabinet. His Majesty's Government in Britain was to have no responsibility with respect to the Government of India or Pakistan.
- 3) It empowered the Constituent Assemblies of the two dominions to frame and adopt any constitution for their respective nations and to repeal any act of the British Parliament, including the Independence act itself.
- 4) It empowered the Constituent Assemblies of both the dominions to legislate for their respective territories till the new constitutions were drafted and enforced. No Act of the British Parliament passed after August 15, 1947 was to extend to either of the new dominions unless it was extended thereto by a law of the legislature of the dominion.

Source: Laxmikanth

Q.4) With reference to the Citizenship Act of 1955, consider the following statements regarding the loss of citizenship:

1. Termination of citizenship takes place when a person renounces it by making a declaration to the Central Government.
2. The Central Government can deprive a person of his/her citizenship if he/she has shown disloyalty to the Constitution of India.
3. Termination of citizenship takes place automatically even if a person acquires citizenship of another country under undue influence.

Which of the statements given above is/ are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Citizenship Amendment Act, 1955 classifies loss of citizenship under three categories i.e., loss of citizenship by renunciation, termination and deprivation.

Statement 1 is incorrect: When a citizen of full age and capacity makes a declaration for renunciation of his citizenship to the Central Government, it is called as loss of citizenship by **renunciation** and **not by termination**. The person ceases to be a citizen when such a declaration is registered by the government.

Statement 2 is correct: Central Government, by an order, can deprive a citizen of India from the Indian citizenship if the person has shown disloyalty to the Constitution of India.

Statement 3 is incorrect: The Citizenship Act, 1955 provides for **automatic termination** of citizenship if a person **voluntarily** acquires citizenship of some other country. It should be noted that the person while doing so **must act voluntarily**. It should **not be under duress, undue influence or compulsion**. Further, this provision of automatic termination of citizenship does not apply during any war in which India is engaged. Source: M Laxmikanth (Chapter 6); <https://indiankanon.org/doc/305990/>

Q.5) Which of the following economic conditions is least likely to result in Subnational Bankruptcy?

- Provision of political election freebies.
- Large reduction in government revenues
- Increase in tax to GDP ratio.
- Economic slowdowns as observed during Covid 19 pandemics.

Ans) c

Exp) Option c is the correct answer.

Sub-national Bankruptcy, also known as sub-national insolvency, refers to **fiscal crisis where the state/local government loses market access or faces rising financing costs that undermine its capacity to deliver essential services.**

There are various reasons which alone or in combination may lead to rising risk of national/subnational bankruptcy.

- Provisioning of political election freebies or revdi culture.**
- Wilful unwillingness from the state to make tough budgetary choices.**
- Erosion of autonomous fiscal space due to GST,**
- Loss of revenue or economic shutdowns as observed during COVID 19 pandemic.**

On the other hand, **increase in tax to GDP ratio may result in rise of state revenue**, which may help state avoid the risk of bankruptcy/insolvency.

Source: <https://www.thehindu.com/business/Economy/freebies-race-could-lead-to-bankruptcy-of-states/article65336044.ece>

Q.6) Consider the following statements regarding the Second Schedule and the Third Schedule of Indian Constitution:

- Both the second and third schedules contains provision related to Vice President.
- The President and the Governor of states are included only in Second Schedule and not in the Third Schedule.
- The Comptroller and Auditor General of India is included in both the Schedules.
- Both the Schedules can be amended by a simple majority of the Parliament.

Which of the statements given above are correct?

- 1, 2 and 3 only
- 3 and 4 only
- 1 and 4 only
- 2, 3 and 4 only

Ans) d

Exp) Option d is the correct answer.

When the Indian Constitution was adopted in 1949, it consisted of 8 Schedules. Now, the Indian Constitution is divided into 12 schedules.

Statement 1 is incorrect: The Vice President is not included in third schedule. The **Third Schedule** contains the forms of oath and affirmation to be taken by various persons.

The Chairman (Vice President) and the Deputy Chairman of the Rajya Sabha are mentioned in schedule. The **Second Schedule** deals with the provisions relating to the emoluments, allowances, privileges, etc.

Statements 2 is correct: The President and the Governor of states are **included only in second Schedule** and not in third schedule. Article 60 and Article 159 of the Indian Constitution provides for the provision of oath or affirmation by the President and Governor respectively.

Statements 3 is correct: The **Comptroller and Auditor General of India** is the head of the Indian audit & account department. He is also the chief Guardian of public purse. **The CAG is included in both the 2nd and 3rd schedule of the Indian Constitution.**

Statement 4 is correct: **The amendment to the second and third schedule is done by Simple Majority** of the two houses of Parliament outside the scope of Article 368.

Knowledge Base:

- 1) The **Second Schedule** deals with the provisions relating to the emoluments, allowances, privileges and so on of the President of India, Governors of Indian States, Speaker of Lok Sabha & Deputy Speaker of Lok Sabha, Chairman of Rajya Sabha & Deputy Chairman of Rajya Sabha, Speaker and Deputy Speaker of Legislative Assemblies of Indian States, Chairman and Deputy Chairman of Legislative Councils of the Indian States, Supreme Court and High Court Judges and Comptroller & Auditor General of India (CAG)
- 2) The **Third Schedule** contains the forms of oath and affirmation for Union Ministers of India, Parliament Election Candidates, Members of Parliament (MPs), Supreme Court Judges, Comptroller and Auditor General, State Ministers, State Legislature Elections Candidates, State Legislature Members and High Court Judges.

Source: Chapter 3 and 10 of M. Laxmikant

Q.7) Consider the following statements:

1. The Constitution explicitly empowers only the President of India to notify rules for all the matters relating to citizenship.
2. The Freedoms under Article 19 of the Constitution are available only to citizens and not to non-citizens.
3. Only an Indian citizen can become a Judge of the Supreme Court.
4. A person is not eligible to be appointed as the President of India if he has acquired citizenship by naturalization.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 4 only
- d) 2, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: **Articles 5 to 11 under Part II of the Indian Constitution** deals with the provisions relating to the citizenship matters. These provisions only provide for the persons who can become citizen at the time of the commencement of the Constitution. **It does not deal with acquisition (other than at the time of commencement of the Constitution) or loss of citizenship.** Accordingly, it **empowers Parliament** to enact law for the matters relating to citizenship. Parliament has enacted laws **like Citizenship Act, 1955** in this regard. Hence, the constitution does not explicitly empower the President to make rules pertaining to citizenship in India.

Statement 2 is correct: **Article 19 deals with six freedoms**- freedom of speech and expression, association, assembly, residence, movement and profession. These fundamental rights are **available only to the citizens of India and not to the aliens.** Hence, the given statement is correct.

Other fundamental rights which are available only to the citizens include:

Article 15: Right against discrimination on grounds of religion, race, caste, sex or place of birth.

Article 16: Right to equality of opportunity in the matters of public employment.

Article 29: Protection of language, script and culture of minorities

Article 30: Right of minorities to establish and administer educational institutions.

Statement 3 is correct: Article 124(3) expressly provides that **only a citizen of India can be appointed as the Judge of Supreme Court**. Besides these provisions, there are various offices to which only an Indian citizen can be appointed. These include office of **President and Vice-President of India, Judges of High Courts, Governor of states, Attorney General of India and Advocate General of States**.

Statement 4 is incorrect: As far as citizenship is concerned for the office of the President of India, **the only condition is that he should be a citizen of India**. Hence, **citizens by birth or by naturalization- both are eligible for the office of President**. Naturalization means granting citizenship by Central Government to a person (not being an illegal migrant) on meeting certain conditions. **Hence, the given statement is incorrect.**

Source: Laxmikanth

Q.8) With reference to 'Fundamental Rights', which of the following statements is/are correct?

1. They are sacrosanct and cannot be amended by the parliament.
2. They acts as a restriction to the ideal of political democracy.
3. They are guaranteed and protected by the Constitution of India.

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

The Fundamental Rights are enshrined in Part III of the Constitution from Articles 12 to 35. They are not absolute but qualified. The state can impose reasonable restrictions on them.

Statement 1 is incorrect: Fundamental rights **can be amended by the Parliament by a constitutional amendment** but only if the amendment does not alter the basic structure of the Constitution. The Fundamental Rights **prevent** the establishment of an **authoritarian and despotic rule** in the country, and protect the liberties and freedoms of the people against the invasion by the State. They operate as **limitations on the tyranny of the executive** and arbitrary laws of the legislature.

Statements 2 is incorrect: The Fundamental Rights are guaranteed by the Constitution to all persons without any discrimination. They uphold the equality of all individuals, the dignity of the individual, the larger public interest and unity of the nation.

The Fundamental Rights are meant for promoting the ideal of political democracy and not limiting it.

Statements 3 is correct: **The Fundamental Rights are guaranteed and protected by the Constitution of India**, which is the fundamental law of the land. They are 'fundamental' also in the sense that they are most essential for the all-round development of the individuals.

Source: Chapter 7 of M. Laxmikant

Q.9) With reference to the Indian and British Parliamentary System, which of the following statements is/are correct?

1. Both the Indian and British Parliamentary systems are based on Doctrine of the Sovereignty of Parliament.
2. In both the systems, the Prime Minister must be from the lower house of Parliament.
3. Britain has the system of legal responsibility of the ministers, while India has no such system.
4. Both the systems have an elected Head of the State.

Select the correct answer using the code given below.

- a) 3 only
- b) 3 and 4 only
- c) 1, 2 and 4 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Even though the Indian parliamentary system is largely based on the British pattern, there are some fundamental differences between the two.

Statement 1 is incorrect: The British system is based on the doctrine of the sovereignty of Parliament, while the Parliament is not supreme in India and enjoys limited and restricted powers due to a written Constitution, federal system, judicial review and fundamental rights.

Statement 2 is incorrect: In Britain, the Prime Minister should be a member of the Lower House (House of Commons) of the Parliament. In India, the Prime Minister may be a member of any of the two Houses of Parliament. Usually, the members of Parliament alone are appointed as ministers in Britain. In India, a person who is not a member of Parliament can also be appointed as minister, but for a maximum period of six months.

Statement 3 is correct: In India, there is no legal responsibility of the minister. While Britain has the system of legal responsibility of the minister. Unlike in Britain, the ministers in India are not required to countersign the official acts of the Head of the State.

Statement 4 is incorrect: India has a republican system in place of British monarchical system. In other words, the **Head of the State in India (that is, President) is elected**, while the **Head of the State in Britain (that is, King or Queen) enjoys a hereditary position.**

Source: chapter 3 and 12th of M. Laxmikanth

Q.10) Consider the following statements about the Directorate of Enforcement (ED):

1. It is a statutory body.
2. It is under the administrative control of the Ministry of Finance.
3. It cannot take a Suo motu action on any financial irregularity.
4. It is responsible for the enforcement of Prevention of Money Laundering Act, 2002.

Which of the statements given above are correct?

- a) 1 and 4 only
- b) 2 and 3 only
- c) 1, 2 and 4 only
- d) 2, 3 and 4 only

Ans) d

Exp) Option d is the correct answer.

The Directorate of Enforcement or the ED is a multi-disciplinary organization mandated with investigation of economic crimes and violations of foreign exchange laws.

Statement 1 is incorrect: ED is not a statutory body, rather a premier financial investigative agency of the Government of India. It was earlier established as an 'Enforcement Unit' to handle Exchange Control Laws violations under **Foreign Exchange Regulation Act (FERA), 1947.** Later in the year 1957, this Unit was renamed as 'Enforcement Directorate'.

Statement 2 is correct: ED is under the administrative control of Department of Revenue, Ministry of Finance, Government of India. It was established on 1st May, 1956, when an 'Enforcement Unit' was formed

in the Department of Economic Affairs for handling Exchange Control Laws violations under Foreign Exchange Regulation Act, 1947 (FERA '47). **In 1960, the administrative control of the Directorate was transferred from the Department of Economic Affairs to the Department of Revenue.**

Statement 3 is correct: ED cannot take an action Suo motu. One has to complain to any other agency or Police first and then ED will investigate the matter and will identify the accused.

Statement 4 is correct: The statutory functions of the Directorate include enforcement of following Acts:

- 1) **The Prevention of Money Laundering Act, 2002 (PMLA):** It is a criminal law enacted to prevent money laundering and to provide for confiscation of property derived from, or involved in, money-laundering.
- 2) **The Foreign Exchange Management Act, 1999 (FEMA):** It is a civil law enacted to consolidate and amend the laws relating to foreign exchange market in India.
- 3) **The Fugitive Economic Offenders Act, 2018 (FEOA):** This law was enacted to deter economic offenders from evading the process of Indian law by remaining outside the jurisdiction of Indian courts.
- 4) **The Foreign Exchange Regulation Act, 1973 (FERA)**
- 5) **Sponsoring agency under COFEPOSA:** Under this Directorate is empowered to sponsor cases of preventive detention with regard to contraventions of FEMA.

Source: <https://enforcementdirectorate.gov.in/>

Q.11) With reference to the Preamble of Indian constitution, consider the following statements:

1. It is a source of power for the legislature and the executive.
2. It can be used by the Judiciary for a legal interpretation of the constitution.
3. It has no legal effect independently of other parts of the Constitution.
4. It shall be enforceable by the courts in India.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Preamble reflects the dreams and aspirations of the founding fathers of the Constitution. Preamble is regarded as the proper yardstick with which one can measure the worth of the Constitution.

Statement 1 is incorrect: The Preamble is neither a source of power to legislature nor a prohibition upon the powers of legislature. The Preamble indicates only the aspirations and goals of the Constitution. Thus, the preamble cannot be regarded as the source of any power to the legislative action.

Statement 2 is correct: It is true that **preamble can be used for the legal interpretation of the constitution.** The Supreme court in **Kesavananda Bharati** case held that the preamble is of extreme importance and the constitution should be interpreted in the light of noble vision enshrined in the preamble.

Statement 3 is correct: It is true that **preamble has no legal effect independently of other parts** as Preamble simply serves as the identity card of the whole constitution. It means unless the word mentioned in the preamble finds expression in any other enforceable parts such as Fundamental rights, it will not have any legal effect.

Statement 4 is incorrect: Preamble is neither enforceable nor justifiable in a court of law. This implies that courts cannot pass orders against the government to implement the ideas enshrined in the Preamble.

Source: Laxmikanth - Preamble of the constitution

Q.12) Why India is sometimes referred to as a 'quasi-federal' polity?

- In India, executive is responsible to the legislature for all its acts and policies.
- Indian constitution provides a Bicameral legislature for the Centre and the states.
- India is a federal country with balance of power tilted towards Centre.
- Indian constitution provides for division of power between the Centre and the states.

Ans) c

Exp) Option c is the correct answer.

India is regarded as a semi-federal state or a **quasi-federal state as described by Prof. K.C. Wheare**. The Supreme Court of India also describes it as a federal structure with a strong bias towards the Centre.

Federal features of Indian Constitution	Unitary features of Indian Constitution
1) Supremacy of the Constitution	1) Single Constitution
2) Bicameral Legislature	2) Rajya Sabha does not represent the States equality
3) Dual Government	3) Division of power is not equal i.e., strong centre.
4) Rigid Constitution	4) Constitution is not strictly rigid ex. Amendment through Simple majority
5) Independent Judiciary	5) Integrated Judiciary
6) In the case of a federal country there is a system of revenue sharing between the Center and the State.	6) The Constitution of India has given emergency powers to the President

Statement a is incorrect: The main principle on which the parliamentary system operates is responsibility of executive to the legislature.

Statement b is incorrect: Bicameralism is a federal feature of Indian constitution. Bicameralism means there are two houses of Parliament lower house or Lok Sabha having representatives elected directly by the people and the upper house namely the council of states or Rajya Sabha which represents the federating units.

Statement c is correct: Quasi federal refers to a system of government where the distribution of powers between the Center and the state are not equal. India is a federation with a unitary bias and is referred as a quasi-federal state because of strong central machinery. According to K Santhanam, factor like dominance of the centre in the financial sphere and the dependence of states upon the central grants responsible for unitary bias.

Statement d is incorrect: India follows dual polity at the centre and state level constitutes as a federal feature of Indian state. Dual polity means centre and state are endowed with sovereign powers to be exercised in the field assigned to them respectively by the constitution.

Source: Laxmikant

Q.13) Consider the following statements regarding 'Basic Structure Doctrine':

- India is the only legal system in the world which defines the 'Basic Structure Doctrine' within the Constitution.
- Singapore is the only country other than India to acknowledge Basic Structure Doctrine.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The **basic structure doctrine** is a common law legal doctrine that the constitution of a sovereign state has certain characteristics that cannot be erased by its legislature. It was developed by the Supreme Court of India in a series of constitutional law cases in the 1960s and 1970s that culminated in *Kesavananda Bharati v. State of Kerala*, where the doctrine was formally adopted.

Statement 1 is incorrect.

The basic features of the Constitution have **not been explicitly defined by the Judiciary nor by legislature**. The doctrine is not expressed and written in constitutional manner in India. The claim of any particular feature of the Constitution to be a "basic" feature is determined by the Court in each case that comes before it.

Bangladesh is perhaps the only legal system in the world which recognizes this doctrine with an expressed, written and rigid constitutional manner through article 7B of its Constitution.

Statement 2 is incorrect.

The Basic Structure doctrine is recognized in **India, Bangladesh, Malaysia, Pakistan, Kenya, and Uganda**. **The High Court of Singapore denied the application of the basic features doctrine in Singapore**. It held that the doctrine was not applicable to the Singapore Constitution: "Considering the differences in the making of the Indian and our Constitution, it cannot be said that our Parliament's power to amend our Constitution is limited in the same way as the Indian Parliament's power to amend the Indian Constitution
Source: Laxmikanth Chapter 11 Basic Structure of the Constitution

The Basic Structure of the Indian Constitution | ConstitutionNet

Doctrine of Basic Structure - Constitutional Law (legalserviceindia.com)

Basic structure doctrine - Wikipedia

Q.14) The Government of India Act of 1935 had provision of establishing an All-India Federation. In this context, how this act differentiated Indian Princely States from the Governor's Provinces?

1. Indian Princely states were mandatorily needed to join Indian federation whereas it was voluntary in case of Governor's Provinces.
2. Unlike Princely States, in case of Governor's Provinces the federal authority was extended to only legislative matters and not to executive matters.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

At the time of colonial rule, India was divided into two parts, British Indian Provinces, and the Indian Princely States. The Government of India act, 1935 was a milestone in the development of a responsible constitutional government in India. One of its provisions included Provision for the establishment of a "Federation of India", to be made up of both British India and some or all of the "princely states".

Statement 1 is incorrect: As per the act, accession to the Federation was voluntary in the case of an Indian State and it was depended upon the option of the Ruler of the State. Whereas accession to the Federation was compulsory or automatic in case of Provinces.

Statement 2 is incorrect: According to the act, in the case of the provinces, the authority of the Federation over the Provinces (**executive as well as legislative**) extended over the whole of the federal sphere outlined by the Act. Whereas in the case of the Indian States, the authority of the Federation could be limited by the Instrument of Accession.

Knowledge Base:

Federal features under Government of India Act 1935:

- 1) **All India Federation:** It provided for the establishment of an All-India Federation consisting of the British India Provinces and other Indian states. The States were absolutely free to join or not to join the proposed Federation. The rulers of Indian states never gave their consent and thus, the Federation envisaged by the Act never came into being.
- 2) **Provincial Autonomy:** The Act divided legislative powers between the provincial and central legislatures and within their defined sphere the provinces they were autonomous units of administration. The Ministers were not absolutely free in matter of running their departments. The Governors continued to possess a set of overriding powers.
- 3) **Setting up of a federal legislature:** Bicameralism was introduced. It envisaged setting up a council of states and federal assembly, with reservations in the Council of states for minorities, women and depressed classes.
- 4) **Distribution of Legislative Power:** The act made a three-fold division of powers between the Centre and the Provinces- federal list, provincial list and concurrent list. The subjects which were of all-India interest and demanded uniform treatment were put in the federal list.
- 5) **Setting up of a federal court:** A Federal court was also envisaged to be set up under this act.

Source: DD Basu

Q.15) Consider the following statements about Weapons of Mass Destruction (WMDs):

1. Biological weapons are generally not considered as WMDs.
 2. India is yet to formulate a specific legislation prohibiting the unlawful activities related to WMDs.
 3. UNSC has binding obligations on all the members to take and enforce effective measures against WMDs.
- Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

WMDs are weapons that can cause death and destruction on such a massive scale and so indiscriminately that their sheer possession by an adversary can be viewed as a grave threat.

Statement 1 is incorrect: In 1977, UN defined WMDs as “**atomic explosive weapons, radioactive material weapons, lethal chemical and biological weapons**, and any weapons developed in the future which might have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above”.

Statement 2 is incorrect: India has a legislation over WMDs as ‘**Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act, 2005**’. Recently an amendment bill was introduced in Lok Sabha to ban funding of weapons of mass destruction.

Statement 3 is correct: UNSCR 1540 (2004) established binding obligations on all UN member states to take and enforce effective measures against proliferation of WMD, their means of delivery and related materials to non-state actors. The above act was passed to enforce above resolution.

Knowledge Base:

The 2005 Act prohibits unlawful activities (such as manufacturing, transport, or transfer) related to weapons of mass destruction, and their means of delivery. **The recent amendment extends the scope of banned activities to include financing of already prohibited activities.**

The amendment bill **bars persons from financing** any prohibited activity related to WMD and their delivery systems directly or indirectly.

It empowers **the central government to freeze, seize or attach financial assets and economic resources** of people engaged in such activities.

Source: <https://prsindia.org/billtrack/the-weapons-of-mass-destruction-and-their-delivery-systems-prohibition-of-unlawful-activities-amendment-bill-2022>

<https://unrcpd.org/wmd/#:~:text=atomic%20explosive%20weapons%2C%20radioactive%20material,or%20other%20weapons%20mentioned%20above.%E2%80%9D>

<https://www.thehindu.com/news/national/amending-the-weapons-of-mass-destruction-act/article65311030.ece>

Q.16) With reference to the Citizenship (Amendment) Act, 2019, consider the following statements:

1. Under the Act, migrants from all neighboring countries are eligible for citizenship of India.
2. It decreases the requirement of citizenship by naturalization to 5 years of residence for the eligible migrants.
3. The Act does not apply to areas included in the Fifth Schedule of the Constitution.
4. It empowers the central government for the cancellation of Overseas Citizen of India (OCI) registration.

Which of the statements given above are correct?

- a) 2 and 4 only
- b) 1, 2 and 3 only
- c) 1 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect: The Citizenship Amendment Act 2019 (CAA), amended the Citizenship Act, 1955 to make Hindu, Sikh, Buddhist, Jain, Parsi, and Christian illegal migrants from **Afghanistan, Bangladesh, and Pakistan only**, eligible for citizenship of India.

Statement 2 is correct: The Citizenship Amendment Act 2019 relaxes the requirement of naturalization from 11 years to 5 years as a specific condition for applicants belonging to these six religions.

Statement 3 is incorrect: The Citizenship Amendment Act 2019 adds that the provisions on citizenship for illegal migrants will not apply to the tribal areas of Assam, Meghalaya, Mizoram, and Tripura, as included in the **Sixth Schedule of the Constitution**. These tribal areas include Karbi Anglong (in Assam), Garo Hills (in Meghalaya), Chakma District (in Mizoram), and Tripura Tribal Areas District. It will also not apply to the areas under the Inner Line Permit under the Bengal Eastern Frontier Regulation, 1873.

Statement 4 is correct: If Overseas Citizen of India Cardholder has violated any of the provisions of this Act or provisions of any other law for time being in force as may be specified by the Central Government in the notification published in the Official Gazette, then his/her registration as OCI card holder can be cancelled by the central government.

Source: <https://egazette.nic.in/WriteReadData/2019/214646.pdf>

Q.17) The Constituent Assembly appointed a number of committees to deal with different tasks of constitution-making. Which of the following committees were headed by Dr. Rajendra Prasad?

1. Union Powers Committee
2. Provincial Constitution Committee
3. Rules of Procedure Committee
4. Steering Committee
5. Finance and Staff Committee
6. Ad-hoc Committee on the National Flag

Select the correct answer using the codes given below:

- a) 1, 3 and 5 only
- b) 1, 2, 4, and 6 only
- c) 3, 4, 5 and 6 only
- d) 1, 2, 3, 4 and 6 only

Ans) c

Exp) Option c is the correct answer.

The Constituent Assembly appointed a number of committees to deal with different tasks of constitution-making. Out of these, eight were major committees and the others were minor committees.

The committees headed by Dr. Rajendra Prasad were:

- 1) Rules of Procedure Committee – Dr. Rajendra Prasad (Major Committee)
- 2) Steering Committee – Dr. Rajendra Prasad (Major Committee)
- 3) Finance and Staff Committee – Dr. Rajendra Prasad
- 4) Ad-hoc Committee on the National Flag – Dr. Rajendra Prasad

Option 1 and 2 are incorrect: Union Powers Committee was headed by Jawaharlal Nehru; Provincial Constitution Committee was headed by Sardar Patel.

Knowledge Base:

Major Committees of Constituent Assembly:

- 1) Union Powers Committee – Jawaharlal Nehru
- 2) Union Constitution Committee – Jawaharlal Nehru
- 3) Provincial Constitution Committee – Sardar Patel
- 4) Drafting Committee – Dr. B.R. Ambedkar
- 5) Advisory Committee on Fundamental Rights, Minorities and Tribal and Excluded Areas – Sardar Patel. This committee had the following five sub-committees:

- (a) Fundamental Rights Sub-Committee – J.B. Kripalani
- (b) Minorities Sub-Committee – H.C. Mukherjee
- (c) North-East Frontier Tribal Areas and Assam Excluded & Partially Excluded Areas Sub-Committee – Gopinath Bardoloi
- (d) Excluded and Partially Excluded Areas (Other than those in Assam) Sub-Committee – A.V. Thakkar
- (e) North-West Frontier Tribal Areas Sub-Committee
- 6) Rules of Procedure Committee – Dr. Rajendra Prasad
- 7) States Committee (Committee for Negotiating with States) – Jawaharlal Nehru
- 8) Steering Committee – Dr. Rajendra Prasad

Source: Laxmikanth

Q.18) With reference to Judiciary in India and United States of America, consider the following statements:

1. Unlike Indian Supreme Court, the Original Jurisdiction of American Supreme Court is confined to Centre-state disputes only.
2. Unlike the Supreme Court of India, the American Supreme Court does not have advisory jurisdiction.
3. Unlike American Supreme Court, the appellate jurisdiction of Indian Supreme Court is confined to constitutional cases only.
4. Unlike Indian Supreme Court, American Supreme Court has a wide discretion to grant special leave to appeal in any matter.

Which of the above given statements are **not correct**?

- a) 1 and 2 only
- b) 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 3 and 4 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: The original jurisdiction of the Indian Supreme court covers only federal cases but the original jurisdiction of the American Supreme court covers not only federal cases but also cases related to the naval forces, maritime activities, ambassadors, etc.

Statement 2 is correct: Indian Judicial System has a provision for Advisory Jurisdiction. Whereas, no such provision is provided in the American Judicial System.

Statement 3 is incorrect: Appellate jurisdiction of the Indian supreme court covers not just constitutional but also criminal and civil cases. Whereas appellate jurisdiction of the American Supreme court covers only constitutional cases.

Statement 4 is incorrect: Indian Judicial System has a wide discretion to grant Special Leave to Appeal. However, American Judicial System has no plenary powers to grant such an appeal.

Source: M Lakshmikanth ch-26

Q.19) Consider the following pairs regarding the various types of instruments in Direct Democracy and their description:

Instrument	Description
1. Referendum	A procedure whereby a proposed legislation is referred to the electorate for settlement by their direct votes.
2. Initiative	A method by means of which the people can propose a bill to the legislature for enactment.
3. Recall	A method by means of which the voters can remove an officer before the expiry of his term.

4. Plebiscite A method of obtaining the opinion of people on any issue of public importance.

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- Only three pairs
- All the four pairs

Ans) d

Exp) Option d is the correct answer.

Democracy is of two types-direct and indirect. In direct democracy, the people exercise their supreme power directly as is the case in Switzerland. There are **four devices of direct democracy, namely, Referendum, Initiative, Recall and Plebiscite**. In indirect democracy, on the other hand, the representatives elected by the people exercise the supreme power and thus carry on the government and make the laws. This type of democracy, also known as representative democracy, is of two kinds-parliamentary and presidential.

Pair 1 is correctly matched: Referendum is a procedure whereby a proposed legislation is referred to the electorate for settlement by their direct votes.

Pair 2 is correctly matched: Initiative is a method by means of which the people can propose a bill to the legislature for enactment.

Pair 3 is correctly matched: Recall is a method by means of which the voters can remove a representative or an officer before the expiry of his term, when he fails to discharge his duties properly.

Pair 4 is correctly matched: Plebiscite is a method of obtaining the opinion of people on any issue of public importance. It is **generally used to solve the territorial disputes**.

Source: M Lakshmikanth ch-4

Q.20) Consider the following statements in the context of management of space:

- Space Situational Awareness (SSA) is a practice of identifying objects in space and tracking their orbits.
- India's first commercial Space Situational Awareness (SSA) observatory will be set up at Bangalore.
- 'Project NETRA' will be an early warning system for Indian satellites in space to protect them from hazards of space debris.
- ISRO has set up a Directorate of Space Situational Awareness and Management (SSAM) as a measure to protect space assets.

Which of the statement given above are correct?

- 1 and 3 only
- 1, 2 and 3 only
- 2, 3 and 4 only
- 1, 3 and 4 only

Ans) d

Exp) Option d is the correct answer.

Space Situational Awareness (SSA) refers to keeping track of objects in orbit and predicting where they will be at any given time. India-US signed an MOU on SSA agreement to share data regarding space debris and other objects posing threat to space assets.

Statement 1 is correct: SSA is the practice of tracking objects in space, identifying them, establishing their orbits, understanding the environment they're operating in, and predicting their future positions and threats to their operations.

Statement 2 is incorrect: India's first commercial Space Situational Awareness (SSA) observatory will be set up by **Digantara**, a space industry startup in **Garhwal region of Uttarakhand**. The observatory will monitor activities that take place in space and look out for military satellites and space debris. It is believed to be a one-of-a-kind observatory which has been placed strategically to monitor global space traffic.

Statement 3 is correct: Project NETRA (Network for space object Tracking and Analysis) is an early warning system in space to detect debris and other hazards to Indian satellites. It will be a network of connected radars, telescopes, data processing units and a control centre.

Statement 4 is correct: ISRO has set up a Directorate of Space Situational Awareness and Management (SSAM) aiming at protecting high valued space assets from space debris close approaches and collisions. A control centre is being established at Bengaluru to systematically carryout all activities related to SSAM. Source: <https://www.outlookindia.com/travel/uttarakhand-gets-india-s-first-ever-commercial-space-situational-awareness-observatory-news-220065>

https://www.esa.int/Space_Safety/Clean_Space/ESA_commissions_world_s_first_space_debris_removal

Q.21) Which of the following statements is/ are correct regarding obtaining citizenship when there is an incorporation of foreign territory into the Indian Union?

1. The Constitution provides for granting citizenship in case a foreign territory is incorporated into the Indian Union.
2. The residents of any incorporated territory automatically become the Indian citizens.

Select the correct answer from the codes given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: The Constitution does not make elaborate provisions pertaining to the citizenship matters. It only prescribes who can become citizens at the time of the commencement of the Constitution. Instead, The **Citizenship Act, 1955 deals with the citizenship rights of the persons whose territory have been incorporated into the Indian Union.**

Statement 2 is incorrect: If any foreign territory becomes a part of India, the **Government of India specifies the persons who among the people of the territory shall be the citizens of India**. Such persons become the citizens of India from the notified date.

Source:

<https://indiankanoon.org/doc/305990/#:~:text=%E2%80%94any%20territory%20becomes%20a%20specified%20in%20the%20order.>

Q.22) “This act made the Governor-General of Bengal as the Governor-General of India. It deprived the Governors of Bombay and Madras of their legislative powers. It attempted to introduce a system of open competition for selection of civil servants.”

Which one of the following acts is being described in the above given paragraph?

- a) Charter Act of 1833

- b) Indian Councils Act of 1861
- c) Government of India Act of 1858
- d) Government of India Act of 1919

Ans) a

Exp) Option a is the correct answer.

The **Charter Act of 1833** was a significant milestone in the history of British India as it established the framework for the modern administrative structure of India and initiated the process of constitutional reforms. It also paved the way for the eventual transfer of power from the East India Company to the British Crown.

Features of the Charter Act of 1833:

- 1) It made the Governor-General of Bengal as the Governor-General of India and vested in him all civil and military powers. Thus, **the act created, for the first time, a Government of India having authority over the entire territorial area possessed by the British in India.** Lord William Bentick was the first governor-general of India.
 - 2) It **deprived the governor of Bombay and Madras of their legislative powers.** The Governor-General of India was given exclusive legislative powers for the entire British India. The laws made under the previous acts were called as Regulations while laws made under this act were called as Acts.
 - 3) It **ended the activities of the East India Company as a commercial body**, which became a purely administrative body. It provided that the company's territories in India were held by it 'in trust for His Majesty, His heirs and successors'.
 - 4) The **Charter Act of 1833 attempted to introduce a system of open competition** for selection of civil servants, and stated that the Indians should not be debarred from holding any place, office and employment under the Company. However, this provision was negated after opposition from the Court of Directors
- Knowledge Base:

Q.23) With reference to 'Composition of Constituent Assembly of India', consider the following statements:

1. Each British Indian province and princely state were allotted fixed one seat in the constituent assembly.
2. The representatives of princely states in the assembly were to be nominated by the heads of the princely states.
3. The seats allocated to each British province were to be divided among the Muslims, Sikhs and General.
4. The members from chief commissioners' provinces were represented in the constituent assembly.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2, 3 and 4 only
- d) 1 and 4 only

Ans) c

Exp) Option c is the correct answer.

The Constituent Assembly was constituted in November 1946 under the scheme formulated by the Cabinet Mission Plan.

Statement 1 is incorrect: Each province and princely state (or group of states in case of small states) were to be **allotted seats in proportion to their respective population.** Roughly, one seat was to be allotted for every million population.

Statement 2 is correct: The representatives of princely states of the constituent assembly were to be **nominated by the heads of the princely states.** 93 out of 389 seats were allocated to the Princely States.

Statement 3 is correct: Seats allocated to each **British province were to be divided among the three principal communities—Muslims, Sikhs and general** (all except Muslims and Sikhs), in proportion to their population. The representatives of each community were to be elected by members of that community in the provincial legislative assembly and voting was to be by the method of proportional representation by means of single transferable vote.

Statement 4 is correct: The total strength of the Constituent Assembly was to be 389. Of these, 296 seats were to be allotted to British India and 93 seats to the Princely States. Out of 296 seats allotted to the British India, 292 members were to be drawn from the eleven governors' provinces and **four from the four chief commissioners' provinces, one from each**. These include Delhi, Ajmer–Merwara, Coorg and British Baluchistan. **Chief Commissioner's Province** refers to middle-level and minor type of provinces of India and in the post-colonial successor states, not headed by a (lieutenant-)governor but by a Chief commissioner.

Source: Laxmikanth

Q.24) Which of the following provisions of the Constitution of India came into force on 26th November, 1949?

1. Provisional Parliament
2. Citizenship
3. Directive Principles of State Policy
4. Elections
5. Planning Commission
6. Fundamental Rights

Select the correct answer using the codes given below:

- a) 1, 2, 3 and 5 only
- b) 1, 2 and 4 only
- c) 2, 3, 4 and 6 only
- d) 1, 2, 3, 4, 5 and 6

Ans) b

Exp) Option b is the correct.

The Constitution as adopted on November 26, 1949, contained a Preamble, 395 Articles and 8 Schedules. The Preamble was enacted after the entire Constitution was already enacted.

Options 1, 2 and 4 are correct: Some provisions of the Constitution pertaining to **citizenship, elections, provisional parliament, temporary and transitional provisions**, and short title contained in Articles 5, 6, 7, 8, 9, 60, 324, 366, 367, 379, 380, 388, 391, 392 and 393 (these provisions are related to citizenship, elections, provisional parliament, temporary and transitional provision) came into force on November 26, 1949 itself.

The **remaining provisions (the major part) of the Constitution came into force on January 26, 1950**. This day is referred to in the Constitution as the 'date of its commencement', and celebrated as the Republic Day.

Options 3, 5 and 6 are incorrect: The provisions of Directive Principles of State Policy and Fundamental Rights came into force on January 26, 1950. **Planning Commission was an extra constitutional body.**

Source: Laxmikanth

https://www.constitutionofindia.net/constitution_of_india/short_title__commencement__authoritative_text_in_hindi_and_repeals_/articles/Article%20394

Q.25) With reference to Participatory notes (P-notes), consider the following statements:

1. They can be issued only by the Securities and Exchange Board of India.
2. Investments flowing through P-notes are considered as offshore derivative investments (ODIs).
3. Holder of P-notes enjoy voting rights in relation to his/her investment in a share/company.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect. P-notes are **issued by registered foreign portfolio investors (FPIs)** and not by SEBI, to overseas investors who wish to be part of the Indian stock market without registering themselves directly.

Statement 2 is correct. Investments flowing through P-notes are considered as **offshore derivative investments** (ODIs). Indian securities market regulator, SEBI issued the new Regulations for Foreign Portfolio Investors, participatory notes where it got formally defined under the tag "Offshore Derivative Instrument" (ODIs) in Section 2(1)(j) of the said regulation.

Statement 3 is incorrect. The P-notes holder **does not enjoy any voting rights** in relation to security/shares referenced. Also, the investor in P-notes **does not own the underlying Indian security**, which is held by the FII who issues the Participatory Notes. Thus, the investors in Participatory Notes derive the economic benefits of investing in the security without actually holding it.

Source: <https://economictimes.indiatimes.com/markets/stocks/news/investment-in-capital-mkts-through-p-notes-drops-to-rs-96292-cr-in-dec-2022-on-profit-booking/articleshow/97253669.cms>
[http://www.arthapedia.in/index.php?title=Participatory_Notes_\(PNs\)](http://www.arthapedia.in/index.php?title=Participatory_Notes_(PNs))

Q.26) Consider the following statements:

1. Communist Party of India did not win any seats in the elections to the Constituent Assembly of India.
2. Unionist Party won the second highest number of seats, after Indian National Congress, in the elections to the Constituent Assembly of India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The Constitution of India was drafted by the Constituent Assembly, and it was implemented under the Cabinet Mission Plan on 16 May 1946. The members of the Constituent Assembly were elected by the provincial assemblies by a **single, transferable-vote system of proportional representation**. The total membership of the Constituent Assembly was 389 of which 292 were representatives of the provinces, 93 represented the princely states and four were from the chief commissioner provinces of Delhi, Ajmer-Merwara, Coorg and British Baluchistan.

Statement 1 is incorrect.

The Congress Party held a large majority in the Assembly (69 percent of the seats), and the Muslim League held nearly all the seats reserved in the Assembly for Muslims. There were also members of smaller parties,

such as the Scheduled Caste Federation, the **Communist Party of India** and the Unionist Party. **Communist Party of India got 1 seat in the Constituent Assembly.**

Statement 2 is incorrect.

Muslim League with 73 seats was the second largest party after Indian National Congress (208 seats) in the Constituent Assembly of India. Unionist Party got only 1 seat in the Constituent Assembly of India

Sl.No.	Name of the Party	Seats won
1.	Congress	208
2.	Muslim League	73
3.	Unionist Party	1
4.	Unionist Muslims	1
5.	Unionist Scheduled Castes	1
6.	Krishak - Praja Party	1
7.	Scheduled Castes Federation	1
8.	Sikhs (Non-Congress)	1
9.	Communist Party	1
10.	Independents	8
Total		296

Results of the Elections to the Constituent Assembly (July–August 1946)

Source: Laxmikanth Chapter 2 Making of the Constitution

Q.27) Which of the following is/are correct regarding the doctrine of basic structure of the constitution?

1. Basic structure of the constitution ensures Judicial Supremacy in India.
2. The bill amending the basic structure of the constitution cannot be initiated by the state legislative assemblies.
3. Basic structure prohibits parliament from amending any of the fundamental rights given in part III of the constitution.
4. High courts in India are empowered to strike down only those laws/executive actions that violate basic structure of the constitution.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

The **Kesavananda Bharati case (1973)** introduced the doctrine of basic Structure to **limit the amendment power of parliament** to prevent any changes in the constitution that may affect the **basic values enshrined in the Constitution.**

Statement 1 is incorrect: Basic structure of the constitution ensures the supremacy of constitution in India, not judicial supremacy. Basic structure doctrine was introduced by the Supreme court to **prevent the excessive use of power by any organs of the state - legislature, executive or judiciary** to uphold the core provisions of the constitution of India.

Statement 2 is correct: It is true that bill amending the constitution cannot be introduced in the state legislative assemblies. In fact, **no constitutional amendment bill can be introduced in the state legislative assemblies.**

Statement 3 is incorrect: Parliament can amend fundamental rights if such changes does not affect the basic structure of the constitution. Thus, it is incorrect to say that basic structure prohibits parliament from amending any of the fundamental rights. The Supreme court in **Kesavanandha Bharati case upheld** the validity of the 24th Constitutional Amendment Act (CAA) and held that parliament is empowered to take away or abridge any of the Fundamental Rights, if such changes does not alter the basic structure of the constitution.

Statement 4 is incorrect: High court can strike down laws/executive actions even if it violates non-basic structure of the constitution. **Article 226** of the Indian constitution gives the high court the power to review legislative/executive actions which contravenes any of the constitutional provisions which includes both basic and non-basic features of the constitution.

Source: Laxmikanth - Amendment of the constitution

Basic structure of the constitution

Q.28) With reference to 'Source of Indian Constitution', consider the following pairs:

Source	Features Borrowed
1. Irish Constitution	Fundamental duties and the ideal of justice
2. Canadian Constitution	Suspension of Fundamental Rights during Emergency
3. Australian Constitution	Joint sitting of the two Houses of Parliament
4. Soviet Constitution	Directive Principles of State Policy

Which of the pairs given above is/are correctly matched?

- a) 1 and 4 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Indian Constitution came into **existence on 26th November 1949**. The Constituent Assembly of India drafted the constitution **considering features of constitutions of the other countries as well as from the Government of India Act 1935**. There are various sources of Indian constitution for some features of it are borrowed. There was no hesitation to learn from the experiences of other nations, hence, the Indian Constitution has various features that are borrowed from other nations.

Pair 1 is incorrectly matched: The features borrowed from Irish Constitution were Directive Principles of State Policy, nomination of members to Rajya Sabha and method of election of president.

The provisions of Fundamental duties and the ideal of justice were borrowed from Soviet Constitution.

Pair 2 is incorrectly matched: The features borrowed from Canadian Constitution were Federation with a strong Centre, vesting of residuary powers in the Centre, appointment of state governors by the Centre, and advisory jurisdiction of the Supreme Court.

The provisions of Suspension of Fundamental Rights during Emergency were borrowed from Weimar Constitution of Germany

Pair 3 is correctly matched: The features borrowed from Australian Constitution were Concurrent List, freedom of trade, commerce and inter-course, and **joint sitting of the two Houses of Parliament.**

Pair 4 is incorrectly matched: The features borrowed from Soviet Constitution were Fundamental duties and the ideal of justice (social, economic and political).

The provisions of Directive Principles of State Policy **were borrowed from Irish Constitution.**

Source: Laxmikanth

Q.29) With reference to the ‘Objectives Resolution’, introduced in the first session of the Constituent Assembly, consider the following statements:

1. It declared India as an Independent Sovereign Republic.
2. It provides for adequate safeguards for minorities and depressed classes.
3. It guaranteed to people of India, the equality of status of opportunity.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The ‘Objectives Resolution’ was moved by **Jawaharlal Nehru** in the Constituent Assembly in December, 1946. It laid down the fundamentals and **philosophy of the constitutional structure.**

This Resolution was unanimously adopted by the Assembly on January 22, 1947. Its modified version forms the Preamble of the present Constitution.

Statement 1 is correct. Under the Objectives resolution, the Constituent Assembly declared its firm and solemn resolve to proclaim India as an **Independent Sovereign Republic** and to draw up for her future governance a constitution.

Statement 2 is correct. It provides that adequate safeguards shall be provided for minorities, backward and tribal areas, and depressed and other backward classes.

Statement 3 is correct. It guaranteed and secured to all the people of India **justice, social, economic and political; equality of status of opportunity, and before the law;** freedom of thought, expression, belief, faith, worship, vocation, association and action, subject to law and public morality.

Source: Indian Polity, M. Laxmikanth, Chapter- 2

Q.30) Consider the following statements about Digital Banking Units (DBUs):

1. Regional Rural banks and Payment banks are permitted to establish DBUs.
2. DBUs are not licensed under Banking Regulation Act, 1949.
3. There is at least one operational DBU in each of the Indian States.
4. DBUs can facilitate digital onboarding of customers for schemes like Atal Pension Yojna among others.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 4 only
- c) 2, 3 and 4 only
- d) 1, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

As part of the Union budget speech for 2022–23, **the finance minister announced setting up the 75 DBUs in 75 districts to commemorate our country's 75 years of independence.** DBU is a specialised fixed point business unit / hub housing certain minimum digital infrastructure for delivering digital banking products & services as well as servicing existing financial products & services digitally.

Statement 1 is incorrect: Scheduled Commercial Banks (other than RRBs, PBs and LABs) with past digital banking experience are permitted to open DBUs in Tier 1 to Tier 6 centres.

Statement 2 is correct: DBUs are treated as banking outlets, equivalent to a branch. These units do not have a legal personality and are **not licensed under the Banking Regulation Act, 1949.**

Statement 3 is correct: On October 17, 2022, 75 digital banking units became operational across 75 districts in India. As of now, there is at least one digital banking unit set up in each of the states and union territories (UTs).

Statement 4 is correct: DBUs also provide services **like digital onboarding of customers for schemes** such as **Atal Pension Yojana (APY);** Insurance onboarding for **Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and Pradhan Mantri Suraksha Bima Yojana (PMSBY).**

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1868239>

RBI Notification on Establishment of DBUs

<https://www.india-briefing.com/news/india-digital-banking-units-26295.html/>

Q.31) With reference to the distinct forms of Justice, consider the following statements:

1. Social Justice implies that all citizens are treated equally irrespective of their status in society.
2. Economic justice is considered as part of liberty without which equality of status and dignity of person is not possible.
3. Political justice proposes that the citizens of a country should have equal access to political offices.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Preamble contains the ideals, objectives and basic principles of the Constitution which include commitment to democracy, guarantee to all the people of India; Justice, equality and freedom The Preamble covers all these dimensions of justice – social, economic and political.

Statement 1 is correct. Social Justice is the recognition or greater good to a larger number without deprivation or accrual of legal rights and is the comprehensive form to **remove social imbalance** by law harmonizing the rival claims or the interest of different groups and/or section in the social structure or individuals by means of which alone it would be possible to build up a **welfare State.** Social Justice implies that all citizens are treated equally irrespective of their status in society as a result of the accident birth, race, caste, religion, sex, title etc

Statement 2 is correct. Economic Justice means the banishment of poverty, not by expropriation of those who have but by the **multiplication of the national wealth** and resources and an equitable distribution thereof amongst all who contribute towards its production, is the aim of the state envisaged by the directive principles. Economic justice is a **facet of liberty** without which **equality of status** and **dignity of person** is teasing illusions. The ideal of economic justice is to make equality of status meaningful and life worth living at its best removing inequality of opportunity and of status-social, economic and political.

Statement 3 is correct. Political justice implies that all citizens should have equal political rights, equal access to all political offices and equal voice in the government.

Source: <https://www.ijlmh.com/wp-content/uploads/2019/04/Social-and-Economic-Justice-under-Constitution-of-India-A-Critical-Analysis.pdf>

<https://www.encyclopedia.com/social-sciences/applied-and-social-sciences-magazines/political-justice#:~:text=Political%20justice%20refers%20to%20the,a%20substitute%20for%20such%20action.>

<https://www.bl.uk/collection-items/an-enquiry-concerning-political-justice>

Q.32) With reference to the Preamble of the Indian Constitution, consider the following statements:

1. In the Kesavananda Bharati case, the Supreme court held that preamble is a part of the Indian constitution.
2. Certain provisions of the preamble may not be altered by a constitutional amendment act.
3. Since the enactment of the Indian Constitution, Preamble was amended only once.

Which of the statement/s given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Preamble refers to the introduction of the constitution and it contains the aspirations and goals of the Indian Constitution. Article 368 in part XX of the Constitution deals with the power of parliament to amend the constitution and its procedure.

Statement 1 is correct: It is true that in the **Kesavananda Bharati case**, the Supreme court held that **preamble as part of the Indian constitution**. In Kesavananda Bharati case, the supreme court reversed the ruling given in the **Berubari Union case (1960)** in which the court held that preamble is not the part of the constitution.

Statement 2 is correct: In the **Kesavananda Bharati case**, the Supreme court held that provisions of the preamble which are related to the **basic structure** of the constitution **cannot be amended** by the parliament.

Statement 3 is correct: It is true that since the enactment of the constitution, **Preamble was amended only once so far**. Preamble was amended in 1976, the **42nd constitutional amendment act, 1976** inserted the word **Socialist, Secular and Integrity** in the preamble.

Source: Laxmikanth - Preamble of the constitution

Q.33) Which of the following persons were eligible to be the citizens of India at the time of commencement of the Constitution?

1. A person domiciled in India and either of his parents were born in India.
2. A person of Indian origin domiciled outside India.
3. A person not of Indian origin and domiciled outside India.
4. A person migrated to Pakistan but returned to India for resettlement.
5. A person migrated from Pakistan and he or his parents or grandparents were not born in undivided India.

Choose the correct answer from the codes given below:

- a) 1, 3, 4 and 5 only
- b) 1, 3 and 5 only
- c) 1, 2 and 4 only
- d) 1 and 2 only

Ans) c

Exp) Option c is the correct answer.

Article 5 to Article 8 of Indian Constitutions deals with the four categories of person who became the citizens of India at the time of commencement of the Constitution.

Statement 1 is correct: As per Article 5 of the Indian Constitution, a person who had his **domicile in India at the time of commencement of the Constitution** was eligible to become a citizen. This is subject to the fulfillment of any of these 3 given additional conditions:

Basic Condition	Additional Conditions
A person domiciled in India	He was born in India. OR Either of his parents were born in India OR He had been an ordinary resident for more than 5 years.

Hence, a person domiciled in India is eligible to obtain Indian citizenship, subject to fulfilling other conditions.

Statement 2 is correct: Article 8 allows for a **person of Indian origin residing outside India** to obtain citizenship **through registration**. During the commencement of the constitution, such person could have applied to the diplomatic or consular representative of India in the country of his residence.

Statement 3 is incorrect: At the time of commencement, the **Constitution did not contain any specific provision pertaining to the citizenship of a person who was neither of an Indian origin nor domiciled in India**. Hence, he was not eligible for obtaining citizenship as per the prevailing provisions. Later, Parliament enacted **Citizenship Amendment Act, 1955** which enabled such persons to obtain citizenship by naturalization, subject to other conditions.

Statement 4 is correct: **Article 7** allows a person migrated from India to Pakistan and returned to India for resettlement to obtain citizenship. For this, he had to be resident in India for six months preceding the date of his application for registration.

Statement 5 is incorrect: **Article 6** deals with the cases where a person has migrated to India from Pakistan, which can be summarized as:

Case: A person migrated to India from Pakistan	
Requirement to obtain citizenship: Fulfilling the basic condition AND any of the additional conditions:	
Basic Condition: He or either of his parents or grandparents were born in undivided India (i.e., he should be a person of Indian origin).	Additional Conditions: If he migrated to India before July 19, 1948, he had been ordinarily resident in India since the date of his migration. OR If he migrated to India on or after July, 1948, he had been registered as a citizen of India. But such a person could only be registered if he was resident in India for six months, preceding the date of application for registration.

In the given case, the basic condition given above is not fulfilled; hence, he was not eligible for Indian citizenship.

Source: M. Laxmikanth (Chapter 6)

Q.34) The Article 13 of the Indian constitution states that any law which contravenes fundamental rights can be declared void by the Judiciary. In this context, consider the following statements:

1. Laws enacted by both the Parliament and State legislative assembly can be struck down by the High court, if it violates fundamental rights.
2. Both the Supreme court and High court can strike down the constitutional amendment act that contravenes fundamental rights.
3. No Social practice, violating fundamental rights, can be struck down by the Supreme Court.
4. Executive actions by civil servants are beyond the scope of article 13 and cannot be struck down by the Supreme court.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1, 2 and 4 only
- c) 2 and 3 only
- d) 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

Article 13 of the Indian Constitution states that **all laws that are inconsistent with or in derogation of any of the fundamental rights** shall be declared void by the judiciary. Article 13 provides for the doctrine of judicial review.

Statement 1 is correct: It is true that **laws enacted by both the Parliament and State legislative assembly** can be struck down by the **High court** if it violates fundamental rights. **Article 226** of the Indian constitution provides the **high court** and **Article 32** provides the **supreme court** - the power of judicial review.

Statement 2 is correct: **Article 13** uses wider definition of laws, **as per article 13 constitutional amendment act too is a law**. Thus, any **constitutional amendment act which contravenes** the provisions of fundamental rights can be **struck down by the Supreme court and High court**.

Statement 3 is incorrect: **As per Article 13, a law includes a custom or social practises** having the force of law. **The Supreme Court can ban those social practices which contravenes fundamental rights**. For instance, the **Supreme Court intervened in the Sabarimala** issue and removed the restrictions posed on the entry of women into a temple because such religious practice violated the fundamental **right of women**.

Statement 4 is incorrect: **Executive actions by civil servants** which violate fundamental rights **can be struck down by the Supreme Court**. As per Article 13, a law includes delegated legislation such as order, bye law, rules and regulations.

Source: Laxmikanth - Fundamental rights

Q.35) Consider the following statements about Ways and Means Advances (WMAs):

1. WMAs are loans provided by centre to states to meet temporary mismatches in the receipts and payments.
2. WMAs are part of the Fiscal Responsibility and Budget Management act, 2003 to ensure fiscal prudence in a state's economy.
3. Normal WMAs are provided against the collateral of the government securities held by the state.

Which of the statements given above are **incorrect**?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Ways and Means Advances scheme was introduced in 1997, replacing the traditional practice of issuing ad-hoc Treasury bills to replenish Central Government's cash balance.

Statement 1 is incorrect: Under Section 17(5) of RBI Act, 1934, the RBI provides Ways and Means Advances (WMA) to the States to help them tide over temporary mismatches in the cash flow of their receipts and payments. Hence, they are not provided by centre but RBI to states. Such advances are repayable within three months from the date of making that advance.

Statement 2 is incorrect: Ways and Means advances are **not a part** of the Fiscal Responsibility and Budget Management (FRBM) act, 2003 because they get paid within the year itself.

Statement 3 is incorrect: There are two types of Ways and Means Advances - normal and special. Special WMA or **Special Drawing Facility is provided against the collateral of the government securities** held by the state. After the state has exhausted the limit of SDF, it gets normal WMA. Hence, normal WMAs do not require provision of security collaterals from state. **Normal WMAs are clean advances.**

Source: <https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?ID=6>

https://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=54458

Q.36) With reference to 'Constituent Assembly', consider the following statements:

1. The assembly was empowered to alter any law made by the British Parliament in relation to India.
2. The members of the Muslim League from the Indian Dominion never entered the Assembly.
3. Both H.C. Mukherjee and V.T. Krishnamachari were elected as the Vice-Presidents of the Assembly.
4. Dr Sachchidanand Sinha was the chairperson of the assembly whenever it met as the legislative body.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 2 and 3 only
- d) 1, 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

It was in 1934 that the idea of a Constituent Assembly for India was **put forward for the first time by M. N. Roy, a pioneer of communist movement in India.** In 1935, the Indian National Congress (INC), for the first time, officially demanded a Constituent Assembly to frame the Constitution of India. The Constituent Assembly was constituted in November 1946 under the scheme formulated by the Cabinet Mission Plan.

Statement 1 is correct: The Indian Independence Act of 1947 made the changes in the position of the Assembly. It was made a fully sovereign body, which could frame any Constitution it pleased. The act empowered the **Assembly to abrogate or alter any law made by the British Parliament in relation to India.**

Statement 2 is incorrect: After the acceptance of the Mountbatten Plan of June 3, 1947 for a partition of the country, the representatives of most of the other princely states took their seats in the Assembly. The **members of the Muslim League from the Indian Dominion also entered the Assembly.** The Muslim League members (hailing from the areas included in the Pakistan) withdrew from the Constituent Assembly for India.

Statement 3 is correct: Dr. Rajendra Prasad was elected as the President of the Assembly. Similarly, **both H.C. Mukherjee and V.T. Krishnamachari were elected as the Vice-Presidents of the Assembly.** In other words, the Assembly had two Vice-Presidents.

Statement 4 is incorrect: The Assembly also became a legislative body. In other words, two separate functions were assigned to the Assembly, that is, making of a constitution for free India and enacting of

ordinary laws for the country. These two tasks were to be performed on separate days. Thus, the Assembly became the first Parliament of free India (Dominion Legislature). Whenever the Assembly met as the Constituent body it was chaired by Dr. Rajendra Prasad and **when it met as the legislative body, it was chaired by G V Mavlankar**. These two functions continued till November 26, 1949, when the task of making the Constitution was over.

Dr Sachchidanand Sinha, the oldest member, was elected as the temporary President of the Assembly, following the French practice.

Source: Laxmikanth

Q.37) With reference to Indian Judiciary, consider the following statements:

1. While Judicial activism is the power of Judiciary to review its own judgements, Judicial review is the power of judiciary to examine the constitutionality of laws.
2. While Judicial activism is a proactive role played by the judiciary, judicial overreach is the judicial encroachment into the domains of legislature or/and executive.
3. While Judicial activism denotes the role of judiciary in policy making, Judicial restraint means non-interference by judiciary in policy making.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 3 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect: Judicial activism is a judicial decision making whereby **judges render their personal views regarding a public policy. Judicial review is the power of the judiciary to examine the constitutionality of legislative/executive actions** of both the Central and State governments. **Article 137** of the constitution grants Supreme court the **power to review its own judgements and it is not a judicial activism.**

Statement 2 is correct: Judicial activism denotes the **proactive role played by the judiciary** in the protection of the rights of citizens and the promotion of justice in society for example the judicial innovation **public interest litigation (PIL)**. Judicial overreach means overstepping of authority by judiciary and encroachment into domains of other organs of the state - legislature or/and executive for example recent Andhra Pradesh High Court order on the inquiry into a 'constitutional breakdown' in the State.

Statement 3 is correct: Judicial activism denotes the role of judiciary in policy making to protect the rights of individual for example **Vishaka guidelines** issues by the Judiciary to ensure sexual harassment free work environment for women. In contrast, **Judicial restraint means non-interference by judiciary in policy making** ie restricting its role to interpreting the constitutionality of laws/executive actions.

Source: [https://blog.ipleaders.in/judicial-](https://blog.ipleaders.in/judicial-activism/#Difference_between_judicial_activism_restraint_and_overreach:~:text=restraint%20and%20overreach-,Judicial%20activism,-Judicial%20activism%20is)

[activism/#Difference_between_judicial_activism_restraint_and_overreach:~:text=restraint%20and%20overreach-,Judicial%20activism,-Judicial%20activism%20is](https://blog.ipleaders.in/judicial-activism/#Difference_between_judicial_activism_restraint_and_overreach:~:text=restraint%20and%20overreach-,Judicial%20activism,-Judicial%20activism%20is)

Q.38) The Supreme court of India can declare certain laws/executive actions as unconstitutional under which of the following conditions?

1. If the law enacted by parliament violates a provision of the constitution.
2. Any laws that are against the federal provisions of the constitution.
3. Any legislative/executive actions that contravenes the Directive Principles of State Policy (DPSP).

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Judicial review is the power of the court to examine the constitutionality of any laws/executive actions. Judicial review is vital to ensure constitutional supremacy in India. It is important to note that the term **Judicial review has nowhere been used in the constitution.**

Statement 1 is correct: Judicial review is the power of the Supreme court to examine constitutionality of any laws/executive actions. On such examination, if the **court finds any laws/executive action which violates any provisions of the constitution, the court can declare it as unconstitutional.**

Statement 2 is correct: The Supreme court of India can declare any actions/laws as unconstitutional if it violates the **basic structure of the constitution.** As **Federal character of the constitution** is one of the basic features of the constitution, any laws/actions contravening federal structure can be declared void by the Supreme court.

Statement 3 is incorrect: The Directive Principles of State Policy (DPSP) are **non-justiciable** in nature i.e., it cannot be enforced by the judiciary. Thus, any **actions/laws which contravenes DPSP cannot be declared void by the Supreme court.**

Source: Laxmikanth - Supreme court (power of judicial review)

<https://www.legalserviceindia.com/legal/article-916-directive-principles-of-state-policy-dpsps-.html#:~:text=A%20law%20against%20the%20DPSPs,the%20case%20with%20Fundamental%20Rights.>

Q.39) Which of the following rights and privileges are available exclusively to citizens of India?

- 1. Only Citizens have right to property in India.
- 2. Only Citizens have the Right to vote in India.
- 3. Only Citizens can become the President of India.
- 4. Only Citizens can become the Attorney General of India.
- 5. Only Citizens can become the Member of Parliament in India.

Select the correct answer using the code given below:

- a) 2, 3, 4 and 5 only
- b) 3, 4 and 5 only
- c) 3 and 4 only
- d) 1, 2, 3, 4 and 5

Ans) a

Exp) Option a is the correct answer.

The population of India is divided into two categories and they are **citizens and non-citizens.** A citizen of a state enjoys all civil and political rights whereas a non-citizen has limited rights as compared to citizens of India.

Option 1 is incorrect: Right to property is not an exclusive right offered to citizens, it is available to both citizens and non-citizens of India. The property right was deleted from the list of Fundamental Rights by the **44th Amendment Act, 1978.** It is made a **legal right under Article 300-A** of the Constitution. Article 300A states that “No person shall be deprived of his property save by the authority of law”.

Q.41) Consider the following statements regarding the similarities and differences between an ‘Overseas Citizen of India (OCI)’ and a Non-Resident Indian (NRI):

1. An NRI, but not OCI, is eligible to vote in the Parliamentary elections.
2. Neither NRI nor OCI is allowed to acquire/purchase any type of property in India.
3. An OCI, but not NRI, needs to apply for visa every time he/ she visit India.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

A non-resident Indian (NRI) is a person who ordinarily resides outside India and holds Indian passport. He has all benefits as available to Indian citizens (subject to notifications issued by the government). An Overseas Citizen of India (OCI) is a person who has been registered as such under the Citizenship Act, 1955.

Statement 1 is correct: Like citizens of India, **NRIs can also vote in the elections** held in India- local, state or the national. However, **an OCI is not entitled to vote** in the Indian elections. Hence, the given statement is correct.

Statement 2 is incorrect: Both NRI and OCI can purchase/ invest in immovable properties like residential and commercial properties. However, they are not allowed to buy agricultural land.

Statement 3 is incorrect: An NRI enjoys almost all the benefits like an ordinary citizen. So, he does not need visa for a visit to India. Similarly, **OCI holder also enjoys the benefit of multiple entry lifelong visa for any purpose.** In other words, an OCI holder need not apply for visa every time he/ she wants to visit India.

Knowledge Base: NRI can buy various kinds of commercial and residential properties, except for those involved with agricultural activities like farmhouses, agricultural land, and plantations.

Source: <https://www.rbi.org.in/commonperson/English/Scripts/FAQs.aspx?Id=1855#Q1>

https://www.mha.gov.in/PDF_Other/Introduction_OCI_cardholder_25042017.pdf

M Laxmikath.

Q.42) With reference to ‘Indian Council Act of 1861’, consider the following statements:

1. It restored the legislative powers to the Bombay and Madras Presidencies.
2. It established a 15-member Council of India to assist the secretary of state for India.
3. It ended the system of double government by abolishing the Board of Control and Court of Directors.
4. It empowered the Viceroy to issue ordinances without the concurrence of the legislative council.

Which of the statements given above is/are correct?

- a) 1, 2 and 4 only
- b) 1 and 4 only
- c) 2, 3 and 4 only
- d) 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

After the great revolt of 1857, the British Government felt the necessity of seeking the cooperation of the Indians in the administration of their country. In pursuance of this policy of association, three acts were enacted by the British Parliament in 1861, 1892 and 1909. The Indian Councils Act of 1861 is an important landmark in the constitutional and political history of India.

Statement 1 is correct: Indian Councils Act of 1861 restored the legislative powers to the Bombay and Madras Presidencies. The act **restored the legislative powers to the Bombay and Madras Presidencies**, which had been taken away by the Charter Act of 1833. The Governor-General's Legislative Council, which was created by the Charter Act, had monopolized the legislative power in India.

Statement 2 is incorrect: Government of India Act of 1858 (not Indian Councils Act of 1861) **established a 15-member Council of India to assist the secretary of state for India**. The council was an advisory body. The secretary of state was made the chairman of the council.

Statement 3 is incorrect: The Indian Council Act of 1858, also known as the Government of India Act 1858, ended the system of **double government by abolishing the Board of Control and Court of Directors**. The Indian Council Act of 1861 did not make any changes in this regard.

Statement 4 is correct: The Indian Council Act of 1861 empowered the Viceroy to make rules and orders for the more convenient transaction of business in the council. It also gave a recognition to the **'portfolio' system, introduced by Lord Canning in 1859**. Under this, a member of the Viceroy's council was made in-charge of one or more departments of the government and was authorised to issue final orders on behalf of the council on matters of his department(s). It **empowered the Viceroy to issue ordinances, without the concurrence of the legislative council**, during an emergency. The life of such an ordinance was six months
Source: Laxmikanth

Q.43) Consider the following statements regarding the term 'Asymmetric Federalism':

1. In Asymmetric Federalism, a particular state can have greater executive powers than other states.
2. It overlooks the diverse cultural, linguistic, and historical differences among constituent units.
3. Indian Constitution provides for the Asymmetric federalism.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2, and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: The term asymmetrical federalism refers to a flexible type of union of states which **allows the government to cut different deals with different states in special matters pertaining to them**. This method allows the government to grant special status to some units providing them with special powers not enjoyed by other states. It permits particular states to have **greater executive, legislative, and at times, judicial powers than other states**.

Statement 2 is incorrect: Asymmetric federalism recognizes (not overlook) the diverse cultural, linguistic, and historical differences among constituent units. An asymmetrical setup can be effective when the needs of state are diverse religiously, culturally and/or ethnically. In such a case, asymmetrical federalism caters to the needs of particular communities by giving them special status.

Statement 3 is correct: Asymmetry is established through legal institutional arrangements. For instance, in India these arrangements have a constitutional basis whereas in countries like Indonesia, China, etc. it is based on legislative arrangements. **Indian constitution allows some border states in the North-West and North-East region (i.e., Jammu and Kashmir, Nagaland and Mizoram) to exercise constitutional asymmetries under article 371**. There are asymmetries present in the Indian constitution at the sub state level in the form of **Union Territories**.

Source: <https://www.legalserviceindia.com/legal/article-1353-whether-india-a-union-of-states-is-an-example-of-asymmetric-federalism-.html>

<https://blog.forumias.com/answered-what-do-you-understand-by-asymmetric-federalism-discuss-the-importance-of-asymmetric-federalism-in-india/>

<https://www.thehindu.com/news/national/the-forms-of-federalism-in-india/article28977671.ece>

Q.44) With reference to Indian Constitution, consider the following statements:

1. India being a Sovereign country can cede its territory in favour of a foreign state.
2. Constitution is the result of rights of individuals which are enforced by the judiciary.
3. Before addition of "socialist" to preamble, constitution already had elements of socialism.

Which of the statements given above is/are correct?

- a) 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Preamble to the Indian Constitution of India is a brief introductory statement that reflects the hopes and aspirations of the people. The preamble can be referred to as the preface which highlights the entire Constitution. It embodies the basic philosophy and the fundamental values on which our constitution is based.

Statement 1 is correct: Preamble states that India is a Sovereign country. This means India can acquire foreign territory and if necessary, can cede its territory in favour of foreign state. It is done through constitutional amendment under article 368.

Statement 2 is incorrect: In Indian system, constitution is the source of Individual rights. It is not the result of individual rights which are defined by the courts of law. Preamble states constitution draws its authority from the people of India. Judiciary helps in protecting the rights enumerated in Constitution. It is the ultimate guardian of the rights of the people.

Statement 3 is correct: The 42nd Amendment 1976 changed the description of India from a "sovereign democratic republic" to a "sovereign, socialist secular democratic republic". However, before the amendment constitution already had socialist content in form of Directive Principle of State Policy (DPSP). Hence what was implied, made explicit after the amendment. The words "unity of the nation" changed to "unity and integrity of the nation" after the amendment.

Source: Laxmikant

<https://egyankosh.ac.in/bitstream/123456789/57869/1/Unit3.pdf>

Q.45) Which of the following institutions publish State Energy and Climate index?

- a) Council on Energy, Environment and Water.
- b) NITI Aayog
- c) Indian Renewable Energy Development Agency (IREDA)
- d) The Energy and Resource Institute (TERI)

Ans) b

Exp) Option b is the correct answer.

State Energy and Climate index (SECI) is published by NITI Aayog, to track the efforts made by states and UTs in the climate and energy sector. It ranks states and UTs on six parameters: discoms' performance, access affordability and reliability of energy, clean energy initiatives, energy efficiency, environmental sustainability and new initiatives.

Based on the outcome of SECI scores, states and union territories have been categorised into three groups -- front runners, achievers, and aspirants. **Gujarat, Kerala and Punjab** have been adjudged as top three performer states in the NITI Aayog's SECI in the year 2022. The top three performers among smaller states are **Goa, Tripura and Manipur**.

Hence, SECI index helps in helping drive the agenda of the affordable, accessible, efficient and clean energy transition at the State level. It also encourages healthy competition among the states on different dimensions of energy and climate.

Source: <https://www.niti.gov.in/sites/default/files/2022-04/StateEnergy-and-ClimateIndexRoundI-10-04-2022.pdf>

Q.46) Arrange the following events in the chronological order of their occurrence:

1. Adoption of National Song
2. Ratification of Commonwealth membership
3. Adoption of National Flag
4. Adoption of National Emblem

Select the correct answer using the codes given below:

- a) 1-2-4-3
- b) 3-2-1-4
- c) 1-3-2-4
- d) 3-4-1-2

Ans) b

Exp) Option b is the correct answer.

The events in chronological order of their occurrence are:

- 1) The **National Flag** is a horizontal tricolor of India saffron (kesaria) at the top, white in the middle and India green at the bottom in equal proportion. The ratio of width of the flag to its length is two to three. In the centre of the white band is a navy-blue wheel with 24 equally spaced spokes which represents the Ashoka Chakra. **The design of the National Flag was adopted by the Constituent Assembly of India on 22 July 1947.**
- 2) The Constituent Assembly **ratified India's membership of the Commonwealth in May 1949**. Choosing to remain in the Organization was India's first major foreign policy decision after Independence. Commonwealth is a free association of sovereign states.
- 3) 'Jana Gana Mana' was adopted as the **national anthem of India on January 24, 1950**, by the Constituent Assembly. Written and composed by Nobel laureate Rabindranath Tagore, the anthem spreads the message of pluralism and its official duration is 52 seconds.
- 4) **National Emblem of India** is a representative seal of the Republic of India that is adapted from the Lion Capital of Ashoka Pillar (based in Sarnath, Uttar Pradesh.) **India adopted it as the State Emblem on 26th January 1950**. The motto of the Indian National Emblem is 'Satyamev Jayate' or 'Truth Alone Triumphs.'

Source: [https://knowindia.india.gov.in/national-identity-elements/national-](https://knowindia.india.gov.in/national-identity-elements/national-flag.php#:~:text=The%20design%20of%20the%20National,India%20on%2022%20July%201947.)

[flag.php#:~:text=The%20design%20of%20the%20National,India%20on%2022%20July%201947.](https://knowindia.india.gov.in/national-identity-elements/national-flag.php#:~:text=The%20design%20of%20the%20National,India%20on%2022%20July%201947.)

Laxmikanth

Q.47) In the context of Indian polity, which one of the following is the most appropriate idea behind Indian Socialism?

- a) Nationalisation of all the means of production.
- b) Ownership of all the means of production by workers.
- c) Coexistence of both public and private sectors.
- d) Economic planning exclusively by the State to ensure inclusive growth of a country.

Ans) c

Exp) Option c is the correct answer.

A Preamble serves as an introduction to the constitution and contains basic principles and goals of the Constitution. The word **Socialist** was inserted into the preamble of the Indian constitution by the 42nd Constitutional Amendment Act in 1976 during the period of emergency.

Option a is incorrect: Unlike Indian socialism, **State Socialism** also known as Communistic socialism involves the **nationalisation of all means of production** and abolition of private property.

Option b is incorrect: **Marxism Socialism** believes that **factors of production should be owned and run by workers** through a well-developed and centralised structure. Marxist theories were influential in the development of socialism, which requires shared ownership by workers of the means of production.

Option c is correct: Indian brand of socialism is a 'democratic socialism' and not a 'communistic socialism' (also known as 'state socialism'). Communistic Socialism involves the nationalisation of all means of production and distribution and the abolition of private property. **Democratic socialism, on the other hand, holds faith in a 'mixed economy' where both public and private sectors co-exist side by side.** As the Supreme Court says, 'Democratic socialism aims to end poverty, ignorance, disease and inequality of opportunity.

Option d is incorrect: Ensuring equitable economic growth through **exclusive state's planning is not an idea behind Indian socialism.** Indian socialism promotes the concept of **Mixed economy** in which **private players also have autonomy to devise their own plan** and contribute to the economic development of a country, thus this statement is incorrect.

Source: Laxmikanth - Preamble of the constitution

Q.48) The Supreme court in various cases included/reiterated various provisions as the basic features of the constitution. In this context, consider the following pairs:

Cases	Provisions included/reiterated as the Basic features
1. Kesavananda Bharati case	Federal character of the constitution.
2. Minerva Mills case	Harmony between Fundamental rights and Directive principles.
3. S.R. Bommai case	Principle of secularism
4. M. Nagaraj case	Free and fair elections

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- Only three pairs
- All the four pairs

Ans) c

Exp) Option c is the correct answer.

Basic features of the constitution are certain features of the constitution which are essential for the functioning of the state. **Any change in basic features would alter the basic structure of the constitution.** Hence basic features are beyond the limits of the amending powers of the Parliament.

Pair 1 is correct: In the Kesavananda Bharati case (1973) the supreme court innovated the doctrine of basic structure to limit the power of parliament and to upheld constitutional supremacy in India. **The basic features added in this case are Federal character of the Constitution, Supremacy of the Constitution, Republican and democratic form of government, Secular character of the Constitution etc.,**

Pair 2 is correct: In the **Minerva Mills case (1980)**, the Supreme court included **Harmony and Balance between Fundamental Rights and Directive Principles** as the basic features of the constitution. Other basic features included in by this case are Limited power of govt. to amend Constitution. Judicial Review.

Pair 3 is correct: In the **SR Bommai case**, the Supreme court reiterated the **principle of secularism as one of the basic features of the constitution.** In this case the court held that the centre can impose president rule on the state which functions in contravention to the idea of secularism, which is basic feature of the constitution.

Pair 4 is incorrect: In the **M.Nagaraj case (2006)**, the Supreme court reiterated the **principle of equality** as one of the basic features of the constitution. **Free and Fair elections** were included as basic feature of the constitution by the Supreme court in the **Indira Gandhi case (1975).**

Source: <https://blog.forumias.com/basic-structure-doctrine/>

Q.49) Which of the following elements were introduced for the first time in British India by the Government of India Act, 1919?

1. Dyarchy at provinces
2. Bicameralism
3. Communal representation in legislature
4. Association of Indians with the Viceroy's executive council
5. Allowing Provincial Councils to determine on women's voting rights

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1, 3 and 4 only
- c) 1, 2 and 5 only
- d) 2, 3, 4 and 5 only

Ans) c

Exp) Option c is the correct answer.

Government of India Act of 1919 was enacted on the basis of declaration of 1917 by the British Government. This declaration stated, for the first time, that the objective of British government was the gradual introduction of responsible Government in India.

Statement 1 is correct. Government of India Act, 1919 relaxed the central control over the provinces by demarcating and separating the central and provincial subjects. It **introduced the dual system of governance known as dyarchy** for the provinces of British India. It further **divided the provincial subjects** into two parts- **transferred and reserved.** The transferred subjects were to be administered by the Governor with the aid of Ministers responsible to the legislative council. The reserved subjects, on the other hand, were to be administered by the Governor and his executive council without being responsible to the legislative council.

Statement 2 is correct. The Government of India Act of 1919 introduced, **for the first time, bicameralism and direct elections** in the country. Thus, the Indian legislative council was replaced by a bicameral

legislature consisting of an Upper House (Council of State) and a Lower House (Legislative Assembly). The **majority of members** of both the Houses were **chosen by direct election**.

Statement 3 is incorrect. Indian Councils Act of 1909 (and not Government of India Act, 1919) introduced a system of communal representation for Muslims by accepting the concept of 'separate electorate'. Under this, the Muslim members were to be elected only by Muslim voters. Thus, the Act 'legalised communalism' and Lord Minto came to be known as the Father of Communal Electorate. The Government of India Act of 1919 **extended** this principle of communal representation by providing **separate electorates for Sikhs, Indian Christians, Anglo-Indians and Europeans**.

Statement 4 is incorrect. Indian Councils Act of 1909 (and not Government of India Act, 1919) provided (for the first time) for the association of Indians with the executive councils of the Viceroy and Governors. Satyendra Prasad Sinha became the first Indian to join the Viceroy's executive council. He was appointed as the Law Member. The Government of India Act, 1919 required that the three of the six members of the Viceroy's executive Council (other than the Commander-in-Chief) were to be Indian.

Statement 5 is correct. The Government of India Act, 1919 granted franchise to a limited number of people on the basis of property, tax or education. Though they were not granted voting rights, nor the right to stand in elections, the Government of India Act 1919 **allowed Provincial Councils to determine if women could vote**, provided they met stringent property, income, or educational levels. Between 1919 and 1929, **all of the British Provinces, as well as most of the Princely states granted women the right to vote** and, in some cases, allowed them to stand in local elections. Thus, it **provided for limited voting rights to women**.
Knowledge Base:

Other features of Government of India Act, 1919:

- 1) It created a new office of the High Commissioner for India in London.
- 2) It provided for the establishment of a public service commission. Hence, a **Central Public Service Commission was set up** in 1926 for recruiting civil servants.
- 3) It **separated, for the first time, provincial budgets from the Central budget** and authorised the provincial legislatures to enact their budgets.
- 4) It provided for the **appointment of a statutory commission** to inquire into and report on its working after ten years of its coming into force.

Source: Indian Polity, M. Laxmikanth, Chapter-1

https://dbpedia.org/page/Women's_suffrage_in_India

Q.50) Consider the following countries:

1. Kazakhstan
2. Uzbekistan
3. Tajikistan
4. Afghanistan
5. Kyrgyzstan
6. Iran

Which of the above share land borders with Turkmenistan?

- a) 1, 2, 3 and 4 only
- b) 2, 3, 4 and 5 only
- c) 1, 2, 4 and 6 only
- d) 1, 3, 5 and 6 only

Ans) c

Exp) Option c is the correct answer.

Turkmenistan is a country in Central Asia bordered by the Caspian Sea and largely covered by the Karakum Desert. It is the **second largest state in Central Asia**, after Kazakhstan, and is the southernmost of the region's five republics.

Bordering Nations:

- 1) **Kazakhstan in the northwest**
- 2) **Uzbekistan in the north and east**
- 3) **Afghanistan in the southeast**
- 4) **Iran in the south**
- 5) **the Caspian Sea to the west.**



Image Source: <https://www.britannica.com/place/Turkmenistan>

Source: <https://www.britannica.com/place/Turkmenistan>

Q.1) Consider the following statements regarding the ‘procedure established by law’ and the ‘due process of law’:

1. The term ‘procedure established by law’ has been explicitly mentioned in the Indian Constitution.
2. The term ‘due process of law’ refers to the laws made by the judiciary instead of legislature.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Procedure established by law- Under this, **judiciary will only assess whether or not proper procedure has been followed in enacting and implementing the laws.** It upholds the law only if confirms to the procedure established. It does not go into the legislative wisdom or rationale behind the formation of a specific law even if the law goes against the principles of the natural justice.

Due process of law- Under this, judiciary **will not only check the procedural validity, but also assess whether or not a law is fair, just and reasonable.** For example, court can reject a law if it violates the principles of natural justice.

Statement 1 is correct: The term ‘procedure established by law’ **has been explicitly mentioned** in the India Constitution. **Article 21** states that no person shall be deprived of his life or personal liberty except according to the procedure established by law.

Statement 2 is incorrect: The term ‘due process of law’ **does not imply that laws are made/ are to be made by the judiciary.** In other words, the judiciary does not overtake the legislative function of the Parliament. It simply **tests the laws on the grounds of reasonableness and fairness.** It aims to protect the individuals **against the arbitrary actions of both the executive and the legislature.**

Source: <https://blog.forumias.com/difference-between-procedure-established-by-law-and-due-process-of-law/>

Q.2) Consider the following principle:

“If a legislature lacks the jurisdiction to enact laws on a specific subject directly, it cannot make laws on it indirectly”. This doctrine is applied when legislature tries to accomplish something in a backhanded way when it can't do it straightforwardly.

Which of the following judicial doctrines best describes the principle mentioned above?

- a) Doctrine of Ancillary Powers
- b) Doctrine of Severability
- c) Doctrine of Eclipse
- d) Doctrine of Colorable Legislation

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: **The Doctrine of Ancillary Powers** implies that the power to legislate on a topic of legislation carries with it the **power to legislate on an ancillary matter** which can be said to be reasonably included in the power given. (State of Rajasthan vs. G. Chawla). In other words, it **deals with the power to legislate on the supplemental or incidental matters.**

Option b is incorrect: The **Doctrine of Severability** aims to protect fundamental rights of the citizens. It states that the whole law or act would not be held invalid, but **only those provisions will be held invalid**

which are inconsistent with the fundamental rights. In other words, it aims to separate valid and invalid parts of a law.

Option c is incorrect: This **Doctrine of Eclipse** is applied when any Act/ law violates the fundamental rights. Using this doctrine, the court **makes the entire law unenforceable**. The law is held as **void ab initio**, that is, no legal effect from the inception. Since, the **Fundamental Rights overshadows the law**, it is called as the doctrine of eclipse.

Option d is correct: The Doctrine of Colourable Legislation is used **when the legislature does not possess powers to make law on a particular subject but indirectly makes one**. It is also called as ‘**Fraud on the Constitution**’. The doctrine traces its origin to the Latin maxim that, “**whatever legislature cannot do directly, it cannot do indirectly**”. The doctrine was used by the Supreme Court of India in the case of **Gajapati Narayan Deo v. The State of Orissa** to decide legality of the statute enacted.

Source: <https://www.legalserviceindia.com/legal/article-9554-doctrine-of-colourable-legislation.html>

Q.3) With reference to the meaning of State as defined under Article 12 of the Constitution, consider the following statements:

1. A private body working as an instrument of the State falls within the meaning of the ‘State’.
2. Urban Improvement Trusts are included in the definition of state.
3. All Private Universities are included as elements of state under Article 12.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Article 12 defines the term ‘State’ for the purpose of different provisions concerning the fundamental rights. **Statement 1 is correct:** The Supreme Court has held that the term ‘state’ is wide enough to include all authorities created by the Constitution or statute on whom powers are conferred by law. Thus, even a **private body** or an agency working **as an instrument of the State falls** within the meaning of the ‘State’ **under Article 12**. It is **not necessary** that the statutory authority should be engaged in performing governmental or sovereign function.

Statement 2 is correct: All local authorities, that is, municipalities, panchayats, district boards, improvement trusts, etc. are included under the definition of state under Article 12. According to List II of VII Schedule ‘**local government**’ includes a municipal corporation, **urban improvement trust, district boards, mining settlement authorities** and other local authorities for the purpose of local self-government or village administration.

Statement 3 is incorrect: In Article 12, the **expression ‘other authorities’ is used** after mentioning the Government, Parliament of India, the Government and Legislature of each of the State and all local authorities. The Madras High Court has held that ‘other authorities’ could **only mean authorities exercising governmental or sovereign functions**. It **cannot include** persons, natural or juristic, such as, **a university unless it is ‘maintained by the State’**.

Source: Indian Polity, M. Laxmikanth, 6th Edition, Chapter-7, Fundamental Rights

<http://www.legalservicesindia.com/article/1914/State-Under-Indian-Constitution.html>

Q.4) Consider the following statements regarding the 86th Constitutional Amendment Act, 2002:

1. It made the 'Right to Education' a Fundamental Right under Part III of the Constitution.
2. It made 'education for all children between the age of six to fourteen years' a Directive Principle under Part IV of the Constitution.
3. It added a new fundamental duty under Article 51A of the Constitution.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 1 and 3 only
- c) 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

The 86th Constitutional Amendment Act is described as a 'dawn of the second revolution in the chapter of the citizens' rights. This is because, it makes 'education for all' a fundamental right. The constitution already contained the provision for free and compulsory education under the Directive Principle of State Policy (DPSP). But as a DPSP, it remained unenforceable till date.

Statement 1 is correct: The 86th Amendment Act of 2002 made '**Right to Education**' a **fundamental right**. This made '**elementary education**' a fundamental right. It inserted a new **Article 21-A** under Part III of the Constitution which provides that the "State shall provide **free and compulsory education to all children of the age of six to fourteen years**". Hence, it granted right to education as a fundamental right for the children between 6-14 years of age.

Statement 2 is incorrect: The 86th Amendment Act also changed the subject matter of Directive Principle of State Policy (DPSP) under Article 45, to provide that "the State shall endeavor to provide early childhood care and education for all children until they complete the age of six years". Hence, the DPSP pertains to **only children up to 6 years of age**.

Statement 3 is correct: The 86th Amendment Act also added a new Fundamental Duty under Article 51A. It states that "it shall be the duty of every citizen of India who is a parent or a guardian to provide opportunities for education to his child or ward between the age of 6-14 years". Hence, the given statement is correct.

Source: M. Laxmikanth (Page 7.12, Chapter 7)

Q.5) With reference to 'Nidhi Companies', consider the following statements:

1. Nidhi companies are a type of non-bank lenders that raise funds exclusively from their members.
2. They are regulated by the Department of Company Affairs (DCA) for operational matters and deployment of funds.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

This question is based on the article "**Central Government amends Nidhi Rules, 2014 to safeguard the interest of general public**" published in **PIB** on **20th April 2022**. The government of India has released the Nidhi (amendment) Rules, 2022. This amendment brings changes to the Nidhi Rules, 2014 to safeguard the interest of the general public.

Statement 1 is correct: Nidhi companies are a type of **non-bank lenders** that **raise funds exclusively from their members** and give loans to them to improve their governance and protect the public interest. To become a Nidhi company, the entity has to first register as a public limited company which has more disclosure requirements than a private limited company. Nidhi companies allow only individual members and it **cannot give loans to companies**.

Statement 2 is correct: Nidhi Companies are regulated by the **Reserve Bank of India (RBI)** for deposit-taking and by the **Department of Company Affairs (DCA)** for **operational matters and deployment of funds**.

Source: Central Government amends Nidhi Rules, 2014 to safeguard the interest of general public -
ForumIAS Blog

Q.6) Consider the following statements regarding the 'preventive detention' law in India:

1. The Constitution of India prescribes that the preventive detention cannot exceed beyond the maximum period of three months under any circumstance.
 2. Both the Centre and the States can enact laws on the matters regarding preventive detention.
 3. Article 22 provides protection against preventive detention only to Indian citizens and not to foreigners.
- Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Preventive detention means detention of a person without trial. It is meant to prevent a person from committing any crime. In other words, the person not committed any crime yet, but the authorities anticipate him to be a threat on the law and order.

Article 22 of Part III (Fundamental Rights) contains certain provisions regarding protections to the persons arrested or detained under the preventive detention law.

Statement 1 is incorrect: The Constitution provides that detention of a person cannot exceed three months. However, in certain circumstances it can be extended **if an Advisory Board reports sufficient cause** for its extension. The Board consists of the Judges of a High Court. Article 22 also empowers Parliament to prescribe maximum detention period for more than three months without obtaining the approval of the Advisory Board. Through the 44th Constitutional Amendment Act, period of detention without obtaining the opinion of the Advisory Board has been reduced from three to two months. But this provision is yet to come into force.

Statement 2 is correct: Both the Centre and the States can make laws on the preventive detention. The Centre has exclusive rights to make a law of preventive detention on the matters connected with **defense, foreign affairs and the security of India**. On the matters pertaining to **security of the State, maintenance of public order and maintenance of supplies and services essential to the community, both the Centre and the States can concurrently enact laws**.

Statement 3 is incorrect: Protection under Article 22 regarding preventive detention is applicable to both- Indian citizens and the foreigners. The protection includes:

- 1) The detention of a person cannot exceed three months unless an advisory board reports sufficient cause for extended detention.
- 2) The grounds of detention should be communicated to the detenu. However, the facts considered to be against the public interest need not be disclosed.
- 3) The detenu should be afforded an opportunity to make a representation against the detention order.

Source: M. Laxmikanth (Page 7.13, Chapter 7)

Q.7) Article 24 of the Indian Constitution provides for the prohibition of employment of children in hazardous activities. In this context, consider the following statements regarding measures taken to curb child labor in India:

1. The Child Labor (Prohibition and Regulation) Amendment Act, 2016 prohibits the employment of children below 14 years in all occupations.
2. PENCIL portal has been launched by Ministry of Social Justice and Empowerment to register complaints against the child and adolescent labor.
3. INDUS project was launched jointly by Government of India and World Bank to fight against the child labor.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Article 24 prohibits the employment of children **below the age of 14 years in any factory, mines or other hazardous activities**. It should be noted that **this Article does not prohibit employment of children in any harmless and innocent work**.

Statement 1 is correct: The Child Labor (Prohibition and Regulation) Amendment Act, 2016 **prohibits employment of children below 14 years of age in all occupations**. Hence, the given statement is correct. In addition to this, the Act also prohibits employment of adolescents (14-18 years of age) in certain hazardous occupations and process.

Statement 2 is incorrect: PENCIL portal has been launched with the objective to register the complaints against the child labor. It stands for Platform for Effective Enforcement for No Child Labor (PENCIL). This platform also has a framework for child tracking system at the level of District Nodal Officer. **The platform has been launched by the Ministry of Labor and Employment** (and not by the Ministry of Social Justice and Empowerment).

Statement 3 is incorrect: INDUS stands for India-US Child Labor Project. This project has been **jointly funded by the India and US governments**. The project has been completed and is **considered successful as an estimated 103,152 child and adolescent workers withdrawn and rehabilitated against set target of 80,000 children**. Hence, it was not collaboration with the World Bank.

Source: <https://labour.gov.in/childlabour/indus>

<https://pencil.gov.in/>

Q.8) The Article 26 of the Indian Constitution deals with the 'Freedom to Manage Religious Affairs'. Under this Article, **the Constitution:**

1. Guarantees right to every religious denomination to establish and maintain institutions for religious purposes.
2. Defines 'religious denomination' as a collection of individuals having common spiritual beliefs organized under a distinctive name.
3. Provides that the rights under Article 26 are subjected to the fulfillment of other Fundamental Rights.
4. Prescribes 'morality' and 'health' as reasonable grounds to impose restrictions on these rights.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 1 and 4 only
- c) 1, 3 and 4 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Article 26 of the Indian Constitution deals with **Freedom to Manage Religious Affairs**. This Fundamental Right deals with the rights of religious denomination or any of its sections. Individual's rights to the Freedom of Religion are dealt with in Article 25.

Statement 1 is correct: Article 26 grants following rights to the religious denominations (or its sections):

- 1) Right to **establish and maintain** institutions for **religious and charitable purposes**.
- 2) Right to **manage its own affairs** in the matters of religion.
- 3) Right to **own or acquire immovable property**.
- 4) Right to **administer such property** in accordance with the law.

Statement 2 is incorrect: The **Constitution does NOT define the term religious denomination**. It has been defined by the **Supreme Court of India in the Shirur Mutt case**. A religious denomination should satisfy the following conditions.

- 1) It should be a **collection of individuals** sharing beliefs for their spiritual well-being.
- 2) It should have a **common organization**.
- 3) It should be designated by a **distinctive name**.

Statement 3 is incorrect: The **rights granted under Article 26 are not subjected to any other Fundamental Rights**. In other words, they are not subordinate to other Fundamental Rights. Hence, the given statement is incorrect. It should be noted that **rights under Article 25** (Freedom of Conscience, Free Profession, Practice and Propagation) are subject to other provisions relating to the Fundamental Rights.

Statement 4 is correct: The Constitution explicitly provides that the rights granted under Article 26 are subject to **public order, health and morality**. Hence, the given statement is correct.

Source: https://lexforti.com/legal-news/religious-denominations-state-control-over-temples/#What_is_a_Religious_Denomination

<https://indiankanoon.org/doc/1858991/>

M. Laxmikanth (Page 7.15, Chapter 7)

Q.9) With reference to the Article 28 of the Indian Constitution, in which of the following institutions providing religious instruction is absolutely prohibited?

1. Institutions recognized by the state
2. Institutions receiving aid from the state
3. Institutions administered by state and established under any endowment.
4. Institutions wholly funded by the state.

Choose the correct answer from the options given below:

- a) 4 only
- b) 2 and 4 only
- c) 1 and 4 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

Article 28 deals with the Freedom of Attending Religious Instruction.

Statement 1 is incorrect: Religious instruction can be allowed in an institute recognized by the State. However, it shall be **allowed on a voluntary basis and nobody can be forced to participate** in the religious activities or instructions in that institute. If a person is minor, religious instruction cannot be allowed without the **permission of his/ her guardian**.

Statement 2 is incorrect: Religious instruction can be allowed in an institute receiving aid from the State. However, it shall be **allowed on a voluntary basis and nobody can be forced to participate** in the religious activities or instructions in that institute. If a person is minor, religious instruction cannot be allowed without the permission of his/ her guardian.

Statement 3 is incorrect: Religious instruction is **not prohibited in the institute which is administered by the State but has been established under any endowment or trust** which requires that religious instruction shall be imparted in such institution.

Statement 4 is correct: There is **absolute prohibition in imparting religious instruction** in the institutes wholly maintained out of the State Funds. Hence, the given statement is correct.

Source: M Laxmikanth (Page 7.16, Chapter 7); <https://indiankanoon.org/doc/1734560/>

Q.10) Under the Indian constitution, concentration of wealth violates

- The Right to equality
- The Directive principles of state policy
- The right to freedom
- The concept of welfare

Ans) b

Exp) Option b is the correct answer.

The concentration of wealth violates the Directive principles of state policy. Under Article 39 of the Constitution of India, the State shall direct its policy towards securing that the **operation of the economic system does not result in the concentration of wealth** and means of production to the common detriment.

Other principles of policy to be followed by the State under the Article 39 are:

- The citizens, men and women equally, have the right to an adequate means to livelihood;
- The ownership and control of the material resources of the community are so distributed as best to subserve the common good;
- There is equal pay for equal work for both men and women;
- The health and strength of workers, men and women, and the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength;
- Children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material abandonment.

Source) UPSC CSE 2021

Q.11) Consider the following statements regarding Article 32 of the Indian Constitution, which has been referred to as 'heart' and 'soul' of the Indian Constitution by Dr. BR Ambedkar:

- It declares the 'Right to Constitutional Remedies' as a part of the 'basic structure'.
- It gives exclusive powers to the Supreme Court to issue writs for the enforcement of Fundamental Rights.
- The concept of writs under this Article is borrowed from the English Common Law.
- The rights granted under this Article are absolute and cannot be suspended under any circumstances.

Which of the statements given above is/ are **incorrect**?

- a) 1, 2 and 4 only
- b) 2, 3 and 4 only
- c) 1 and 4 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

Article 32 provides for the 'Right to the Constitutional Remedies' for the enforcement of fundamental rights. Thus, an aggrieved citizen for violation of his Fundamental Rights can approach Supreme Court of India. Dr. Ambedkar has called this Article as the 'heart and soul' of the Indian Constitution.

Statement 1 is incorrect: The **Constitution of India neither defines nor mentions the term 'basic structure'**. It is a judicial innovation and first time used in India in the Keshavananda Bharti Case (1973). **In Delhi Judicial Services Association Case (1991)** and various other judgments, Supreme Court has held judicial review under Article 32 as a basic structure of the Indian constitution. **Hence, Article 32 forms the basic structure, but it is not declared in the Constitution itself.**

Statement 2 incorrect: The Article does not empower Supreme Court with the exclusive jurisdiction over issuing writs. As per this Article, **Parliament can empower any other Courts to issue directions, orders and writs of all kinds.** However, the Parliament cannot take away the writ jurisdiction from the Supreme Court.

Statement 3 correct: Writ jurisdiction in India has been **borrowed from the English Common Law.** They are called as **'prerogative writs' in England.** The Courts use these writs under extraordinary circumstances to uphold the rights and liberties of the people.

Statement 4 is incorrect: As per Article 32, the right to move Supreme Court cannot be suspended unless otherwise stated in the Constitution. **Article 359 states that President can suspend the right to move any courts (including the Supreme Court) for the enforcement of Fundamental Rights during National Emergency.** Hence, rights under Article 32 are not absolute and can be suspended.

Source: M. Laxmikanth (Page 7.18, Chapter 7)

Q.12) Which one of the following legislations in India directly implements the directive mentioned in Article 47 under Part IV of Indian Constitution?

- a) Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), 2005
- b) National Food Security Act, 2013
- c) Right to Education Act (RTE), 2006
- d) Child Labour (Prohibition and Regulation) Act, 1986

Ans) b

Exp) Option b is the correct answer.

Article 47 of The Constitution of India is one of the Directive Principles which directs the State to **raise the level of nutrition and the standard of living and to improve public health** as among its primary duties and, in particular, the State shall endeavor to bring about prohibition of intoxicating drinks and drugs which are injurious to health.

National Food Security Act, 2013: As passed by the Parliament, Government has notified the National Food Security Act, 2013 on 10th September, 2013 with the objective to **provide for food and nutritional security in human life cycle approach**, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity. Thus, this act implements the directive mentioned in Article 47 under Part IV of Indian Constitution.

Option a is incorrect: Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), 2005 fulfils the **Article 41 of the DPSP (Directive Principle of State Policy)** of the Indian Constitution. Article 41 aims to secure work, education and public assistance rights for persons in cases of unemployment, old age, sickness, disablement, and undeserved want.

Option c is incorrect: Part IV of Indian Constitution, Article 45 and Article 39 (f) of DPSP, had a provision for state funded as well as equitable and accessible education.

Option d is incorrect: Article 24 of Fundamental Right provides for Prohibition of employment of children in factories, etc. Child Labour (Prohibition and Regulation) Act, 1986 reaffirms this right under Indian Constitution.

Source: Laxmikanth

Q.13) Consider the following pairs pertaining to the different types of writs and their corresponding features:

Writ	Features/ Scope
1. Habeas Corpus	It can be issued even against private individuals.
2. Mandamus	It can be issued to transfer a pending case to the writ issuing Court.
3. Certiorari	It can be issued against public official for performing an official duty.
4. Quo Warranto	It can only be requested by an aggrieved person.

How many pair(s) mentioned above is/ are correctly matched?

- Only 1 pair
- Only 2 pairs
- Only 3 pairs
- All 4 pairs

Ans) a

Exp) Option a is the correct answer.

Article 32 and Article 226 empowers Supreme Court and High Courts respectively to issue writs. The Supreme Court can issue writs only on the matters pertaining to the Fundamental Rights, whereas, High Courts can also issue writs for enforcement of other statutory rights (in addition to the Fundamental Rights).

Pair 1 is correct: The writ of Habeas Corpus **can be issued even against the private individuals**. The literal meaning of habeas corpus is 'to have the body of'. This is issued against any public and private individual who has detained another person, except when the:

- Detention is lawful i.e., a person has been detained as per the procedure established by the law
- Proceeding is for contempt of any court or legislature
- Detention by a competent court
- Detention is outside the court's jurisdiction.

Only this writ can be issued against the private individuals.

Pair 2 is incorrect: Certiorari, and not Mandamus, is issued to transfer a pending case from the lower court to a higher court. Mandamus means 'we command'. Through this writ, the Court asks an official to perform his **official duty**. It can be issued against a public official, public body, corporation, inferior court, tribunal and government. It cannot be issued against private individuals, department with no statutory

backing, discretionary duty, enforcing contractual duty, President, Governors and Chief Justice of High Court acting in judicial capacity.

Pair 3 is incorrect: As stated above, mandamus is issued to public official directing him to perform his official duty. Certiorari is issued to transfer a pending case from a lower court to the higher writ issuing court. It is issued on the grounds of excess or lack of jurisdiction or error of law. It can be issued against courts, tribunals, quasi-judicial authorities and other administrative authorities.

Pair 4 is incorrect: Writ of **Quo warranto can be sought or requested by any interested person and not necessarily by an aggrieved person.** The writ can be issued only in case of a substantive public office of a permanent character created by the statute or the constitution. **It prevents illegal usurpation of the public office.** It is to be noted that this writ cannot be issued against a ministerial or a private office.

Source: M. Laxmikanth (Page 7.19, Chapter 7)

Q.14) With reference to the 'Lok Adalats', consider the following statements:

1. They are statutory bodies formed under The Arbitration and Conciliation Act of 1996.
2. The award given by Lok Adalat is final and binding on all parties with no appeal before any court of law.
3. The role of Lok Adalat is of statutory conciliation only and do not have any judicial role.
4. Small and nominal amount of court fee is payable when a matter is filed in a Lok Adalat.

Which of the statements given above is/are correctly matched?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Lok Adalat was created as an **alternative dispute resolution mechanism** used in India to resolve disputes/grievances outside courts. It is a forum where cases pending on panchayat, or at a pre-litigation stage in a court of law, are settled.

Statement 1 is incorrect: Lok Adalats have been given **statutory status under the Legal Services Authorities Act, 1987.** Section 22 B of The Legal Services Authorities Act 1987 provides for the establishment of Permanent Lok Adalats (PLA) for exercising jurisdiction in respect of one or more public utility services (PUS).

Statement 2 is correct: Under the NALSA Act, the award (decision) made by the Lok Adalats is deemed to be a **decree of a civil court and is final and binding on all parties and no appeal against such an award lies before any court of law.** If the parties are not satisfied with the award of the Lok Adalat though there is no provision for an appeal against such an award, but they are free to initiate litigation by approaching the court of appropriate jurisdiction by filing a case by following the required procedure, in exercise of their right to litigate.

Statement 3 is correct: The persons deciding the cases in the Lok Adalats are called the Members of the Lok Adalats, they have the **role of statutory conciliators only and do not have any judicial role;** therefore, they can only persuade the parties to come to a conclusion for settling the dispute outside the court in the Lok Adalat and shall not pressurize or coerce any of the parties to compromise or settle cases or matters either directly or indirectly.

Statement 4 is incorrect: There is **no court fee payable when a matter is filed in a Lok Adalat.** If a matter pending in the court of law is referred to the Lok Adalat and is settled subsequently, the court fee originally paid in the court on the complaints/petition is also refunded back to the parties.

Source: Lok Adalat - National Legal Services Authority! (nalsa.gov.in)

Laxmikanth.

Q.15) With reference to 'Climate Change', which one of the following statements correctly describe the term 'Social Cost of Carbon' (SCC)?

- It is the total impact of excess carbon emission on the vulnerable sections including tribals, women and children.
- It sets a price on carbon by defining a tax rate on greenhouse gas emissions.
- It is the marginal cost of the impacts on environment caused by emitting one extra tonne of greenhouse gas.
- It is the process of buying and selling permits and credits that allow the permit holder to emit carbon dioxide.

Ans) c

Exp) Option c is the correct answer.

This question is based on the article **“Explained: Can climate change be solved by pricing carbon?” published in Indian Express** on 24th April 2022.

The **social cost of carbon (SCC)** is the **marginal cost of the impacts caused by emitting one extra tone of greenhouse gas** (carbon dioxide equivalent) at any point in time, **inclusive of 'non-market' impacts on the environment and human health.**

The social cost of carbon is a calculation focused on taking corrective measures on climate change which can be deemed a form of market failure

When we emit a ton of carbon dioxide in the atmosphere, it sticks around for a while and causes warming, affecting human outcomes. The social cost of carbon is the total damage that an additional ton of CO₂ has on outcomes, converted into monetary term.

Option b is incorrect.

A carbon tax directly sets a price on carbon by defining a tax rate on greenhouse gas emissions or – more commonly – on the carbon content of fossil fuel.

Option d is incorrect.

Carbon trading is the process of buying and selling permits and credits that allow the permit holder to emit carbon dioxide.

Source: Professors explain the social cost of carbon | Stanford News

Social Cost of Carbon: What Is It, and Why Do We Need to Calculate It? (columbia.edu)

Q.16) Which of the following Directives is/are outside the Part IV of the Indian Constitution?

- Provision of adequate facilities for instruction in the mother-tongue at the primary stage of education.
- Protection and improvement of the environment
- Promotion and development of Hindi language
- Distribution of material resources of the community in an equitable manner.
- Consideration of the claims of the members of the Scheduled Tribes in the making of appointments to public services.

Select the correct answer using the codes given below:

- 1 and 5 only
- 2, 3 and 4 only
- 1, 3 and 5 only
- 1, 3, 4 and 5 only

Ans) c

Exp) Option c is the correct answer.

There are certain directives that are **outside of Part IV of the Indian Constitution**. They are also important principles that guide the governance of the country. There are some other Directives contained in other Parts of the Constitution. They are:

Option 1 is correct: Instruction in mother tongue is outside Part IV of the Constitution. It states that- It shall be the endeavour of every state and every local authority within the state to **provide adequate facilities for instruction in the mother-tongue at the primary stage of education to children** belonging to linguistic minority groups (Article 350-A in Part XVII).

Option 2 is incorrect: Protection and improvement of the environment and to safeguard forests and wild life in the country is a **part of DPSP under Article 48A**.

Option 3 is correct: Development of the Hindi Language is outside Part IV of the Constitution. It shall be the duty of the Union to **promote the spread of the Hindi language and to develop it so that it may serve as a medium of expression** for all the elements of the composite culture of India (Article 351 in Part XVII).

Option 4 is incorrect: Similarly, distribution of material resources of the community for the common good in an equitable manner is also a **part of DPSP under Article 39**.

Option 5 is correct: Claims of SCs and STs to Services is outside Part IV of the Constitution. The claims of the **members of the Scheduled Castes and the Scheduled Tribes shall be taken into consideration**, consistently with the maintenance of efficiency of administration, in the **making of appointments to services** and posts in connection with the affairs of the Union or a State (Article 335 in Part XVI).

Source: Laxmikanth

Q.17) Which among the following constitutional rights are **not** contained in the Part III (Fundamental Rights) of the Indian Constitution?

1. Universal Adult Suffrage
2. Levying of tax only by the authority of law
3. Right to Free Legal Aid
4. Right against Untouchability

Choose the correct answer from the codes given below:

- a) 1 only
- b) 1, 2 and 3 only
- c) 1 and 2 only
- d) 2, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

All Fundamental Rights are the Constitutional Rights, but vice versa need not be true. Despite, Fundamental Rights being part of the Constitutional Rights, there are differences between them. Amendment of Fundamental Rights requires special majority, but amendment to constitutional rights may not require a special majority. Besides, Supreme Court can issue writ only for the enforcement of the Fundamental rights.

Option 1 is correct: Article 326 in part XV deals with adult suffrage. It states that elections to the House of the People and to the Legislative Assemblies of States to be on the basis of adult suffrage.

Option 2 is correct: Article 265 in Part XII states that no tax can be levied except by the authority of law. In other words, levying of any tax must be based on a statute and it can only be imposed by an authority authorized under as such under a statute.

Option 3 is incorrect: Right to free legal aid falls under Article 21 of the Part III of the Constitution which provides Right to Life and Personal Liberty. In **Menaka Gandhi vs. Union of India case (1978)**, the scope of Article 21 has been expanded by the Supreme Court to include various rights such as right to free legal aid,

right to fair trial, right to privacy, etc. In **M.H. Hoskot vs. State of Maharashtra**, Supreme Court reaffirmed that the right to free legal aid is the duty of the government and is implicit aspect of Article 21.

Option 4 is incorrect: Right against Untouchability has been provided under **Article 17 of Part III of the Indian Constitution**. Article 17 aims to abolish untouchability and forbid its practice in any form. The word 'untouchability' has not been defined under the Constitution.

Knowledge Base: Other important rights outside Part III of the Constitution are:

- 1) **Article 300-A (Part XII):** No person shall be deprived of his property except by the authority of the law.
- 2) **Article 301 (Part XIII):** Trade, commerce and intercourse throughout the territory of India shall be free.

Source: <https://www.legalserviceindia.com/legal/article-1235-article-21-of-the-constitution-of-india-right-to-life-and-personal-liberty.html>

M. Laxmikanth

Q.18) The understanding of 'reasonableness' of a restriction on Fundamental Rights helps Courts in deciding the constitutionality of a statute. In this context, consider the following statements:

1. The Supreme Court has laid down a general framework for the 'reasonableness test', which is applicable to all cases.
2. Prevailing social values can be considered while deciding 'reasonableness' of a law.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: In the **State of Madras vs. VG Row**, it has been held that the test of reasonableness **should be applied in the context of each statute concerned and no abstract standard or general pattern of reasonableness can be laid down as applicable to all the cases**. In other words, the 'reasonableness' has to be decided on a case-to-case basis. There are precedents, but the **Court has not laid down a general framework** for the reasonableness test applicable to all the cases. It will vary with **changing conditions, values of human life, social philosophy of the Constitution and so on**.

Statement 2 is correct: In the **State of UP vs. Kaushailiya**, Supreme Court has held that prevailing social values and social needs which are intended to be satisfied by the restrictions also help in deciding 'reasonableness' of a law. These social needs and values should be, therefore, kept in mind while deciding the constitutionality. Hence the given statement is correct.

Knowledge Base: **Other considerations in deciding reasonableness can be:**

- 1) The Directive Principles of State Policy (DPSP)
- 2) Arbitrariness and excessiveness of the restrictions
- 3) Balance between restrictions imposed and the social control envisaged.
- 4) Proximity between restrictions and the objects to be achieved.

Source: <https://indiankanoon.org/doc/554839/>

<http://www.goforthelaw.com/articles/fromlawstu/article48.htm>

https://main.sci.gov.in/supremecourt/2020/23817/23817_2020_34_1501_31829_Judgement_06-Dec-2021.pdf

Q.19) In 1999, the Verma Committee was appointed. What was the purpose of the committee?

- To examine the political and administrative structure in the district for the purpose of district planning.
- To look into the issue of Centre-State relations.
- To look into the issues of linguistic and religious minorities in India.
- To identify the existence of legal provisions for implementation of the fundamental duties.

Ans) d

Exp) Option d is the correct answer.

The **Verma Committee** on Fundamental Duties of the Citizens (1999) **identified the existence of legal provisions for the implementation of some of the fundamental duties.**

Option a is incorrect. Thungon Committee: In 1988, a sub-committee of the Consultative Committee of Parliament was constituted under the chairmanship of P.K. Thungon to examine the political and administrative structure in the district for the purpose of district planning.

Option b is incorrect. Sarkaria Commission: was set up in 1983 by the central government to examine the central-state relationship.

Option c is incorrect. Ranganath Misra Commission: National Commission for Religious and Linguistic Minorities, also called as Ranganath Misra Commission was constituted by Government of India in 2004 to look into various issues related to Linguistic and Religious minorities in India.

Source: M Laxmikanth, chapter-Fundamental duties

Q.20) Consider the following pairs:

Initiatives	Objectives
1. Hydrogen Valley Platform	Optimization of hydrogen demand and supply by onsite generation and utilization
2. Three Material Acceleration Platforms	To develop Methanol-based energy resources with viable technological solutions
3. Integrated Biorefineries Mission	Replacing fossil-based fuels with bio-based alternatives.

Which of the pairs given above is/are correctly matched?

- 1 only
- 2 only
- 2 and 3 only
- 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

This question is based on the article “**Union Minister launches a major futuristic PPP mode initiative for ‘Clean Energy’ with the full launch of “Mission Integrated Biorefineries” to accelerate Clean Energy solutions through Public-Private Alliance**” published in **PIB** on **4th April 2022**.

Pair 1 is correctly matched: Hydrogen Valley Platform is a global initiative to optimize the **hydrogen demand and supply by onsite generation and utilization**. The platform utilizes renewable resources

effectively, and water in excess areas with geographical identity. The Hydrogen Valleys Platform has been prepared for the Fuel Cells and Hydrogen 2 Joint Undertaking. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme, Hydrogen Europe and Hydrogen Europe Research.

Pair 2 is incorrectly matched: Three Material Acceleration Platforms were launched at the MI Annual Gathering session on 4th April 2022, where new Energy Innovation Collaborations were announced. It has been **set up by the Department of Science and Technology (DST)**. These platforms would **leverage emerging capabilities in next-generation computing, artificial intelligence (AI) and machine learning and robotics** to accelerate the pace of **materials discovery** up to 10 times faster.

Pair 3 is correctly matched: Integrated Biorefineries Mission is **co-Led by India and Netherlands** It aims to **develop and demonstrate innovative solutions to accelerate the commercialization of integrated biorefineries**, with a target of **replacing 10% of fossil-based fuels, chemicals and materials with bio-based alternatives by 2030**.

The mission is a **PPP (Public Private Participation) mode initiative** that unites countries, international organizations, the corporate sector, academic institutions and civil society to accelerate innovation for renewable fuels, chemicals, and materials for a low-carbon future.

Source: <https://blog.forumias.com/union-minister-launches-a-major-futuristic-ppp-mode-initiative-for-clean-energy-with-the-full-launch-of-mission-integrated-biorefineries-to-accelerate-clean-energy-solutions-thro/>

<https://www.fch.europa.eu/news/launch-hydrogen-valley-platform>

Integrated Clean Energy Material Acceleration Platform launched & funding opportunity announced for Hydrogen Valley Platform at MI meeting | Department Of Science & Technology (dst.gov.in)

Q.21) According to the Article 20 of Part III of the Indian Constitution, which of the following statements is/ are correct regarding the right of 'protection against self-incrimination'?

1. It provides that a person accused of any offence shall not be compelled to be a witness against himself.
2. It extends only to the civil proceedings and not to the criminal proceedings.
3. It provides that an accused cannot be compelled to submit his thumb impression or blood specimen.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

Article 20 of the Part III of the Indian Constitution deals with 'Protection in Respect of Conviction for Offences'. This right is available to **citizens, foreigner and the legal persons** like company etc. The Article covers three rights-

- 1) **No ex-post-facto law:** According to this, a person shall be convicted of any offence, except for the violation of a law in force during the commission of an offence. It also provides that no penalty can be levied which is greater than the one prescribed under the law in force at the time of commission of the offence
- 2) **No double jeopardy:** A person cannot be punished/ penalized more than once for the same offence
- 3) **No self-incrimination:** A person cannot be compelled to be a witness against himself.

Statement 1 is correct: According to Article 20, No person accused of any offence shall be compelled to be a witness against himself. According to the 180th Report of the Law Commission, the right to silence has

various facets. One of them is the right of the accused against self-incrimination. In other words, an individual cannot be compelled to be a witness in his own case by giving oral or the written evidence. The Code of Criminal Procedure also gives defendant the right to remain silent.

Statement 2 is incorrect: The right against self-incrimination is available **only during criminal proceedings and not during civil proceedings or the proceedings which are not criminal in nature.** In America, the constitutional provision applies alike to both the civil and the criminal proceedings.

Statement 3 is incorrect: The protection under Article 20 does not extend to:

- 1) Compulsory production of material objects
- 2) Compulsion to give blood specimen, thumb impression, specimen signature.
- 3) Compulsory exhibition of body

Source: M Laxmikanth (Pg. 7.11, Chapter 7)

<https://indiankanoon.org/doc/10337889/#:~:text=In%20India%2C%20the%20right%20against,be%20follwowed%20in%20criminal%20cases.>

Q.22) Consider the following statements regarding the writ jurisdiction of the Supreme Court and the High Court:

1. High Courts have more discretion in the exercise of writ jurisdiction as compared to the Supreme Court.
2. Supreme Court has wider territorial jurisdiction than the High Courts for the purpose of issuing writs.
3. Parliament cannot curtail the writ jurisdiction of Supreme Court, but it can curtail the writ jurisdiction of the High Courts.

Which of the statements given above is/ are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 3 only

Ans) a

Exp) Option a is the correct answer.

There are major differences in the writ jurisdiction of the Supreme Court and the High Court. **Supreme Court (under Article 32) can issue writs only on the matters regarding the violation of the Fundamental rights. On the other hand, High Courts have wider jurisdiction (under Article 226) as they can issue writs also on the matters other than the Fundamental Rights.**

Statement 1 is correct: Article 32 in itself is a Fundamental right. Hence, the remedies (i.e., writs) contained in the Article 32 may not be refused by the Supreme Court. However, remedy under Article 226 is discretionary. So High Court can refuse to exercise its writ jurisdiction. Hence, a High Court has more discretion regarding issuance of writs.

Statement 2 is correct: The Supreme Court is empowered to issue writs against a person/ government **throughout the territory of India.** On the other hand, High Court can issue writs against a person/ government within its territorial jurisdiction. It can issue writ outside its territorial jurisdiction only if the cause of action arises in its territorial jurisdiction. Hence, Supreme Court has wider territorial jurisdiction.

Statement 3 is incorrect: In the **Chandra Kumar Case (1997)**, the Supreme Court held that the writ jurisdiction of both the High Courts and the Supreme Court is a **part of basic structure** of the constitution. Hence, it cannot be taken away even by the way of the Constitutional Amendment. In other words, **Parliament cannot curtail the writ jurisdiction either of the High Court or the Supreme Court.**

Source: M. Laxmikanth (Page 7.19, Chapter 7)

Q.23) With reference to ‘Part IV of Indian Constitution’, consider the following statements:

1. Constitution has classified Directive Principles into three broad categories, viz, socialistic, Gandhian and liberal–intellectual.
2. All the public authorities in India should keep in mind the ideals of directives while formulating policies and enacting laws.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The Directive Principles of State Policy are enumerated in Part IV of the Constitution from Articles 36 to 51. They impose a moral obligation on the state authorities for their application, but the real force behind them is political, that is, public opinion.

Statement 1 is incorrect: The Constitution **does not contain any classification of Directive Principles**. However, on the basis of their content and direction, they can be classified into three broad categories, viz, socialistic, Gandhian and liberal–intellectual.

Statement 2 is correct: The phrase ‘Directive Principles of State Policy’ denotes the **ideals that the State should keep in mind while formulating policies and enacting laws**. These are the constitutional instructions or recommendations to the State in legislative, executive and administrative matters. According to Article 36, the term ‘State’ in Part IV has the same meaning as in Part III dealing with Fundamental Rights. Therefore, it **includes the legislative and executive organs of the central and state governments, all local authorities and all other public authorities in the country**.

Source: Laxmikanth

Q.24) With reference to ‘Fundamental Rights and Directive Principles of State Policy (DPSP)’, consider the following statements:

1. DPSPs promote the welfare of the community, whereas Fundamental Rights promote the welfare of the individuals, in general.
2. Unlike in case of violation of Fundamental rights, the courts cannot declare a law violative of any of the DPSPs as unconstitutional.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Fundamental Rights (FRs) and Directive Principles of State Policy (DPSPs) are two important provisions in the Constitution of India. The Directive Principles along with the Fundamental Rights contain the philosophy of the Constitution and is the soul of the Constitution.

Statement 1 is correct: DPSPs are guidelines and principles that are aimed at promoting the **social, economic, and political welfare of the community as a whole**. They include provisions for ensuring adequate means of livelihood, equal pay for equal work, protection of the environment, provision of education and health services, and promotion of social justice.

On the other hand, **FRs are guaranteed to every individual by the Constitution of India**. They include the right to equality, right to freedom, right against exploitation, right to freedom of religion, cultural and educational rights, and right to constitutional remedies. The aim of FRs is to protect the individual liberties and freedoms of the citizens and to ensure social, economic, and political justice.

Statement 2 is correct: If a law violates any of the FRs, a citizen can approach the courts and seek redressal for the violation. The courts **have the power of judicial review and can declare any law or executive action that violates FRs as unconstitutional and void**.

However, if a law violates any of the DPSPs, a citizen cannot approach the courts and seek redressal for the violation. DPSPs are non-justiciable in nature, which means that they are not enforceable by the courts. **The courts cannot declare a law violative of any of the DPSPs as unconstitutional and void.**

Source: Laxmikanth

Q.25) Consider the following statements:

Statement 1: Polar Sea ice is important for maintaining global temperatures on our planet.

Statement 2: Polar Sea ice reflects majority of the sunlight that strikes its surface.

Which one of the following is correct in respect of the above statements?

- Both Statement 1 and Statement 2 are correct and Statement 2 is the correct explanation of Statement 1.
- Both Statement 1 and Statement 2 are correct but Statement 2 is not the correct explanation of Statement 1.
- Statement 1 is correct but Statement 2 is not correct.
- Statement 1 is not correct but Statement 2 is correct.

Ans) a

Exp) Option a is the correct answer.

This question is based on the article **“Explained | Arctic Sea ice peaked on February 25 this year. Why Is that important?”** published in **The Hindu** on **1st April 2022**. Arctic sea ice has appeared to have hit its annual maximum extent on February 25, 2022, after growing through the fall and winter. According to National Snow and Ice Data Centre (NSIDC), this year’s Arctic Sea ice wintertime extent is the 10th-lowest in the satellite record.

Statements 1 and 2 are correct: Polar Sea ice is important to **maintain global temperatures**. This is because **sea ice reflects 80% of the sunlight that strikes its surface**, thus keeping the polar regions cool.

Once the ice melts in the summer, the dark surface of the ocean is exposed, and it absorbs 90% of the sunlight that falls on it. This causes a rise in the temperature of the polar region.

Moreover, small temperature changes at the poles can lead to greater warming over time, making polar regions extremely sensitive to climate change. The loss of sea ice can accelerate global warming.

Source: <https://blog.forumias.com/explained-arctic-sea-ice-peaked-on-february-25-this-year-why-is-that-important/>

How does the temperature of ocean water vary? : Ocean Exploration Facts: NOAA Office of Ocean Exploration and Research

Q.26) Consider the following statements regarding the Fundamental Duties enshrined in the Constitution of India:

- The Fundamental Duties in the Indian Constitution are inspired from the Irish Constitution.
- In 1976, the Balwant Rai Mehta committee recommended for the inclusion of Fundamental Duties.
- The Fundamental Duties were added by 42nd and 86th Constitutional Amendment Acts.
- Fundamental Duties are applicable to both Indian Citizens and Non-Citizens.

Which of the statements given above is/are correct?

- a) 3 only
- b) 1 and 4 only
- c) 3 and 4 only
- d) 1, 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect: The Indian Constitution is inspired from the Constitution of Countries like UK, USSR, USA, Ireland, Japan, Canada, etc. The Part IV A of Indian Constitution that is the **Fundamental Duties** are **inspired** from the Constitution of **Soviet Union (USSR)**.

Statement 2 is incorrect and Statement 3 is correct: Originally, the Indian Constitution did not contain **Fundamental Duties**. In 1976, the Congress Party setup the **Sardar Swaran Singh committee to make recommendation about Fundamental Duties**. The recommendation of the committee was accepted by the Government and **42nd Constitutional Amendment Act added a new part, namely Part IV A (Fundamental Duties) to the Constitution of India**. It added 10 Fundamental Duties. The 86th Constitutional Amendment Act of 2002 added one more fundamental duty.

Statement 4 is incorrect: Unlike some of the **Fundamental Rights** that are **applicable** to all persons whether **Citizens or Foreigners**, **The Fundamental Duties** are confined **only to Citizens of India**.

Source: Chapter 9: Fundamental Duties of Indian Polity by M. Laxmikant

Q.27) With reference to 'Co-operative Societies in India', consider the following statements:

1. The subject of Co-operative Societies falls under concurrent list in Seventh Schedule of Indian Constitution.
2. The Constitution directs the state to promote voluntary formation and autonomous functioning of co-operative societies.
3. Right to form co-operative societies a fundamental right under Constitution of India.
4. Recently, Supreme Court of India has declared the entire Part IXB of Indian constitution as unconstitutional.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 4 only
- c) 2 and 3 only
- d) 1, 2 and 4 only

Ans) c

Exp) Option c is the correct answer.

Recently, Supreme Court in a 2:1 majority verdict upheld the validity of the 97th constitutional amendment but struck down a part inserted by it which relates to the Constitution and working of cooperative societies.

Statement 1 is incorrect: The subject of cooperative societies **fell in the state list under the Seventh Schedule of Indian Constitution** and "belongs wholly and exclusively to the State legislatures to legislate upon".

Statement 2 is correct: The 97th Amendment Act of 2011 added a new Directive Principle relating to co-operative societies. It requires the state to **promote voluntary formation, autonomous functioning, democratic control and professional management of co-operative societies (Article 43B)**.

Statement 3 is correct: The 97th Constitutional Amendment Act of 2011 gave a constitutional status and protection to co-operative societies. In this context, it made the following three changes in the constitution:

- 1) It made the right to **form co-operative societies a fundamental right** (Article 19).
- 2) It included a new Directive Principle of State Policy on promotion of co-operative societies (Article 43-B2).
- 3) It added a new Part IX-B in the Constitution which is entitled “The Co-operative Societies” (Articles 243-ZH to 243-ZT)

Statement 4 is incorrect: Supreme Court struck down **only a part inserted by 97th Constitutional Amendment** which relates to the Constitution and working of cooperative societies. Now, **Part IXB of the Constitution of India is operative only in so far as it concerns multi-State co-operative societies** both within the various States and in the Union territories of India. SC had said if the Centre wanted to achieve **uniformity (the reason for Amendment, as quoted by Centre)** then the only way available was to take the **recourse under Article 252 of the Constitution** which deals with the power of Parliament to legislate for two or more states by consent.

Source: Laxmikanth

<https://www.mea.gov.in/Images/pdf1/S7.pdf>

<https://indianexpress.com/article/india/sc-majority-verdict-quashes-part-of-97th-constitutional-amendment-on-cooperatives-7413479/>

Q.28) Even though ‘Directive Principles of State Policy’ (DPSP) are fundamental in the governance of the country, they are non-justiciable in nature. Which one of the following is the most appropriate reason for this?

- a) To avoid conflict between the Fundamental Rights and DPSP
- b) No sufficient financial resources at the time of enactment of the constitution
- c) To ensure that the judiciary does not encroach upon the domain of the legislative branch.
- d) Inadequate development of democratic culture in the country

Ans) b

Exp) Option b is the correct answer.

Article 37 of Indian Constitution defines the nature of DPSP. It states that **DPSPs are not enforceable in the courts but at the same time, it defines DPSPs as a duty of the state**. Moreover, the same Article defines DPSPs as principles that are **fundamental to the governance of any country**. It shows the relevance and significance of DPSPs in the constitution and in the governance of a country.

DPSPs were not made justiciable because **India did not have sufficient financial resources**. Moreover, its backwardness and diversity were also a hindrance in implementing these principles at that time. At the time of the drafting of the Constitution, India was a newly born independent state and was struggling with other issues and making DPSPs justiciable would have put India in great difficulty.

Source: Laxmikanth

<https://blog.ipleaders.in/directive-principles-of-state-policy-dpsp-under-the-indian-constitution/>

Q.29) Consider the following statements with reference to the Fundamental rights of Indian Constitution and the Bill of Rights of the USA:

1. While taking away the rights of an individual, Indian constitution follows the due process of law while America follows the process established by law.
2. Unlike the Indian Constitution, the Right to freedom of press is explicitly mentioned in the Bill of Rights.
3. Unlike Indian Constitution, the Right to Property is a fundamental right in the Bill of Rights.

Which of the above given statement is/are correct?

- a) 2 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

The Americans adopted the Bill of Rights into their Constitution in the form of 10 amendments in 1791. While, Part III of the Indian Constitution contains the Fundamental Rights (Articles 12–35).

Statement 1 is incorrect: In the United States, no person's life and liberty can be deprived without following the due process of law, **in India on the other hand the life and personal liberty can be taken away only according to the procedure established by law. Only in case of depriving someone of Right to Life, the Supreme Court introduced the concept of due process of law in Maneka Gandhi Case.**

Statement 2 is correct: In the United States, the **First Amendment** guarantees **press freedom**, whereas in India, it is implicit in **Article 19(1)(a)**, which guarantees **freedom of speech and expression**.

Statement 3 is correct: The **right to property** was **abolished** as a fundamental right in India in 1978, but it is **still a fundamental right in the United States** and as per the bill of rights, no property can be taken away without just compensation.

Source: Introduction to the Constitution of India by D D Basu

Q.30) Regarding the Kodavas, an ethnolinguistic group, consider the following statements:

1. They are only found in the hilly regions of Nagaland and Arunachal Pradesh.
2. In India, the group is permitted to carry firearms without a license.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Researchers have published a book titled “A Place Apart: Poems from Kodagu”. It is a bilingual edition of 21 poems by Appanna. This book will help spread awareness about the endangered Kodava takke language.

Statement 1 is incorrect: Kodavas are an **ethnolinguistic group** from the region of **Kodagu (Coorg) in Karnataka**. They speak the Kodava language. Kodavas are **traditionally land-owning agriculturists** and patrilineal, with martial customs.

Statement 2 is correct: Kodavas worship **ancestors and weapons**. They are among the **ones in India permitted to carry firearms without a license**. As per the exemption, continuing from the British-era rule, the people from the hill district of Kodagu can possess pistols, revolvers and double-barrelled shotguns without a licence.

Knowledge Base: Kodava takke belongs to the Dravidian group of languages. This language doesn't have a script. But over the years, it has found its way into a written form through Kannada.

The language has been classified as an Endangered Language by UNESCO as it is spoken by just 166,187 people according to the 2001 census.

Several factors have contributed to the Kodava language becoming endangered. For instance, with the coming of the Haleri dynasty, Kannada became the language of communication, the language of the court

and state. The language took a further back seat when the British introduced Kannada as the medium of education.

Source: <https://blog.forumias.com/endangered-kodava-takke-gets-a-new-lease-of-life/>

Karnataka HC upholds Arms Act exemption for Kodavas: History behind community's right to own guns without a licence (firstpost.com)

Q.31) Consider the following actions:

1. The policy of non-alignment and Panchsheel followed by India in international relations.
2. Enactment of old age pension schemes by state governments.
3. Supreme Court restraining governmental actions in order to protect privacy of an individual.
4. Central legislation to protect the monuments, places and objects of national importance.

Which among the actions given above can be regarded as the implementation of 'Directive Principles of State Policy' in India?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 2 and 4 only
- d) 1 and 4 only

Ans) c

Exp) Option c is the correct answer.

The Directive Principles of State Policy are enumerated in Part IV of the Constitution from Articles 36 to 51. They require legislation for their implementation. They are not automatically enforced.

Statement 1 is correct: The policy of non-alignment and Panchsheel followed by India in international relations is a policy decision and reflects the principle of promoting international peace and cooperation, which is one of the **DPSP under Article 51**.

Statement 2 is correct: Enactment of old age pension schemes by state governments **reflects the DPSP in Article 41**, which states that the State shall provide public assistance in certain cases (secure the right to work, to education and to public assistance in cases of unemployment, **old age, sickness and disablement**).

Statement 3 is incorrect: The Supreme Court restraining governmental actions in order to protect privacy of an individual **does not directly reflect any specific DPSP**. It reflects the Fundamental Right under Article 21 of Indian Constitution.

Statement 4 is correct: The Central legislation to protect the monuments, places and objects of national importance reflects the DPSP in Article 49, which states that the State shall protect monuments and places and objects of national importance.

Source: Laxmikanth

Q.32) Which of the following are the Liberal–Intellectual Principles under the Directive Principles of State Policy?

1. Securing for all citizens a uniform civil code throughout the country.
2. Promoting cottage industries on an individual or co-operation basis in rural areas.
3. Maintaining just and honorable relations between nations and promoting international peace.
4. Taking steps to secure the participation of workers in the management of industries.

Select the correct answer using the codes given below:

- a) 1 and 3 only
- b) 1, 2 and 4 only
- c) 2 and 4 only
- d) 2, 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

The Constitution **does not contain any classification of Directive Principles**. However, on the basis of their content and direction, they can be **classified into three broad categories, viz, socialistic, Gandhian and liberal-intellectual**.

Statement 1 and 3 are correct: Liberal-Intellectual Principles included in this category represent the **ideology of liberalism**. They direct the state:

- 1) To **secure for all citizens a uniform civil code throughout the country (Article 44)**.
- 2) To provide early childhood care and education for all children until they complete the age of six years⁹ (Article 45).
- 3) To organise agriculture and animal husbandry on modern and scientific lines (Article 48). 4. To protect and improve the environment and to safeguard forests and wild life¹⁰ (Article 48 A).
- 4) To protect monuments, places and objects of artistic or historic interest which are declared to be of national importance (Article 49).
- 5) To separate the judiciary from the executive in the public services of the State (Article 50).
- 6) To **promote international peace and security and maintain just and honourable relations between nations**; to foster respect for international law and treaty obligations, and to encourage settlement of international disputes by arbitration (Article 51)

Statement 2 is incorrect: Promotion of cottage industries on an individual or co-operation basis in rural areas are **based on Gandhian ideology**. They represent the programme of reconstruction enunciated by Gandhi during the national movement.

Statement 4 is incorrect: Taking steps to secure the participation of workers in the management of industries reflect the **ideology of socialism**. It lay down the framework of a democratic socialist state, aim at providing social and economic justice, and set the path towards welfare state.

Source: Laxmikanth

Q.33) Consider the following statements with reference to the amendability of Fundamental Rights in India:

1. Presently, the Parliament has unlimited power to amend the Fundamental Rights in India.
2. In the Golaknath Case (1971), the Supreme Court had held that the parliament does not have power to amend Fundamental Rights.
3. In the Minerva Mills Case, the Supreme Court held that fundamental rights can be amended to give effect to directive principles.

Which of the above given statements is/are correct?

- a) 2 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Article 368 in Part XX of the Constitution deals with the **power of parliament to amend the constitution** and its procedures. It states that the Parliament may amend the Constitution by way of **addition, variation or repeal of any provision** in accordance with the procedure laid down for the purpose.

Statement 1 is incorrect: The Supreme Court ruled first in **1951 in Shankari Prasad Case** that the power of the Parliament to amend the Constitution under Article 368 also includes the power to amend Fundamental Rights. The word 'law' in Article 13 includes only ordinary laws and not the constitutional amendment acts.

However later on it was ruled by the Supreme Court in the Kesavananda Bharati case (1973) that the Parliament cannot amend those provisions which form the 'basic structure' of the Constitution. Thus, the parliament does not have unlimited power to amend the constitution.

Statement 2 is correct: In the Golaknath v. State of Punjab, the Supreme Court held that parliamentary powers under Article 368 were not absolute and that the Parliament cannot abridge fundamental rights as they are included under Part III, giving them a transcendental position beyond the scope of the Parliament's functioning. It further stated that any amendment taking away, abridging upon or in contravention to a fundamental right conferred by Part III is unconstitutional, thus subjecting the Parliament's powers to limitations and judicial review.

Statement 3 is correct: As per the Minerva Mills Case, if amendments to fundamental rights are consistent with the basic structural theory, the Parliament may modify the Constitution without impairing that principle. And ideally both Directive Principles and Fundamental Rights should have a harmonious construction. It also held a law made under Article 31C would be protected only if it is made to implement directives in article 39b and 39 c and not any other DPSPs. The extension to all DPSPs was declared as unconstitutional and void by the SC. Thus, in cases of a conflict between Fundamental Rights and any Directive Principles, the former would take precedence.

Source: <https://www.legalserviceindia.com/legal/article-8385-analysing-amendability-of-fundamental-rights-under-article-368-of-the-constitution.html>
https://blog.ipleaders.in/the-amendment-of-the-constitution-article-368/#Amendment_of_Fundamental_Rights

Q.34) Consider the following statements with reference to the Article 19 of the Indian Constitution:

1. Right to Privacy is a fundamental right under the Article 19.
2. Rights of a foreigner provided under Article 19 can be invoked even if he is not present in India.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Article 19 of the Indian Constitution deals with the Right to Freedom of Speech and expression.

Statement 1 is incorrect: The Supreme Court described privacy and its importance in the landmark decision of **K.S. Puttaswamy v. Union of India in 2017** that - Right to Privacy is a fundamental and inalienable right and attaches to the person covering all information about that person and the choices that he/ she makes. **The right to privacy is protected as an intrinsic part of the right to life and personal liberty under Article 21** and as a part of the freedoms guaranteed by Part III of the Constitution.

Statement 2 is incorrect: As per the Gujrat High Court, **life and liberty under Article 19 and 21 of a foreigner cannot be invoked on his behalf when the individual himself is not in India.** Also, the rights under Article 19 are available only to the citizens of India and not to foreigners.

Source: <https://www.scobserver.in/cases/puttaswamy-v-union-of-india-fundamental-right-to-privacy-case-background/>

<https://thewire.in/law/article-19-21-fundamental-rights-supreme-court>

<https://www.livelaw.in/news-updates/life-and-liberty-of-a-foreigner-cannot-be-invoked-on-his-behalf-when-the-individual-himself-is-not-in-india-gujarat-high-court-218659>

Q.35) Consider the following statements:

1. Pollen grains are male biological entities involved in sexual reproduction process in flowers.
2. Pollen enters the thoracic regions of the respiratory tract leading to poor quality of life for patients.
3. Rise in global temperature is responsible for increase in the pollen-induced respiratory allergies.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

This question is based on the article “**Indian scientists propose multi-sectoral strategies for the prevention and control of pollen allergy**” published in PIB on 31st March 2022. Indian scientists have recommended several measures for the prevention and control of pollen allergy.

Statement 1 is correct: Pollen grains are **microscopic structures, which bear androecium – a male reproductive organ of a flower**. The interior section of pollen grain contains cytoplasm along with the tube cell, which converts into a pollen tube and the generative cell releases the sperm nuclei. They are male biological entities produced by higher plant cells that are essential for sexual reproduction.

Pollen themselves are immobile and dispersion is aided by agents such as water, insects, birds and wind. Hence, they are considered as aero planktons (floating in the air) surrounding human beings.

Statement 2 is incorrect: Pollen Allergy is considered a major public health problem that causes morbidity and subsequently affects a patient’s quality of life. Pollen **due to their large size cannot enter the thoracic regions of the respiratory tract** but can affect the nasopharyngeal mucous membrane. In India, about 20-30% of the population suffers from allergic rhinitis/hay fever and approximately 15% develop asthma.

Statement 3 is correct: There are many factors responsible for the increase of pollen allergens in the atmosphere such as:

- 1) **Climate change and increase in global temperature** in the atmosphere have a significant impact on plant life-cycle events (photosynthesis and plant growth) and their physiological parameters (such as pollen production, morphology and pollen season).
- 2) Magnitude and concentration of pollen is the **change in meteorological conditions** and geographic distribution
- 3) **Rapid unplanned urbanization with high vehicular emissions** was reported to be linked with rising incidences of pollen-induced respiratory allergies.

Source: 9 PM Daily Current Affairs Brief – April 1st, 2022 -ForumIAS Blog

Q.36) Consider the following statements:

1. Article 31A provides for the compensation in case of acquisition of property by the State.
2. Article 31B does not provide protection from Judicial review while Article 31A provides the same.
3. Article 31C seeks to facilitate the implementation of Article 39(b) and Article 39(c).

Which of the above given statements is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

After the deletion of the Right to property from article 31, later on Article 31 A, B and C were added to the Indian Constitution. The **First Amendment Act, 1951 inserted Articles 31A and 31B** to the Constitution. **Article 31C was inserted in the Constitution by 25th Amendment Act, 1971.**

Statement 1 is correct: Article 31A saves five categories of laws from being challenged and invalidated on the ground of contravention of the fundamental rights conferred by Article 14 and Article 19. It includes Acquisition of estates and related rights by the State, Taking over the management of properties by the State, Amalgamation of corporations, Extinguishment or modification of rights of directors or shareholders of corporations and Extinguishment or modification of mining leases. It **also provides the guaranteed right to compensation in case of acquisition or requisition of the private property by the state.**

Statement 2 is incorrect: Article 31B protects the acts and regulations included in the Ninth Schedule from being challenged and invalidated on the ground of contravention of any of the fundamental rights. **The scope of Article 31B is wider than Article 31A as it immunizes any law included in the Ninth Schedule from the Fundamental Rights (unlike article 31A that protects only five categories).** However, the Supreme Court in its judgement in the I.R. Coelho case (2007) ruled that even laws under the Ninth Schedule would be open to scrutiny if they violated Fundamental Rights or the basic structure of the Constitution.

Statement 3 is correct: Article 31C says that no law that seeks to implement socialistic directive principles specified in Articles 39 (b) and (c), shall be declared void on the grounds of contravention of the fundamental rights conferred by Article 14 or Article 19.

Source: Indian Polity by Laxmikanth – 6th Edition, Chapter- Fundamental Rights

Q.37) Consider the following statements with reference to the Martial Law and provisions of Emergency as found in Indian Constitution:

1. Martial law affects fundamental rights as well as the distribution of legislative powers between the Centre and the states.
2. Unlike National Emergency, Martial law can be imposed only on three grounds i.e., war, external aggression or armed rebellion.
3. The definition of 'martial law' has not been mentioned explicitly in the Constitution of India.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) option b is the correct answer.

Article 34 provides for the restrictions on fundamental rights while martial law is in force in any area within the territory of India.

Statement 1 is incorrect: Martial law affects only Fundamental Rights (FRs) while National Emergency affects not only Fundamental Rights but also Centre-state relations, distribution of revenues and legislative powers between Centre and states. It may extend the tenure of the Parliament.

Statement 2 is incorrect: Martial law is imposed to restore the breakdown of law and order due to any reason. While **National Emergency can be imposed only on three grounds**—war, external aggression and armed rebellion.

Statement 3 is correct: The concept of martial law has been borrowed from English Common Law. **The definition of 'martial law' has not been mentioned explicitly in the Constitution of India. However, the provision of martial law is implicit in Article 34.** Martial law literally means 'military rule'. It refers to a situation where military authorities run the civil administration as per their own rules and regulations. Ordinary law is not adhered when martial law is under operation.

Source: Indian Polity by Laxmikanth – 6th Edition, Chapter- Fundamental Rights

Q.38) Who among the following enjoy immunities as the exceptions to the Article 14 under the Indian Constitution?

1. The Governor
2. Sovereigns of foreign country
3. Members of Parliament
4. Members of Agencies of United Nations

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 1, 2 and 4 only
- c) 2 and 3 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Article 14 of the Indian Constitution deals with Equality before law.

Option 1 is correct: Article 361 of the Indian constitution affords an immunity to the President of India and the state Governors. Article 361 is an exception to Article 14 (Right to Equality) of the Indian Constitution. Among its key feature is that the President or the Governor is not answerable to any court for the exercise of the powers and duties of his office.

Option 2 is correct: As an exception to the Article 14, Foreign sovereigns (rulers), ambassadors, and diplomats are exempt from prosecution in both civil and criminal courts.

Option 3 is correct: Both Member of Parliaments and State legislatures enjoy immunity as an exception to Article 14. No member of Parliament shall be liable to any proceedings in any court in respect of anything said or any vote given by him in Parliament or any committee thereof. And. Similarly, no member of the Legislature of a state shall be liable to any proceedings in any court in respect of anything said or any vote given by him in the Legislature or any committee thereof.

Option 4 is correct: The member of the United Nations Organization and its agencies are protected under diplomatic immunity.

Source: Indian Polity by Laxmikanth – 6th Edition, Chapter- Fundamental Rights

Q.39) Article 15 provides that the State shall not discriminate against any citizen on certain grounds. In this context, which among the following cannot be considered as a violation to this general rule of non-discrimination?

1. Provisions made for the advancement of Socially and Educationally backward classes of citizens.
2. Special provision providing reservation of seats for women in local bodies.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Article 15 of the Indian Constitution prohibits discrimination on grounds only of religion, race, caste, sex, or place of birth. However, there are four exceptions to this general rule of non-discrimination.

Option 1 is correct: As per the Article 15 (4), the state is permitted to make any special provision for the advancement of any socially and educationally backward classes of citizens or for the scheduled castes

and scheduled tribes. For instance, public educational institutions may offer fee discounts or seat reservations. This provision was added by the first Amendment Act, of 1951.

Option 2 is correct: The state is permitted to make any special provision for women and children. For example, reservation of seats for women in local bodies or provision of free education for children.

Source: Indian Polity by Laxmikanth – 6th Edition, Chapter- Fundamental Rights

Q.40) With reference to India, consider the following statements:

1. When a prisoner makes out a sufficient case, parole cannot be denied to such prisoner because it becomes a matter of his/her right.

2. State Governments have their own 'Prisoner Release on Parole Rules'.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. Parole is a system of releasing a prisoner with suspension of the sentence. **Parole cannot be claimed as a matter of right.** Parole may be denied to a prisoner even when he makes out sufficient cause for release on parole.

Parole is to be granted only on a sufficient cause such as cases of severe illness or death of any member of the prisoner's family. The granting authority for parole is the deputy home secretary of the state government.

On the other hand, **Furlough is seen as a matter of right for a prisoner**, to be granted periodically irrespective of any reason. It is granted merely to enable the prisoner to retain family and social ties, and to counter the ill-effects of prolonged time spent in prison.

Both Parole and Furlough can be denied if the competent authority is of the opinion that releasing the inmate would not be in the interest of society.

Statement 2 is correct. State governments have their own Prisoner Release on Parole Rules. 'Prisons' is a State subject under the State List of the Seventh Schedule of the Constitution.

The management and administration of prisons fall exclusively in the domain of state governments and are governed by the Prisons Act, 1894, and the Prison Manuals of the respective state governments.

The Prisons Act further says that only states can make rules regarding the release of prisoners on furlough, parole and remission, as part of the correctional process in jail reforms.

Source) UPSC Pre 2021

Q.41) Consider the following statements with reference to the recent judgment of Supreme Court regarding 103rd constitutional amendment:

1. The 50% limit set for the reservations by the Indra Sawhney Judgment cannot be breached under any circumstance.
2. Reservations of Economically Weaker Sections (EWS) does not breach the basic structure of the constitution.
3. The Supreme Court has upheld the amendments made to Article 15 and 16, relating to Economically Weaker Sections, as constitutional.
4. The Supreme Court has allowed both vertical and horizontal reservation under the EWS quota.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 2 and 4 only
- d) 1, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Recently, the Supreme Court has upheld the validity of the 103rd Constitutional Amendment which provides 10% reservation for the Economically Weaker Sections (EWS) among forward castes in government jobs and colleges across India.

Statement 1 is incorrect: The Supreme Court has recently held that Reservations for EWS does not violate basic structure on account of 50% ceiling limit fixed by Mandal Commission because ceiling limit is not inflexible. **50% rule formed by the Supreme Court in the Indira Sawhney judgment in 1992 was “not inflexible”.** Further, it had applied only to SC/ST/SEBC/OBC communities and not the unreserved category.

Statement 2 is correct: As per the Supreme Court, the EWS quota **does not violate equality and the basic structure** of the constitution. Reservation in addition to existing reservation does not violate provisions of the Constitution. The reservation is an **instrument of affirmative action by the state for the inclusion of backward classes**. Basic structure can't be breached by enabling the state to **make provisions for education**. Reservation is instrumental not just for inclusion of socially and economically backward classes into the society **but also to class so disadvantaged**.

Statement 3 is correct: The 10% EWS quota was introduced under the 103rd Constitution (Amendment) Act, 2019 by amending Articles 15 and 16. It inserted Article 15 (6) and Article 16 (6). It is for economic reservation in jobs and admissions in educational institutes for Economically Weaker Sections (EWS). It was enacted to promote the welfare of the poor not covered by the 50% reservation policy for Scheduled Castes (SCs), Scheduled Tribes (STs) and Socially and Educationally Backward Classes (SEBC). It enables both the Centre and the States to provide reservations to the EWS of society.

Statement 4 is incorrect: EWS or Economically Weaker Section reservation is a type of vertical reservation. Vertical reservation is for the people belonging to the so-called backward classes. Horizontal reservation is for other disadvantaged groups like women, children, transgender people, people with disabilities, etc. within such groups.

Source: <https://www.livelaw.in/top-stories/supreme-court-10-reservation-for-ews-economically-weaker-section-in-education-public-employment-213437#:~:text=The%20Supreme%20Court%20Constitution%20Bench,in%20education%20and%20public%20employment>.

<https://www.thehindu.com/news/national/explained-how-has-the-ews-ruling-altered-reservations/article66129488.ece>

Q.42) Which of the following may be considered as a correct utility of Directive Principle of State Policy under Part IV of Constitution of India?

1. They enable the opposition to exercise influence over the operations of the government.
2. They act as a shield against any arbitrary action by the state.
3. They facilitate stability in domestic policies in spite of the changes of the party in power.
4. They can serve as a crucial test for the welfare policies of the government.

Select the correct answer using the codes given below:

- a) 1 and 3 only
- b) 2 and 4 only

- c) 1, 3 and 4 only
 d) 2, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

DPSP stands for **Directive Principles of State Policy**, which are a set of guidelines and principles laid down in the Indian Constitution to direct the state in matters of social, economic, and political importance. Although DPSP confer no legal rights and create no legal remedies, are significant and useful in the many ways.

Statement 1 is correct: Directive Principles of State Policy enable the **opposition to exercise influence and control over the operations of the government**. The Opposition can blame the ruling party on the ground that its activities are opposed to the Directives.

Statement 2 is incorrect: Fundamental Rights (and not Directive Principles of State Policy) act as a shield against any arbitrary action by the state or any other entity. In contrast, the **Directive Principles of State Policy are guidelines for the government to frame policies and laws for the welfare of the people**. These principles are not enforceable by the courts. While they provide a roadmap for the government to follow, they are not legally binding and cannot be enforced in a court of law.

Statement 3 is correct: Directive Principles of State Policy facilitate **stability and continuity in domestic and foreign policies in political, economic and social spheres** in spite of the changes of the party in power.

Statement 4 is correct: The DPSPs are a **set of guidelines and principles that the government is expected to keep in mind while making policies and laws**. Since the DPSPs are not legally enforceable, it is up to the government to voluntarily implement them. The implementation of these principles can provide an indication of the government's commitment towards ensuring the welfare of the people. Therefore, the implementation of **DPSPs can serve as a crucial test for the performance of the government in terms of its commitment towards the welfare of the people**.

Source: Laxmikanth

Q.43) Consider the following statements with reference to the Article 18 of the Indian Constitution:

1. It prohibits the hereditary titles of the nobility.
2. A foreigner residing in India cannot accept any title from any other foreign state without the consent of the President.
3. No restriction is placed by Article 18 on any citizen for accepting a present or emolument from any foreign state.

Which of the above given statements is/are correct?

- a) 1 and 2 only
 b) 2 and 3 only
 c) 1 only
 d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Article 18 abolishes titles and makes provisions in that regard. The hereditary titles of nobility like Maharaja, Raj Bahadur, Rai Bahadur, Rai Saheb, Dewan Bahadur, etc., which were conferred by colonial States are banned by Article 18 as these are against the principle of equal status of all.

Statement 2 is incorrect: According to article 18(c), a foreigner holding any office of profit or trust under State cannot accept any title from any foreign state without the consent of the President. No such bars for foreigners just residing in the country.

Statement 3 is incorrect: It provides that no citizen or foreigner holding any office of profit or trust under the State is to accept any present, emolument or office from or under any foreign State without the consent of the president.

Source: Indian Polity by Laxmikanth – 6th Edition, Chapter- Fundamental Rights

Q.44) Which among the following is not a fundamental right under the Right to Freedom of Speech and Expression under the Indian Constitution?

- a) Right to propagate others' views
- b) Right to telecast
- c) Right to remain silent
- d) Right to Strike

Ans) d

Exp) Option d is the correct answer.

Article 19 guarantees to all citizens the six rights under right to freedom and expression. These are:

- 1) Right to freedom of speech and expression.
- 2) Right to assemble peaceably and without arms.
- 3) Right to form associations or unions or co-operative societies.10a
- 4) Right to move freely throughout the territory of India.
- 5) Right to reside and settle in any part of the territory of India.
- 6) Right to practice any profession or to carry on any occupation, trade or business.

Originally, Article 19 contained seven rights. But, the right to acquire, hold and dispose of property was deleted by the 44th Amendment Act of 1978. These six rights are protected against only state action and not private individuals. Moreover, these rights are available only to the citizens and to shareholders of a company but not to foreigners or legal persons like companies or corporations, etc. **The State can impose 'reasonable' restrictions on the enjoyment of these six rights** only on the grounds mentioned in the Article 19 itself and not on any other grounds. **The Supreme Court has held that though there is Right to demonstration or picketing but not right to strike.**

Source: Indian Polity by Laxmikanth – 6th Edition, Chapter- Fundamental Rights

Q.45) What is the position of the right to property in India?

- a) Legal right available to citizens only
- b) Legal right available to any person
- c) Fundamental Right available to citizens only
- d) Neither Fundamental Right nor legal right

Ans) b

Exp) Option b is the correct answer.

The Right to Property is a **legal right available to any person**. **Article 300-A** provides that **no person shall be deprived of his property save by authority of law**.

Right to Property was a Fundamental Right in the original constitution under Article 31, which provided that the Constitution not only guarantees the right of private ownership but also the right to enjoy and dispose of property free from restrictions other than reasonable restriction. It is also mentioned that compensation would be paid to a person whose property has been taken for public purposes.

The **Constitution (Forty-fourth Amendment) Act, 1978 deleted the right to property from the Fundamental Rights**. The Amendment omitted Article 31 and Article 19 (1) (f) and inserted in their place Article 300-A.

Source) UPSC CSE 2021

Q.46) Which of the following Fundamental Duties are mentioned in Part IVA of the Indian Constitution?

1. To abide by the Constitution and respect its ideals and institutions.
2. To provide for early childhood care and education to children below the age of six years.
3. To protect and improve the natural environment including forests, lakes, rivers and wild life.
4. To promote international peace and security.
5. To uphold and protect the sovereignty, unity and integrity of India.
6. To develop scientific temper, humanism and the spirit of inquiry and reform.

Select the correct answer using the code given below.

- a) 1, 4, 5 and 6 only
- b) 2, 4 and 5 only
- c) 1, 3, 5 and 6 only
- d) 1, 2, 3, 5, and 6 only

Ans) c

Exp) Option c is the correct answer.

The Fundamental Duties are intended to serve as a constant reminder to every citizen that while the Constitution conferred on them certain Fundamental Rights specifically, it also requires citizens to observe certain basic norms of democratic conduct and democratic behaviour because rights and duties are correlative.

Statements 1, 3, 5 and 6 are correct.

The **Article 51(a)** of the Indian Constitution mentions the following **Fundamental Duties**:

- 1) **to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem.** The Fundamental Duty does not contain any duty regarding National Song. **Hence, statement 1 is correct.**
- 2) to cherish and follow the noble ideals which inspired our national struggle for freedom;
- 3) **to uphold and protect the sovereignty, unity and integrity of India; Hence, statement 5 is correct.**
- 4) to defend the country and render national service when called upon to do so;
- 5) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;
- 6) to value and preserve the rich heritage of our composite culture;
- 7) **to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures; Hence, statement 3 is correct.**
- 8) **to develop the scientific temper, humanism and the spirit of inquiry and reform; Hence, statement 6 is correct.**
- 9) to safeguard public property and to abjure violence;
- 10) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement;
- 11) to provide opportunities for education to his child or ward between the age of six and fourteen years.

Statements 2 and 4 are incorrect: Part IV of the Indian Constitution (Article 36–51) contains the **Directive Principles of State Policy (DPSP)**. DPSP consists of all the ideals which the State should follow and keep in mind while formulating policies and enacting laws for the country. **Following are some of DPSP mentioned in Indian Constitution.**

- 1) **Article 45** provides for **early childhood care and education to children below the age of six years.**
- 2) **Article 51** provides for the **establishment of international peace and security.**

Source: chapter 8 and 9 of Indian Polity by M. Laxmikant

Q.47) Consider the following statements regarding the significance of the Fundamental Duties:

1. They serve as warning against antinational and antisocial activities.
2. They promote a sense of discipline and commitment among the citizens.
3. They can be enforced by the Parliament through suitable legislation.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statements 1, 2, and 3 are correct: In spite of criticisms and opposition, the fundamental duties are considered significant from the following viewpoints:

- 1) **They serve as a warning against the antinational and antisocial activities** like burning the national flag, destroying public property and so on. **Hence, statement 1 is correct.**
- 2) They serve as a source of inspiration for the citizens and **promote a sense of discipline and commitment among them. Hence, statement 2 is correct.**
- 3) They create a feeling that the citizens are not mere spectators but active participants in the realization of national goals.
- 4) They help the courts in examining and determining the constitutional validity of a law
- 5) **The Parliament can provide for suitable legislation** to impose appropriate penalty or punishment for failure to fulfil any of them. **Hence, statement 3 is correct.**
- 6) They serve as a reminder to the citizens that while enjoying their rights, they should also be conscious of duties they owe to their country, their society and to their fellow citizens.

Source: Chapter 9: Fundamental Duties of Indian Polity by M. Laxmikant

Q.48) Article 29 of the Constitution provides for the 'Protection of Interest of Minorities'. In this context, consider the following statements:

1. This Article is applicable only to minorities.
2. Right to conserve the language under Article 29 includes the right to agitate for its protection.
3. It provides the right to establish and administer educational institutions to the minorities.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect: Article 29 provides for the 'Protection of Interest of Minorities'

- 1) **Article 29** provides that **any section of the citizens** residing in any part of India **having a distinct language, script or culture** of its own, **shall have the right to conserve the same.**
- 2) Further, **no citizen shall be denied admission into any educational institution maintained by the State or receiving aid out of State funds** on grounds only of religion, race, caste, or language

Article 29 grants protection to both religious minorities as well as linguistic minorities. However, **the Supreme Court held that the scope of this article is not necessarily restricted to minorities only**, as it is

commonly assumed to be. This is because of the use of words ‘section of citizens’ in the Article that include minorities as well as majority.

Statement 2 is correct: The Supreme Court also held that the right to conserve the Language under Article 29 includes the right to agitate for the protection of the language. Hence, the political speeches or promises made for the conservation of the language of a section of the citizens does not amount to corrupt practice under the Representation of the People Act, 1951.

Statement 3 is incorrect: Article 30 provides for the Right of Minorities to Establish and Administer Educational Institutions. It grants the following rights to minorities, whether religious or linguistic:

- 1) All minorities shall have the right to establish and administer educational institutions of their choice.
- 2) The compensation amount fixed by the State for the compulsory acquisition of any property of a minority educational institution shall not restrict or abrogate the right guaranteed to them.
- 3) In granting aid, the State shall not discriminate against any educational institution managed by a minority.

Thus, the protection under Article 30 is confined only to minorities (religious or linguistic) and does not extend to any section of citizens (as under Article 29).

Source: Chapter7: Fundamental Rights of Indian Polity by M.Laxmikant

Q.49) Which of the following rights are included in both Fundamental Rights of Indian constitution and Universal Declaration of Human Rights?

1. Right against arbitrary arrests
2. Prohibition of forced labour
3. Right to freely practice religion

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

India was a signatory to the Universal Declaration of Human Rights (1948). Thus, great precaution was taken so that Fundamental Rights as mentioned in Part 3 of Indian Constitution is concurrent with the provisions of the Universal Declaration of Human Rights.

Option 1 is correct: Article 21 of the Indian Constitution provides that **no person shall be deprived of his life or personal liberty** excepted according to procedure established by law. Similarly, as per Universal Declaration of Human Rights (UDHR), everyone has the right to life, liberty and security of person and **no one shall be subjected to arbitrary arrest**, detention or exile.

Option 2 is correct: Article 23 (1) of the Indian Constitution **prohibits traffic in human being and ‘Begar’ and other similar forms of forced labour** are prohibited and any contravention of this provision shall be an offence punishable in accordance with law. Similarly, UDHR provides that no one shall be held in slavery or servitude and the slave trade shall be prohibited in all forms.

Option 3 is correct: Article 25 (1) of the Indian Constitution provides that all persons are equally entitled to **freedom of conscience and right freely to profess, practice and propagate religion**, subject to public order, morality and health and to the provisions of this part. Similarly, according to provisions of UDHR, everyone has the right to freedom of thought, conscience and religion.

Source: https://www.worldwidejournals.com/global-journal-for-research-analysis-GJRA/fileview/April_2016_1464957217__58.pdf

Q.50) Which of the following statements **is/are incorrect** regarding minority educational institutions (MEIs)?

1. MEIs recognised but unaided by the State are not subjected to regulatory power of state.
2. All MEIs should provide 25% reserved seats to children belonging to economically backward section of society.
3. National Eligibility-cum-Entrance Test (NEET) does not apply to unaided minority educational institutions.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Article 30 of the Indian Constitution states the right of minorities to establish and administer educational institutions. It says: “All minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice.”

Statement 1 is incorrect. Any minority educational institutions (MEIs) which **seek recognition from the state but not aid from the state are subjected** to regulatory power of state with regard to syllabus prescription, academic standards, discipline, sanitation etc. MEIs which **neither seek recognition from the state nor aid from the state can manage their own affairs**, but general laws, labour law, taxation law, industrial law etc still apply to these institutions.

Statement 2 is incorrect. The RTE 2009 mandates all private schools to reserve 25 per cent seats to students from economically weaker sections at the entry level.

The Supreme Court in *Society for Un-Aided Private Schools of Rajasthan v. Union of India* held that the **Right of Children to Free and Compulsory Education Act, 2009 is not applicable** to unaided minority schools. Thus, **MEIs are not** required to provide admission to children in the age group of 6-14 years up to 25% of enrolment reserved for economically backward section of society.

Statement 3 is incorrect. The Supreme Court has ruled that the National Eligibility-cum-Entrance Test (**NEET**) for admissions to these courses **would also apply to minority (both aided and unaided)** and private educational institutions. The Constitution provides a limitation on the power of the State to interfere with life, liberty and rights however, the concept of limited government cannot be extended to a level when **it defeats national interest**. So, providing central examination in the form of NEET cannot be said to be violation of the rights under Articles 19(1)(g) and 30 of the Constitution.

Source: Laxmikanth 6th edition chapter- 7 page- 7.19

<https://rsrr.in/2021/07/17/supreme-court-of-india-on-minority-education-institutions-regarding-students-admission-and-medium-of-instruction/>

<https://www.tribuneindia.com/news/editorials/neet-and-clean-78712>

Q.1) Consider the following statements regarding the Central and State Information Commission:

1. The tenure of central and state information commissioners has now been reduced to 3 years.
2. The Salary of the Chief Information Commissioner at Centre will be equivalent to the salary paid to the Chief Election Commissioner.
3. The Chief Information Commissioner at Centre is eligible for reappointment.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 2 only
- d) 1, 2, and 3

Ans) a

Exp) Option a is the correct answer.

The Right to Information (Amendment) Act, 2019 amended the Right to Information Act, 2005. The RTI (Amendment) Act, 2019 made changes to the provision of Chief Information Commissioner (CIC) and Information Commissioners (ICs) at the central and state level.

Statement 1 is correct: The tenure of central and state information commissioners has now been **reduced from five to three years by the Central Government.**

Statement 2 is incorrect: According to Right to Information (Amendment) Act, 2019, the salary, allowances and other service conditions of the Chief Information Commissioner and an Information Commissioner shall be **such as prescribed by the Central Government.** But they cannot be varied to his disadvantage during service.

Earlier according to 2005 RTI Act states that the salary of the **CIC and ICs** (at the central level) will be equivalent to the **salary** paid to the **Chief Election Commissioner and Election Commissioners, respectively.**

Statement 3 is incorrect: The Commission consists of a Chief Information Commissioner and not more than ten Information Commissioners. **They are not eligible for reappointment.** Right to Information (Amendment) Act, 2019 has not made any changes with this regard.

Source: Chapter 57 and 58 of Indian Polity by M. Laxmikant.

<https://economictimes.indiatimes.com/news/politics-and-nation/centre-notifies-rti-rules-for-cic-ics-tenure-cut-to-3-years/articleshow/71769584.cms>

Q.2) Which of the following are not eligible for further employment under Central or State Government after their tenure is completed in their respective offices?

1. Election commissioners.
2. Chairman of Union Public Service Commission (UPSC).
3. Chairman of State Public Service Commission (SPSC).
4. Comptroller and Auditor General of India (CAG)
5. Attorney General of India.

Select the correct answer using the code given below:

- a) 2 and 4 only
- b) 1, 2, 3, and 4 only
- c) 3 and 5 only
- d) 1, 2, 3, 4, and 5

Ans) a

Exp) Option a is the correct answer.

Option 1 is incorrect: The Constitution has not debarred the retiring election commissioners from any further appointment by the government. Thus, they can take employment after their retirement.

Option 2 is correct: The chairman of UPSC (on ceasing to hold office) is not eligible.

for further employment in the Government of India or a state. A member of UPSC (on ceasing to hold office) is eligible for appointment as the chairman of UPSC or a State Public Service Commission (SPSC), but not for any other employment in the Government of India or a state.

Option 3 is incorrect: The chairman of a SPSC (on ceasing to hold office) is eligible.

for appointment as the chairman or a member of the UPSC or as the chairman of any other SPSC, but not for any other employment under the Government of India or a state. A member of a SPSC (on ceasing to hold office) is eligible for appointment as the chairman or a member of the UPSC, or as the chairman of that SPSC or any other SPSC, but not for any other employment under the Government of India or a state.

Option 4 is correct: CAG is the head of the Indian Audit and Accounts Department. S/ he is the guardian of the public purse and controls the entire financial system of the country at both the levels—the Centre and the state. S/he is not eligible for further office, either under the Government of India or of any state, after he ceases to hold his office.

Option 5 is incorrect: The Attorney General is not a fulltime counsel for the Government. He does not fall into the category of government servants. Further, he is not debarred from private legal practice. Also, not debarred from further employment.

Source: chapter 42, 43, 44, Ch 51, Ch 52 of Indian Polity by M. Laxmikant.

Q.3) Lokpal is a statutory body that performs the role of an “Ombudsman”. Consider the following statements with reference to Lokpal and Lokayuktas Act 2013:

1. Lokpal’s jurisdiction covers all categories of public servants of the Union including those belonging to Groups C and D.
2. Lokpal can Suo motu proceed against any public servant.
3. Under the act, any person can file an anonymous complaint against a public servant.
4. The Lokpal has the power of superintendence and direction over any central investigating agency.

Which of the statements given above are correct?

- a) 1, 2 and 4 only
- b) 1 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct. The Lokpal has jurisdiction to inquire into allegations of corruption against anyone who is or has been Prime Minister, or a Minister in the Union government, or a Member of Parliament, as well as officials of the Union government under Groups A, B, C and D.

Statement 2 and 3 are incorrect. The following are the drawbacks (shortcomings) of the Lokpal and Lokayuktas Act, 2013:

- 1) **Lokpal cannot Suo motu proceed against any public servant.**
- 2) Emphasis on form of complaint rather than substance.
- 3) Heavy punishment for false and frivolous complaints against public servants may deter complaints being filed to Lokpal.
- 4) **Anonymous complaints not allowed** -Can’t just make a complaint on plain paper and drop it in a box with supporting documents.
- 5) Legal assistance to public servant against whom complaint is filed.

- 6) Limitation period of 7 years to file complaints.
 7) Very non-transparent procedure for dealing with complaints against the PM

Statement 4 is correct. The Lokpal has the power of **superintendence and direction over any central investigating agency**, including the CBI, for cases referred to them by the Lokpal.

Source: Chapter 61: Lokpal of Indian Polity by M. Laxmikant.

Q.4) The Central Bureau of Investigation (CBI) is the main investigating agency of the Central Government. Consider the following statements with reference to CBI:

1. It is a statutory body established under Delhi Special Police Establishment Act, 1946.
2. The Director of CBI is provided with four-year tenure in office.
3. It acts as the “National Central Bureau” of Interpol in India.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The establishment of the CBI was recommended by the Santhanam Committee on Prevention of Corruption (1962–1964).

Statement 1 is incorrect. The Central Bureau of Investigation (CBI) was set up in 1963 by a resolution of the Ministry of Home Affairs. Later, it was transferred to the Ministry of Personnel and now it enjoys the status of an attached office. The CBI is **not a statutory body**. It derives its powers from the Delhi Special Police Establishment Act, 1946.

Statement 2 is incorrect. The Director of CBI has **been provided security of a two-year tenure in office by the CVC Act, 2003.**

Statement 3 is correct. The CBI **acts as the “National Central Bureau” of Interpol in India.** The Interpol Wing of the CBI coordinates requests for investigation-related activities originating from Indian law enforcement agencies and the member countries of the Interpol.

Knowledge Base: **Along with state police forces, the Special Police Establishment (SPE) (SPE is a division of CBI) enjoys concurrent powers of investigation and prosecution for offences** under the Delhi Police Establishment Act, 1946. However, to avoid duplication and overlapping of cases between these two agencies, the following administrative arrangements have been made:

- 1) The SPE shall take up such cases which are essentially and substantially concerned with the Central Government's affairs or employees, even if they also involve certain state government employees.
- 2) The state police force shall take up such cases which are substantially concerned with the state government's affairs or employees, even if they also involve certain Central Government employees.
- 3) The SPE shall also take up cases against employees of public undertakings or statutory bodies established and financed by the Central Government.

Source: Chapter 60: Central Bureau of Investigation (CBI) of Indian Polity by M. Laxmikant.

Q.5) The term ‘Event Horizon’ is sometimes seen in the news. It is a-

- a) point of no return around the black hole
- b) study of the solar and the lunar eclipses
- c) point in space where there is a mass with infinite density
- d) program to understand the origin and evolution of living organisms on the Earth

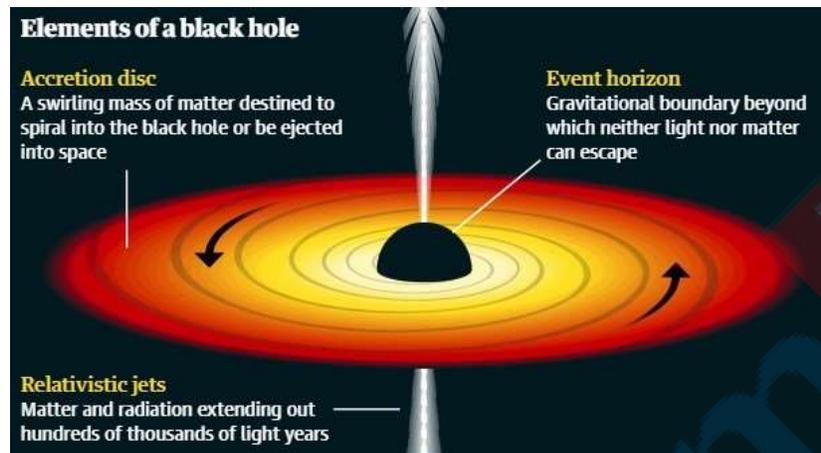
Ans) a

Exp) Option a is the correct answer.

The event horizon: It is the "point of no return" around the black hole. It is not a physical surface, but a sphere surrounding the black hole that marks where the escape velocity is equal to the speed of light. Not even light can escape the pull of the singularity once it crosses the event horizon.

That is why we cannot see the singularity at the heart of a black hole but only see points outside the event horizon.

Hence, all the physics happening within the black hole's event horizon is indeed blocked from the view of the observer.



Knowledge Base: A singularity is a point in space where there is a mass with infinite density. This would lead to a spacetime with an infinite curvature. Singularities are predicted to exist in black holes by Einstein's theory of general relativity, which is a theory that has done remarkably well at matching experimental results.

Source: <https://astronomy.swin.edu.au/cosmos/e/Event+Horizon>

Q.6) A State law made upon the subjects mentioned in the Concurrent list shall prevail over Union laws under which of the following circumstances?

1. If law made by the State legislature reserved for the consideration of the President and received his/her assent.
2. If the law made by the State legislature aims to give effect to the provisions of fundamental rights.
3. If the Supreme court of India directed states to make laws on the subject enumerated in the concurrent list.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The Constitution of India provides for a threefold distribution of legislative subjects between the Union and States - **Union list (100 subjects), State list (61 subjects) and Concurrent list (52 subjects)** enshrined in the **Seventh schedule** of the constitution.

Statement 1 is correct: The laws made by the State legislative assembly may prevail over laws made by the Parliament if such laws were **reserved for the consideration of the President and received the president's**

assent. However, it would **still be competent for Parliament to override such State law** by subsequent legislation.

Statement 2 is incorrect: There is **no such exemption** given to the state legislative assembly in matters related to concurrent list. If there is conflict over centre and state laws regarding matters enumerated in the concurrent list, then centre law shall prevail.

Statement 3 is incorrect: There is **no such exceptional condition for the state laws to prevail over union law** in case of inconsistency between them with respect to concurrent list. If there is inconsistency between union and state laws, then the **union law will prevail even if those state laws were made on the directions of the Supreme court.**

Source: DD Basu – State legislature (ordinance making power of Governor)

Laxmikanth – Centre State relations

Q.7) Executive power relating to the concurrent list normally remains with the state government instead of Union government, except in a few cases. With reference to this which of the following are those conditions/cases?

1. When a law on a concurrent subject is enacted by the Parliament, then it will be executed by the Centre only.
2. If the State Legislative Assembly authorises the Union government to exercise executive power over a law made on a concurrent subject.

Which of the statement/s given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Article 256 to 263 in part XI of the constitution deals with the **administrative (executive) relations** between centre and states. The **executive power** has been divided between centre and state on the lines of distribution of legislative power, while in **concurrent list some novelty** has been exercised by the constitution.

Statement 1 is incorrect: The executive power over matters related to concurrent list usually remains with the state government. **A law on concurrent subjects though enacted by the Parliament is to be generally executed by the states.**

Statement 2 is incorrect: **State legislative Assembly does not have the power to authorise the Parliament** to exercise executive functions. On the contrary **Parliament can enact laws which specifically mandates the Union government to exercise executive functions** over a law on a concurrent subject.

Source: DD Basu (DISTRIBUTION OF LEGISLATIVE AND EXECUTIVE POWERS)

Q.8) To protect the interest of States in the financial matters, which of the following provisions were laid down by the Constitution of India?

1. A bill which varies any tax in which states are interested can be introduced in the Parliament only after consulting the State governments.
2. The Parliament can alter the definition of agricultural income only on the recommendation of the President.
3. A bill introduced in Parliament affecting the vertical distribution of taxes between centre and states can be introduced only on the recommendation of the Finance commission.

4. A bill that imposes any surcharge on tax for the purpose of the centre can be introduced in the Parliament only on the recommendation of the President.

Select the correct answer using the code given below:

- a) 1 and 4 only
- b) 2, 3 and 4 only
- c) 2 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

To protect the interest of states in the financial matters, the Constitution lays down that the following **bills** can be introduced in the Parliament only on the **recommendation of the President**:

- 1) A bill which **imposes or varies any tax** or duty in which states are interested;
- 2) A bill which varies the meaning of the expression **'agricultural income'** as defined for the purposes of the enactments relating to Indian income tax.
- 3) A bill which affects the **principles** on which money is **distributable to states**.
- 4) A bill which imposes any **surcharge** on any specified tax or duty for the **purpose of the Centre**

Statement 1 is incorrect: A bill which varies any tax in which states are interested shall be introduced in the Parliament only on the **recommendation of the President (not after consultation with state governments)**.

Statement 2 is correct: A bill which proposes to alter the meaning of agriculture income must be introduced in the Parliament on the **recommendation of the President**.

Statement 3 is incorrect: The bill affecting the principles on which money is distributed between centre and states **need not to be recommended by the Finance Commission**, rather such bill can be introduced in the Parliament only after the **recommendation of the President**.

Statement 4 is correct: It is true that the **bill which imposes any surcharge** on tax for the purpose of the centre can be introduced in the **Parliament only on the recommendation of the President**. **As the proceeds of surcharge are not shared with the states, so the divisible pool of finance from centre to states would be affected. Thus, states would be getting lesser share negatively impacting their finances.**

Source: Laxmikanth - Centre State Relations (Protection of States' interests)

Q.9) With reference to financial relations between the Centre and States, consider the followings statements:

- 1. While the central government can borrow anywhere within India, the state governments can borrow only within the boundaries of the concerned state.
- 2. Normally a state cannot raise any loan without the consent of the centre.
- 3. The loans given to states by centre are charged on the consolidated fund of India.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The **constitution of India** lays down certain **provisions** with respect to the borrowing powers of the centre and the states.

Statement 1 is incorrect: While it is true that the **centre government can raise money anywhere within the country** or outside India, it is incorrect to say that states can raise money only within their respective boundaries. **States can raise money anywhere within India.**

Statement 2 is incorrect: **Normally a state can raise a loan without the consent of the centre government.** It is **mandatory** for states to take central government's consent for raising any loan if the **state owes any outstanding liabilities to the central government.**

Statement 3 is correct: The **loans** granted by the Centre government to states is **charged on the consolidated fund of India.**

Source: Laxmikanth - Centre- State relations

Q.10) With reference to Liquid Nano Urea, consider the following statements:

1. It can easily penetrate through leaf stomatal pores.
2. It has shorter shelf life of 3 months
3. Its efficiency is as high as 90% compared to conventional Urea
4. It carries no subsidy to the farmers
5. The Ministry of Chemicals and fertilizers have launched it.

Which of the statements given above is/are correct?

- a) 1, 3 and 4 only
- b) 1, 2, 3 and 5 only
- c) 2, 4, and 5 only
- d) 1, 2, 3, 4 and 5

Ans) a

Exp) Option a is the correct answer.

Liquid nano Urea is a patented chemical nitrogen fertilizer developed by IFFCO's Nano Biotechnology Research Centre at Kalol with nano nitrogen particles (from 20-50 nm).

Statement 1 is correct: It is sprayed directly on the leaves of plants and easily gets absorbed by the stomata-pores found on the epidermis of leaves.

Statement 2 is incorrect: Liquid nano urea has a **shelf life of a year** and farmers need not be worried about "caking" (dry or harden into a solid mass) when it encounters moisture.

Statement 3 is correct: The efficiency of liquid nano urea is as high as 85-90% in comparison to 25% of conventional urea.

Statement 4 is correct: At present there is no subsidy on liquid nano Urea and farmer pays around Rs 240 for a half-liter bottle. By contrast, a farmer pays around Rs 300 for a 50-kg bag of heavily subsidized urea.

Statement 5 is incorrect: Indian Farmers Fertilizer Cooperative Limited (IFFCO) has launched the world's first Nano Urea Liquid. IFFCO is one of the India's biggest cooperative societies wholly owned by Indian Cooperatives.

Source: <https://nanourea.in/en/nano-urea#Benefits>

<https://blog.forumias.com/explained-what-is-liquid-nano-urea-produced-by-iffco-which-can-potentially-revolutionize-the-use-of-nitrogen-fertilizers-in-india/>

Q.11) With reference to consequences of emergency provisions on the legislative relations between centre and states, consider the following statements:

1. Upon proclamation of National emergency, the state legislatures are prohibited to make laws on matters related to state lists.
2. Laws made by the Parliament will continue to be operative even after revocation of the President's rule.
3. Upon proclamation of President's rule, generally the legislative power of states will be exercised by the President of India.

4. Upon proclamation of financial emergency, legislative power of states related to financial matters will be exercised by the Parliament.

Which of the statement/s given above is/are correct?

- a) 1 and 2 only
- b) 1,3 and 4 only
- c) 2 and 3 only
- d) 2 only

Ans) d

Exp) Option d is the correct answer.

The Emergency provisions are contained in Part XVIII of the Constitution, from Articles 352 to 360. These provisions enable the Central government to meet any abnormal situation effectively. Emergency provision fundamentally alters the relations between centre and state.

Statement 1 is incorrect: On the proclamation of **National emergency, power of state legislatures to make laws on state lists is not restricted**. It continues to have **simultaneous legislative power** along with Parliament, however in case of **inconsistency** between Parliament and state assembly laws, the **Parliament law will prevail**.

Statement 2 is correct: It is true that **on revocation of the President's rule, the law made by the Parliament will continue to prevail** unless it would be repealed by the state legislative assembly. In contrast, laws made by Parliament during **national emergency** will **cease to have any effect on the expiration of 6 months** after revocation of national emergency.

Statement 3 is incorrect: On proclamation of the President's rule, **power of the state legislature cannot be exercised by the President but by the Parliament**. The President can assume the functions of State governments and powers vested in the Governor or any executive authority of the state. Further, the President can declare that powers of state legislatures are to be exercised by the Parliament.

Statement 4 is incorrect: On proclamation of **financial emergency, Parliament cannot assume the power of state legislature**, however financial emergency empowers **Union government to executive directions to any state** to observe financial propriety and to reduce the salaries and pensions of government employees of the state.

Source: Laxmikanth - Centre State relations
Emergency Provisions

Q.12) With reference to executive relations between centre and states as given in constitution of India, consider the following statements:

1. The Governor of a state, with the consent of the central government, can delegate executive functions of state to centre.
2. The parliament can delegate executive functions of central government to states, without the consent of states.
3. State legislature can delegate executive functions of state to centre.

Which of the statement/s given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The distribution of **executive functions between centre and state is rigid**, the same as distribution of legislative functions. However, the constitution provides for **inter-governmental delegation of executive functions to mitigate rigidity** and avoid a situation of deadlock.

Statement 1 is correct: The **Governor of a state**, with the **consent** of the central government, can delegate **executive functions of state to centre**. Similarly, the **President** of India can delegate executive functions of **centre to state** with the consent of the state government.

Statement 2 is correct: It is true that the Constitution empowers the **parliament to delegate executive functions** of central government **to states without the consent of states**. Thus, centre can use means of both agreement (consent) and legislation (without consent), state can use only agreement mode.

Statement 3 is incorrect: While the constitution **allows the parliament** to delegate executive functions of centre to state, it does **not allow state legislature to delegate executive functions of state to centre**. In the case of delegation by states, **only governors are allowed** to delegate executive functions.

Source: Laxmikanth: Centre- State relations

Q.13) Under the constitution of India which of the following taxes are levied, collected and retained by the state governments?

1. Surcharge on tax
2. Land revenue
3. Entertainment tax
4. Professional taxes.
5. Any cess levied for the specific purpose.
6. Taxes on goods carried by inland waterways.

Select the correct answer using the code given below:

- a) 1, 3 and 6 only
- b) 2 and 3 only
- c) 2, 3, 4 and 6 only
- d) 1, 4 and 6 only

Ans) c

Exp) Option c is the correct answer.

Articles 268 to 293 in Part XII of the Constitution deal with Centre State financial relations. The taxes enumerated in the **Union List (15 in numbers) are leviable by the Centre exclusively** while those mentioned in the **State List (20 in numbers) are leviable by the States exclusively**. The taxes enumerated in the **concurrent list (5 in numbers)** are leviable by both centre and states.

Option 1 and 5 is incorrect: Both **Surcharge and cess are levied, collected and retained by the central government**. Surcharge is a tax on tax and cess is levied for any specific purpose for example education cess to improve the funding support for education.

Option 2 is correct: **Land revenue** is a tax levied on land holdings and it is **levied, collected and retained by the state governments**. Land revenues are taxes belonging to the state exclusively thus need not to be shared with the central government.

Option 3 is correct: Entertainment tax is any tax levied on any form of commercial entertainment, such as movie tickets, exhibitions, sport events etc., **Entertainment taxes are levied, collected and retained by states**.

Option 4 is correct: **Professional tax not exceeding 2,500Rs can be levied, collected and retained by the state government**. Professional tax is a tax levied on individuals who earn income from any profession, trade or employment.

Option 6 is correct: It is true that the **taxes on goods or passengers carried by inland waterways** (or road) will be **levied, collected and retained by the state government**.

Source: Laxmikanth: Centre - State relations

Q.14) With reference to “Discretionary grants”, consider the following statements:

1. It is called discretionary grants because there is no constitutional obligation for the centre to give these grants to states.
2. States can make these grants only for those public purposes which are within their legislative jurisdictions.
3. Centre allots these grants to states based only on the recommendation of the Finance commission.

Which of the statement/s given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

Besides sharing of taxes between the Centre and the states, the Constitution provides for grants-in-aid to the states from the Central resources. There are two types of grants-in-aid- **statutory grants and discretionary grants**.

Statement 1 is correct: Discretionary grants are called so because there is **no constitutional obligation for the centre to give these grants to states** and matters lie within the **centre’s discretion**. These grants are given to states to help states to fulfil their developmental plans and influence states to implement the national plan.

Statement 2 is incorrect: **Article 282** empowers both the **Centre and the states to make any grants** for any public purpose, even if it is **not within their respective legislative jurisdictions**.

Statement 3 is incorrect: **Centre does not allot these grants to states based on the recommendation of the Finance commission**. In contrast **statutory grants (Article 275)** are allotted to states by the centre based on the recommendation of the Finance commission.

Source: Laxmikanth: Centre - State relations

Q.15) With reference to section 124A of Indian Penal Code (IPC), consider the following statements:

1. Criticizing Judicial setup amounts to sedition under section 124A.
2. It penalizes only that speech which has the tendency to create public disorder.
3. Under this law anyone can be arrested without any warrant.
4. Life imprisonment as a maximum punishment is prescribed under this law.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

Section 124A of the IPC defines sedition as any action that brings or attempts to bring contempt or hatred or disaffection towards the Government established by law in India. It categorizes 4 sources of seditious acts:

- 1) Spoken or Written Words;
- 2) Signs;
- 3) Visible representations;
- 4) Other Sources;

Statement 1 is incorrect: In *P. Alavi vs State of Kerala, 1982* SC held that sloganeering,

Criticizing Parliament or Judicial setup did not amount to sedition.

Statement 2 is correct: Supreme Court in *Kedarnath Singh* case clarified that Section 124A penalizes **only that speech that is either intended or tends to create public disorder or incitement to violence.**

Statement 3 is correct: **Sedition law** is classified as ‘cognizable’ meaning there is no need for Court warrant to arrest the person and it is also a ‘non-bailable’ and ‘non-compoundable’ offence.

Statement 4 is correct: Punishment under Section 124A ranges from imprisonment up to three years to **life imprisonment as maximum punishment, with or without a fine.**

Source: <https://indianexpress.com/article/explained/vinod-dua-sedition-case-supreme-court-kedarnath-ruling-explained-7343405/>

<https://www.thequint.com/news/law/getting-to-know-the-kedarnath-case#read-more>

Q.16) With reference to Goods and Services Tax (GST) Council, consider the following statements:

1. The GST council is periodically constituted by the President of India as and when the issue arises related to GST.
2. The Union Finance Minister is the chairperson of the Council.
3. The decisions of the council are always based on consensus.
4. The recommendations given by the council are binding upon the state and centre.

Which of the statements given above is/are correct?

- a) 1, 2 and 3 only
- b) 2 only
- c) 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

Goods & Services Tax (GST) Council is a constitutional body for making recommendations to the Union and State Government on issues related to Goods and Service Tax.

Statement 1 is incorrect: The Goods & Services Tax (GST) Council was **established by the President as per Article 279A (1) of the Constitution.** The GST council was notified under Article 279(1) of the constitution after passing **The Constitution (One Hundred and First Amendment) Act, 2016** by the parliament and 15 states of India. They are not constituted periodically on the lines of Finance commission.

Statement 2 is correct: **Chief Ministers of states are not members of this council.** The **Union Finance Minister is the chairperson of this council.** Members of this council are **the Union Minister of State, in-charge of Revenue of finance and the Minister of finance for state governments or any other Minister nominated by each State Governments.**

Statement 3 is incorrect: **GST council decides the GST rate on various goods and services.** Every decision of the GST Council is taken at a meeting, **by a majority of not less than three fourths** of the weighted votes of the members present and voting.

Statement 4 is incorrect: **The recommendations given by this council are not binding,** recently the **Supreme court** held that **Article 246A** of the Constitution gives both **Parliament and state legislatures a power to legislate on GST.** The supreme court observed that recommendations of the Council as the product of a collaborative dialogue between the Union and States and it is not binding in nature.

Source: <https://indianexpress.com/article/explained/everyday-explainers/explained-what-is-gst-council-7997061/>

Q.17) In which of the following circumstances, Parliament can make laws on the subjects enumerated in the state lists?

1. If the legislative assembly of two or more states by simple majority passes a resolution recommending Parliament to make laws on the state subjects.
 2. To implement the provisions of the Fundamental Duties.
 3. If Rajya Sabha passes a resolution for the same supported by two-thirds of members present and voting.
- Select the correct answer using the code given below:
- a) 1 and 3 only
 - b) 2 and 3 only
 - c) 2 only
 - d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Seventh schedule of the constitution distributes the legislative power between centre and states and in ordinary circumstances parliament cannot legislate on matters related to state list. However, the constitution empowers the **Parliament to make laws on any matter enumerated in the State List under the certain extraordinary circumstances.**

Statement 1 is correct: Parliament can make laws on the state subject if the **legislatures of two or more states pass resolutions**, by simple majority, recommending the Parliament to enact laws on a matter in the State List. A law so enacted **applies only to those states which have passed the resolutions.**

Statement 2 is incorrect: There is **no such ground (to implement provisions of Fundamental duties) for the Parliament to make laws on subjects enumerated in the state list.** However, Parliament can make laws on state list to give effect to the international agreements or treaties.

Statement 3 is correct: Parliament can make laws on the state subjects if the **Rajya Sabha passes a resolution supported by two thirds of members present and voting.** Rajya Sabha declares that it is necessary in the national interest that parliament should make laws with respect to matters related to state subjects.

Source: Laxmikanth: Centre - State relations

Q.18) With reference to Comptroller and Auditor General of India (CAG), consider the following statements:

1. S/he is responsible only to the Parliament.
2. The legal audit, regulatory audit, and propriety audits are obligatory on the part of the CAG.
3. S/he has the responsibility of auditing the secret service expenditure.

Which of the statements given above is/are **incorrect**?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 2 and 3
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

Comptroller and Auditor General of India (CAG) is **the head of the Indian Audit and Accounts** Department. He is the **guardian of the public purse** and controls the entire financial system of the country at both the levels—the Centre and the state. His duty is to **uphold the Constitution of India and laws of Parliament** in the field of financial administration.

Statement 1 is correct: The role of CAG is to uphold the Constitution of India and the laws of Parliament in the field of financial administration. The **accountability of the executive** (i.e., council of ministers) to Parliament in the sphere of financial administration is **secured through audit reports of the CAG**. The CAG is an agent of the Parliament and **conducts audit of expenditure on behalf of the Parliament**. Therefore, **he/she is responsible only to Parliament**.

Statement 2 is incorrect: In addition to legal and regulatory audit, **the CAG can also conduct the propriety audit**, that is, he can investigate the ‘wisdom, faithfulness and economy’ of government expenditure and comment on the wastefulness and extravagance of such expenditure. However, **unlike the legal and regulatory audit, which is obligatory** on the part of the CAG, the **propriety audit is discretionary**.

Statement 3 is incorrect: The **secret service expenditure is a limitation on the auditing role of the CAG**. In this regard, the CAG cannot call for particulars of expenditure incurred by the executive agencies but **has to accept a certificate** from the **competent administrative authority** that the **expenditure** has been so **incurred under his authority**.

Knowledge Base:

Comptroller and Auditor General of India

- 1) He is **appointed by the president** of India by a warrant under his hand and seal.
- 2) He makes and subscribes **before the president an oath** or affirmation.
- 3) He holds office for a period of **six years or up to the age of 65 years**, whichever is earlier.
- 4) He can **resign** any time from his office by addressing the resignation letter to the president. He can **also be removed** by the president on same grounds and in the same manner as a **judge of the Supreme Court**.
- 5) He is **not eligible for further office**, either under the Government of India or of any state, after he ceases to hold his office.

Source: Chapter 51: Comptroller and Auditor General of India of Indian Polity by M. Laxmikant.

Q.19) The Attorney General of India is the highest law officer in the country. In this context, consider the following statements:

1. S/he has the right of audience in Supreme court only.
2. S/he is debarred from attending any joint sitting of Parliament but can attend the proceedings of either house of Parliament.
3. S/he gives advice to the Government of India upon such legal matters, which are referred to him/her by the President.
4. The remuneration of the Attorney General is determined by the President.

Which of the statements given above are correct?

- a) 1, 2, and 4 only
- b) 2, 3 and 4 only
- c) 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Article 76 of the Indian Constitution provides for the Attorney General of India. He is the highest law officer in the country.

Statements 1 and 2 are incorrect: In the performance of his official duties, **the Attorney General has the right of audience in all courts in the territory of India** and not just Supreme court. Further, **he has the right to speak and to take part in the proceedings of both the Houses of Parliament or their joint sitting** and any committee of the Parliament of which he may be named a member, but **without a right to vote**. He enjoys all the privileges and immunities that are available to a member of Parliament.

Statement 3 is correct: As the chief law officer of the Government of India, the duties of the AG include the following:

- 1) **To give advice to the Government of India upon such legal matters, which are referred to him by the president.**
- 2) To perform such other duties of a legal character that are assigned to him by the president.
- 3) To discharge the functions conferred on him by the Constitution or any other law.

Statement 4 is correct: The remuneration of the Attorney General is determined by the **President**. He may also quit his office by submitting his resignation to the President.

Knowledge Base:

Attorney General of India:

- 1) He is **appointed by the President**.
- 2) He must be a person who **is qualified** to be appointed a **judge of the Supreme Court**.
- 3) The **term of office** of the AG is **not fixed by the Constitution**. Further, the Constitution does not contain the procedure and grounds for his removal. He holds office during the **pleasure of the president**.
- 4) The Attorney General is **not a full-time counsel for the Government**.
- 5) He is **not debarred from private legal practice**.
- 6) The president has assigned the **following duties** to the Attorney General of India:
 - a. To **appear on behalf of the Government** of India in all cases in the Supreme Court **in which the Government of India is concerned**.
 - b. To **represent the Government** of India in any **reference made by the president** to the Supreme Court under **Article 143** of the Constitution.
 - c. To **appear** (when required by the Government of India) in **any high court** in any case in which the Government of India is concerned.

Source: Chapter 52: Attorney General of India of India of Indian Polity by M. Laxmikant.

Q.20) With reference to the Delimitation Exercise in Jammu and Kashmir, consider the following statements:

1. This Delimitation Exercise was based on the 2011 census instead of the 2001 census.
2. This Delimitation Commission was constituted under The Jammu and Kashmir Reorganization Act, 2019.
3. Apart from making changes in the structure of the existing Assembly seats, the commission has also redrawn the boundaries of Lok Sabha Constituencies of Union Territory of J&K.
4. The commission has recommended for reservation of seats in Legislative assembly for Kashmiri migrants.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

The **Delimitation Commission (DC) was set up on March 6, 2020**, to redraw the boundaries of assembly and parliamentary constituencies in Jammu and Kashmir.

- 1) The panel, formed by the Centre in March 2020, is headed by former Supreme Court judge **Ranjana Prakash Desai**.
- 2) The commission has proposed increasing the number of seats in UT **from 83 to 90**. Besides, there are **24 seats in Pakistan-occupied Kashmir (PoK)** that continue to remain vacant.

Statement 1 is correct: The Delimitation Commission was entrusted with the work of delimiting the Assembly and Parliamentary Constituencies in the UT of Jammu and Kashmir **based on 2011 Census** and in accordance with the provisions of the Jammu and Kashmir Reorganization Act, 2019 and the provisions of Delimitation Act, 2002.

Statement 2 is incorrect: The Delimitation Commission was constituted by the Govt. of India, in exercise of powers conferred by **Section 3 of Delimitation Act, 2002**, for the purpose of delimitation of Assembly and Parliamentary Constituencies in the Union Territory of Jammu & Kashmir.

Statement 3 is correct: The commission is vested with the task of making changes in the structure of the existing Assembly seats and the commission has also redrawn the boundaries of Lok Sabha Constituencies of UT of J&K.

Statement 4 is correct: The commission has also recommended for the provision of at least two members (one of them must be a female) from the community of Kashmiri Migrants in the Legislative Assembly and such members may be given power at par with the power of nominated members, of the Legislative Assembly of Union Territory of Puducherry.

Source: <https://blog.forumias.com/wp-content/uploads/2022/06/Epic-May-month.pdf>

<https://indianexpress.com/article/india/supreme-court-dismisses-plea-jammu-kashmir-delimitation-8441555/>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1822939>

Q.21) NITI Aayog is the premier policy ‘Think Tank’ of the Government of India. In this context, consider the following statements:

1. One of the objectives of NITI Aayog is to formulate credible plans at the village level and aggregate these progressively at higher levels of government.
2. The regional council of NITI Aayog is headed by the union home minister.
3. The erstwhile Planning Commission was established by an executive resolution whereas NITI Aayog is established under a Legislative Act.

Which of the statements given above are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2, and 3

Ans) a

Exp) Option a is the correct answer.

On January 1, 2015, the NITI Aayog (National Institution for Transforming India) was established as the successor to the planning commission. NITI Aayog is the premier policy ‘Think Tank’ of the Government of India, providing both directional and policy inputs.

Statement 1 is correct: The NITI Aayog will develop mechanisms to formulate **credible plans to the village level and aggregate these progressively at higher levels** of government. It will ensure special attention to the sections of society that may be at risk of not benefitting adequately from economic progress.

Statement 2 is incorrect: Regional Council of NITI Aayog: These are formed to address specific issues and contingencies impacting more than one state or a region. These are formed for a specified tenure. These are **convened by the Prime Minister**. It comprises of the following.

- 1) **Chief Ministers of States**
- 2) **Lt. Governors of Union Territories in the region.**
- 3) These are **chaired by the Chairperson of the NITI Aayog or his nominee.**

Statement 3 is incorrect: The NITI Aayog, **like that of the Planning Commission**, was also created by an **executive resolution** of the Government of India (i.e., Union Cabinet). Hence, it is a **non-constitutional or**

extra-constitutional body (i.e., not created by the Constitution) and a **non-statutory** body (not created by an Act of the Parliament).

Knowledge Base:

NITI Aayog: The Composition of NITI Aayog is as follows.

- 1) **The Prime Minister of India is the Chairperson of the NITI Aayog.**
- 2) **Governing Council:** It comprises the **Chief Ministers of all the States, Chief Ministers of Union Territories with Legislatures** (i.e., Delhi, Puducherry and Jammu and Kashmir) **and Lt. Governors of other Union Territories.**
- 3) **Full-time Organizational Framework:** It comprises, in addition to the Prime Minister as the Chairperson:
 - a. **Vice-Chairperson:** He is appointed by the Prime Minister. He enjoys the rank of cabinet minister.
 - b. **Members: Full-time.** They enjoy the rank of Minister of State.
 - c. **Part-time Members: Maximum of 2,** from leading universities, research organizations and other relevant institutions in an ex-officio capacity. Part-time members would be on rotation.
 - d. **Ex-Officio Members:** Maximum of **4 members of the Union Council of Ministers** to be **nominated by the Prime Minister.**
 - e. **Chief Executive Officer:** He is **appointed by the Prime Minister** for a fixed tenure, in the **rank of Secretary** to the Government India.
 - f. **Secretariat:** As deemed necessary.

Source: Chapter 54: NITI Aayog of Indian Polity by M. Laxmikant.

Q.22) The National Human Rights Commission (NHRC) is the watchdog of human rights in the country. In this context, consider the following statements:

1. A person currently serving as the Chief justice of a High Court can become a member of NHRC.
2. The NHRC act mandates the commission to meet at least 3 times a year.
3. They can visit jails and detention places to study the living conditions of inmates.
4. They have all the powers of a civil court, and its proceedings have a judicial character.

Which of the statements given above are correct?

- a) 1, 2 and 4 only
- b) 3, and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3, and 4

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: The NHRC is a multi-member body consisting of a chairperson and five members.

- 1) **The chairperson should be a retired chief justice of India, or a judge of the Supreme Court and members should be a serving or retired judge of the Supreme court, a serving or retired chief justice of a high court and three persons** (out of which at least one should be a woman) **having knowledge or practical experience with respect to human rights.**
- 2) In addition to these full-time members, the commission also has **seven ex-officio members**—the chairpersons of the NC for **Minorities**, the NC for **SCs**, the NC for **STs**, the NC for **Women**, the NC for **BCs** and the NC for **Protection of Child Rights** and the **Chief Commissioner for Persons with Disabilities.**

Statement 2 is incorrect: The Commission shall meet at such time and place as the Chairperson may think fit. There is **no mandate that the commission should meet at least 3 times a year.**

Statement 3 is correct: **The functions of the Commission are as follows:**

- 1) NHRC investigates grievances regarding the violation of human rights **either Suo moto** or after receiving a **petition**.
- 2) **To visit jails and detention places to study the living conditions of inmates and make recommendations thereon.**
- 3) To study treaties and other international instruments on human rights and make recommendations for their effective implementation.
- 4) To encourage the efforts of NGOs working in the field of human rights, etc.

Statement 4 is correct: The NHRC is vested with the power to regulate its own procedure. **It has all the powers of a civil court, and its proceedings have a judicial character.** It may call for information or reports from the Central and state governments or any other authority subordinate thereto.

Source: Chapter 55: National Human Rights Commission of Indian Polity by M. Laxmikant.

Q.23) Which of the following officers are appointed by the Governor of the state but removed by the President of India?

1. Chairman of State Public Service commission
2. Members of State Human Rights Commission
3. Chairman of Joint Public Service Commission
4. State Chief Information Commissioner

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 1, 2, and 3 only
- c) 2 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: A State Public Service Commission consists of a chairman and other members **appointed by the governor of the state**. The chairman and members of the Commission hold office for a term of six years or until they attain the age of 62 years. Although the chairman and members of a SPSC are appointed by the Governor, they can be **removed only by the President (and not by the governor)**. The President can remove them on the same grounds and in the **same manner as** he can remove a **chairman or a member of the UPSC**.

Statement 2 is correct: The **chairperson and members of State Human Rights Commission are appointed by the Governor** on the recommendations of a committee consisting of:

- 1) chief minister as its head,
- 2) the speaker of the Legislative Assembly,
- 3) the state home minister and the leader of the opposition in the Legislative Assembly.
- 4) In the case of a state having Legislative Council, the chairman of the Council and the leader of the opposition in the Council would also be the members of the committee.

Although the chairperson and members of a SHRC is appointed by the governor, they **can be removed only by the President** (and not by the governor).

Statement 3 is incorrect: The Constitution makes a provision for the establishment of a Joint State Public Service Commission (JSPSC) for two or more states. A JSPSC is a statutory and not a constitutional body. **The chairman and members of a JSPSC are appointed by the President**. They hold office for a term of six years or until they attain the age of 62 years, whichever is earlier. **They can be suspended or removed by the President**. They can also resign from their offices at any time by submitting their resignation letters to the president.

Statement 4 is incorrect: The State Information Commission consists of a State Chief Information Commissioner and not more than ten State Information Commissioners. **They are appointed by the Governor** on the recommendation of a committee consisting of the Chief Minister as Chairperson, the Leader of Opposition in the Legislative Assembly and a State Cabinet Minister nominated by the Chief Minister. **The Governor of State can remove the State Chief Information Commissioner or any State Information Commissioner** from the office.

Source: Chapter 42, Chapter 44, Chapter 56, and Chapter 58 of Indian Polity by M. Laxmikant.

Q.24) Which among the following can be considered as ‘Federal Features’ of Indian Constitution?

1. The Supremacy of the Constitution of India
2. The division of powers between Centre and states
3. The presence of Integrated Judiciary

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Federalism is a system of government in which the power is divided between a central authority and various constituent units of the country. Usually, a federation has two levels of government. One is the government for the entire country and others are governments at the state or province level.

Option 1 and 2 are correct: In a federal state the legal supremacy of the Constitution is essential for the existence of the federal system. It is essential to maintain the separation of power between the coordinate branches of the government, and the division of powers between the federal government and the states themselves.

Statement 3 is incorrect: Integrated judiciary is a unitary feature (not a Federal Feature) of the Indian constitution. The Indian Constitution has established an integrated judicial system with the Supreme Court at the top and the state high courts below it. This single system of courts enforces both the Central laws as well as the state laws. In the US, on the other hand, there is a double system of courts whereby the federal laws are enforced by the federal judiciary and the state laws by the state judiciary. **Independence of Judiciary is rather considered a federal feature of the Indian Constitution.**

The Supreme Court has observed that Indian Constitution is basically federal in form and is marked by the traditional characteristics of a federal system, namely, **supremacy of the Constitution, division of power between the Union and the States** and existence of an **Independent Judiciary**.

Source: Introduction to the Indian Constitution by D D Basu, pg. 52.

Q.25) Consider the following statements with respect to the “Declaration for the Future of the Internet”:

1. The declaration was launched by the Global Network Initiative.
2. India is not a party to this declaration.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The **United States (and not the Global Network Initiative)** launched the **Declaration for the Future of the Internet** jointly with more than 60 partners from around the world. The Declaration is a political commitment among partners to advance an affirmative vision for the Internet and digital technologies. The Declaration's principles include commitments to protecting human rights and fundamental freedoms of all people, **promote a global Internet that advances the free flow of information, advancing “inclusive and affordable” connectivity** and strengthening the multi-stakeholder approach to governance that keeps the Internet running for the benefit of all.

Statement 2 is correct: India, China and Russia are among the nations that have not signed this declaration. These Declaration's **principles are not legally binding** but should rather be used as a reference for public policymakers as well as citizens, businesses and civil society organizations.

Source: <https://blog.forumias.com/india-stays-out-of-global-declaration-on-future-of-internet/#:~:text=signed%20this%20declaration,-,What%20is%20the%20Declaration%20for%20the%20Future%20of%20the%20Internet,the%20Internet%20and%20digital%20technologies.>

<https://www.thehindubusinessline.com/info-tech/white-house-60-global-partners-launch-the-declaration-of-the-future-of-the-internet-india-not-on-the-list/article65366407.ece>

Q.26) Consider the following statements about merits of Parliamentary System of government:

1. It establishes a responsible government, wherein executive is responsible to the legislature.
2. It assures the separation of power in letter and spirit, between different organs of the State.
3. It helps in preventing the dictatorial tendencies of the executive.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Constitution of India provides for a parliamentary form of government, both at the centre and in the states. Articles 74 and 75 deal with the parliamentary system at the centre and Articles 163 and 164 in the states.

Statement 1 is correct: Dr. B.R Ambedkar pointed out in the Constituent Assembly that, “a democratic executive must satisfy two conditions i.e., Stability and Responsibility. Unfortunately, it has not been possible so far to devise a system which can provide both in equal degree. The American Constitution gives more stability but less responsibility. The British System gives more responsibility but less stability”. **So, the Draft Constitution had preferred more responsibility over stability**. Responsible government is ensured by making ministers accountable to Parliament for their actions. It can be attained by tools like question hour, parliamentary debates, various motions like adjournment and no confidence motion.

Statement 2 is incorrect: In a parliamentary form of government, **the executive is not separated from the legislature as the members of the council of ministers are members of the legislature**. Hence, the whole system of the government goes against the letter and spirit of the theory of separation of power. **In fact, there is a fusion of power.**

Statement 3 is correct: Parliamentary system **prevents despotism**. Under this system, the executive authority is vested in a group of individuals (council of ministers) and not in a single person. **This dispersal of authority checks the dictatorial tendencies of the executive**. Moreover, the executive is responsible to the Parliament and can be removed by a no-confidence motion.

Source: Chapter 12 Parliamentary System, Indian Polity by Laxmikant.

Q.27) Which of the following is **not** a correct reason behind the adoption of the federal system of government in India?

- a) To take into consideration the large size of the country.
- b) To accommodate the large socio-cultural diversity of India.
- c) To provide equal representation for all the states in Parliament.
- d) To reconcile national unity with regional autonomy of the states.

Ans) c

Exp) Option c is the correct answer.

Option a and b are correct: The Constitution of India provides for a federal system of government in the country. The framers of the Constitution adopted the federal system due to two main reasons- **the large size of the country and its socio-cultural diversity.**

Option c is incorrect: The Indian Constitution does not provide equal representation to the states in Parliament especially in the Rajya Sabha, unlike in the US. **Hence, this unequal state representation is a unitary feature of the Parliament and not the federal feature.**

Option d is correct: The framers propounded that the federal system not only ensures efficient governance but also reconciles **national unity with regional autonomy for the states.**

Source: Chapter 13 Federal system, Indian Polity by M Laxmikant

Q.28) According to the Constitution of India, the expression 'Territory of India' includes which among the following?

1. The territories of the states
2. The Union territories
3. The territories that may be acquired by the government of India at any time.

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Option 1, 2 & 3 are correct. According to Article 1 of the Constitution of India, the expression 'Territory of India' includes not only the territories of the states but also union territories and territories that may be acquired by the Government of India at any future time.

Source: chapter 5- Union and its Territory, Indian Polity by M Laxmikanth.

Q.29) Consider the following statements about the procedure for reorganisation of states in India:

1. States in India can be reorganised by the Parliament only by amending the Constitution under article 368.
2. A bill for the reorganisation of states can be introduced in the Parliament only on the recommendation of the President.
3. The President before giving his recommendation shall refer the state reorganisation bill to the respective state legislature for expressing its view.
4. The President is bound by the views of state legislature regarding the state reorganisation bill.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 and 4 only
- d) 2, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

According to constitution of India (Article 2), Parliament may by law admit into the Union, or establish, new States on such terms and conditions as it thinks fit. **Also, Article 3 of the Constitution empowers the Parliament to** (a) form a new State by separation of territory from any State or by uniting two or more States or parts of States or by uniting any territory to a part of any State; (b) increase the area of any State; (c) diminish the area of any State; (d) alter the boundaries of any State; (e) alter the name of any State.

Statement 1 is incorrect: Article 4 of the Constitution provides that **laws of the Parliament to give effect to the provisions of Article 2 and 3 of the Constitution shall not be deemed to be an amendment of this Constitution for the purposes of Article 368. Hence, statement 1 is incorrect.**

Statement 2 is correct: No bill for the purpose of reorganisation of states can be introduced in the Parliament except on the recommendation of the President.

Statement 3 is correct: The President shall before giving his recommendation, refer the bill to the Legislature of the State which is going to be affected by the changes proposed in the bill, for expressing its views on the changes within the period specified by the President.

Statement 4 is incorrect: The President is not, however, bound by the views of the state legislature, so ascertained. Hence the statement is incorrect.

Source: Introduction To the Constitution of India, D D Basu, Pg. 71

Q.30) Consider the following statements regarding the Goods and Services Tax (GST) Council:

1. The GST Council has a quorum requirement of one half of the total members for meetings.
2. In a recently held GST council meeting, tax on liquid form of jaggery has been removed if it is sold in loose form.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

As per Article 279A of the amended Constitution, the GST Council is a joint forum of the Centre and the States, and consists of the following members: -

- 1) **Union Finance Minister- Chairperson.**
- 2) The Union Minister of State, in-charge of Revenue or finance- Member.
- 3) The Minister In-charge of finance or taxation or any other Minister nominated by each State Government - Members.
- 4) The Vice-Chairperson is selected by members of the Council from one amongst themselves [Article 279A (3)]

Statement 1 is correct: The Constitution (One Hundred and First Amendment) Act, 2016 provides that one half of the total number of members of the GST Council shall constitute the quorum at its meeting.

Statement 2 is correct: In 49th GST Council meeting held in February 2023 tax rate on liquid form of jaggery or 'Rab' has been lowered from **18 per cent to 5 per cent**, if packaged and labelled and to **zero if sold loose**.

Knowledge Base: Every decision of the GST Council shall be taken at its meeting by a majority of not less than 3/4th of the weighted votes of the Members present and voting. The vote of the Central Government shall have a weightage of 1/3rd of the votes cast and the votes of all the State Governments taken together shall have a weightage of 2/3rd of the total votes cast in that meeting.

Source: <https://indianexpress.com/article/explained/supreme-court-ruling-gst-council-decision-centre-states-7927786/> <https://blog.forumias.com/gst-council/>
<https://www.gst.gov.in/about/gst/council>

Q.31) If, in any case, India needs to cede some parts of its territory to any country, then it can be done through:

- The executive action of Government of India.
- The Amendment of Constitution under Article 368.
- The Legislative action of the Parliament
- The Judicial Action under the purview of Supreme Court.

Ans) b

Exp) Option b is the correct answer.

The decision of the **central government to cede part of territory of the Berubari Union** (West Bengal) to Pakistan led to political agitation and controversy and thereby necessitated the Presidential reference to the Supreme Court.

The Supreme Court held that, the power of parliament to diminish the area of a state (under Article 3) does not cover the cession of Indian territory to a foreign country. **Hence, Indian territory can be ceded to a foreign state only** by an amendment under the provisions of article 368. Consequently, the 9th Constitutional amendment Act was enacted to transfer the said territory to Pakistan.

The Supreme Court, on the other hand, ruled in 1969 that resolving boundary disputes between India and another country does not necessitate a constitutional amendment. **It can be done by executive action as it does not involve the cession of Indian territory to a foreign country.**

Source: Introduction To the Constitution of India, D D Basu

Q.32) Consider the following commissions and acts regarding the reorganisation of states in India:

- Fazl Ali Commission
- Dhar Commission
- State Reorganisation Act
- JVP Committee

Arrange the above in the correct chronological order of their establishment/passage:

- 2-4-1-3
- 1-3-4-2
- 2-1-4-3
- 3-2-4-1

Ans) a

Exp) Option a is the correct answer.

The correct chronological order is 2-4-1-3.

Dhar Commission: There had been demands from different regions, particularly South India, to reorganise the state on a linguistic basis. **Accordingly, the government of India appointed the Dhar Commission in June 1948.** It submitted its report in December 1948.

JVP Committee: The Dhar Commission recommended reorganisation of state based on administrative convenience rather than on linguistic basis which led to wide resentment and led to appointment of another committee i.e., **the JVP Committee in December 1948. It submitted its report in April 1949 and rejected language as the basis for reorganisation of state.**

Fazl Commission: The creation of Andhra state in October 1953 intensified the demand from other regions for the creation of states on Linguistic basis. **This forced the government to appoint the Fazl Ali commission In December 1953**

State Reorganisation Act 1956: The State Reorganisation Act was **passed by the government through the 7th Constitutional Amendment Act, 1956** on the recommendation of Fazl Ali Commission.

Source: Chapter 5 Union and Its Territory, Indian Polity by M Laxmikant

Q.33) Consider the following statements:

1. The President can make regulations with respect to the Union territory of Andaman and Nicobar Islands.
2. The Governor of a state can provide that an act of parliament does not apply to a Scheduled Area in that state.
3. The President can modify a parliamentary law in relation to tribal areas in Assam.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Parliament has the power to legislate for the whole or any part of the territory of India, which includes not only the states but also the Union territories or any other area, for the time being included in the territory of India.

The plenary territorial jurisdiction of Parliament is, however, subject to some special provisions of the Constitution.

Statement 1 is correct: As regards some of the Union Territories, such as the Andaman and Lakshadweep group of Islands, President may make regulations. These **regulations have the same force as Acts of Parliament and such regulations may repeal or amend a law made by Parliament in relation to such Territory. Thus, parliamentary acts can be overridden by the regulations made by President in the UT of Andaman and Nicobar.**

Statement 2 is correct: The application of Acts of Parliament to any Scheduled Area may be rejected or modified by notifications made by the Governor [Para 5 of the 5th Schedule].

Statement 3 is incorrect: The Governor of Assam may, by public notification, direct that any other Act of Parliament shall not apply to an autonomous district or an autonomous region in the State of Assam. Hence, it is the Governor of Assam and not the President who has overriding power over the acts of parliament in the state of Assam.

Source: Introduction To the Constitution of India, D D Basu, Pg. 324

Q.34) With reference to the River Boards Act, 1956 and 'River Boards' in India, consider the following statements:

1. The River Boards Act, 1956 was enacted under the provisions of Article 262 of the Constitution.
2. A River Board can be established by the state government after obtaining the permission from the President.
3. One of the objectives of the boards is to prepare schemes for the purpose of regulating an inter-state river.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

In India, River Boards are statutory bodies established to manage and develop the water resources of inter-state rivers and river basins. These bodies are established under the River Boards Act, 1956.

Statement 1 is correct: Article 262 of the Constitution provides for the adjudication of inter-state water disputes. It makes two provisions: (1) Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution and control of waters of any inter-state river and river valley. (2) Parliament may also provide that neither the Supreme Court nor any other court is to exercise jurisdiction in respect of any such dispute or complaint. **Under this provision, the Parliament has enacted two laws-The River Boards Act (1956) and the Inter-State Water Disputes Act (1956)].**

Statement 2 is incorrect: A river board is **established by the Central government** on the request of the state governments concerned to advise them.

Statement 3 is correct: The main objective of River Boards is to **promote integrated and coordinated development of inter-state river systems** and to regulate and develop water resources in an equitable and sustainable manner. They facilitate cooperation and coordination among the various states sharing a river basin and help to resolve disputes over the use of river water resources. They are also **entrusted with the task of preparing schemes**, including multi-purpose schemes, for the **purpose of regulating or developing the inter-State River** or river valley and advising the Governments interested to undertake measures for executing the scheme prepared by the Board.

Source: Laxmikanth.

<https://www.indiawaterportal.org/articles/river-boards-act-1956>

Q.35) With reference to e-Shram Portal, consider the following statements:

1. The portal was launched by the Union Ministry of Labour and Employment (MoLE).
2. Aadhar is not mandatory to get registered under this portal.
3. Workers registering with the e-Shram portal will get an Accidental Insurance cover of 2 Lacs under Pradhan Mantri Suraksha Bima Yojana (PMSBY).

Which of the statements given above is/are correct?

- a) 1 Only
- b) 1 and 2 Only
- c) 1 and 3 Only
- d) 2 and 3 Only

Ans) c

Exp) Option c is the correct answer.

e-Shram portal, the National Database of Unorganized Workers (UWs) which was launched on 26th August 2021 will be used for enrollment, registration, collection, and identification of the required data of all the unorganized workers. Portal will provide the facility to register workers by Self registration as per their convenience.

Statement 1 is correct: Ministry of Labour and Employment (MoLE) has launched the E-Shram portal.

Statement 2 is incorrect: Documents like the Aadhaar Number, mobile number, Aadhaar linked bank account will be required by the worker to register on the portal. If a worker does not have an Aadhaar linked mobile number, he can visit the nearest Common Service Centre (CSC) and register through Biometric authentication.

Statement 3 is correct: Workers registering with the e-Shram portal will get an Accidental Insurance cover of 2 Lacs under **Pradhan Mantri Suraksha Bima Yojana (PMSBY)** and premium for the first year will be borne by MoLE. The person should be between 18 – 59 years to be eligible for PMSBY through e SHRAM registration. **Objectives of e-SHRAM Portal**

- 1) **Creation of a centralized database of all unorganized workers (UWs)** including Construction Workers, Migrant Workers, Gig and Platform workers, Street Vendors, Domestic Workers, Agriculture Workers, etc., to be seeded with Aadhaar. ✓ Documents like the Aadhaar Number, mobile number, Aadhaar linked bank account are required by the worker to register on the portal.
- 2) To improve the implementation efficiency of the social security services for the unorganized workers.
- 3) **Sharing of information in respect of registered unorganised workers with various stakeholders** such as Ministries/ Departments/ Boards/ Agencies/ Organisations of the Central & State Governments through APIs for delivery of various social security and welfare schemes being administered by them.
- 4) **Portability of the social security and welfare benefits** to the migrant and construction workers.

Source: <https://blog.forumias.com/government-of-india-launches-the-e-shram-portal/>

<https://blog.forumias.com/e-shram-needs-some-hard-work-to-get-going/>

<https://blog.forumias.com/more-than-4-crore-unorganized-workers-registered-at-e-shram-portal-indias-first-national-database-on-unorganized-workers/> <https://www.nic.in/products/e-shram/>

Q.36) With reference to the 'Northeastern Council', consider the following statements:

1. It is constituted by the President under the article 263 of the Constitution.
2. It falls under the administrative jurisdiction of the Ministry of Development of the Northeastern Region.
3. The Governors of all the eight north eastern states are the members of the council.
4. Presently, Union Home Minister acts as ex-officio Chairman of the Northeastern Council.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 3 and 4 only
- d) 1, 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

Recently, Prime Minister of India attended the **Golden Jubilee celebrations (50 years) of the North-Eastern Council (NEC) in Shillong**. The Northeastern Council is the nodal agency for the economic and social development of the Northeastern Region.

Statement 1 is incorrect: Northeastern Council was **constituted in 1971 by an Act of Parliament**. It is a **statutory body established by the Government of India in 1971 under the Northeastern Council Act, 1971**. The council is headquartered in Shillong, Meghalaya, and covers the eight states of the Northeast region of India, namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura.

Statement 2 is correct: Northeastern Council (NEC) is under the **administrative purview of Ministry of Development of the North-Eastern Region (MDoNER)**. NEC has made significant contributions to the socio-economic development of the Northeastern region, as an Advisory body and as a Planning body.

Statement 3 is correct: The NEC consists of the **Governors and Chief Ministers of the eight states** of the Northeast region, along with nominated members from the government of India.

Statement 4 is correct: The NEC Act was amended by Parliament in 2002 to **add Sikkim and restructure** it as the **regional planning body** for the Northeastern Region. In 2018, The Union Cabinet has approved proposal of Ministry of Development of Northeastern Region (DoNER) for **nomination of Union Home Minister as ex-officio Chairman of Northeastern Council (NEC)**.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1884485>

<https://necouncil.gov.in/sites/default/files/about-us/Amendment%20Act%202002.pdf>

<https://necouncil.gov.in/about-us/nec-amendment-act-2002-0>

Q.37) With reference to 'Inter-State Council', consider the following statements:

1. As per the Constitution, only the Parliament of India is empowered to define the duties of an inter-state council.
2. Janata Dal Government established the Inter-State Council in 1990 on the recommendations of the Sarkaria Commission.
3. The council is a recommendatory body that is empowered to investigate and discuss subjects of common interest between Centre and states.
4. All the questions in the council are decided by consensus.

Which of the statements given above are correct?

- a) 1 and 4 only
- b) 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Article 263 contemplates the establishment of an Inter-State Council to effect coordination between the states and between Centre and states. Thus, the President can establish such a council if at any time it appears to him that the public interest would be served by its establishment.

Statement 1 is incorrect: The **president is empowered to define the duties** of an inter-state council. He can define the nature of duties to be performed by such a council and its organisation and procedure.

Statement 2 is correct: The **Sarkaria Commission on Centre-State Relations (1983-87) made a strong case for the establishment of a permanent Inter-State Council under Article 263** of the Constitution. It recommended that to differentiate the Inter-State Council from other bodies established under the same Article 263, it must be called as the Inter-Governmental Council. In **pursuance of the above recommendations of the Sarkaria Commission, the Janata Dal Government headed by V. P. Singh established** the Inter-State Council in 1990.

Statement 3 is correct: The **council is a recommendatory body on issues relating to inter-state, Centre-state and Centre-union territories relations**. It aims at promoting coordination between them by examining, discussing and deliberating on such issues. Its duties, in detail, are as follows:

- 1) investigating and discussing such subjects in which the states or the centre have a common interest;
- 2) making recommendations upon any such subject for the better coordination of policy and action on it; and
- 3) deliberating upon such other matters of general interest to the states as may be referred to it by the chairman.

Statement 4 is correct: The Council is assisted by a secretariat called the Inter-State Council Secretariat. This secretariat was set-up in 1991 and is headed by a secretary to the Government of India. Since 2011, it is also functioning as the secretariat of the Zonal Councils. The Council may meet at least thrice in a year. Its meetings are held in **camera and all questions are decided by consensus.**

Source: Laxmikanth

Q.38) With reference to 'Interstate and Intrastate trade & commerce', consider the following statements:

1. The subject of 'Inter-state trade and commerce' is mentioned in the concurrent list under Seventh Schedule of the Constitution.
2. Parliament can impose restrictions on the freedom of trade within a state in the public interest.
3. A bill to impose restrictions on the freedom of trade within a state can be introduced in the state legislature only with the previous sanction of the President.
4. Parliament can appoint an appropriate authority for carrying out the constitutional provisions relating to the freedom of trade in the country.

Which of the statements given above are correct?

- a) 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

Articles 301 to 307 in Part XIII of the Constitution deal with the trade, commerce and intercourse within the territory of India. The object of these provision is to break down the border barriers between the states and to create one unit with a view to encourage the free flow of trade, commerce and intercourse in the country.

Statement 1 is incorrect: The subject of 'Inter-state trade and commerce' is provided in **the Union list under Seventh Schedule of the Constitution.** This means that the power to legislate on matters related to inter-state trade and commerce is given to the central government, and not to the state governments.

Statement 2 is correct: Parliament can impose **restrictions on the freedom of trade, commerce and intercourse between the states or within a state in public interest.** But the Parliament cannot give preference to one state over another or discriminate between the states except in the case of scarcity of goods in any part of India.

Statement 3 is correct: The legislature of a state can imposes reasonable restrictions on the freedom of trade, commerce and intercourse with that state or within that state in public interest. But a **bill for this purpose can be introduced in the legislature only with the previous sanction of the president.** Further, the state legislature cannot give preference to one state over another or discriminate between the states.

Statement 4 is correct: The **Parliament can appoint an appropriate authority for carrying out the purposes of the provisions relating to the freedom of trade,** commerce and intercourse and restrictions on it. The Parliament can also confer on that authority the necessary powers and duties. But no such authority has been appointed so far.

Source: Laxmikanth

Q.39) According to the Constitution, in which of the following matters is the Centre empowered to give directions to the states with regard to the exercise of their executive power?

1. Construction and maintenance of means of communication declared to be of national or military importance.
2. Drawing up and execution of the specified schemes for the welfare of Scheduled Tribes in the state.
3. Measures to be taken for the protection of the railways within the state.
4. Devolution of financial powers to local governments to enable them to function as units of self-government.

Select the correct answer using the codes given below:

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 2 and 3 only
- d) 2, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Statement 1, 2 and 3 are correct:

The Constitution has placed **two restrictions on the executive power of the states** in order to give ample scope to the Centre for exercising its executive power in an unrestricted manner. Thus, the executive power of every state is to be exercised in such a way (a) as to ensure compliance with the laws made by the Parliament and any existing law which apply in the state; and (b) as not to impede or prejudice the exercise of executive power of the Centre in the state. In addition to the above two cases, the Centre is empowered to give directions to the states regarding the exercise of their executive power in the following matters:

- 1) the construction and maintenance of means of communication (declared to be of national or military importance) by the state;
- 2) the measures to be taken for the protection of the railways within the state;
- 3) the provision of adequate facilities for instruction in the mother-tongue at the primary stage of education to children belonging to linguistic minority groups in the state; and
- 4) the drawing up and execution of the specified schemes for the welfare of the Scheduled Tribes in the state.

The coercive sanction behind the Central directions under Article 365 is also applicable in these cases.

Statement 4 is incorrect: The **devolution of financial powers to local governments is a voluntary provision under the 73rd and 74th Amendment Acts**. Thus, executive cannot direct state to implement these provisions as it is under the discretion of state governments in India.

Source: Laxmikanth.

Q.40) With reference to UN-Energy Plan of Action towards 2025, consider the following statements:

1. It was launched to support the countries to transition towards net zero emissions.
2. It sets a milestone for no new coal power plants in the pipeline after 2021.
3. It is aimed at accelerating the achievement of Sustainable Development Goals (SDGs).
4. Under this, UN-Energy will provide analytical inputs for intergovernmental dialogues.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Plan of Action Towards 2025 was launched by **the UN Energy** against the backdrop of a global energy crisis and worsening climate emergency. It is a major step to catalyze the large-scale action and support needed for the transition to clean, affordable energy for all and net-zero emissions.

Statement 1 is correct: It is a major step to catalyze the large-scale action and support needed for the transition to clean, affordable energy for all and **net-zero emissions**.

Statement 2 is correct: Under plan of action 2025 UN Energy sets various milestones like **no new coal power plants in the pipeline after 2021**, 100% increase in modern renewables capacity globally, 30 million jobs in renewable energy and energy efficiency etc.

Statement 3 is correct: It aims to promote coherence in the UN system's multidisciplinary response to achieve **Sustainable Development Goal (SDG) 7** (Affordable and clean energy) in support of the 2030 Agenda for Sustainable Development, and the Paris Agreement on climate change

Statement 4 is correct: By harnessing the UN system's collective strengths, UN-Energy can provide analytical inputs for intergovernmental dialogues, share knowledge, and document best practices on institutional arrangements, technologies etc.

Knowledge Base:

UN Energy

- 1) UN-Energy is the United Nations' mechanism for inter-agency collaboration in the field of energy established by the **UN System Chief Executives Board for Coordination (CEB)**.
- 2) UN-Energy reports to the CEB through the High-Level Committee on Programmes (HLCP).
- 3) It brings together 30 organizations that are global leaders in their respective fields, covering together all aspects of energy and sustainable development.
- 4) It aims to promote **coherence in the UN system's multidisciplinary response to achieve Sustainable Development Goal (SDG) 7** in support of the 2030 Agenda for Sustainable Development, and the Paris Agreement on climate change.
- 5) It enhances coordination and collaborative actions within the UN with regards to policy development and implementation as well as knowledge sharing in area of energy.

Source: <https://energy.economictimes.indiatimes.com/news/power/un-energy-plan-of-action-towards-2025-launched/91334914> <https://un-energy.org/wp-content/uploads/2022/05/UN-Energy-Plan-of-Action-towards-2025-2May2022.pdf>

Q.41) With reference to 'Union Public Service Commission', consider the statements:

1. It acts as a central personnel agency in India responsible for cadre management of all-India services and Central services.
2. An individual ministry or department has no power to reject the advice of the UPSC.
3. The jurisdiction of UPSC can be extended by an act made by Parliament.
4. If the government fails to consult UPSC on matters relating to methods of recruitment to civil services, the aggrieved public servant has no remedy in court.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 2 and 4 only
- d) 2, 3 and 4 only

Ans) d

Exp) Option d is the correct answer.

Union Public Service Commission (UPSC) is the central recruiting agency in India. It is an independent constitutional body in the sense that it has been directly created by the Constitution. **Articles 315 to 323 in Part XIV of the Constitution** contain elaborate provisions regarding the composition, appointment and removal of members along with the independence, powers and functions of the UPSC.

Statement 1 is incorrect: UPSC is **not concerned with the classification of services, pay and service conditions, cadre management, training, and so on.** These matters are handled by the Department of Personnel and Training—one of the three departments of the Ministry of Personnel, Public Grievances and Pensions. Therefore, UPSC is **only a central recruiting agency while the Department of Personnel and Training is the central personnel agency in India.**

Statement 2 is correct: The UPSC presents, annually, to the president a report on its performance. The President places this report before both the Houses of Parliament, along with a memorandum explaining the cases where the advice of the Commission was not accepted and the reasons for such non-acceptance.

All such cases of non-acceptance must be approved by the Appointments Committee of the Union cabinet. An individual ministry or department has no power to reject the advice of the UPSC.

Statement 3 is correct: The additional functions relating to the services of the Union can be conferred on UPSC by the Parliament. It can also place the personnel system of any authority, corporate body or public institution within the jurisdiction of the UPSC. Hence the **jurisdiction of UPSC can be extended by an act made by the Parliament.**

Statement 4 is correct: UPSC is consulted on the matters related to personnel management and all matters relating to methods of recruitment to civil services and for civil posts.

The Supreme Court has held that if the **government fails to consult UPSC in the matters (mentioned above), the aggrieved public servant has no remedy in a court.** In other words, the court held that any irregularity in consultation with the UPSC or acting without consultation does not invalidate the decision of the government. Thus, the provision is directory and not mandatory. Similarly, the court held that a selection by the UPSC does not confer any right to the post upon the candidate.

Source: Laxmikanth

Q.42) Which of the following statements support the argument that the Finance Commission is a quasi-judicial body?

1. The commission submits its report to the President to be laid before both the Houses of Parliament.
2. The recommendations of the commission shall be implemented within a specified time frame.
3. The Commission has the powers of a civil court, and it can summon witnesses and take evidence.

Select the correct answer using the codes given below:

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

Article 280 of the Constitution of India provides for a **Finance Commission as a quasi-judicial body.** It is constituted by the president of India every fifth year or at such earlier time as he considers necessary. A quasi-judicial body is a type of administrative agency that has powers and procedures like those of a court of law but is not a court itself.

Statement 1 is incorrect: The Finance commission submits its report to the president. He lays it before both the Houses of Parliament along with an explanatory memorandum as to the action taken on its recommendations. **However, this does not make it a quasi-judicial body.**

Statement 2 is incorrect: The recommendations made by the Finance Commission are only of advisory nature and hence, **not binding on the government**. The recommendations of the commission have no time for its implementation.

Statement 3 is correct: In carrying out its functions, the Finance Commission has the **powers of a civil court, and it can summon witnesses**, take evidence, and require the production of documents. This provision makes it a Quasi-Judicial body.

Source: Laxmikanth

<https://www.legalserviceindia.com/legal/article-10088-finance-commission-of-india.html>

Q.43) Which of the following are the functions of ‘National Commission for Scheduled Castes’?

1. To enquire into specific complaints with respect to the deprivation of rights of the Schedule Castes.
2. To investigate and monitor all matters relating to the constitutional safeguards for the Schedule Castes.
3. Specifying the castes to be deemed as Scheduled Castes in relation to any Union Territory.
4. Annually present report to the President upon the working of safeguards for Schedule Castes in India.

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

National Commission for Scheduled Castes (SCs) is a constitutional body in the sense that it is directly established by Article 338 of the Constitution. It consists of a chairperson, a vice-chairperson and three other members. They are appointed by the President by warrant under his hand and seal. Their conditions of service and tenure of office are also determined by the President.

Statements 1, 2 and 4 are correct: The functions of the National Commission for Scheduled Castes are:

- (a) To **investigate and monitor all matters relating to the constitutional and other legal safeguards** for the SCs and to evaluate their working;
- (b) To **inquire into specific complaints with respect to the deprivation of rights and safeguards** of the SCs;
- (c) To participate and advise on the planning process of socio-economic development of the SCs and to evaluate the progress of their development under the Union or a state;
- (d) To **present to the President, annually and at such other times as it may deem fit, reports upon the working of those safeguards;**
- (e) To make recommendations as to the measures that should be taken by the Union or a state for the effective implementation of those safeguards and other measures for the protection, welfare and socio-economic development of the SCs; and
- (f) To discharge such other functions in relation to the protection, welfare and development and advancement of the SCs as the president may specify.

Statement 3 is incorrect: **President by public notification specify the castes, races or tribes or parts of or groups within castes, races or tribes which shall for the purposes of the Constitution** be deemed to be Scheduled Castes in relation to that State or Union Territory, as the case may be.

Source: Laxmikanth

<https://dopt.gov.in/sites/default/files/ch-11.pdf>

Q.44) With reference to ‘Special Officer for Linguistic Minorities’, consider the following statements:

1. Originally, the Constitution of India did not make any provision with respect to the Special Officer for Linguistic Minorities.
2. Special Officer for Linguistic Minorities is appointed by Central government after consultation with the states.
3. The Office of the Special Officer for Linguistic Minorities falls under the ambit of Union Ministry of Home Affairs.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

The **Special Officer for Linguistic Minorities** is a constitutional post created under Article 350 B of the Indian Constitution. The primary responsibility of the Special Officer is to investigate and monitor the implementation of constitutional safeguards provided to linguistic minorities in India.

Statement 1 is correct: The Constitution of India, **originally, did not make any provision with respect to the Special Officer for Linguistic Minorities**. Later, the States Reorganisation Commission (1953–55) made a recommendation in this regard. Accordingly, the Seventh Constitutional Amendment Act of 1956 inserted a new Article 350–B in Part XVII of the Constitution.

Statement 2 is incorrect: Special Officer for Linguistic Minorities is **appointed by the President of India**. Constitution does not specify the qualifications, tenure, salaries and allowances, service conditions and procedure for removal of the Special Officer for Linguistic Minorities.

Statement 3 is incorrect: This constitutional body of Special Officer for Linguistic Minorities falls under the Ministry of Minority Affairs (Not Home Ministry). The Special Officer submits the annual reports along with other reports to the President of India through the Union Minister of Minority Affairs.

Source: Laxmikanth.

Q.45) With reference to Technical Barriers to Trade Agreement (TBT), consider the following statements:

1. It is an Agreement of World Trade Organization.
2. Recently, an Indian representative has been made the chair of TBT committee.
3. It also covers sanitary and phytosanitary (SPS) measures.

Which of the statements given above is/are correct?

- a) 2 and 3 only
- b) 1 and 2 only
- c) 1 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Technical Barriers to Trade (TBT) Agreement is a **World Trade Organization** agreement focusing on removing/regulating non-tariff barriers to trade in the form of technical barriers to international trade.

Statement 1 is correct: The Agreement on Technical Barriers to Trade is an **international treaty of the World Trade Organization**

Statement 2 is correct: After a gap of ten years, an **Indian government officer Anwar Hussain Shaik has been made the chair of the WTO's committee on Technical Barriers on Trade**. He will take this role from Elisa Maria Olmeda de Alejandro from Mexico.

Statement 3 is incorrect: Although TBT applies to a broad range of agricultural and industrial products, **sanitary and phytosanitary (SPS) measures and specifications for government procurement are covered under separate agreements**.

Source: https://www.wto.org/english/tratop_e/tbt_e/tbt_e.htm

https://www.wto.org/english/tratop_e/tbt_e/tbt_info_e.htm

<https://economictimes.indiatimes.com/news/economy/foreign-trade/indian-officer-anwar-hussain-shaik-is-new-chair-of-wto-committee/articleshow/91791460.cms>

Q.46) Consider the following statements with reference to the territorial integrity of the states in India:

1. The Parliament can redraw the political map of India according to its will.
2. The State Legislature can enlarge its territorial jurisdiction and possess the power of 'extra-territorial legislation' in some circumstances.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

It is important to note that the **integrity of the territory** of the States is not guaranteed by the Constitution of India and **Parliament is made Supreme** even with respect to the questions relating to the territory.

Statement 1 is correct: The Constitution **authorizes the Parliament to form new states or alter the areas, boundaries or names of the existing states without their consent**. In other words, **the Parliament can redraw the political map of India according to its will**. Hence, the territorial integrity or continued existence of any state is not guaranteed by the Constitution. Therefore, India is rightly described as '**an indestructible union of destructible states**'.

Statement 2 is incorrect: It is not possible for a State Legislature to enlarge its territorial jurisdiction under any circumstances except when the boundaries of the state itself are widened by an act of Parliament.

As regards territory, Article 245 (1) provides that subject to the provisions of this constitution, a State Legislature may make laws for the whole or any part of the state to which it belongs. Parliament has, on the other hand, the power to legislate for 'the whole or any part of the territory of India, which includes not only the states but also the union territory of India. It also possesses the **power of 'extra-territorial legislation' under Art. 245 (2) of the Constitution, which no state legislature possesses**.

Knowledge Base:

Article 1 deals with the name of the country and the type of polity.

Article 2 empowers the Parliament to 'admit into the Union of India, or establish, new states on such terms and conditions as it thinks fit'.

Article 3 details the power of parliament to reorganize states and/or union territories.

Source: Indian Polity; Laxmikanth 6th Edition Chapter 5

Q.47) The Indian Constitution contains the “Full Faith and Credit” clause, which is related to:

1. Any official record made by a public servant in the discharge of his official duties
2. Public records of each state
3. Executive acts of the government of a state

Which of the above options is/are correct?

- a) 3 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Under the Constitution, the jurisdiction of each state is confined to its own territory. Hence, it is possible that the acts and records of one state **may not be recognized in another state.**

Every state must recognize and respect the judgments, judicial proceedings, laws & records of other states.

To remove any such difficulty, Constitution lays down the following:

Full faith and credit are to be given throughout the territory of India to **public acts, records and judicial proceedings** of the Centre and **every state**. Hence, **Option 2 is correct.**

This clause is primarily invoked to enforce the functioning of a union, a state refusing to recognize acts and records of another state may give rise to confusion and inconvenience. This avoids inter-governmental conflicts.

Option 1 is correct. The expression ‘**public record**’ includes **any official** book, register or **record made** by a public servant in the **discharge of his official duties.**

Option 3 is correct. The expression ‘**public acts**’ includes both legislative and executive acts of the government.

Knowledge Base: The way and the conditions under which such acts, records and proceedings are to be proved and their effect determined would be as provided by the laws of Parliament. This means that the general rule mentioned above is subject to the power of Parliament to lay down the mode of proof as well as the effect of such acts, records and proceedings of one state in another state.

Source: Indian Polity: M Laxmikanth 6th Edition, Page 365

<https://indiankanoon.org/doc/358206/>

Q.48) The Constitution of India provides which of the following provisions to ensure the independence of Chief Election Commissioner (CEC)?

1. The Chief Election Commissioner is to be appointed by a collegium headed by the Prime Minister.
2. Retiring Chief Election Commissioner is not eligible for any further appointment under the government.
3. He can be removed only on the same grounds as a judge of the Supreme Court.
4. The service conditions of the Chief Election Commissioner cannot be varied to his disadvantage after his appointment.

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 3 and 4 only
- c) 1 and 4 only
- d) 2, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Article 324 of the Constitution has made the provisions to safeguard and ensure the independent and impartial functioning of the Election Commission.

Statement 1 is incorrect: The Constitution has not prescribed the qualifications (legal, educational, administrative or judicial) of the members of the Election Commission. The **appointment of the chief election commissioner and other election commissioners are made by the president.**

Statement 2 is incorrect: The Constitution **has not debarred the retiring election commissioners** from any further appointment by the government.

Statement 3 is correct: The chief election commissioner is provided with the security of tenure. He **cannot be removed from his office except in same manner and on the same grounds as a judge of the Supreme Court.** In other words, he can be removed by the president based on a resolution passed to that effect by both the Houses of Parliament with special majority, either on the ground of proved misbehaviour or incapacity. Thus, he does not hold his office till the pleasure of the president, though he is appointed by him.

Statement 4 is correct: According to the Constitution of India, the service conditions of the Chief **Election Commissioner (CEC) cannot be varied to his disadvantage** after his appointment. This provision is enshrined in Article 324(5) of the Constitution.

Source: Laxmikanth

Q.49) Which of the following statements is/are correct regarding the National Investigation Agency (NIA)?

1. It can investigate a terror case in a state only after getting permission from the concerned state government.
2. It has the authority to investigate offences that are committed outside Indian territory.
3. The agency can investigate offences related to Cyber terrorism.

Select the correct answer using the code given below:

- a) 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The National Investigation Agency (NIA) is the central counter-terrorism law enforcement agency in the country. It was created in 2008 after the Mumbai terror attack. It can investigate terror cases across the country **without** having to get **permission from the states.**

Statement 2 is correct: The NIA (Amendment) Act 2019 expands the jurisdiction of the NIA. Now, it has the authority to **investigate scheduled offences that are committed outside** Indian territory subject to international treaties and domestic laws of other nations.

Statement 3 is correct: The NIA (Amendment) Act 2019 allows the agency to investigate the following new offences, these are - Human trafficking; Counterfeit currency or bank notes related offences; Sale or manufacture of prohibited arms; Offences under the Explosive Substances Act, 1908; and **Cyber terrorism.**

Knowledge Base:

- 1) The National Investigation Agency (NIA) was constituted in 2009 under the provisions of the National Investigation Agency Act, 2008 (NIA Act). It is the central counter-terrorism law enforcement agency in the country.
- 2) The headquarters of the NIA is at New Delhi.
- 3) The NIA is headed by a Director-General. He is appointed by the central government. His powers are like the powers exercisable by a Director-General of Police in respect of the police force in a state.

- 4) The NIA works under the administrative control of the Ministry of Home Affairs, Government of India.
- 5) The state government extends all assistance and co-operation to the NIA for investigation of the offences specified under the NIA Act.

Source: M Laxmikanth, Chapter 54

<https://indianexpress.com/article/explained/explained-what-is-the-nia-act-and-why-is-chhattisgarh-challenging-it-6219106>

Q.50) Which of the following best describes the AKRUTI initiative?

- a) It is a scheme of the Ministry of Tribal Affairs to promote entrepreneurial art.
- b) It is an initiative of the Ministry of Housing and Urban Affairs to promote sustainable rural housing.
- c) It is a program launched by Bhabha Atomic Research Centre (BARC) for encouraging village-level technopreneurship.
- d) It is an initiative of Indian space research organization (ISRO) for encouraging innovations in small satellite design.

Ans) c

Exp) Option c is the correct answer.

- 1) **The AKRUTI programme is offered by Bhabha Atomic Research Centre (BARC). Aimed at encouraging village-level technopreneurship based on BARC technologies.**
- 2) BARC, under AKRUTI program, presently offers Technologies/ Consultancy in fields of Biodegradable Waste Processing, Water, Food, and Agriculture.
- 3) To create awareness regarding the use of AKRUTI, several Knowledge and Rural Technology Implementation Kendras (KRUTIK) were opened in villages to impart regional-level training.

Source: <https://www.thehindu.com/news/cities/Madurai/akruti-promotes-youth-entrepreneurship-in-and-around-kudankulam/article65463744.ece>

Q.1) Consider the following statements regarding 'judicial review' and the 'judicial activism':

1. The concept of 'judicial review' originated in United States, whereas 'judicial activism' is an Indian innovation.
2. The term 'judicial review' is mentioned in the Constitution, whereas 'judicial activism' is not mentioned in the Constitution.
3. Both 'judicial review' as well as 'judicial activism' are the parts of basic structure of the Constitution.

Which of the statements given above are **incorrect**?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Judicial review means power of the judiciary to **review the actions of the executive, legislature and the administration. Judicial activism denotes the proactive role played by the judiciary in the protection of the rights** of citizens and promotion of justice in the society. Through activism, the judiciary forces the executive and the legislature to discharge their duties.

Statement 1 is incorrect: Both the concepts of judicial review and judicial activism were originated in the USA. Judicial activism was introduced for the first time by **John Marshall** in the case of **Marbury vs. Madison (1803)**. The term 'judicial activism' was coined by **Arthur Schlesinger Jr. in 1947** in an article in Fortune.

Statement 2 is incorrect: Both the terms- 'judicial review' and 'judicial activism' are not explicitly mentioned in the Constitution. However, the Constitution itself confers the power of judicial review on the judiciary. For example, Article 13 where Supreme Court can declare a law null and void if it violates the Fundamental Rights.

Statement 3 is incorrect: Only judicial review has been held as a part of the basic structure. In India Nehru Gandhi Case (1975), Minerva Mills case (1980), S.P. Sampath Kumar Case (1987), S.R. Bommai case (1994), I.R. Coelho case (2007) and in many other cases, judicial review has been considered as a basic feature of the Indian Constitution. **On the other hand, Supreme Court has time and again advocated to balance judicial activism with the judicial restraint to ensure separation of powers and maintain the autonomy of the judiciary.**

Source: M. Laxmikanth (Chapter 27 and 28)

Q.2) The Indian Constitution has certain borrowed features. In this context, from which of the following sources has the 'integrated system of courts' been adopted?

- a) The Constitution of Ireland
- b) The Constitution of France
- c) The English Common Law
- d) The Government of India Act, 1935

Ans) d

Exp) Option d is the correct answer.

Integrated system of Courts means a judicial system where a single system of **courts enforces both Centre as well as state laws**. India has integrated judicial system with Supreme Court at the top and High Courts below it. There is a hierarchy of subordinate courts below the High Court. All these courts are empowered to hear cases pertaining to both Centre as well as the state laws.

Option a is incorrect: Some of the borrowed features from Constitution of Ireland are Directive Principles of State Policy, nomination of members to the Rajya Sabha and method of election of the President and not integrated system of courts.

Option b is incorrect: The judicial system including the single system of courts in India has not been adopted from the French Constitution. There are considerable differences between the judicial setup of India and France. For example, unlike India, in France any court can hear civil and criminal system. Moreover, **France is a unitary state**. So, there is no question of single system of courts enforcing center and the state laws.

Option c is incorrect: The United Kingdom (UK) has **three separate legal systems, one each for England and Wales, Scotland and Northern Ireland**. Also, **UK is not a federal country**. So, there is no question of single system of courts in UK.

Option d is correct: The single system of courts in India has been adopted from the Government of India Act, 1935. The Supreme Court of India has succeeded the Federal Court of India, which was established under the Government of India Act, 1935. The Federal Court also has original, advisory and appellate jurisdiction. **It was empowered to hear appeals from the Provincial High Courts**. Also, the **High Courts could decide cases on the matters pertaining to the Government of India Act, 1935**. Hence, there was a single system of courts which was later adopted in the Constitution of India. A significant chunk of administrative provisions was adopted from the Government of India Act, 1935.

Source: M. Laxmikanth (Page 26.1, Chapter 26)

Q.3) Consider the following statements regarding the Supreme Court of India:

1. The Constitution provides for a maximum tenure of 6 years for the Supreme Court Judges.
2. The Constitution explicitly provides the grounds for the removal of a Supreme Court Judge.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Articles 124-147 of the Constitution deals with various provisions regarding the Supreme Court of India, its powers, administration and so on.

Statement 1 is incorrect: The Constitution does not prescribe tenure of a Supreme Court Judge. It only specifies that a Judge **holds office until he attains the age of 65 years**. So, there is no fixed tenure of the Judges of the Supreme Court. The Judge retires on attaining the age of 65 years or he/ she can resign or can be removed by the President on the recommendation of the Parliament.

Statement 2 is correct: Article 124(4) provides for the removal of the Supreme Court Judge. The **Article explicitly mentions the grounds for removal of Judge- proven misbehavior or incapacity**. Hence, the given statement is correct.

Source:

<https://main.sci.gov.in/constitution#:~:text=A%20Judge%20of%20the%20Supreme%20Court%20cannot%20be%20removed%20from,presented%20to%20the%20President%20in>

https://www.constitutionofindia.net/constitution_of_india/the_union/articles/Article%20124

M. Laxmikanth (Page 26.3, Chapter 26)

Q.4) With reference to removal of the High Court judges in India, consider the following statements:

1. No judge of any high court has been impeached so far since independence.
2. Speaker has discretionary power in admitting the motion of removal.
3. Removal procedure of a high court judge is similar to Supreme Court judge.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is correct answer.

A judge of a high court can be removed from his office by an order of the President. The President can issue the removal order only after an address by the Parliament has been presented to him in the same session for such removal. The address must be supported by a special majority of each House of Parliament.

Statement 1 is correct: No judge of any high court (or Supreme Court) of India has been impeached so far. Impeachment proceedings against SC or HC judges initiated a total of 4 times in Indian history.

Statement 2 is correct: The Speaker/Chairman may admit the motion of removal of High court or refuse to admit it. They have discretionary power in admitting the motion of removal.

Statement 3 is correct: A judge of a high court can be removed in the same manner and on the same grounds as a judge of the Supreme Court. The procedure for the impeachment of a judge of a high court is the same as that for a judge of the Supreme Court. The grounds of removal are two- **proved misbehaviour or incapacity.**

Source: Laxmikanth (Ch 34)

Q.5) Consider the following statements with reference to the Central Advisory Board on Archaeology:

1. Recently, it has been reconstituted to include the culture minister as the chairperson of the board.
2. It will promote a closer association of learned societies in India with the activities of the Archaeological Survey of India.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Recently, the Government has re-constituted the Central Advisory Board on Archaeology (CABA). It has been constituted to strengthen contacts between the Archaeological Survey of India (ASI) and those in the field of archaeological research.

Statement 1 is correct: The Central Advisory Board on Archaeology has been reconstituted by the ASI to **include the culture minister as the chairperson** and also includes ASI and Culture Ministry officials, state government nominees, MPs, scientists, university representatives, and experts on the Indus Valley script among the members. This board will also consist of 5 persons that will be nominated by the Indian Government along with the former Director-General of ASI.

Statement 2 is correct: The board will meet once a year and its functions would include advising the Centre on "matters relating to archaeology" referred to by its members. It will **promote** the studies related to

application of archaeological principles, training future Archaeologists, and closer association of **learned societies in India and of the State Governments with the activities of the ASI**. It will promote closer contacts of the Archaeological Survey of India with Indian Universities conducting Archaeological Research.

Source: <https://www.thehindu.com/news/national/central-advisory-board-of-archaeology-to-meet-after-8-years/article65523305.ece>

<https://www.thehindu.com/news/national/govt-reconstitutes-central-advisory-board-on-archaeology/article65439702.ece>

Q.6) With respect to the Indian judicial system, which of the following statements is/ are correct regarding 'charge sheet'?

1. It is the final report prepared by a police officer or investigative agency after completing their investigation.
2. Non-filing of charge sheet within the prescribed time gives accused the 'right to default bail'.
3. It is a public document and must be made publicly available.

Choose the correct answer from the codes given below:

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Section 173 of Code of Criminal Procedure (CrPC) contains provisions regarding the charge sheet. According to this section, charge sheet should contain the names, the nature of information, offences etc. All important questions are answered in the charge sheet.

Statement 1 is correct: A charge sheet is the **final report prepared by the police office or the investigative agency after completing their investigation**. It was also upheld by the Supreme Court in **K Veeraswami vs. Union of India and Others (1991)**, that a charge sheet is a final report of the police officer under section 173(2) of the CrPC.

Statement 2 is correct: A charge sheet **needs to be filed within the prescribed period of 60/90 days. Non-filing of charge sheet within the prescribed time will entitle the accused for the right to default bail**. In **Rakesh Kumar Paul case**, Justice M.B. Lokur of Supreme Court had held that since no charge sheet has been filed within the prescribed time, the petitioner was eligible for obtaining default bail. Therefore, the **prosecuting agency needs to show a sense of urgency** in the investigation of the case and omits or defaults to file a charge-sheet within the time prescribed, the accused would be entitled to be released on bail. **Also, the right of default bail is lost, once charge sheet is filed.**

Statement 3 is incorrect: Recently Supreme Court has held that **charge sheet is NOT a public document and it cannot be made publicly available**. **Section 74 of the Evidence Act** contains the details about the public documents and as per the Court's ruling, charge sheets cannot be called as public document under this section. The Court held that if it is made public, **it will compromise the rights of the accused, victim and investigative agencies**. It should be noted that **First Information Report (FIR) is a public document** and the Supreme Court has directed to publish copies of FIRs online (except in the sensitive cases).

Source: <https://www.legalserviceindia.com/legal/article-1338-what-is-fir-and-chargesheet-.html>

<https://indianexpress.com/article/explained/chargesheets-not-public-documents-breaking-down-sc-ruling-8396054/>

Q.7) Consider the following statements regarding the doctrine of judicial review, as followed in India:

1. Judicial review of executive decisions over the administrative matters is permitted.
2. The Supreme Court's power of judicial review can be curtailed by amending the constitution.
3. Judicial review of laws included under the IX Schedule of the Constitution is not permitted.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Judicial review means power of the judiciary to examine the constitutionality of the legislative and the executive actions. Its objective is to uphold the supremacy of the constitution.

Statement 1 is correct: Courts are empowered to review the executive actions on administrative matters if they violate fundamental rights or any other legal rights. For example, under Article 32, Supreme Court can issue the writ of mandamus to direct a public official to perform his official duty.

Statement 2 is incorrect: As per the Constitution of India, **the powers of Supreme Court can only be enhanced and cannot be curtailed.** Also, judicial review has been declared as a basic feature of the Indian Constitution under various cases like India Nehru Gandhi Case (1975), Minerva Mills case (1980), S.P. Sampath Kumar Case (1987), S.R. Bommai case (1994), I.R. Coelho case (2007). Hence, it cannot be curtailed.

Statement 3 is incorrect: In I.R. Coelho case, the Supreme Court has held that there is no blanket immunity from judicial review of the laws included in the IX Schedule. These laws can be challenged in the Supreme Court if they violate the Fundamental Rights. Hence, judicial review of laws included in the IX schedule is permissible.

Source: M. Laxmikanth (Page 27.1, Chapter 27)

Q.8) Consider the following statements regarding the 'Public Interest Litigation (PIL)':

1. This concept was originated in the United States of America.
2. It requires a stricter application of the rule of 'locus standi'.
3. It is based on the non-adversarial system of litigation.

Which of the statements given above is/ are **incorrect**?

- a) 2 only
- b) 3 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

As per the Supreme Court, "Public Interest Litigation (PIL) is a legal action initiated in a court of law for the enforcement of public interest or general interest. In simple words, **it is a litigation filed in the court of law, for the protection of public interests like pollution, terrorism, construction hazards etc.**

Statement 1 is correct: In order to provide representation to the previously unrepresented sections, the concept of PIL was originated and developed in the **United States of America (USA) during 1960s.** In 1960s the PIL movement began to receive financial support from the Office of Economic Opportunity. This encouraged lawyers and public spirited persons to take up cases of the under-privileged and fight against dangers to environment, public health, consumer interests and the weak sections.

Statement 2 is incorrect: The locus standi rule has been diluted for the PIL. Locus Standi means, a person whose rights have suffered, only he/ she can move to the courts to seek justice. **In PIL, any member of the public, like a public-spirited citizen or organization, can approach the courts for enforcing the rights of general public.** Judges themselves have in some cases initiated **suo moto action** based on newspaper articles or the letters received. **Bandhua Mukti Morcha vs. Union of India, Unni Krishnan vs. the State of Andhra Pradesh** are the examples where the rule has been relaxed.

Statement 3 is correct: Non-adversarial or inquisitorial system of litigation implies an active involvement of the court in the case investigation. In adversarial system, on the other hand, the Court acts as an impartial referee between the two litigating parties. **Supreme Court in People's Union for Democratic Reforms vs. Union of India has held that PIL is a non-adversarial system of litigation.** As a non-adversarial litigation, PIL has following aspects:

- 1) Collaborative litigation: In collaborative litigation the effort is from all the sides i.e. the claimant, the court and the government or public official all are in collaboration to see that basic human rights become meaningful.
- 2) Investigative litigation: This is because it works on the reports of registrar, district magistrate, comments of experts, newspapers etc.

Hence, the statement is correct as PIL is a non-adversarial system of litigation.

Source: <https://www.legalserviceindia.com/legal/article-542-public-interest-litigation-genesis-and-evolution.html>

<https://www.legalserviceindia.com/article/1273-Public-Interest-Litigation.html>

M Laxmikanth (Page 29.1, Chapter 29)

Q.9) In India, Legal Services Authorities provide free legal services to which of the following?

1. All transgender persons
2. The victims of an ethnic violence or caste atrocity
3. A mentally ill or otherwise disabled person
4. All workers in services and industrial sectors
5. A woman or a child below the age of 18 years.
6. A victim of Human trafficking

Select the correct answer using the code given below:

- a) 1, 4 and 6 only
- b) 2, 3 and 4 only
- c) 2, 3, 5 and 6 only
- d) 2, 3, 4, 5 and 6 only

Ans) c

Exp) Option c is the correct answer.

Under the mandate of Article 39A of the constitution, Legal Services Authorities Act, 1987 was enacted to provide free legal aid to the poor and weaker sections of society.

Statement 1 is incorrect: NALSA, 1987 does not provide free legal aid to all transgender persons separately. They will have to fulfil the conditions related to different income criterion to get the free legal aid as per the Act. On the other hand, all women and children are eligible for free legal aid.

Statement 2 and 3 are correct: A mentally ill or otherwise disabled person and victim of a mass disaster, ethnic violence, caste atrocity, flood, drought, earthquake or industrial disaster are covered under NALSA for free legal aid.

Statement 4 is incorrect: It does not cover all workman from services and only covers industrial workman as mentioned in section 12(f) of the NALSA ACT 1987.

Statement 5 is correct: A woman is entitled for free legal aid irrespective of her income or financial status. A woman is eligible to apply for free legal aid by virtue of Section 12(c) of the Legal Services Authorities Act, 1987. Similarly, A child is eligible for free legal aid till the age of majority i.e., 18 years. This is effectuated by Section 12 (c) of the Legal Services Authorities Act, 1987.

Statement 6 is correct: A victim of trafficking in human beings or begar as referred to in Article 23 of the Constitution are covered under free legal aid. Also, person in custody, including custody in a protective home within the meaning of clause (g) of Section 2 of the Immoral Traffic (Prevention) Act, 1956

Source: Laxmikanth Chapter 36 Subordinate courts

<https://www.thehindu.com/news/national/other-states/bengals-state-legal-services-authority-launches-support-for-survivors-of-domestic-violence/article66494699.ece>

<https://nalsa.gov.in/services/legal-aid/eligibility>

<https://www.deccanherald.com/opinion/in-perspective/give-transgenders-access-to-justice-1183066.html>

<https://nalsa.gov.in/services/legal-aid/eligibility>

Q.10) Consider the following statements with reference to the Thomas Cup:

1. It is associated with badminton.
2. Recently, India's has won the men's Thomas Cup 2022 for the first time.
3. It is biennial international championship.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Recently, India won the Thomas Cup for the first time ever.

Statement 1 is correct: Thomas Cup trophy **signifies the world supremacy** in the sport of **badminton**. It can be considered equivalent to football or cricket world cup.

Statement 2 is correct: Recently, India's men's badminton team **won the Thomas Cup title for the first time ever by defeating Indonesia in the finals**. In the **tournament's seven-decade-long history**, the championship title has changed hands only among five nations - China, Malaysia, Indonesia, Japan and Denmark. With its win, **India became only the sixth country** ever to break into this elite club.

Statement 3 is correct: Thomas Cup is a **biennial international badminton championship** contested by the men and women's national teams. It is a **16-nation team event**.

Source: <https://www.thehindu.com/opinion/editorial/each-for-all/article65419460.ece>

<https://bwfthomasubercups.bwfbadminton.com/history/>

<https://olympics.com/en/news/badminton-bwf-thomas-cup-final-2022-indonesia-india-live-updates>

Q.11) Consider the following statements regarding powers and functioning of Lok Adalats:

1. It has the jurisdiction to settle those matters pending before any court but not the matters which are at pre-litigation stage.
2. It can deal only with matters which are civil in nature, and not criminal matters.
3. An appeal against the judgement of Lok Adalat shall lie to Supreme court directly.

Which of the statements given above are **incorrect**?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: Lok Adalat has jurisdiction to determine and to arrive at a compromise or settlement between the parties to a dispute in respect of any case pending before any court and for any matter which falls within the jurisdiction of any court and not brought before such a court (pre-litigation stage).

Statement 2 is incorrect: Lok Adalat deals with civil cases and criminal matters (compoundable offences). The offences which are non-compoundable in nature fall outside the purview of Lok Adalat.

Statement 3 is incorrect: An award of Lok Adalat is like a decree of civil court. So, the decision of Lok Adalat is final and binding on the parties to the dispute. Hence no appeal shall lie to any court. It reduces the delay in settlement of disputes.

Source: Laxmikanth Chapter 36 Subordinate courts

<https://blog.forumias.com/answered-what-are-lok-adalats-why-were-they-established-discuss-the-role-of-lok-adalats-and-their-limitations/>

Q.12) Which of the following statements is/are correct regarding the Family Courts?

1. They are established under the Legal Services Authorities Act,1987.
2. An appeal against the decision of family court shall lie to the high court.
3. Parties are provided with help of a legal practitioner as a matter of right in family courts.
4. They are established only by central government in consultation with the high courts of respective states.

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2 and 4 only
- c) 2 only
- d) 1, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect: The Family Courts are established under the Family Courts Act, 1984 (not the Legal Services Authorities Act 1987). It was enacted to provide for the establishment of Family Courts to promote speedy settlement of disputes relating to marriage and family affairs.

Statement 2 is correct: It provides for only one right of appeal which shall lie to the High Court.

Statement 3 is incorrect: Parties are not provided with help of legal practitioner as a matter of right in family courts.

Statement 4 is incorrect: Family Court Act,1984 provides for the establishment of Family Courts by the state governments (and not the Central Government) in consultation with the High Courts.

Source: Laxmikanth Chapter 36 Subordinate courts

Q.13) With reference to High Courts in India, consider the following statements:

1. The Constitution makes no provision for the appointment of a distinguished jurist as a judge of a high court.
2. Only a citizen of India can be appointed as a judge of High Court.

3. A person who holds a judicial office for minimum five years can be appointed as a judge of a high court.
 4. The Constitution has not prescribed a minimum age for appointment of a High Court judge.

Which of the statements given above are correct?

- a) 1, 2 and 4 only
 b) 3 and 4 only
 c) 1 and 2 only
 d) 1, 2 and 3 only

Ans) a

Exp) Option a is correct answer.

The high courts of India are the highest courts of appellate jurisdiction in each state and union territory of India.

Statement 1 is correct: Unlike in the case of the Supreme Court, the Constitution makes no provision for appointment of a distinguished jurist as a judge of a High Court.

Statement 2 is correct and Statement 3 is incorrect: Qualification to become the Judge of the High Court are-

1) He should be a citizen of India. Therefore, **only Indian citizens** can be High court judge.

2) (a) He should have held a judicial office in the territory of India for ten years (not five years); or (b) He should have been an advocate of a High court (or High courts in succession) for ten years.

Statement 4 is correct: The Constitution **has not prescribed a minimum age** for appointment as a judge of a high court. However, it has prescribed the retirement age (62 years).

Source: Laxmikanth (Ch 34)

Q.14) Consider the following statements regarding Gram Nyayalaya:

1. It is a non-statutory body.
2. The presiding officer of Gram Nyayalaya shall be appointed by the state government in consultation with high court concerned.
3. It is mandatory to establish a Gram Nyayalaya at every gram panchayat.
4. It has the power to adjudicate civil as well as criminal cases.

Which of the statements given above are correct?

- a) 1 and 2 only
 b) 1 and 3 only
 c) 2 and 3 only
 d) 2 and 4 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: Gram Nyayalaya is a statutory body established under Gram Nyayalaya Act, 2008 for grass root delivery of justice.

Statement 2 is correct: Presiding officer of Gram Nyayalaya who is Nyayadhikari are appointed by state government in consultation with high courts.

Statement 3 is incorrect: As per provisions of the Act, it is mandatory to establish a Gram Nyayalaya at every intermediate panchayat or for a group of contiguous panchayat **and not in every gram panchayat.**

Statement 4 is correct: They can adjudicate both civil and criminal cases on the matters scheduled in the Act.

Source: Laxmikanth Chapter 36 Subordinate courts

Q.15) 'Endosulfan', generally seen in news, is-

- a) Water Purification Agent
- b) Pesticide
- c) Fertilizer
- d) new medicines for endocrine diseases

Ans) b

Exp) Option b is the correct answer.

The Supreme Court has recently slammed the Kerala government for doing “virtually nothing” for Endosulfan pesticide exposure victims. The court said the State’s inaction was “appalling” and amounted to a breach of the apex court’s 2017 judgment, which had ordered the State to pay ₹5 lakh each to the victims in three months.

Endosulfan is an **organochlorine insecticide (pesticide)** which was first **introduced in the 1950s** and is commonly known by its trade name Thiodan. It became a **highly controversial agrichemical** due to its **acute toxicity, potential for bioaccumulation**, and role as an **endocrine disruptor**. Because of its threats to human health and the environment, a **global ban on the manufacture and use of Endosulfan** was negotiated under the **Stockholm Convention** in April 2011. **Endosulfan is listed under both the Rotterdam Convention on the Prior Informed Consent and the Stockholm Convention on Persistent Organic Pollutants.** The **Supreme Court of India has banned** the manufacture, sale, use, and export of Endosulfan throughout the country, citing its harmful health effects in 2015.

Source: <https://www.downtoearth.org.in/coverage/health/tracking-decades-long-endosulfan-tragedy-in-kerala-56788>

<https://www.thehindu.com/news/national/kerala-did-virtually-nothing-for-endosulfan-victims-for-5-years-sc/article65420193.ece>

Q.16) Which of the following statements best describes the term “amicus curiae”, often seen in the news?

- a) It refers to a third party who mediates in the settlement of a dispute through the method of arbitration.
- b) It means one who assists the court by furnishing information or advice regarding questions of law or fact.
- c) It refers to the legal party in a case who defends his/her own case in a court of law.
- d) It denotes to the legal practitioner who provides free legal aid to poor on voluntary basis.

Ans) b

Exp) Option b is the correct answer.

An **amicus curia** is a legal practitioner appointed by the court of law to assist the court for the complete delivery of justice. The phrase “amicus curiae” means “friend of court”. In civil matters, criminal cases and PIL cases, the Court can appoint an Advocate as amicus curiae if it thinks it necessary in the case of an unrepresented party. The concept of amicus curiae originated in Roman Law. Then English Law adapted it and others also followed especially for human rights cases. Amicus curiae volunteers to help the court in deciding some matters, however it is the discretion of the court whether to accept it or not. The information provided by the amicus curiae could be in the form of brief, testimony etc.

Source:

https://www.law.cornell.edu/wex/amicus_curiae#:~:text=Amicus%20Curiae%20literally%20translated%20from,strong%20interest%20in%20the%20matter.

<https://www.legalserviceindia.com/legal/article-796-amicus-curiae.html>

Q.17) In legal context, which of the following statements is correct with reference to “Plea bargaining”?

- a) The Code of Criminal Procedure does not have any provisions related to it.
- b) Under plea bargain, defendant pleads guilty to a lesser offence, and it involves pre-trial negotiations with the prosecution.
- c) It is available for all types of crime, including those which are punishable with death sentence.
- d) Under plea bargain, the defendant pleads guilty to all the charges levied against him by the prosecution to skip the long process of trial.

Ans) b

Exp) Option b is the correct answer.

Statement a is incorrect: Earlier plea bargaining was not part of Indian legal system. It was added to the Code of Criminal Procedure in 2006 for pre-trial negotiation in criminal cases.

Statement b is correct: Plea bargaining is the system of negotiating an agreement between the prosecution and defense wherein the defendant pleads guilty to a lesser offence and involves pre-trial negotiations with the prosecution. It may involve bargaining on the charge or in the quantum of sentence.

Statement c is incorrect: Plea bargaining is available only in those criminal cases where the punishment is up to seven years. It is not available for all types of crime e.g.; a person cannot claim plea bargaining after committing heinous crimes or for the crimes which are punishable with death or life imprisonment.

Statement d is incorrect: Plea bargaining is not same as **pleading guilty by the defendant to all charges** levied against him by the prosecution. The aim of the plea bargain for the defendant is also not just to avoid the long process of trial. Rather it is a pretrial negotiation between the accused and the prosecution where the accused agrees to **plead guilty in exchange for certain concessions by the prosecution.**

Source: <https://www.thehindu.com/news/national/the-hindu-explains-what-is-plea-bargaining-and-how-does-it-work/article32126364.ece>

<https://www.liveweb.in/columns/concept-of-plea-bargaining-supreme-court-offence-criminal-justice-system-218842>

Q.18) A Gram Nyayalaya can try which of the following types of offences?

1. Offences related to property Disputes at village level
2. Offences under the Protection of Civil Rights Act, 1955
3. Election disputes related to gram panchayat
4. Offences punishable with imprisonment of more than 7 years
5. Disputes as to the use of forest produce by inhabitants of Gram Panchayats.

Select the correct answer using the code given below:

- a) 1, 2 and 5 only
- b) 2, 3 and 4 only
- c) 2, 3 and 5 only
- d) 1, 2, 4 and 5 only

Ans) a

Exp) Option a is the correct answer.

Statement 1, 2 and 5 are correct: Under first and second schedule of Gram Nyayalaya Act offences like property disputes, Protection of rights under Civil Rights Act of 1955, disputes related to the use of forest produce by inhabitants of Gram Panchayats, right to purchase of property, use of common pasture, regulation and timing of taking water from irrigation channel, the Equal Remuneration Act, 1976 (25 of 1976), the Protection of Women from Domestic Violence Act etc. are covered.

Statements 3 and 5 are incorrect: Only petty criminal cases (punishable for a term of 2 years) are tried under the Gram Nyayalaya Act. Also, election disputes related to gram panchayats, according to 73rd

Constitutional Amendment Act are adjudicated by relevant authority formed under the purview of respective state laws.

Source: <https://indiankanoon.org/doc/69849624/>

Q.19) The Criminal Contempt of Court can be invoked for which of the following?

1. Publication of any matter which lowers the authority of the court.
2. Obstructing the administration of justice and interfering with due course of judicial proceedings by any means.
3. Commenting on the day-to-day administrative process of judiciary.
4. Willful disobedience of an order of any court.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 and 4 only
- c) 2 and 3 only
- d) 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

As a Court of Record, the Supreme Court ruled that it has power to punish for contempt not only of itself but also of high courts, subordinate courts and tribunals functioning in the entire country. Contempt of court may be civil or criminal.

Statement 1 and 2 are correct: Criminal contempt means the publication of any matter or doing an act which—(i) scandalizes or lowers the authority of a court; or (ii) prejudices or interferes with the due course of a judicial proceeding; or (iii) interferes or obstructs the administration of justice in any other manner.

Statements 3 is incorrect: As innocent publication, fair and accurate reporting and reasonable criticism of the day-to-day administrative process of judiciary does not account to criminal contempt.

Statement 4 is incorrect: Also, willful disobedience of court is a civil contempt. Section 2(b) of the Contempt of Courts Act, 1971 defines “civil contempt” as willful disobedience to any judgment, decree, direction, order, writ or other process of a court or willful breach of an undertaking given to a Court.

Source: <https://blog.forumias.com/contempt-of-court/>

<https://indiankanoon.org/doc/1396751/>

Laxmikanth Chapter 26 Supreme court

Q.20) Consider the following statements with reference to the recent amendments in National Policy on Biofuels, 2018:

1. The amended policy targets 20% blending of ethanol in petrol by 2030.
2. It will now allow for export of biofuels in specific cases.
3. The policy aims to promote the production of biofuels in the country, under the Make in India program.

Select the correct answer using the code given below:

- a) 1, 2 and 3
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1 and 2 only

Ans) c

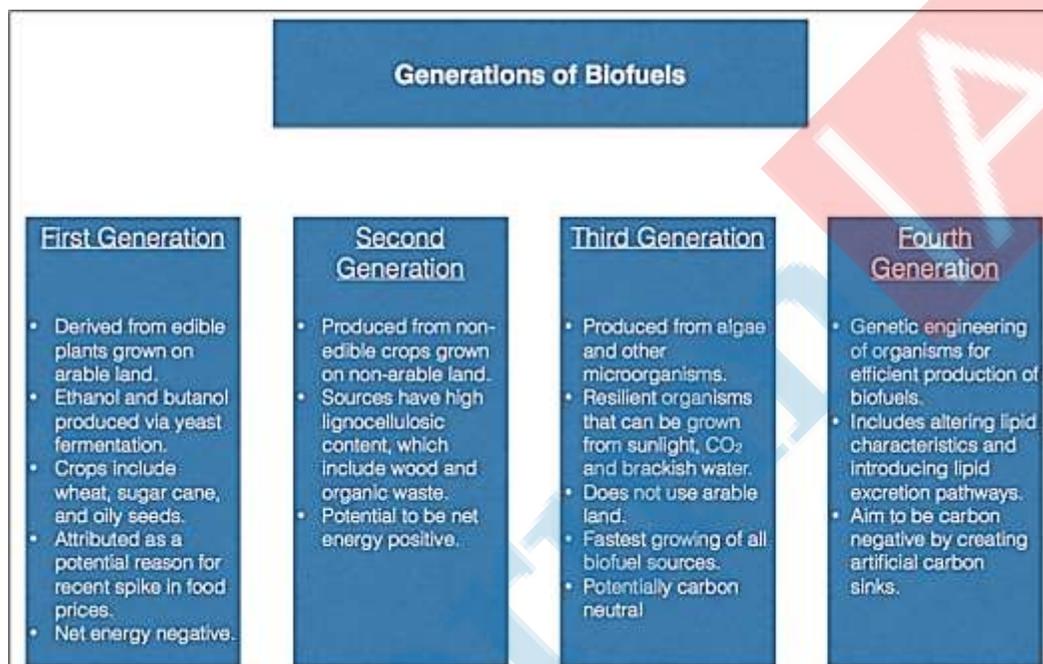
Exp) Option c is the correct answer.

Recently, the Union Cabinet approved **amendments to the National Policy on Biofuels, 2018.**

Statement 1 is incorrect: Instead of 2030, the Centre plans to move ahead with its ethanol blending target of 20% of petrol containing ethanol by 2025-26. It will promote the production of biofuels in the country, under the Make in India program, by units located in Special Economic Zones (SEZ)/ Export Oriented Units (EoUs).

Statement 2 is correct: The new amendments will grant permission for export of biofuels in specific cases. And it would also allow to delete/amend certain phrases in the Policy in line with decisions taken during the meetings of National Biofuel Coordination Committee.

Statement 3 is correct: The amended policy aims to promote the production of biofuels in the country, under the Make in India program, by units located in Special Economic Zones (SEZ)/ Export Oriented Units (EoUs).



Source: https://www.business-standard.com/article/economy-policy/cabinet-approves-national-biofuel-policy-after-slew-of-amendments-122051801171_1.html#:~:text=Also%2C%20more%20feedstocks%20have%20been,be%20doped%20with%20auto%20fuels&text=The%20Union%20Cabinet%20on%20Wednesday,2025%2D26%20from%202030%20earlier.

Q.21) Consider the following statements regarding Supreme Courts's Advisory Jurisdiction:

- The Constitution of India authorizes President to seek the opinion of the judiciary on any question of law or fact of public importance.
- The Supreme Court can refuse to tender its opinion to President on any question of law or fact of public importance.
- The Supreme Court can also refuse to tender its opinion on any dispute arising out of any pre-constitution treaty or agreement.
- The advice tendered by supreme court is binding on the President of India.

Which of the statements given above are correct?

- 1 and 2 only
- 1 and 3 only
- 1, 2 and 4 only
- 2, 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: Under Article 143 of the constitution President can seek opinion of judiciary on A) any question of law or fact of public importance which has arisen, or which is likely to arise and on B) any dispute arising out of any pre-constitution treaty, agreement, covenant, engagement, Sanad or other similar instruments.

Statement 2 is correct: As per constitution, Supreme Court can refuse to tender its opinion to President which involves any question of law or fact of public importance.

Statement 3 is incorrect: As per constitution, Supreme Court must provide its opinion on matters involving any dispute arising out of any pre-constitution treaty, agreement or similar instrument.

Statement 4 is incorrect: Under advisory jurisdiction, the opinion expressed by the Supreme Court is only advisory and not a judicial pronouncement. Hence, it is not binding on the president; he may follow or may not follow the opinion.

Knowledge Base: Knowledge Base: So far (2019), the President has made fifteen references to the Supreme Court under its advisory jurisdiction (also known as consultative jurisdiction). Ex. Berubari Union case in 1960, 2G spectrum case etc.

Source: Laxmikanth Chapter 26 Supreme court

Q.22) The Constitution empowers the President of India to appoint “acting Chief Justice of India” in which of the following circumstance(s)?

1. If the Chief Justice of India is unable to perform the duties of his/her office due to absence.
2. When both the houses of the Parliament passed a resolution demanding initiation of impeachment motion against the Chief Justice of India.
3. If the deadlock between Government and Collegium over the appointment of Chief Justice of India persists for more than six months.

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Article 126 of the Constitution of India deals with matters related to appointment of acting Chief Justice of India and grounds related to it. The President can appoint a judge of the Supreme Court as an acting Chief Justice of India in certain circumstances.

Statement 1 is correct: Article 126 empowers the President of India to appoint acting Chief Justice of India, if the Chief Justice of India is **unable to perform the duties of his/her office because of absence or otherwise**. Further the President can appoint acting chief justice if the office of Chief Justice of India is **vacant**.

Statement 2 is incorrect: The constitution provides **no such provision** for appointment of acting Chief Justice of India (CJI) when Parliament passes a resolution demanding removal motion against CJI.

Statement 3 is incorrect: The constitution provides **no such ground** to appoint acting CJI i.e., if the deadlock between Government and Collegium over the appointment of Chief Justice of India persists for more than six months,

Source: Laxmikanth - Supreme Court

Q.23) With reference to the procedure for removal of judges of Supreme Courts and High Courts in India, consider the following statements:

1. The word “impeachment” is mentioned nowhere in the Constitution of India.
2. The Judges of Supreme court can be removed by the President, based on a motion passed by each house of Parliament with special majority.
3. Prior written consent of the Chief Justice of India is mandatory for the initiation of impeachment motion against judges of High courts.

Which of the statements given above are correct?

- a) 1,2 and 3
- b) 1 and 3 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

The procedure for removal of the Supreme Court judge is guided by **Article 124(4) of the Constitution of India and the Judges (Inquiry) Act, 1968**. **Article 218** of the Constitution of India provides for the impeachment of High Court judges.

Statement 1 is correct: The Constitution does not use the word ‘impeachment’. The term impeachment is used to refer to the **proceedings under Article 124** (for the removal of a Supreme Court judges) and **Article 218** (for the removal of a High Court judges).

Statement 2 is correct: It is true that judges of the Supreme court cannot be removed by the President except based on a motion passed by each house of the parliament with special majority. The Constitution of India (**Article 124(4)**) provides that a **judge of the Supreme court shall not be removed** from his/her office except by an order of the President. The same order should be passed after an address by each house of parliament supported by a **majority of total membership of that House and by not less than two-thirds of total members of that House present and voting.**

Statement 3 is incorrect: As per the Judges (Inquiry) Act 1968, prior written consent of the Chief Justice of India is not mandatory for the initiation of impeachment motion in the Parliament against judges of High courts.

Source: <https://prsindia.org/theprsblog/explainer-removal-of-judges-from-office>

Q.24) In the context of Indian Judiciary, which of the following best describes the term “Original Jurisdiction”?

- a) Admission of judgements given by the Supreme court as legal precedents in the lower courts.
- b) It consists of all the jurisdictional powers conferred upon the Supreme court on the date of enforcement of Indian constitution.
- c) A territorial limit on the jurisdiction of high courts before large scale reorganization of states in 1956.
- d) Power of the Supreme Court or High Courts to hear and adjudicate certain cases in the first instance.

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: Admission of judgements given by the Supreme court as legal precedents by lower judiciaries is related to the concept of **Court of records**, not original jurisdiction.

Option b is incorrect: On 26th November 1949, the Constituent Assembly of India adopted the Constitution of India, which came into effect from 26th January 1950. The powers conferred to the Supreme court of India by original constitution does not means original jurisdiction of Indian Judiciary. The Jurisdictional

powers conferred upon the Supreme court on the date of enforcement of Indian Constitution also include its appellate jurisdiction, advisory jurisdiction etc other than the original jurisdiction. **Hence the statement is not correct.**

Option c is incorrect: The States Reorganization Act, 1956 made a major change in the boundaries of India's states and territories by organizing them along linguistic lines. However, the **original jurisdiction is not related to territorial jurisdiction exercised by high courts before implementation of this act.**

Option d is correct: **Original jurisdiction of a court is the power to hear a case for the first time**, as opposed to appellate jurisdiction. The constitution gives citizens the **right to approach** either the Supreme court (Article 32) or high courts (Article 226) **directly to enforce their fundamental rights** and so this is the original jurisdiction of both the supreme court as well as high courts.

Source: Laxmikanth - Supreme Court

Q.25) Consider the following statements with reference to IN-SPACE:

1. It is a central public sector enterprise (CPSE) under Department of Space.
2. It authorizes and provides licenses to private players to carry out Space Activities.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Recently, the Minister of State for the Department of Space (DOS) informed the Lok Sabha that the government was looking at opening the space sector to Foreign Direct Investment.

Statement 1 is incorrect: IN-SPACE (Indian National Space Promotion and Authorization Center) is an independent nodal agency under Department of Space (not a Central Sector Public Enterprise). On the other hand, New Space India Ltd (NSIL), is the CPSE under Department Of Space which will transfer the matured technologies developed by ISRO to Indian industries.

Statement 2 is correct: A national level autonomous Nodal Agency namely Indian National Space Promotion and Authorization Centre (IN-SPACE) under DOS has been created for promoting, handholding, authorizing and licensing private players to carry out Space Activities.

Source: https://www.isro.gov.in/sites/default/files/draft_national_space_transportation_policy.pdf

https://www.business-standard.com/article/economy-policy/india-s-draft-space-transportation-policy-gives-green-push-to-isro-121063000171_1.html

<https://www.isro.gov.in/indian-national-space-promotion-and-authorization-center-space>

<https://www.nsilindia.co.in/Aboutus>

<https://pib.gov.in/PressReleaseDetail.aspx?PRID=1796867>

Q.26) Although Indian judiciary is majorly influenced by the judicial system of the United States of America (USA), there are some differences between them. Which of the following statements are correct regarding these differences?

1. While India has an integrated Judiciary, the USA has a dual system of courts- one to enforce Union laws and other to enforce State laws.
2. The Scope of judicial review is broader in the USA as compared to India.
3. While the Indian Judicial System has a provision for Advisory Jurisdiction, it is absent in the with respect to United States of American Judicial system.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: The Indian Constitution has established an **integrated judicial system** with the Supreme Court at the top, Indian judiciary enforces both Union and State laws. In contrast, **the United States of America (USA) has a dual system of courts**—one for the Centre and the other for the states. Thus, state laws and union laws are enforced by separate judiciary in the USA.

Statement 2 is correct: The scope of **judicial review is broader in the USA** as compared to India because India follows **Procedure established by law** whereas the USA follows **due process of law**. While Indian Judiciary sits on the judgement of whether the laws/executive actions followed proper procedures, American Judiciary sits on the judgement of wisdom of law i.e., reasonableness of law which provides better scope for judicial review.

Statement 3 is correct: It is true that the Indian **Judicial System has a provision for Advisory Jurisdiction**, but **no such provision** is provided in the **American Judicial System. Article 143** of the Indian Constitution authorises the **President to seek the opinion of the Supreme Court**.

Source: <https://www.whitehouse.gov/about-the-white-house/our-government/the-judicial-branch/#:~:text=The%20Supreme%20Court%20of%20the%20United%20States&text=All%20Justices%20are%20nominated%20by,political%20pressure%20when%20deciding%20cases.>

<https://www.lawinsider.in/columns/analyzing-the-judicial-systems-of-u-s-a-u-k-and-india#:~:text=provision%20for%20Advisory-,Jurisdiction,-.%20Whereas%2C%20no%20such>

Q.27) In the context of Indian Judiciary, which of the following can be considered as criticisms against the “Collegium system”?

1. It has no power with respect to the transfer of High court judges.
2. The system does not recognize the reservation for underprivileged sections of society while appointing the judges.
3. The system is not part of the original constitution, but it has just evolved through the judgements of the Supreme court.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Supreme court collegium system is chaired by **the Chief Justice of India** along with four senior-most Supreme Court judges. The High court collegium is chaired by the **Chief Justice** and the two senior-most judges of the concerned high court, and it sends its judicial appointments recommendation only to the Supreme Court Collegium.

Statement 1 is incorrect: The **collegium system decides on both the appointment and transfer of judges**, thus plays a major role in reducing the interference of the executive. The collegium system makes

recommendations for the candidates to be appointed as Supreme Court and High Court judges to the President.

Statement 2 is correct: It is true that the appointment made by the Collegium system does not recognize any affirmative action or reservation policy. The lack of representation of disadvantaged groups such as OBCs/SCs and STs and Women are one of the major criticisms levelled against the Indian Judiciary. For instance, so far, there has been just one **judge from the ST community and no women CJI so far.**

Statement 3 is correct: Collegium system is not part of the original constitution, and this is one of the major criticisms levelled against collegium. The Collegium system is a judicial innovation through a **series of three cases** (happened in 1981,1993 and 1998) popularly known as **three judge cases.**

Source: <https://indianexpress.com/article/explained/explained-law/judiciary-appointment-of-judges-collegium-system-njac-debate-explained-8329397/>

<https://www.indiatoday.in/law/story/centre-vs-collegium-how-judges-are-appointed-in-india-us-uk-and-other-countries-2326456-2023-01-25>

Q.28) "The exclusive original jurisdiction of the Supreme Court extends to the disputes which involve a question, whether of law or fact, on which the existence or extent of a legal right depends." In this context, in which of the following matters the supreme court has the exclusive original jurisdiction?

1. A dispute arising out of any pre-Constitution treaty or agreement.
2. Any dispute between two or more states.
3. Matters related to inter-state water disputes.
4. A dispute between the Centre and any of the states.
5. Matters referred to the finance commission.

Select the correct answer using the code given below:

- a) 2 and 4 only
- b) 2, 3 and 4 only
- c) 1, 2, 4 and 5 only
- d) 1, 3, and 5 only

Ans) a

Exp) Option a is the correct answer.

Article 131 of the constitution of India deals with the original jurisdiction of the Supreme court. Original jurisdiction of the Supreme court means that the court **hears the case first as opposed to the appellate jurisdiction** and **exclusive jurisdiction means the power of the Supreme court alone** to hear that in the first instance.

Option 1 is incorrect: Exclusive Original jurisdiction (or even Original Jurisdiction) of the Supreme Court does **not extend to a dispute arising out of any pre-Constitution treaty**, agreement, covenant, engagement or other similar instruments. In fact, disputes arising out of pre-constitution treaties belong to an **advisory jurisdiction (Article 143)** of the Supreme court.

Option 2 is correct: It is true that a **dispute between two or more states is the exclusive original jurisdiction of the Supreme court**, which means that such cases cannot be heard by the High court.

Option 3 is incorrect: Matters related to Inter-state water disputes are neither exclusive original nor the original jurisdiction of the supreme court as the Interstate water disputes act of 1956 has excluded the original jurisdiction of Supreme court in disputes between states with respect to the use, distribution or control of the water of interstate river or river valley.

Option 4 is correct: A dispute between centre and any state on any matter comes under the exclusive original jurisdiction of the Supreme Court.

Option 5 is incorrect: Original jurisdiction of the Supreme court **does not extend to cover matters referred to the Finance Commission.** The Finance Commissions are constituted by the President of India under **Article 280** of the Indian Constitution to define the financial relations between the Centre and state governments.

Source: Laxmikanth - Supreme court

Q.29) In the context of Indian Judiciary, Judicial review can be used to ensure which of the following?

1. To ensure Judicial supremacy.
2. To ensure Federal character of Indian constitution.
3. To ensure the constitutionality of executive powers such as ordinance issued by the President and Governors.

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 1, 2 and 3
- c) 2 and 3 only
- d) 1 and 2 only

Ans) c

Exp) Option c is the correct answer.

The Constitution of India confers the power of judicial review on both the Supreme Court and High Courts in India. Further, the Supreme Court has declared the power of **judicial review as a basic structure of the Constitution.**

Statement 1 is incorrect: Judicial review **ensures Constitutional supremacy, not Judicial supremacy.** Judicial review empowers the Judiciary (both Supreme court and High courts) **to strike down any laws/executive actions, if it violates constitutional provisions** thereby ensuring supremacy of the constitution.

Statement 2 is correct: It is true that Judicial review **ensures the federal character** of the Indian constitution. Judiciary can strike down any central laws if it violates federal nature of the Indian constitution for instance if the **central government enacts law in state list**, except according to the grounds mentioned in the constitution then Judiciary can strike down such laws to ensure Federalism in India.

Statement 3 is correct: The Supreme court (SC) in DC Wadhwa v. State of Bihar case, 1986 held that re-promulgation of ordinances without submitting it to the legislature is a violation of the Constitution. Further in the Krishna Kumar Singh & Anr vs State of Bihar & Ors case, 2017 the SC ruled that power of the President and the Governor to make ordinances **is not exempt from judicial review** under the Constitution. Source: Laxmikanth - Judicial Review (chapter 27)

<https://indianexpress.com/article/explained/jharkhand-new-quota-bill-what-is-ninth-schedule-of-constitution-8265015/>

Q.30) Consider the following pairs:

Species	Likely to find in the regions of
1. Hump nosed Pit Viper	Western Ghats of Maharashtra
2. Sloth bear	Madhya Pradesh
3. White-rumped Vulture	Cold Deserts of Ladakh

Which of the above given pairs have been matched correctly?

- a) 3 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correctly matched: Hump-nosed Pit Viper are found in the Western Ghats regions of state of Maharashtra, Goa and southern India. They are often seen in dense forests and coffee plantations where they seek refuge under leaf litter or thick bushes. They are terrestrial reptiles and ambush predators.

Pair 2 is correctly matched: The sloth bear is the most widespread bear species in India, where it mostly occurs in areas with forest cover. It is **found in dry and moist forests** and sometimes in grasslands as well. In India, they are **widely found in Madhya Pradesh** and nearby areas.

Pair 3 is incorrectly matched: White-rumped vultures are listed as Critically Endangered species after the drastic population decline in India. Small populations of White-rumped vultures are residing in the natural habitats in various regions of **North-Central India that includes the districts of Uttar Pradesh and Madhya Pradesh.**

Source: <https://www.natureinfocus.in/animals/india-s-striking-variety-of-pit-vipers>

<https://www.nathab.com/know-before-you-go/asia-the-pacific/india/wildlife-guide/sloth-bear/>

https://www.discoveryjournals.org/Species/current_issue/2020/v21/n68/A8.pdf

Q.31) How tribunals under Article 323A are different from tribunals under Article 323B of Indian Constitution?

1. Article 323A contemplates establishment of tribunals for public service matters only, while Article 323B contemplates establishment of tribunals for certain other matters also.
2. Tribunals under Article 323A can be established only by Parliament, whereas tribunals under Article 323B can be established both by Parliament and state legislatures.
3. There is hierarchy of tribunal under Article 323A, whereas no hierarchy of tribunals can be created under Article 323B.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is correct answer.

The 42nd Amendment Act of 1976 added a new Part XIV-A to the Constitution. This part is entitled as 'Tribunals' and consists of only two Articles—Article 323 A dealing with administrative tribunals and Article 323 B dealing with tribunals for other matters.

Statement 1 is correct: Article 323A contemplates establishment of tribunals for **public service matters only**, Article 323 B contemplates establishment of tribunals **for certain other matters** such as (a) Taxation (b) Foreign exchange, import and export (c) Industrial and labour (d) Land reforms, etc.

Statement 2 is correct: Tribunals under Article 323 A can be established **only by the Parliament**; tribunals under Article 323 B can be established **both by Parliament and state legislatures** with respect to matters falling within their legislative competence.

Statement 3 is incorrect: Under Article 323A, only one tribunal for the Centre and one for each state or two or more states may be established. **There is no question of hierarchy of tribunals under Article 323A**, whereas **under Article 323B, a hierarchy of tribunals may be created**. For example, **there is hierarchy in form of appellate tribunal of respective tribunals such as** Income Tax Appellate Tribunal (ITAT), Customs, Excise and Service Tax Appellate Tribunal (CESTAT), Competition Appellate Tribunal (COMPAT) and Securities Appellate Tribunal (SAT) etc.

Source: Laxmikanth (Ch 35)

Q.32) With reference to Indian Judiciary, consider the following statements:

1. District judges are appointed by the Governor only after consultation with the State Public Service Commission and the high court of the state.
2. District judge is the highest judicial authority in the district.
3. Sessions' judge has the power to impose life imprisonment but cannot award death sentence.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

The state judiciary consists of a **high court and a hierarchy of subordinate courts**, also known as lower courts. The subordinate courts function below and under the high court at **district and lower levels**. **Articles 233 to 237 in Part VI** of the Constitution deal with matters related to subordinate courts.

Statement 1 is incorrect: District judge are appointed by the governor of the state in consultation with the concerned high court (consultation with State Public Service commission is not required). However, appointment of persons (other than district judges) to the judicial service of a state are made by the governor of the state after consultation with the State Public Service Commission and the high court.

Statement 2 is correct: The district judge is the highest judicial authority in the district. He/she possesses original and appellate jurisdiction in both civil as well as criminal matters. He/she also has supervisory powers over all the subordinate courts in the district. Appeals against his/her orders and judgements lie to the High Court.

Statement 3 is incorrect: District judges are called Session's judges when they deal with criminal matters. Session's judge has the power to impose life imprisonment as well as death sentence (capital punishment). However, a capital punishment passed by them is subject to confirmation by the High Court, whether there is an appeal or not.

Source: Laxmikanth - Subordinate courts

Q.33) With reference to Indian Judiciary, consider the following statements:

1. The power to increase the number of judges in High court is vested only with the Governor of the state concerned.
2. Pensions of high court judges are charged on the Consolidated Fund of India.
3. Salaries and allowance of the high court judges cannot be changed under any circumstances.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

India follows the model of integrated judiciary arranged in a hierarchical order with the Supreme court as apex organization and high courts which work below the Supreme Court. Currently, India has 25 High Courts established in different states of the country.

Statement 1 is incorrect: The power to increase the **number of judges in High courts is vested in the President of India (Article 216)** whereas the power to increase the number of judges in the **Supreme courts is vested in the Parliament (Article 124)**.

Statement 2 is correct: It is true that **Pensions** of high court judges are charged on the **Consolidated fund of India**. It is to be noted here that while pensions are charged on the consolidated fund of India, **salaries and other allowance** of high court judges are charged upon the **consolidated fund of respective states**.

Statement 3 is incorrect: The salaries, allowances, privileges, leave and pension of the judges of a high court are determined from time to time by Parliament and it can be **changed during a financial emergency**. **Thus, salaries and allowance cannot be changed under any circumstances is incorrect.**

Source: Laxmikanth - High Court

Q.34) The Constitution of India allows declaring other cities/places as seats of the Supreme court. In this context which of the following statements is correct?

- a) The President of India can declare such seats after seeking recommendation from the Chief Justice of India.
- b) The Parliament can declare such seats, but those decisions must be approved by the constitutional bench of the Supreme court.
- c) The Chief Justice of India can declare such seats with approval from the President of India.
- d) The President of India can declare such seats based on the report of the Law Commission.

Ans) c

Exp) Option c is the correct answer.

The Constitution declares Delhi as the seat of the Supreme Court. The Supreme Court of India is the highest judicial authority of India, and it is in New Delhi, India.

Option a is incorrect: **The President of India cannot change the seat of the Supreme court;** however, he/she has an active role to play in this context because **president's approval is essential** to change the seat of the Supreme court.

Option b is incorrect: **Parliament has no direct role in making decisions about declaring other cities as seats of the Supreme court** as this matter is restricted to the Judiciary (the chief justice of India).

Option c is correct: It is true that the Constitution **authorizes the Chief Justice of India to appoint other places as a seat** of the Supreme Court with the approval of the President. This provision is **only optional**

which means that no court can give any direction either to the President or to the Chief Justice to appoint any other place as a seat of the Supreme Court.

Option d is incorrect: The President of India cannot declare other cities as seats of the Supreme court and the Law commission too has no direct role in making such decisions.

Source: Laxmikanth - Supreme Court

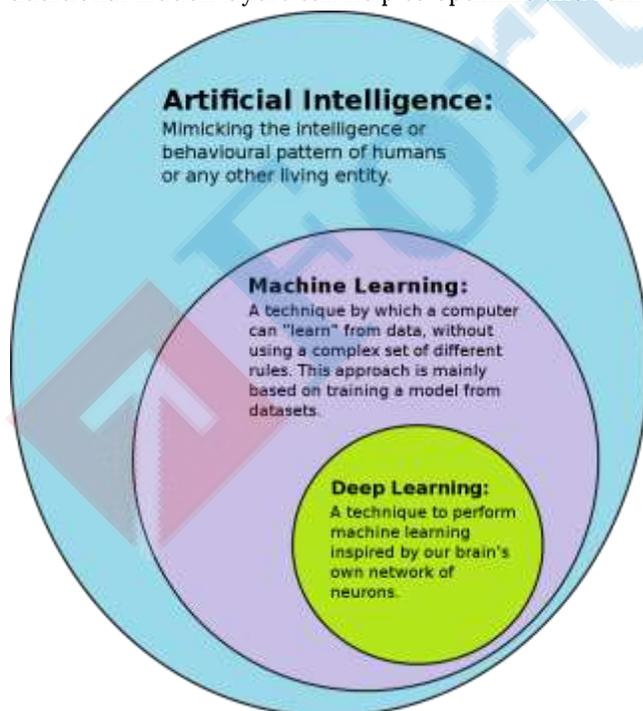
Q.35) Which among the following best describes the term, “Deep Learning”, seen frequently in the news?

- It is a type of artificial intelligence that assists humans in fast learning.
- It is a type of machine learning that tries to imitate the way humans gain certain types of knowledge.
- It is a type of artificial intelligence that can analyze big data of millions of books and references in a short span of time.
- It is an artificial intelligence chip that can significantly improve memorization and recall ability of humans.

Ans) b

Exp) Option b is the correct answer.

Deep learning is a type of machine learning and artificial intelligence (AI) that imitates the way humans gain certain types of knowledge. Deep learning is a machine learning technique that **teaches computers to do what comes naturally to humans:** learn by example. Deep learning is a key technology behind driverless cars, enabling them to recognize a stop sign, or to distinguish a pedestrian from a lamppost. It is the key to voice control in consumer devices like phones, tablets, TVs, and hands-free speakers. Deep learning is getting lots of attention lately and for good reasons. It’s achieving results that were not possible before. It is **essentially a neural network with three or more layers. These neural networks attempt to simulate the behavior of the human brain—albeit far from matching its ability—allowing it to “learn” from large amounts of data.** While a neural network with a single layer can still make approximate predictions, additional hidden layers can help to optimize and refine for accuracy.



Source: <https://www.ibm.com/cloud/learn/deep-learning>
<https://cedar.buffalo.edu/~srihari/CSE676/>

Q.36) With reference to jurisdiction and powers of High Courts in India, consider the following statements:

1. A high court can interpret the Constitutional provisions not only related to the State government but also Union government.
2. The Constitution empowers the Parliament and the state legislature to change, but not curtail, the jurisdiction and powers of a high court.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is correct answer.

Like the Supreme Court, the High court has been vested with quite extensive and effective powers. It is the Highest court of appeal in the state. It is the protector of the Fundamental Rights of the citizens.

Statement 1 is correct: A high court is vested with the power to interpret the Constitution. **It can interpret provisions not only related to State government but also Union government as well.**

Statement 2 is correct: **The Constitution empowers the Parliament and the state legislature to change the jurisdiction and powers of a high court.** However, the jurisdiction and powers of a high court as they are specified in the Constitution **cannot be curtailed both by the Parliament and the state legislature.**

Source: Laxmikanth (Ch 34)

<https://indiankanoon.org/doc/1953097/#::~:~:text=Article%20137%20of%20the%20Constitution,power%20on%20the%20High%20Courts.>

Q.37) Which of the following statements are correct regarding the Central Administrative Tribunal (CAT)?

1. It is a Constitutional body established by the original constitution.
2. The procedure for removal of members of CAT is same as high court judges.
3. It is not bound by the procedure laid down by the Civil Procedure Code, 1908.
4. The Selection committee for CAT members is chaired by a sitting Judge of Supreme Court.

Select the correct answer using the code given below.

- a) 2 and 3 only
- b) 3 and 4 only
- c) 1 and 3 only
- d) 1, 3 and 4 only

Ans) b

Exp) Option b is correct answer.

Statement 1 is incorrect: **The Central Administrative Tribunal (CAT) is a statutory body (not a Constitutional body).** The Parliament has passed the **Administrative Tribunals Act in 1985.** The act authorises the Central government to establish one Central administrative tribunal and the state administrative tribunals. The **CAT was set up in 1985** with the principal bench at Delhi and additional benches in different states.

Statement 2 is incorrect: The procedure of removal of Members in the CAT is **NOT same** as high court judge. The Chairman, or any other Member shall not be removed from his office except **by an order made by the President on the ground of proved misbehavior or incapacity after an inquiry made by a Judge of the Supreme Court.** The **Parliament is not involved** in the removal process like in case of removal of high court judge.

Statement 3 is correct: The CAT is not bound by the procedure laid down in the Civil Procedure Code of 1908. It is guided by the principles of natural justice. These principles keep the CAT flexible in approach.

Statement 4 is correct: The appointment of Members in CAT is made on the basis of **recommendations of a high-powered selection committee chaired by a sitting Judge of the Supreme Court** who is nominated by the Chief Justice of India. After obtaining the concurrence of the Chief Justice of India, appointments are made with the approval of the Appointments Committee of the Cabinet (ACC).

Source: Laxmikanth (Ch 35)

<https://www.advocatekhaj.com/library/bareacts/administrative/9.php?Title=Administrative%20Tribunals%20Act,%201985&STitle=Resignation%20and%20Removal>

Q.38) With reference to the National Legal Services Authority (NALSA), consider the following statements:

1. It is a realization of a provision given in the Fundamental Duties.
 2. Only the Chief Justice of a High Court can be appointed as the Executive Chairman of the NALSA.
- Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is correct answer.

The National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act, 1987 to monitor and evaluate implementation of legal aid programmes.

Statement 1 is incorrect: NALSA is a realization of a provision given in the Directive Principles of State Policy (not Fundamental Duties). **Article 39A** of the Constitution of India provides for free legal aid to the poor and weaker sections of the society and ensures justice for all.

Statement 2 is incorrect: The **Chief Justice of India is the Patron-in-Chief** and the **Senior most Hon'ble Judge, Supreme Court of India is the Executive Chairman** of the NALSA.

Source: Laxmikanth (Ch 36)

<https://nalsa.gov.in/about-us/introduction>

Q.39) Consider the following statements regarding the rules of functioning of the Supreme Court of India:

1. The Constitution provides that Supreme Court can give judgment only with the concurrence of majority of Judges hearing the case.
2. The Constitution provides for a hearing by at least 7 judges in any case involving substantial question of law as to the interpretation of the Constitution.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Article 145 deals with the various provisions regarding the rules of functioning of the Supreme Court.

Statement 1 is correct: **Article 145(5) expressly provides that No judgment and no such opinion shall be delivered by the Supreme Court save with the concurrence of a majority of the Judges present at the**

hearing of the case. However, this provision does not prevent a Judge from giving a dissenting judgment or opinion. Hence, the judicial decisions are taken on the basis of majority.

Statement 2 is incorrect: In the matters involving the substantial question of law as to the interpretation of the Constitution, **minimum 5 number of judges are required to sit for the purpose of deciding the case.** Also, when the President seeks opinion of Supreme Court under Article 143, minimum number of judges required for the sitting is 5.

Source: <https://indiankanoon.org/doc/1537130/>

Q.40) Which of the following COVID vaccines have been developed indigenously in India?

1. Covaxin
2. Covishield
3. ZyCoV-D
4. Pfizer-BioNTech

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1, 2 and 3 only
- c) 1 and 3 only
- d) 2, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Option 1 is correct: COVAXIN is India's indigenous COVID-19 vaccine by **Bharat Biotech** and is developed in collaboration with the **Indian Council of Medical Research (ICMR) - National Institute of Virology (NIV)**. The vaccine is developed using Whole-Virion Inactivated Vero Cell derived platform technology. Inactivated vaccines do not replicate and are therefore unlikely to revert and cause pathological effects. They contain dead viruses, incapable of infecting people but still able to instruct the immune system to mount a defensive reaction against an infection.

Option 2 is incorrect: The **Oxford-AstraZeneca COVID-19** vaccine also known as **Covishield** is a **viral vector vaccine** for prevention of COVID-19. It is developed in **the United Kingdom by the Oxford University** and British-Swedish company **AstraZeneca**.

Option 3 is correct: ZyCoV-D is a **plasmid DNA vaccine**. It is **indigenously developed** under the Vaccine Discovery Programme supported by the **Department of Biotechnology** under the **National Biopharma Mission**. It is designed and developed by **Zydus (a pharmaceutical company)** with support from the Department of Biotechnology (DBT).

Option 4 is incorrect: The **Pfizer-BioNTech** COVID-19 vaccine sold under the brand name Comirnaty, is an mRNA-based COVID-19 vaccine developed by the **German biotechnology company BioNTech**.

Source: <https://www.bharatbiotech.com/covaxin.html>

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1747669>

https://www.seruminstitute.com/health_faq_covishield.php

Q.41) With reference to supervisory jurisdiction of High Courts in India, consider the following statements:

1. A high court has the power of superintendence over all courts and tribunals functioning in its territorial jurisdiction.
2. Supervisory jurisdiction of a high Court covers both administrative and judicial superintendence.
3. Under supervisory jurisdiction, a high court can act Suo-motu in a case.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 1 only
- c) 3 only
- d) 2 and 3 only

Ans) d

Exp) Option d is correct answer.

Statement 1 is incorrect: A High court has the power of superintendence over all courts and tribunals functioning in its territorial jurisdiction (**except military courts or tribunals**). This provision is given in Article 227.

Statement 2 and 3 are correct: Power of superintendence of a high court is very broad because, (i) it extends to all courts and tribunals whether they are subject to the appellate jurisdiction of the high court or not; (ii) **it covers administrative superintendence along with judicial superintendence**; (iii) it is a revisional jurisdiction; and (iv) **it can be Suo-motu (on its own) and not necessarily on the application of a party.**

Source: Laxmikanth (Ch 34)

Q.42) Consider the following statements regarding the principle of 'judicial restraint':

1. It helps in maintaining the doctrine of the Separation of Powers.
2. It helps in maintaining the independence of the judiciary.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Judicial restraint is a concept that encourages the judiciary to limit the exercise of their judicial powers. Judicial restraint is considered the opposite of judicial activism, in which judges are restricted from interfering with democratic politics.

Statement 1 is correct: Judicial restraint helps in maintaining the separation of powers. It restrains courts from making laws and helps them focus on their duty of interpretation of statutes. Judicial restraint aims to accomplish balance of power in two ways. Firstly, it not only recognizes the equality of the other two branches, but it also fosters that equality by minimizing inter-branch interference.

Statement 2 is correct: Judicial restraint protects the independence of the judiciary. When court encroaches upon the jurisdiction of the other two organs, the voters and the elected officials might conclude that the activities of the judges should be monitored. Judicial restraint helps the courts to not to overstep their mandate and protect their independence.

Source: <https://www.legalservicesindia.com/article/2019/Judicial-Activism-and-Judicial-Restraint.html>
M. Laxmikanth (Page 28.4, Chapter 28)

Q.43) Which of the following safeguards are provided in the Constitution of India to protect the independence of the Supreme Court and its judges?

1. Prohibition on practice after retirement.
2. Appointment of the senior-most Judge as the Chief Justice.
3. Parliament is not authorized to curtail the jurisdiction of Supreme Court.

4. The salaries of the Judges as well as administrative expenses of the Court are charged on the Consolidated Fund of India.

Choose the correct answer from the codes given below:

- a) 1, 2 and 3 only
- b) 2 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

The Supreme Court of India is the highest court of the land. It is the guardian of the Fundamental Rights of the citizens. Its independence from legislature and executive is essential for the effective discharge of its duties.

Option 1 is correct: The Supreme Court Judges are not allowed to practice (plead or act) in any court or before any authority within the territory of India. This ensures that judges do not extend any favor in lieu of some future benefit. It should be noted that in future judges can assume the Office of the President or Governor or Member of Parliament etc.

Option 2 is incorrect: Constitution does not explicitly provide for the appointment of the senior-most Judge as the Chief Justice. The process of appointing senior-most judge as the Chief Justice has been established by conventions. This convention was broken in the years in 1973 and 1977. In the **Second Judges Case (1993)**, Supreme Court curtailed the discretion of government and ruled that only senior-most judge of the Supreme Court can alone be appointed as the Chief Justice.

Option 3 is correct: Parliament is not authorized to curtail the jurisdiction of the Supreme Court. As per Article 138, Parliament can, however, increase the jurisdiction of the Supreme Court. This protects the autonomy of the Supreme Court with respect to the matters falling within their jurisdiction.

Option 4 is correct: The salaries, pensions and allowances of the Judges of the Supreme Court are charged on the Consolidated Fund of India. This implies that they are not votable by the Parliament while approving the annual budgets. Also, the **administrative expenses of Supreme Court are charged on the Consolidated Fund of India.** This is to ensure autonomy of the Court in the financial matters. Besides this, the appointment and terms of service of the staff of Supreme Court is also decided by the Chief Justice of India.

Q.44) With reference to the Writ jurisdiction of High Courts, consider the following statements:

- 1. Writs can be issued for enforcement of an ordinary legal right.
- 2. Writ jurisdiction is a part of Basic structure of the Constitution.
- 3. High Court can never issue writs outside its territorial jurisdiction.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is correct answer.

Article 226 of the Constitution empowers a high court to issue writs including habeas corpus, mandamus, certiorari, prohibition and quo warranto.

Statement 1 is correct: The Constitution empowers a high court to issue writs not only for the enforcement of the fundamental rights of the citizens but also for the **enforcement of an ordinary legal right**. Whereas the Supreme Court issues writs only for the enforcement of the fundamental rights of the citizens under Art. 32. **This is the reason that the writ jurisdiction of the high court is wider than that of the Supreme Court.**

Statement 2 is correct: In the **Chandra Kumar case (1997)**, the Supreme Court ruled that the **writ jurisdiction of both the high court and the Supreme Court constitute a part of the basic structure of the Constitution**. It cannot be ousted or excluded even by way of an amendment to the Constitution.

Statement 3 is incorrect: The high court can issue writs to any person, authority and government **not only within its territorial jurisdiction but also outside its territorial jurisdiction if the cause of action arises within its territorial jurisdiction.**

Source: Laxmikanth (Ch 34)

Q.45) Which among the following countries have recognised cryptocurrency as a legal tender?

1. El Salvador
2. Ecuador
3. Uruguay
4. Central African Republic

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 4 only
- c) 1 and 3 only
- d) 1 and 4 only

Ans) d

Exp) option d is the correct answer.

The **Central African Republic declared Bitcoin**, the world's largest and most popular cryptocurrency, **an official currency**. It is **only the second nation in the world to accept cryptocurrency** as legal tender. The country is also now the **first African country to adopt Bitcoin** as legal currency. In September last year, **El Salvador became the first country** in the world to introduce Bitcoin as legal tender.

A transition towards cryptocurrencies by the Central African Republic and El Salvador is spurred by the urge to circumvent inflationary pressures and move away from colonial currency mechanisms. However, prerequisites such as internet and financial digital literacy make a case for inclusivity cumbersome.

Source: <https://www.thehindu.com/news/international/explained-why-countries-like-the-central-african-republic-are-adopting-cryptocurrencies-as-legal-tender/article65403858.ece>

<https://www.livemint.com/market/stock-market-news/this-country-adopts-bitcoin-as-legal-currency-details-here-11651153008675.html>

Q.46) Consider the following statements regarding the Supreme Court's jurisdiction in the matters pertaining to 'special leave to appeal' under Article 136 of the Constitution:

1. The special leave to appeal can be granted only against the order passed by a High Court.
2. It is a discretionary power of the Supreme Court.
3. It can be granted in the cases of violation of the principle of natural justice.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

Article 136 of the Indian Constitution provides for the special leave to appeal. Anybody can go for an appeal in the Supreme Court but that person is required to take special permission from the Supreme Court for such appeal.

Statement 1 is incorrect: According to Article 136, Supreme Court can “grant special leave to appeal from any judgment, decree, determination, sentence or order in any cause or matter passed or made **by any court or tribunal in the territory of India.**” In simpler words, special leave can be granted in any case where the order is passed by any court or tribunal within India. However, special leave to **appeal cannot be granted against the orders made by any court or tribunal constituted under any law relating to the armed forces.**

Statement 2 is correct: Article 136 itself mentions **that it is at the discretion of the Supreme Court** as to whether or not special leave be granted. The parties cannot claim that they will get permission from the Supreme Court. In the case of **DC Mills v. Commissioner of Income Tax (1955)**, it was held by the court that as the supreme court uses discretionary powers while granting special leave appeal under Article 136 of the constitution **so much power should be utilized moderately with due care that too only under certain exceptional cases.**

Statement 3 is correct: Special leave to appeal can be granted on the following grounds:

- 1) If there is a violation of **the principle of natural justice** (Hence, the given statement is correct).
- 2) If **substantial injustice** has been done by any court or tribunal (except military courts or tribunals)
- 3) If there is a **disregard to the legal procedures** by any court or tribunal (except military courts or tribunals)

Source: <https://indiankanoon.org/doc/427855/>

<https://blog.ipleaders.in/supreme-court-and-the-power-to-grant-special-leave-to-appeal-with-condonation-of-delay/>

Q.47) Consider the following statements:

1. The National Judicial Appointments Commission (NJAC) Act was declared unconstitutional by the Supreme Court as it violated the basic structure of the Constitution.
2. The Supreme Court upheld the primacy of the collegium system following the NJAC judgement.
3. The collegium was expanded to a five-member body of the Supreme Court in the Third Judges case.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Fourth Judges Case (2015) related to 99th Constitutional Amendment Act of 2014 and the National Judicial Appointments Commission Act of 2014. NJAC replaced the collegium system of appointing judges to the Supreme Court and High Courts.

Statement 1 is correct: In the Fourth Judges Case (2015), the Supreme Court declared the National Judicial Appointments Commission (NJAC) Act as **unconstitutional and void.** The Court held the Act encroached upon the judiciary’s independence and **undermined the basic structure.**

Statement 2 is correct: The Supreme Court upheld the **primacy of the collegium system** of appointment of judges. The court held that NJAC gave the government significant powers to appoint judges which would affect the independence of the judiciary.

Statement 3 is correct: In **Third Judges Case (1998)**, the Supreme Court **expanded the collegium to a five-member body** to include the CJI and the four senior-most judges of the court after the CJI.

Source: Indian Polity, M. Laxmikanth, 6th Edition, Chapter-26, Supreme Court

Q.48) With reference to the appointment of subordinate employees in High Courts, consider the following statements:

1. The Chief Justice of the High Court holds the power to appoint a person as an officer or servant in the High Court.
2. The conditions of service of officers and servants of a High Court are prescribed by rules made by the Chief Justice of the High Court.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Article 229 of the Indian Constitution is associated with Officers and servants and the expenses of High Courts.

Statement 1 is correct. Article 229 (1) is associated with appointments of officers and servants of a High Court. According to it, the appointments of officers and servants of a High Court shall be made by the **Chief Justice of the High Court** or such other **Judge or officer of the Court** as he may direct. But the **Governor** of the State may require that a **person not already attached to the Court** shall not be appointed to any office connected with the Court.

Statement 2 is correct. According to Article 229 (2), the conditions of service of officers and servants of a High Court are prescribed by rules made by the Chief Justice of the High Court. purpose. But the rules made related to salaries, allowances, leave or pensions, **require the approval of the Governor** of the State.

Source:

<https://indiankanoon.org/doc/72643601/#:~:text=%E2%80%9CThe%20unequivocal%20purpose%20and%20obvious,by%20the%20executive%20except%20to>

<https://indiankanoon.org/doc/875627/>

Q.49) Consider the following:

1. Secretarial staff of the Parliament
2. Central civil services
3. Members of the defence forces
4. Officers and servants of the Supreme Court
5. Civilian employees of defence services

Which of the above service matters of services/personnels are **not** included under the original jurisdiction of the Central Administrative Tribunal (CAT)?

- a) 3 and 5 only
- b) 1, 3, 4 and 5 only
- c) 1, 3 and 4 only
- d) 2 and 4 only

Ans) c

Exp) Option c is correct answer.

The Central Administrative Tribunal had been established **under Article 323 -A** of the Constitution for adjudication of disputes and complaints with respect to recruitment and conditions of service.

The CAT exercises original jurisdiction in relation to recruitment and all service matters of public servants covered by it.

Its jurisdiction extends to the following:

- 1) All-India services,
- 2) **Central civil services, (Hence, option 2 is correct.)**
- 3) Civil posts under the Centre,
- 4) **Civilian employees of defence services. (Hence, option 5 is correct.)**

However, the CAT **does not cover** recruitment and all service matters of the

- 1) **Secretarial staffs of the Parliament, (Hence, option 1 is incorrect.)**
- 2) **Members of the defence forces, (Hence, option 3 is incorrect.)**
- 3) **Officers and servants of the Supreme Court. (Hence, option 4 is incorrect.)**

Source: Laxmikanth (Ch 35)

Q.50) With reference to the Insolvency and Bankruptcy Code 2016 (IBC), consider the following statements:

1. Insolvency is a situation where individuals or companies are unable to repay their outstanding debt.
2. Only the creditors can apply for the initiation of a Corporate Insolvency Resolution Process (CIRP) under the IBC while debtors have no such right.

Which of the statements given above is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Insolvency and Bankruptcy Code, 2016 was introduced in 2016 through an act of Parliament to tackle the bad loan problems and act as one stop solution for resolving insolvencies. It consolidates and amends the laws relating to reorganization and insolvency resolution of all entities- both corporate and individuals.

Statement 1 is correct: The Insolvency and Bankruptcy Code, 2016 provides a time-bound process for resolving insolvency in companies and among individuals. **Insolvency** is a situation where individuals or companies are unable to repay their outstanding debt.

Statement 2 is incorrect: When a corporate debtor, or a company which has taken loans, defaults on its loan repayment, **either the creditor or the debtor can apply for the initiation of a Corporate Insolvency Resolution Process (CIRP) under Section 6 of the IBC. Hence the statement is incorrect.**

Source: <https://prsindia.org/policy/report-summaries/implementation-of-insolvency-and-bankruptcy-code-pitfalls-and-solutions> <https://www.thehindu.com/news/national/explained-what-is-the-insolvency-and-bankruptcy-code-ibc-and-where-does-it-stand-after-more-than-five-years-of-being-in-place/article65969421.ece>

<https://www.ibbi.gov.in/uploads/whatsnew/a650764a464bc60fe330bce464d5607d.pdf>

<https://blog.forumias.com/insolvency-and-bankruptcy-code-present-challenges/>

Directions for the following 40 (Forty) items:

Read the following three passages and answer the item that follows the passages. Your answers to these items should be based on the passages only.

PASSAGE 1 (Q.1)

To see the extraordinary depth and beauty of life, the immensity of all living things, one must have peace, and that peace is denied wherever there is poverty. Even in affluent countries, there is a great deal of poverty. No nationalistic government can ever solve poverty because it is a global problem, one for the whole world, not a particular government, whether totalitarian, communist, or so-called democratic. The effects of poverty are degradation, the utter slavery of it, the brutality. And there is also the poverty of the mind, which is not resolved by books, institutions, organisations, or forums – that poverty ends when one understands the whole existence of oneself and one's relationship to the world at large.

The poverty trap is the self-reinforcing mechanism of poverty that can keep countries cycling in and out of poverty. Poor countries are not only poor; they are also stuck in a bad equilibrium. Everything seems to be pushing them downward, while they themselves seem unable to generate the momentum needed to break out of the trap. Poverty leads to more poverty, and it is difficult to escape from that vicious cycle. The trap can be broken, but only with outside help. In the poverty trap, the poorest people are stuck without hope, and the vicious cycle of poverty is perpetuated.

Q.1) What is the most logical assumption regarding breaking the poverty trap in poor countries?

- a) Poor countries are solely responsible for generating the momentum needed to break out of the poverty trap.
- b) The poverty trap can be broken with the help of external support.
- c) The poorest people in poor countries are capable of breaking out of the poverty trap on their own.
- d) The poverty trap perpetuates economic growth in poor countries.

Ans) b

Exp) Option b is the correct answer.

The passage states that the poverty trap is a self-reinforcing mechanism that keeps countries cycling in and out of poverty. Poor countries are stuck in a bad equilibrium and seem unable to generate the momentum needed to break out of the trap. The passage suggests that the poverty trap can be broken, but only with outside help. Therefore, the most logical assumption is that the poverty trap can be broken with the help of external support. The passage suggests that poor countries are unable to generate the momentum needed to break out of the poverty trap on their own. The passage also suggests that the poorest people are stuck without hope, and the vicious cycle of poverty is perpetuated. Furthermore, it does not suggest that the poverty trap perpetuates economic growth in poor countries.

PASSAGE 2 (Q.2)

Water scarcity is the defining crisis of the twenty-first century. It is a bigger long-term problem than COVID-19, terrorism, or any war we are now fighting. It has already unleashed resource wars and is now threatening to drive mass migration and undermine the economies of rich and poor countries alike. It is also, of course, the source of famine and starvation for many of the world's poorest people. Water scarcity is what will happen when demand outstrips dwindling supply. It is different from drought, which is a temporary fall in water availability. Water scarcity is the new reality, and the balance between the water we need and the water that is available is becoming ever more precarious.

Q.2) Which statement best reflects the crux of the passage regarding water scarcity?

- Water scarcity is a temporary fall in water availability due to drought.
- Water scarcity can wreak havoc on all of us.
- Water scarcity does not pose a significant threat to the economies of rich and poor countries alike.
- Water scarcity only affects the poorest people in the world.

Ans) b

Exp) Option b is the correct answer.

The passage discusses the severity of water scarcity, calling it the defining crisis of the twenty-first century. The passage further states that water scarcity is a bigger long-term problem than COVID-19, terrorism, or any war we are fighting. The passage highlights that water scarcity has already unleashed resource wars and is now threatening to drive mass migration and undermine the economies of rich and poor countries alike. The passage suggests that water scarcity is a significant issue and the balance between the water we need and the water that is available is becoming more precarious. Therefore, the statement that best reflects the crux of the passage is that Water scarcity can wreak havoc on all of us.

PASSAGE 3 (Q.3)

Man is born free, and everywhere he is in chains. One thinks himself the master of others, and still remains a greater slave than they. How did this change come about? I do not know. What can make it legitimate? That question I think I can answer.

If I took into account only force, and the effects derived from it, I should say: "As long as a people is compelled to obey, and obeys, it does well; as soon as it can shake off the yoke, and shakes it off, it does still better; for, regaining its liberty by the same right as took it away, either it is justified in resuming it, or there was no justification for those who took it away." But the social order is a sacred right which is the basis of all other rights. Nevertheless, this right does not come from nature, and must therefore be founded on conventions.

Q.3) Based on the above passage, the following assumptions have been made:

- Social order is a necessary component for a stable society.
- Social order is not a natural right, but a man-made construct.

Which of the above assumptions is/are valid?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: The passage implies that social order is a necessary component for a stable society, as it allows people to live in an organized and predictable manner. This assumption is correct because social order is a fundamental aspect of human society, as it provides a framework for individuals to interact and cooperate with one another. At the same time, the fact that social order is a man-made construct means that it is subject to change and can be modified or restructured to better suit the needs of society.

Statement 2 is correct: That passage argues that social order is a sacred right, but it does not come from nature and must be founded on conventions. The passage also suggests that social order is not a natural right, but rather a man-made construct. This means that the rules and conventions that make up the social order are not inherent in human nature, but rather created by people to govern their interactions.

PASSAGE 4 (Q.4)

In the Indian tradition, the argumentative pattern of discourse is of considerable importance. The acceptance of a particular thesis is not taken to be a sign of loyalty to a team or to an ideology, but rather as an outcome of a process of critical evaluation. In many other cultures and traditions, the praise of a particular position is taken as an affirmation of loyalty to a group or to a leader, and to question the viewpoint of the leader or the group is seen as a sign of disloyalty. In the Indian tradition, criticism and critical questioning of a leader, a party, or a position are seen as natural requirements of intellectual inquiry, and the pursuit of knowledge is not compromised by an undue concern for loyalty and party unity.

Q.4) Consider the following statements with reference to the above passage:

1. Adherence to the process of critical evaluation is an Indian tradition.
2. Pursuit of knowledge can be compromised if one is concerned with showing loyalty.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: It is outlined in the beginning of the passage itself that Indian tradition aims to adhere to the critical inquiry. It is highlighted by these lines as well, **“In the Indian tradition, the argumentative pattern of discourse is of considerable importance.”**

Statement 2 is correct: It is logical that the pursuit of truth and inquiry should only be made in critical manner and it can be corrupted if it is more concerned with ensuring one’s loyalty to an individual or a group. It is highlighted here, **“In the Indian tradition, criticism and critical questioning of a leader, a party, or a position are seen as natural requirements of intellectual inquiry, and the pursuit of knowledge is not compromised by an undue concern for loyalty and party unity.”**

PASSAGE 5 (Q.5)

The shift of economic power from one major region to another is never a smooth process. It is a harsh and brutal process which, like natural selection itself, weeds out the unfit and those who are slow to adapt to changing circumstances. At a certain point, the disadvantaged party may decide to resist, leading to international conflict or even war. It is the moment of transition, rather than the age of equilibrium, which is the most dangerous phase in the history of a Great Power. The Black Death caused massive social and economic upheaval, leading to the end of the feudal system in Europe. It also had significant cultural impacts, with depictions of death and mortality becoming more prevalent in art and literature. Despite its devastating effects, the Black Death ultimately paved the way for new social, economic, and cultural developments in Europe.

Q.5) What is the primary message conveyed in the passage?

- a) The shift of economic power is a man-made process that leads to progress and development.
- b) The Black Death resulted in the start of feudalism and cultural change in Europe.
- c) Cultural change in Europe would not have been possible with peace.
- d) The resistance to change during a transition period can cause conflict and chaos.

Ans) d

Exp) Option d is the correct answer.

The passage discusses the harsh and brutal process of a shift of economic power and the danger during the transition period. It mentions that **at a certain point, the disadvantaged party may decide to resist, leading to international conflict, chaos or even war.** The **example of the Black Death is used to illustrate** how such a devastating event led to significant changes, but only after significant social and economic upheaval. The passage explicitly mentions that the shift of economic power is **harsh** and brutal, not natural and peaceful. The passage also acknowledges the negative effects of the Black Death but highlights the eventual positive developments.

PASSAGE 6 (Q.6 – Q.7)

As technology continues to advance at an exponential rate, it is not hard to imagine a future in which humans and machines merge into a new type of being. This is the concept of the singularity, a point in time when artificial intelligence surpasses human intelligence, leading to unprecedented advances in science, medicine, and other fields. Some experts predict that this could happen as soon as 2045. However, there are also concerns about the potential dangers of such a development. If machines become more intelligent than humans, they may become uncontrollable and pose a threat to our very existence. It is therefore important to ensure that we develop AI in a responsible and ethical way, with appropriate safeguards and regulations in place. Moreover, the singularity raises important questions about what it means to be human. If we merge with machines, will we still be human? What will be the implications for our identity, our values, and our relationships with each other? These are complex ethical and philosophical questions that will require careful consideration as we move towards the singularity.

Q.6) Based on the above passage, the following assumptions have been made:

1. Artificial intelligence may surpass human intelligence in the future.
2. The benefits of merging humans and machines will outweigh the potential risks and concerns.

Which of the above given assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The passage states, "**This is the concept of the singularity, a point in time when artificial intelligence surpasses human intelligence, leading to unprecedented advances in science, medicine, and other fields.**" The passage also notes that some experts predict this could happen as soon as 2045. Therefore, the idea that AI may surpass human intelligence in the future is a reasonable assumption based on the passage.

Statement 2 is incorrect: The benefits of merging humans and machines will outweigh the potential risks and concerns - is **not supported by the passage.** The passage notes that there are concerns about the potential dangers of AI surpassing human intelligence, such as machines becoming uncontrollable and posing a threat to our existence. The passage also suggests that it is important to develop AI in a responsible and ethical way with appropriate safeguards and regulations in place. Additionally, the passage raises complex ethical and philosophical questions about what it means to be human if we merge with machines, including implications for our identity, values, and relationships with each other. **The passage does not suggest that the benefits of merging humans and machines will outweigh the potential risks and concerns.**

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Q.7) What is the *most logical, rational, and crucial inference* that can be made from the passage?

- The singularity will occur in the next decade, leading to the merging of humans and machines.
- Artificial intelligence surpassing human intelligence raises important ethical and philosophical questions.
- Machines becoming uncontrollable and posing a threat to our existence is not a significant concern.
- None of the above

Ans) b

Exp) Option b is the correct answer.

The passage discusses the concept of the singularity, where artificial intelligence surpasses human intelligence, leading to unprecedented advances in science, medicine, and other fields. The passage notes that while some experts predict this could happen as soon as 2045, there are also concerns about the potential dangers of such a development, such as machines becoming uncontrollable and posing a threat to our very existence. However, the most logical, rational, and crucial inference that can be made from the passage is that the singularity raises important ethical and philosophical questions about what it means to be human. The passage specifically notes, "**The singularity raises important questions about what it means to be human. If we merge with machines, will we still be human? What will be the implications for our identity, our values, and our relationships with each other? These are complex ethical and philosophical questions that will require careful consideration as we move towards the singularity.**"

PASSAGE 7 (Q.8 -Q.9)

For most of human history, geography was seen as fate, as something that dictated the future. This is changing, and a new vision of geography as possibility is emerging. The transformation of geography from fate to possibility has been driven by the evolution of technology and the forces of globalization. The combination of technological change and globalization has enabled people to communicate with each other across the globe more easily and cheaply than ever before. This has led to a convergence of cultures and economies, as people are able to interact and exchange ideas and goods more freely. The result has been the emergence of a more interconnected and interdependent world, where the possibilities for economic growth and development are greater than ever before. One of the key drivers of this transformation has been the rise of the Internet and other forms of digital communication. These technologies have enabled people to connect with each other across vast distances, and to access information and resources that were previously unavailable. As a result, people are now able to collaborate and work together in ways that were once unimaginable.

Q.8) Based on the above passage, the following assumptions have been made:

- The transformation of geography from fate to possibility is a positive development.
- The increased interconnectedness has benefits for all individuals and communities involved.

Which of the above given assumptions is/are valid?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: The passage does not explicitly state whether the transformation of geography from fate to possibility is positive or negative. While the passage highlights the benefits of increased

interconnectedness and economic potential resulting from globalization and technology, **it does not provide a value judgment on whether these changes are good or bad.** The passage merely describes how geography has been viewed historically and how it is changing with the forces of technology and globalization.

Statement 2 is incorrect: The passage describes how the convergence of cultures and economies resulting from globalization and technology has led to a more interconnected and interdependent world, which has created greater possibilities for economic growth and development. However, the **passage does not address whether these changes have benefits for all individuals and communities involved.** It is possible that some individuals or communities may be negatively affected by globalization and technology, such as those who are displaced by economic changes or whose cultural traditions are threatened by increased homogenization.

Q.9) What is the *most logical corollary* of the passage?

- The rise of the Internet and other forms of digital communication has led to alienation.
- Geography is still a determining factor in shaping the future.
- The possibilities for economic growth and development are greater than ever before due to technological advancements and globalization.
- The forces of globalization have led to increased homogenization of cultures and economies.

Ans) c

Exp) Option c is the correct answer.

The passage describes how the combination of technological change and globalization has enabled people to communicate with each other across the globe more easily and cheaply than ever before, leading to a convergence of cultures and economies and the emergence of a more interconnected and interdependent world where the possibilities for economic growth and development are greater than ever before. It does not mention that it has led to alienation. Geography is increasingly becoming more irrelevant as per the passage and thus this corollary that is not correct that Geography is still a determining factor in shaping the future. Passage does not mention the increased homogenization of cultures and economies as a result of globalization. Also, it talks about key drivers of transformation (possibility of economic growth) is also due to rise of internet and other forms of digital communication.

PASSAGE 8 (Q.10 – Q.12)

Postcolonialism is a way of thinking about the world that emerged in the wake of decolonization. It is concerned with the legacies of colonialism and imperialism, and the ways in which they continue to shape the world today. At its core is the recognition that colonialism was not just a historical event, but an ongoing process that continues to shape power relations between nations and peoples. Postcolonialism is concerned with the ways in which power operates within culture, language, and knowledge production. It recognizes that colonialism involved not just the exploitation of land and resources, but also the imposition of European values and ways of thinking on colonized peoples. This legacy continues to shape the way in which knowledge is produced and disseminated, and the ways in which cultures are valued or devalued.

One of the key insights of postcolonialism is the recognition that knowledge is always situated within specific social, cultural, and historical contexts. This means that knowledge is not objective or neutral, but is always shaped by power relations and the interests of those who produce it. Postcolonialism seeks to challenge dominant ways of knowing and to explore alternative perspectives that have been excluded or marginalized. Postcolonialism also emphasizes the agency of colonized peoples in shaping their own histories and identities. It recognizes the importance of local knowledge and cultural practices, and seeks to challenge the idea that Western values and ways of thinking are universally applicable. Through its focus on power, knowledge, and agency, postcolonialism offers a critical perspective on the world that challenges dominant ways of thinking and opens up new possibilities for understanding and engagement.

Q.10) Based on the above passage, the following assumptions have been made:

1. The transmission of knowledge has been a way of exerting the colonial thinking.
2. Postcolonialism believes that people should shape their own histories.

Which of the above assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: The above passage clearly outlines that knowledge is one of the dominant ways colonialism is spread through as it leads to **imposition of European values and ways of thinking on colonized peoples**. Furthermore, these lines from the passage also emphasize on the same, **“This legacy continues to shape the way in which knowledge is produced and disseminated, and the ways in which cultures are valued or devalued.”**

Statement 2 is correct: The postcolonialism believes that it is not the western ideas about the history of others that should be followed but rather people should have agency on writing their own history. These lines corroborate the same, **“Postcolonialism seeks to challenge dominant ways of knowing and to explore alternative perspectives that have been excluded or marginalized. Postcolonialism also emphasizes the agency of colonized peoples in shaping their own histories and identities.”**

Q.11) Based on the above passage, the following assumptions have been made:

1. Postcolonialism is dominant method of approaching the history now.
2. Knowledge should be made neutral.

Which of the above assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: Nowhere in the passage it has been mentioned that now the method of approaching history has changed to postcolonialism and that the dominant form of approaching history is now postcolonialism. It only mentions that **“postcolonialism offers a critical perspective on the world that challenges dominant ways of thinking and opens up new possibilities for understanding and engagement.”**

Statement 2 is incorrect: The passage does not make any such imperative that knowledge should be made neutral but rather it argues that knowledge is never neutral. It mentions that **“...knowledge is always situated within specific social, cultural, and historical contexts. This means that knowledge is not objective or neutral, but is always shaped by power relations and the interests of those who produce it.”**

Q.12) Consider the following statements:

1. Colonialism is an ongoing process that continues to shape global relations
2. Postcolonialism seeks to reinforce the ideas of Western values and ways of thinking.

Which of the above given can be considered as the ‘critical inference’ of the passage?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The passage emphasizes that colonialism was not just a historical event, but an ongoing process that continues to shape power relations between nations and peoples. It says that **“It is concerned with the legacies of colonialism and imperialism, and the ways in which they continue to shape the world today. At its core is the recognition that colonialism was not just a historical event, but an ongoing process that continues to shape power relations between nations and peoples.”**

Statement 2 is incorrect: The passage seeks to challenge the idea that Western values and ways of thinking are universally applicable, rather than reinforce it. Postcolonialism is a dominant method in fact that challenges the ethnocentricity of knowledge and history.

PASSAGE 9 (Q.13 – Q.15)

Diplomacy is an art of letting someone else have your way. It is the art of persuading others to do what you want, while giving them the impression that they are doing what they want. Diplomacy involves both bargaining and communication. It requires a willingness to compromise, to make concessions, and to find common ground. Successful diplomacy depends on understanding the motivations and interests of the other side. It involves a careful balancing of power and persuasion. It requires the ability to read signals and to respond in kind. It requires patience, persistence, and creativity. Diplomacy is not just a tool of foreign policy. It is also a means of resolving conflicts within societies. It is a way of negotiating compromises and finding common ground between different groups. It requires a willingness to listen to other points of view, to recognize the legitimacy of other perspectives, and to seek win-win solutions. At its best, diplomacy is a way of avoiding war. It is a way of resolving conflicts peacefully and preserving the dignity of all parties involved. But diplomacy is not always successful. It can be undermined by misunderstandings, mistrust, and hardline positions. It requires constant effort and attention.

Q.13) What are the key qualities required for successful diplomacy, according to the above passage?

- a) Stubbornness, assertiveness, and a hardline position.
- b) Willingness to compromise but not settle
- c) Strong military power, persuasive language, and a willingness to use force.
- d) Patience, persistence, and creativity.

Ans) d

Exp) Option d is the correct answer.

This passage indicates that successful diplomacy requires a nuanced approach that takes into account the motivations and interests of the other side, as well as the ability to adapt to changing circumstances. Patience, persistence, and creativity are key qualities that allow a diplomat to navigate complex negotiations and achieve successful outcomes. Following lines confirm the same, **“Successful diplomacy depends on understanding the motivations and interests of the other side. It involves a careful balancing of power and persuasion. It requires the ability to read signals and to respond in kind. It requires patience, persistence, and creativity.”**

Q.14) Based on the above passage, the following assumptions have been made:

1. Diplomacy is essentially about generating consent without other being aware of it
2. Diplomacy is the singular tool of the foreign policy.

Which of the above assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: In the very beginning of the passage, it has been outlined that diplomacy is essentially generating consent in one's own favour. These lines highlight the same as well, **"Diplomacy is an art of letting someone else have your way. It is the art of persuading others to do what you want, while giving them the impression that they are doing what they want."**

Statement 2 is not correct: Nowhere in the passage it has been mentioned that the only i.e. singular tool of foreign policy is diplomacy. Nonetheless, it is an essential part of it. Furthermore, the passage explains that diplomacy is useful much beyond foreign policy as well.

Q.15) What according to the passage can lead to the failure of diplomacy?

- a) Acknowledging the validity of alternate viewpoints
- b) The lack of trust, and inflexible stances
- c) Discovering shared interests among diverse factions
- d) Maintaining the stance of every individual or group

Ans) b

Exp) Option b is the correct answer.

The passage towards the highlight the situations which can lead to the weakening or the failure of the foreign policy. This is highlighted by the lines, **"But diplomacy is not always successful. It can be undermined by misunderstandings, mistrust, and hardline positions. It requires constant effort and attention."**

PASSAGE 10 (Q.16)

Globalization is not just a phenomenon and not just a passing trend. It is the international system that replaced the Cold War system. Globalization is the integration of capital, technology, and information across national borders, in a way that is creating a single global market and, to some degree, a global village. It is a system that has unleashed astonishing levels of economic growth and lifted hundreds of millions of people out of poverty. But it has also destabilized the world's political systems, given rise to a new wave of cultural conflicts, and complicated the tasks of governments everywhere.

Q.16) Which of the following best summarizes the author's message in the passage?

- a) Globalization has led to economic growth, but has also caused cultural conflicts.
- b) The Cold War system has been replaced by globalization, which has created a global village and lifted people out of poverty.
- c) Globalization is a phenomenon that has destabilized political systems and created a single global market.
- d) Capital, technology, and information have not disintegrated national borders.

Ans) a

Exp) Option a is the correct answer.

The passage highlights the effects of globalization, such as economic growth and poverty reduction, but also discusses the negative impacts on political systems and the rise of cultural conflicts. The key message of the author is that globalization has led to economic growth while also creating complications for governments and causing cultural conflicts. Capital, technology, and information have actually disintegrated or rather diluted national borders. Globalization clearly has both positive and negative effects which is best encapsulated in the first statement.

PASSAGE 11 (Q.17)

Humanity is not an abstraction. It is a physical, palpable presence on earth, and it is subject to the same harsh realities as any other life form. Our presence is not necessarily benign, either. The question of how we will make ourselves present on earth is the question of how we will make the earth present to us. That in turn involves a pretty good idea of what we value, and what we don't value. We don't value places that have no heart or meaning, places that make us feel like lemmings or lab rats. We don't value places where things that matter to us are in danger. We don't value places where we feel helpless. We don't value places where we feel unwelcome. We don't value places where we feel dead inside.

Q.17) What is the *most critical inference* drawn from the passage?

- a) Humanity is a nonthreatening presence on Earth.
- b) The value of a place is determined by what matters to us.
- c) Our presence on Earth is subject to harsh realities.
- d) Our physical presence on Earth is an abstraction.

Ans) c

Exp) Option c is the correct answer.

The passage emphasizes that humanity's presence on Earth is not necessarily benign, and that we are subject to the same harsh realities as any other life form. It goes on to discuss the importance of valuing places that matter to us and avoiding places where we feel helpless, unwelcome, or dead inside. However, the most critical inference that can be drawn from the passage is that our presence on Earth is subject to harsh realities, and we must take this into account when considering how we will make ourselves present on the planet.

PASSAGE 12 (Q.18)

Climate change is one of the most profound challenges facing humanity. It involves the interplay of complex natural systems with equally complex social systems. The science of climate change is characterized by large uncertainties and complexities, while the economics of climate change is characterized by difficult ethical and distributional problems. Climate change is also marked by the conflict between the present and the future. The benefits of abatement come in the future, while the costs are borne today. Climate change is a classic example of a problem of intergenerational equity. The benefits of abatement will accrue primarily to future generations, while the costs of abatement will be borne largely by the present generation.

Q.18) Based on the above passage, the following assumptions have been made:

1. All countries are affected by climate change.
2. The costs of abatement are always greater than the benefits.

Which of the above assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: This assumption is incorrect because **the passage doesn't make any mention of how different countries may be affected differently** by climate change. It is possible that some countries are more vulnerable to the effects of climate change than others due to factors such as geographic location, economic development, and infrastructure:

Statement 2 is incorrect: This assumption is incorrect because the passage acknowledges that the benefits of abatement will accrue primarily to future generations, but it **doesn't suggest that the costs of abatement will always outweigh these benefits**. The passage only states that the costs are borne today, while the benefits come in the future. It is possible that in some cases, the benefits of abatement may outweigh the costs.

PASSAGE 13 (Q.19)

The study of animal behavior has a rich history and is a critical field in the understanding of the natural world. The behavior of animals can be shaped by genetics, environment, and experience, and can vary from individual to individual, even within the same species. Ethologists, or those who study animal behavior, use a variety of methods to observe and interpret animal behavior, including field observations, laboratory experiments, and controlled studies. They seek to answer questions about animal behavior such as why and how animals behave, how they learn, communicate, and interact with each other, and how they adapt to changing environments. Through the study of animal behavior, we can gain a deeper understanding of the complex relationships that exist within the natural world and the impact that humans have on these relationships.

Q.19) What is the key message of the author in the above given passage?

- a) Animal behavior is solely shaped by genetics.
- b) Ethologists use only laboratory experiments to observe animal behavior.
- c) The study of animal behavior is critical for understanding the natural world and the impact of humans on it.
- d) Animal behavior is always the same within a species.

Ans) c

Exp) Option c is the correct answer.

The passage emphasizes the importance of the study of animal behavior in understanding the natural world and the impact that humans have on it. This is conveyed in the following line: **"Through the study of animal behavior, we can gain a deeper understanding of the complex relationships that exist within the natural world and the impact that humans have on these relationships."**

PASSAGE 14 (Q.20 – Q.21)

Myth is the secret opening through which the inexhaustible energies of the cosmos pour into human cultural manifestation. Religions, philosophies, arts, the social forms of primitive and historic man, prime discoveries in science and technology, the very dreams that blister sleep, boil up from the basic, magic

ring of myth. The function of myth, then, is to point beyond itself to a realm that cannot be mapped and measured, to suggest a universe of potentialities that stretches beyond our horizons and that will forever remain unknowable and yet, one hopes, significant. Without the help of the mythic dimension, the mind is exposed naked to the abysses of despair, not knowing why human life, why any life, should exist. With such assistance, however, it can find the courage to face the fact that the world is shaped by chaos and that there are ultimate limits to knowledge.

But more important than courage is the capacity to rejoice in the sheer fact of existence. What we call “the rapture of being alive” comes not from some religious or philosophical doctrine, but from an experience of living in harmony with the universe. It comes from participating in the dance of life that myth celebrates.

Q.20) Based on the above passage, the following assumptions have been made:

1. Without the help of myth, the mind is exposed to despair and chaos.
2. Myth is a fundamental source of human cultural expression.

Which of the above given assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: As per the passage myths help us face the fact that the world is shaped by chaos and that there are limits to knowledge. This outlined in the passage here, “**Without the help of the mythic dimension, the mind is exposed naked to the abysses of despair, not knowing why human life, why any life, should exist.**”

Statement 2 is correct: One of the assumptions made in the passage is that myth is a vital aspect of human cultural expression. The author suggests that myths are the source of religions, philosophies, arts, social forms, and even scientific discoveries. Following line highlights the same, “**Myth is the secret opening through which the inexhaustible energies of the cosmos pour into human cultural manifestation.**”

Q.21) Based on the passage, which of the following is the *most rational inference*?

- a) Mythology is a product of chaos and despair.
- b) Mythology is a source of courage and a celebration of life.
- c) Mythological beliefs are based solely on historical facts.
- d) All cultures and societies share a common set of myths.

Ans) b

Exp) Option b is the correct answer.

The passage highlights the importance of mythology and its function in human cultural expression. It suggests that mythology is a fundamental source of religions, philosophies, arts, and social forms. The passage further argues that the function of mythology is to point beyond itself to a realm that cannot be mapped and measured, and to suggest a universe of potentialities that stretches beyond our horizons. The passage also states that without the help of mythology, the mind is exposed naked to the abysses of despair, but with such assistance, it can find the courage to face the fact that the world is shaped by chaos and that there are ultimate limits to knowledge. The passage then goes on to suggest that the rapture of being alive comes from participating in the dance of life that myth celebrates. Based on this,

the most rational inference is that mythology is a source of courage and a celebration of life, as it helps humans face the chaos and limits of the world, and participate in the dance of life.

PASSAGE 15 (Q.22 – Q.23)

The notion of mathematical truth has an extraordinary power. The axioms, definitions, and rules of inference are all set down by humans; but once the rules are set down, the theorems and proofs that can be built from them seem to acquire a life of their own, completely independent of their human creators. Indeed, even when humans understand a theorem completely, they often have the eerie feeling that it somehow existed "out there" in the universe of mathematical concepts, just waiting to be discovered, rather than having been invented by human thought. This "out there-ness" of mathematical concepts is the starting point of all the Platonic beliefs about mathematics. But there are some mathematicians who do not accept the idea of an independent mathematical universe. They are called formalists, and they believe that mathematics is nothing but the study of symbols and rules for manipulating those symbols. In other words, mathematical statements are merely strings of symbols which have no intrinsic meaning, and the task of mathematics is simply to deduce, from the axioms and definitions, the consequences of these meaningless symbols. The formalists believe that the only truth to be found in mathematics is logical truth - that is, the truth that arises from purely symbolic manipulation, with no reference to any real-world meaning. This is a very austere view of mathematics, which some find hard to swallow.

Q.22) Based on the above passage, the following assumptions have been made:

1. The key axioms have been devised by the humans.
2. All mathematicians believe in the existence of an independent mathematical universe.

Which of the above given assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) **Option a is the correct answer.**

Statement 1 is correct: It is stated clearly in the passage that "**The axioms, definitions, and rules of inference are all set down by humans.**" The author acknowledges that these fundamental principles of mathematics are created by humans and not discovered in the natural world.

Statement 2 is incorrect: The passage mentions the existence of formalists, who reject the idea of an independent mathematical universe. The passage states, "**there are some mathematicians who do not accept the idea of an independent mathematical universe. They are called formalists, and they believe that mathematics is nothing but the study of symbols and rules for manipulating those symbols.**" This suggests that there are differing views among mathematicians regarding the nature of mathematical concepts and their relationship to the physical world.

Q.23) Which of the following is the *most logical and rational assumption* based on the information given in the passage?

- a) Mathematical concepts and principles have an inherent truth that exists independently of human understanding or interpretation.
- b) The formalist view of mathematics is the only valid perspective.
- c) All mathematicians believe in the existence of an independent mathematical universe.
- d) The axioms, definitions, and rules of inference are discovered in the natural world.

Ans) a

Exp) Option a is the correct answer.

The passage suggests that mathematical theorems and proofs seem to acquire a life of their own, independent of their human creators, and that even when humans understand a theorem completely, they often have the eerie feeling that it somehow existed "out there" in the universe of mathematical concepts, just waiting to be discovered, rather than having been invented by human thought. Therefore, it can be inferred that mathematical concepts and principles have an inherent truth that exists independently of human understanding or interpretation

PASSAGE 16 (Q.24 – Q.26)

The sociological imagination enables us to grasp history and biography and the relations between the two within society. That is its task and its promise. To recognize this task and this promise is the mark of the classic social analyst. It is characteristic of Herbert Spencer, of Karl Marx, of Emile Durkheim, of Max Weber, and of the many other founders of our science. To understand the social world, we must understand both the history that has shaped it and the biography of the individuals who inhabit it. We must be able to see the intersection between the two and understand how each one affects the other. This requires us to move beyond our own limited experiences and see the world through the eyes of others.

We must be able to step outside of our own social location and see how different groups experience the world. We must also be able to understand how society is structured and how power operates within it. This means that we must be critical of the social structures and institutions that shape our lives, and we must be willing to challenge them when they perpetuate inequality and injustice. The sociological imagination is not a fixed body of knowledge that can be learned once and for all. It is a way of thinking that must be constantly cultivated and refined. It requires us to be curious, creative, and critical. It challenges us to see the world in new ways and to question the assumptions that underlie our beliefs and actions. In doing so, it helps us to understand ourselves and the world around us, and to work towards creating a more just and equitable society.

Q.24) Based on the above passage, the following assumptions have been made:

1. One should have empathy to develop sociological imagination.
2. One should not question the norms that influence our existence.

Which of the above assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The following lines outline the fact that one should empathy as it helps us understand others better and develop a sociological imagination. **“We must be able to see the intersection between the two and understand how each one affects the other. This requires us to move beyond our own limited experiences and see the world through the eyes of others.”**

Statement 2 is incorrect: The passage argues contrary to the given statement as our lives are affected by social patterns and institutions that we need to examine critically. Following lines emphasize the same, **“We must also be able to understand how society is structured and how power operates within it. This means that we must be critical of the social structures and institutions that shape our lives, and we must be willing to challenge them when they perpetuate inequality and injustice.”**

Q.25) Based on the above passage, the following assumptions have been made:

1. The social world is influenced by the personal stories of the people who live in it.
2. Sociological imagination demands us to be inquisitive.

Which of the above given assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: The passage argues at the start that we must understand the intersection of biography which is personal history of individual as well as the history they inhabit. Following lines highlight this, **“To understand the social world, we must understand both the history that has shaped it and the biography of the individuals who inhabit it. We must be able to see the intersection between the two and understand how each one affects the other.”**

Statement 2 is correct: The following lines highlight that to have a sociological imagination, one should have inquisitiveness, **“It is a way of thinking that must be constantly cultivated and refined. It requires us to be curious, creative, and critical. It challenges us to see the world in new ways and to question the assumptions that underlie our beliefs and actions.”**

Q.26) How does the passage argue that the sociological imagination can address injustices?

- a) By understanding and criticizing existing social structures
- b) By building new social structures and social orders
- c) By changing how an individual see his/her history
- d) By building a new body of knowledge

Ans) a

Exp) Option a is the correct answer.

The passage clearly outlines that that by being curious, creative, and **critical, we can question the assumptions that underlie our beliefs and actions and see the world in new lights. Questioning the existing social structures** would help us to understand the prevailing injustices. Only by understanding this we can work towards creating a more just and equitable society.

PASSAGE 17 (Q.27 – Q.29)

The dream is a sort of involuntary thinking that occurs during sleep, in which the unconscious mind communicates with the conscious mind through the creation of symbols and imagery. These symbols and imagery are often derived from repressed desires, fears, or memories, which are transformed and disguised by the mind in order to protect the dreamer from experiencing anxiety or guilt. In this way, the dream serves as a kind of safety valve for the psyche, allowing the individual to process and integrate their unconscious material in a way that is less threatening than direct confrontation with the repressed content.

However, the interpretation of dreams is not a straightforward process, as the symbols and imagery used in the dream are often highly personal and idiosyncratic, and may have different meanings for different individuals. Moreover, the dream is not a static entity, but is rather a dynamic process that evolves over time and is influenced by both internal and external factors. Despite these challenges, the interpretation of dreams can provide valuable insights into the workings of the human mind and the nature of the

unconscious. Through careful analysis of the symbols and imagery used in the dream, it is possible to uncover repressed desires, fears, and memories, and to gain a deeper understanding of the individual's personality and psychological makeup.

Q.27) What is the main purpose of the dream according to the passage?

- a) To provide entertainment during sleep.
- b) To prevent communication with the unconscious mind.
- c) To completely eliminate the anxieties or guilts of the dreamer.
- d) To act as a system to release the pressure for the psyche

Ans) d

Exp) Option d is the correct answer.

The main purpose of the dream, according to the passage, is to act as a safety valve for the psyche, allowing the individual to process and integrate their unconscious material in a way that is less threatening than direct confrontation with the repressed content. While the dream may involve the communication between the unconscious mind and conscious mind through the creation of symbols and imagery, it is ultimately a means of protecting the dreamer from experiencing anxiety or guilt. However, they do not eliminate the anxieties and guilts completely.

Q.28) Why according to the author of the passage, interpreting dreams a challenging process?

- a) The symbols and imagery used in dreams are not relevant to the individual
- b) The dream remains transfixed entity.
- c) The dream is barely influenced by internal and external factors
- d) The symbols and imagery used in dreams are highly individualistic.

Ans) d

Exp) Option d is the correct answer.

The passage explains that the interpretation of dreams is not a straightforward process because the **symbols and imagery used in dreams are often highly personal and idiosyncratic, and may have different meanings for different individuals.** This means that the interpretation of a dream may be influenced by an individual's personal experiences and associations. Furthermore, the passage notes that **the dream is a dynamic process that evolves over time and is influenced by both internal and external factors.** These factors may include the individual's current emotional state, recent experiences, and external events, all of which can make interpreting dreams more challenging.

Q.29) Based on the above passage, the following assumptions have been made:

1. Interpreting dreams can provide insights into the individual's psyche.
2. Everyone has repressed desires, fears, or memories.

Which of the above given assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The passage assumes that despite the challenges involved in interpreting dreams, it can provide valuable insights into the workings of the human mind and the nature of the unconscious. Through careful analysis of the symbols and imagery used in the dream, it is possible to uncover repressed desires, fears, and memories, and to gain a deeper understanding of the individual's personality and psychological makeup.

Statement 2 is incorrect: This assumption is not made in the passage on dreams. While the passage notes that dreams often communicate repressed desires, fears, or memories, it does not assume that everyone has such repressions. There may be individuals who do not have repressed material that is communicated through their dreams.

PASSAGE 18 (Q.30)

The great enemy of clear language is insincerity. When there is a gap between one's real and one's declared aims, one turns as it were instinctively to long words and exhausted idioms, like a cuttlefish spurting out ink. In our age, there is no such thing as 'keeping out of politics.' All issues are political issues, and politics itself is a mass of lies, evasions, folly, hatred, and schizophrenia. When the general atmosphere is bad, language must suffer. I should expect to find -- this is a guess which I have not sufficient knowledge to verify -- that the German, Russian and Italian languages have all deteriorated in the last ten or fifteen years, as a result of dictatorship.

Q.30) What is the most logical and essential message conveyed in the passage?

- Long words and exhausted idioms are necessary for clear language.
- Politics is a necessary evil that corrupts language.
- Dictatorship leads to the deterioration of language.
- Sincerity is required for the development of clear and better language.

Ans) d

Exp) Option d is the correct answer.

The passage argues that **insincerity is the great enemy of clear language**, and that when there is a gap between one's real and declared aims, long words and exhausted idioms are used as a means of evading the truth. This is demonstrated by the metaphor of the cuttlefish spurting out ink. The author argues that in our age, politics is inescapable and that when the general atmosphere is bad, language suffers. Thus, it is evident Sincerity is required for the development of clear and better language. The final sentence of the passage is a guess that **the German, Russian, and Italian languages have deteriorated due to dictatorship**. It is another **illustration that sincerity is a key requirement** for betterment of a language.

PASSAGE 19 (Q.31)

The modern world tends to be individualistic. We believe in the importance of individual happiness, and seek to provide every individual with the means to pursue happiness as they see fit. Yet at the same time we believe that individual freedom can be reconciled with economic growth, technological progress, and modernization. In practice, this is often an illusion. To ensure economic growth, the modern state has to engage in a complex balancing act between competing demands of different groups, such as employers and employees, merchants and consumers, environmentalists and industrialists. Meanwhile, technological progress threatens to disrupt the job market, as artificial intelligence and automation make many human jobs redundant.

Q.31) Based on the passage, what is the most logical corollary of the belief in individual freedom and economic growth?

- The state should prioritize economic growth over individual freedom in order to ensure progress.
- Balancing the competing demands of different groups is crucial to reconcile individual freedom with economic growth.
- The advancement of technology will eventually lead to the disappearance of human jobs.
- The pursuit of individual happiness should be sacrificed for the benefit of the greater good.

Ans) b

Exp) Option b is the correct answer.

The passage **highlights the contradiction between the belief in individual freedom and the need for economic growth**, as the latter often requires the state to balance the competing demands of different groups. The passage also mentions the threat of technological progress to the job market. The **most logical corollary of these ideas is that balancing the competing demands** of different groups is crucial to reconcile individual freedom with economic growth. Furthermore, the passage does not suggest sacrificing individual happiness for the greater good.

PASSAGE 20 (Q.32)

But no one can reach the edifice of the English language who is not constantly adding from newer sources. New combinations of words are continually being formed for special purposes. Those who seek in language a medium for the expression of thought and feeling, for the transmission of knowledge, or for the elaboration of ideas, will find themselves in constant need of new materials to give their purpose full effect. Each of the words and phrases in our language has a history and a genealogy. In this department the accumulation of the past is always increasing, and the latest results of scholarship and research must be added to the mass. As the tide flows on, the pool must grow deeper, for it is the pool of thought which gives depth and significance to the stream.

Q.32) Based on the above passage, the following assumptions have been made:

- The English language is constantly evolving.
- Knowing a greater number of words and phrases is necessary to express one's thoughts and ideas in a better way.

Which of the above assumptions is/are valid?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: It is cleared at the outset itself that English language is constantly developing and evolving and new words, phrases are being added to it continually. It is highlighted by these lines, **“But no one can reach the edifice of the English language who is not constantly adding from sources such as these. New combinations of words are continually being formed for special purposes.”**

Statement 2 is incorrect: The passage does not imply that **Knowing a greater number of words and phrases is necessary to express one's thoughts and ideas in a better way**. The author only talks about the importance of having a variety of words and phrases available for those who seek to express their thoughts and ideas. And did not consider it as necessity.

PASSAGE 21 (Q.33 – Q.34)

The truth is the whole. We must comprehend the whole to know the truth. Knowledge of a single object can be said to be true only insofar as it agrees with the truth of the whole system of reality. Truth, therefore, is not simply the agreement of thought with reality, but the agreement of a thought with the whole system of reality. Truth is a function of the whole, and the whole is the system of reality. The truth of any particular thought, then, depends not only on the thought itself but on the other thoughts in the whole system of reality. A thought that is true in one context may be false in another, depending on the other thoughts that it is related to in that context. Truth, then, is not simply a matter of correspondence between a thought and an object in the world. Rather, truth is a function of the whole system of reality, and any particular thought is true only insofar as it fits into the whole. The whole system of reality, then, is not something that we simply observe from the outside, but something that we participate in, and something that we help to create through our thinking.

Q.33) Based on the above passage, the following assumptions have been made:

1. Human beings have the ability to completely comprehend the entire system of reality.
2. The truth can often be contextual.

Which of the above given assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The passage does not explicitly state that human beings have the ability to completely comprehend the entire system of reality. In fact, the passage suggests that the whole system of reality is not something that we simply observe from the outside but something that we participate in and help to create through our thinking.

Statement 2 is correct: The passage clearly outline that truth is often contextual. It has been highlighted in this line, **“A thought that is true in one context may be false in another, depending on the other thoughts that it is related to in that context.”**

Q.34) What does the author mean by "the truth is the whole"?

- a) The truth is determined by individual perceptions of reality.
- b) The truth can be known through the study of individual objects.
- c) The truth depends on the interconnectedness of all objects in reality.
- d) The truth is determined by scientific facts.

Ans) c

Exp) Option c is the correct answer.

The author means that "the truth is the whole" in the sense that the truth cannot be understood or known by looking at individual objects or perceptions in isolation. The truth depends on the interconnectedness of all objects and perceptions in the whole system of reality. As the passage states: "Knowledge of a single object can be said to be true only insofar as it agrees with the truth of the whole system of reality." The author is arguing that the truth is not simply a matter of correspondence between a thought and an object in the world, but it's a function of the whole system of reality. In other words, the truth is not determined by isolated facts or perceptions, but by the relationships and interconnections between all of them.

PASSAGE 22 (Q.35 – Q.37)

Cancer, we have long known, is the most tenacious of adversaries. It evolves with Darwinian cunning and has outwitted our best efforts to subdue it for centuries. We have blasted it with radiation, cut it out with scalpels, scorched it with chemicals, and yet it has survived, elusive and mysterious. The human body, it seems, was not designed to battle cancer—our immune systems are geared to detect and destroy invaders that come from the outside, not the inside. The signals that cancer cells send out when they are first born and then thrive are, at best, weak distress signals that are often missed or ignored. When the immune system does respond, the cancer cells have already evolved new means of evasion. But over the last few years, a remarkable scientific story has emerged, one that has confounded all the long-held beliefs about how the immune system works. The discovery that the immune system can be mobilized against cancer has emerged as one of the most promising and innovative approaches of the twenty-first century. Immune cells, it seems, can learn to recognize the hitherto unknown landscape of the inside of the cell, and destroy it with astonishing efficiency. Cancer, in this view, is simply a disease of the failure of the immune system to recognize and eliminate malignant cells. But if the immune system can be trained to do so, then it can emerge as an unanticipated and powerful ally in the war against cancer.

Q.35) According to the passage, why has the immune system been unable to effectively combat cancer?

- The immune system is mainly designed to target and eliminate external threats.
- The immune system often fails to notice or respond to the faint distress signals.
- Cancer cells have the ability to evolve rapidly and outwit all our efforts to destroy them.
- Both a and b.

Ans) d

Exp) Option d is the right answer.

The passage states that the human immune system is geared to detect and **destroy invaders that come from the outside, not the inside**, and that cancer cells send **out weak distress signals that are often missed or ignored by the immune system**. The passage does not mention that Cancer cells have the ability to evolve and outwit all our efforts to destroy them. Also, the second half of the statement, i.e. and outwit all our efforts to destroy them, can be considered as an extreme statement.

Q.36) According to the passage, what is the most promising and innovative approach to combating cancer?

- Using radiation to destroy cancer cells.
- Using scalpels to cut out cancerous tissue.
- Using chemicals to scorch cancer cells.
- Training the immune system to recognize and eliminate malignant cells.

Ans) d

Exp) Option d is the correct answer.

The passage notes that over the last few years, a remarkable scientific story has emerged, one that has confounded all the long-held beliefs about how the immune system works. It goes on to state that the discovery that the immune system can be mobilized against cancer has emerged as one of the most promising and innovative approaches of the twenty-first century. It concludes that cancer is simply a disease of the failure of the immune system to recognize and eliminate malignant cells and that if the immune system can be trained to do so, it can emerge as an unanticipated and powerful ally in the war against cancer.

Q.37) What is the critical inference that can be derived from the above given passage?

- Cancer is a disease that can be easily cured with modern medicine.
- The immune system is ill-equipped to fight cancer due to its inability to recognize malignant cells.
- Traditional cancer treatments such as radiation and chemotherapy are more effective than using the immune system to combat cancer.
- Cancer cells cannot adapt and evolve to counteract the human immune system.

Ans) b

Exp) Option b is the correct answer.

The passage describes how cancer has been a difficult adversary for modern medicine because it can evolve and outwit our efforts to eliminate it. The immune system's design is to target external invaders, making it poorly suited to recognize and destroy cancer cells within the body. Therefore, the key critical inference from the passage is that the immune system is ill-equipped to fight cancer due to its inability to recognize malignant cells. Option B correctly reflects this critical inference. Option A is incorrect because the passage does not suggest that cancer is easy to cure. Option C is incorrect because the passage describes how training the immune system to recognize and eliminate malignant cells is a promising approach. Option D is incorrect because the passage explicitly states that cancer cells can adapt and evolve to evade the human immune system.

PASSAGE 23 (Q.38 – Q.39)

As we spend more and more time online, we are rewiring our brains to think and process information in new ways. The internet encourages rapid, superficial browsing and skimming, rather than deep, reflective thinking. This has important implications for our ability to concentrate, remember, and learn. Studies have shown that frequent internet use can lead to a decrease in attention span and a reduction in the ability to engage in complex cognitive tasks. The constant distraction and interruption of digital devices can also contribute to anxiety, stress, and a sense of overload. However, the effects of the internet on the brain are not entirely negative. Neuroplasticity, or the brain's ability to change and adapt, means that the internet can also be a valuable tool for learning and cognitive growth. The key is to use it in a mindful and intentional way, balancing the benefits of easy access to information with the need for deep, focused thinking.

Q.38) Based on the above passage, the following assumptions have been made:

- The internet has an impact on the way our brains process information.
- Rapid browsing and skimming on the internet may hinder deep, reflective thinking.

Which of the above given assumptions is/are valid?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: This assumption is correct based on the following line from the passage: "**As we spend more and more time online, we are rewiring our brains to think and process information in new ways.**" This suggests that the internet is having a direct impact on our brains and the way we process information.

Statement 2 is correct: This is clearly outlined in this line in the passage, "**The internet encourages rapid, superficial browsing and skimming, rather than deep, reflective thinking.**" This implies that the way the

internet is designed can encourage a certain type of thinking that is more focused on speed and surface-level understanding, rather than deep, reflective thinking.

Q.39) What is the most critical message conveyed in the passage?

- The internet has a purely negative impact on cognitive abilities.
- Mindful and intentional use of the internet is required to make it a valuable tool for cognitive development.
- Rapid browsing and skimming on the internet is the only way to process information.
- The internet should be avoided in order to maintain concentration and memory.

Ans) b

Exp) Option b is the correct answer.

The passage discusses how the internet can impact our cognitive abilities, but ultimately argues that the key is to use it in a mindful and intentional way. This is conveyed in the following line: "**The key is to use it in a mindful and intentional way, balancing the benefits of easy access to information with the need for deep, focused thinking.**" The passage states that the internet encourages rapid browsing and skimming, but it doesn't suggest that this is the only way to process information. The passage mentions that the effects of the internet on the brain are not entirely negative, and that neuroplasticity means the internet can also be a valuable tool for learning and cognitive growth. The passage doesn't suggest that the internet should be avoided altogether.

PASSAGE 24 (Q.40)

It is widely recognised that political secularism, virtually everywhere in the world, is in crisis. It is also acknowledged that to overcome this crisis, secularism needs to be reimagined and reconceptualized. We need to move away from the standard church-state models of secularism and begin to focus instead on secularism as a response to deep religious diversity. Furthermore, diversity must be understood as enmeshed in power relations, and therefore the hidden potential of religion-related domination must be explicitly acknowledged. Also, these two moves enable us to view secularism as a response to two forms of institutionalized religious domination, inter- and intra-religious. This way of conceiving secularism rebukes the charge that secularism is intrinsically anti-religious. Secularism is not against religion; it opposes institutionalized religious domination. A secular state should show critical respect to all religious and philosophical world views, possible only when it adopts a policy of principled distance towards all of them.

Q.40) Which one of the following is the most logical and rational inference that can be made from the above passage?

- Standard model of State–Church separation is no more applicable to the modern world.
- Secularism seems to be in crisis across the globe and needs to be protected.
- A new model of secularism based on principled distance would make it more accommodative and acceptable.
- A modern state cannot function without the value of secularism.

Ans) c

Exp) Option c is the correct answer.

The following lines highlight the logical message of the passage, "We need to move away from the standard church-state models of secularism and begin to focus instead on secularism as a response to deep religious diversity. A secular state should show critical respect to all religious and philosophical world views, possible only when it adopts a policy of principled distance towards all of them."

Q.1) In the context of India, which of the following best describes the theory of “Collective Ministerial Responsibility”?

- The Ministers are directly responsible to the People of India.
- The Council of Ministers is responsible to the House of the People.
- The Council of Ministers is responsible only to the Head of the State.
- The Ministers are responsible only for their own actions, and not for the actions of entire Cabinet.

Ans) b

Exp) Option b is the correct answer.

According to theory of collective ministerial responsibility, **the Ministers are responsible to the House of the People**. It is a business of the House of the People to see that the Cabinet remains in power so long as it retains the confidence of the majority in that House. It is explicitly expressed in **Art. 75 (3)** of our Constitution. **Art. 75 (3) reads “The Council of Ministers shall be collectively responsible to the House of the People”**.

The principle of collective responsibility also means that the Cabinet decisions bind all cabinet ministers even if they differed in the cabinet meeting. It is the duty of every minister to stand by cabinet decisions and support them both within and outside the Parliament.

Source: DD BASU CH. 12

<https://indiankanoon.org/doc/1336375/>

Q.2) With reference to representation of Union Territories in Rajya Sabha, which of the following statements is/are correct?

- The representatives of a union territory in the Rajya Sabha are indirectly elected by members of an electoral college specially constituted for this purpose.
- The system of proportional representation by means of the single transferable vote is used for election of members to Rajya Sabha from Union Territories.
- Only Delhi and Puducherry have representation in Rajya Sabha.

Select the correct answer using the code given below.

- 1 and 3 only
- 2 only
- 3 only
- 1 and 2 only

Ans) d

Exp) Option d is the correct answer.

At present, the Rajya Sabha has 245 members. Of these, 229 members represent the states, 4 members represent the union territories, and 12 members are nominated by the president. The **Fourth Schedule** of the Constitution deals with the allocation of seats in the Rajya Sabha to the states and union territories

Statement 1 is correct: The **representatives of a union territory in the Rajya Sabha** are indirectly elected by **members of an electoral college specially constituted for this purpose**. Whereas the **representatives of states** in the Rajya Sabha are elected by **the elected members of state legislative assemblies**.

Statement 2 is correct: This election is **held in accordance with the system of proportional representation by means of the single transferable vote**. Method of election is same in State and Union Territories.

Statement 3 is incorrect: Out of the eight union territories, **three union territories (Delhi, Puducherry and Jammu & Kashmir)** have representation in Rajya Sabha. The populations of other six union territories are too small to have any representative in the Rajya Sabha.

Source: M. Laxmikant Ch. 22

Q.3) A person elected as a member of Parliament can be disqualified under which of the following circumstances?

1. If he is of unsound mind and stands so declared by a court.
2. If he is convicted for promoting enmity between different groups.
3. If he is an undischarged insolvent.
4. If he has voluntarily acquired the citizenship of a foreign State.

Select the correct answer using the code given below.

- a) 2 and 3 only
- b) 1, 2 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

A person elected to be a member of Parliament can be disqualified either under the provisions of the constitution or the Representation of People's Act (1951).

Statements 1, 3 and 4 are correct: Under the Constitution, a person shall be disqualified from being elected as a member of Parliament in the following cases.

- 1) if he holds any office of profit under the Union or state government (except that of a minister or any other office exempted by Parliament).
- 2) **if he is of unsound mind and stands so declared by a court.**
- 3) **if he is an undischarged insolvent.**
- 4) if he is not a citizen of India or has voluntarily acquired the citizenship of a foreign state or **is under any acknowledgement of allegiance to a foreign state**; and
- 5) if he is so disqualified under any law made by Parliament.

Statement 2 is correct: Other than the Constitution, many conditions of disqualification have been given in the **Representation of People Act (1951)**. Such as-

- 1) He must not have been found guilty of certain election offences or corrupt practices in the elections.
- 2) He must not have been convicted for any offence resulting in imprisonment for two or more years. But, the detention of a person under a preventive detention law is not a disqualification.
- 3) He must not have failed to lodge an account of his election expenses within the time.
- 4) He must not have any interest in government contracts, works or services.
- 5) He must not be a director or managing agent nor hold an office of profit in a corporation in which the government has at least 25 per cent share.
- 6) He must not have been dismissed from government service for corruption or disloyalty to the State.
- 7) **He must not have been convicted for promoting enmity between different groups** or for the offence of bribery.
- 8) He must not have been punished for preaching and practicing social crimes such as untouchability, dowry and sati.

Source: M Laxmikant Ch Parliament

Q.4) With reference to Panel of Chairpersons of Lok Sabha, which of the following statements are correct?

1. The Speaker nominates a Panel of Chairpersons from amongst the members of the Lok Sabha.
2. A Minister cannot be a member of panel of Chairpersons.
3. The Key task of panel of Chairpersons is to preside over the House when the office of the Speaker or the Deputy Speaker is vacant.

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Each House of Parliament has its own presiding officer. There is a Speaker and a Deputy Speaker for the Lok Sabha and a Chairman and a Deputy Chairman for the Rajya Sabha. A **panel of chairpersons for the Lok Sabha** and a panel of vice-chairpersons for the Rajya Sabha is also appointed.

Statement 1 is correct: The Rules of Procedure and Conduct of Business in Lok Sabha provide that at the commencement of the House or from time to time, as the case may be, the **Speaker shall nominate from amongst the Members a Panel of not more than ten Chairpersons.**

Statement 2 is correct: Any one member of panel of chairpersons may preside over the House in the absence of the Speaker and the Deputy Speaker. A Chairperson so nominated, holds office until a new Panel of Chairpersons is nominated, unless he/she resigns earlier from the Panel or is appointed a Minister or elected as Deputy Speaker. **Minister cannot be a member of panel of chairpersons. Overall, a minister cannot preside house in any capacity.**

Statement 3 is incorrect: A member of the panel of chairpersons **cannot preside over the House, when the office of the Speaker or the Deputy Speaker is vacant.** During such time, the Speaker's duties are to be performed by such member of the House as the **President** may appoint for the purpose.

Source: <https://loksabha.nic.in/FAQ.aspx>

Q.5) With reference to the provisions regarding “hate speech and freedom of expression” in India, consider the following statements:

1. Hate speech has not been defined in any existing law in India.
2. Representation of the People Act, 1951 disqualifies a person from contesting election if he is convicted for illegitimate use of freedom of speech and expression.
3. Constitution allows the State to make laws regarding freedom of speech to prevent defamation or incitement to an offence.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

According to the National Criminal Records Bureau (NCRB) data, between 2014 and 2020, cases **filed under Section 153A of the Indian Penal Code (IPC)** (incitement to hostility among different groups based on religion, race, place of birth, place of residence, language) increased sixfold or nearly 500%. **Statement 1 is correct: Hate speech has not been defined under any existing law in India.** Even the Election Commission told the Supreme Court that **there is no law on “hate speech” in India.** Therefore, **it has been relying on provisions of the Indian Penal Code (Various Sections like 153A, 153B, 298 etc) and the Representation of the People Act, 1951.**

Statement 2 is correct: Section 8 in the Representation of the People Act, 1951 disqualifies a person from contesting an election if he is convicted for illegitimate use of freedom of speech and expression. Such offence includes- offence of promoting enmity between different groups on ground of religion, race or offence of making statement creating or promoting enmity, hatred or ill-will between classes.

Statement 3 is correct: Constitution allows the State to make law to prevent defamation or incitement to an offence. As per Article 19(2) of the Constitution, **nothing prevents the State from making any law**, as long as such law imposes reasonable restrictions on the exercise of the right conferred by the said sub-clause in the interests of the sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency or morality or in relation to contempt of court, **defamation or incitement to an offence.**

Source: [https://indianexpress.com/article/india/relying-on-ipc-rp-act-in-absence-of-law-on-hate-speech-ec-to-supreme-court-](https://indianexpress.com/article/india/relying-on-ipc-rp-act-in-absence-of-law-on-hate-speech-ec-to-supreme-court-8151674/#:~:text=The%20Election%20Commission%20on%20Wednesday,any%20existing%20law%20in%20India%E2%80%A6)

[8151674/#:~:text=The%20Election%20Commission%20on%20Wednesday,any%20existing%20law%20in%20India%E2%80%A6](https://www.un.org/en/hate-speech/understanding-hate-speech/what-is-hate-speech#:~:text=In%20common%20language%2C%20%E2%80%9Chate%20speech,that%20may%20threaten%20social%20peace.)

<https://www.un.org/en/hate-speech/understanding-hate-speech/what-is-hate-speech#:~:text=In%20common%20language%2C%20%E2%80%9Chate%20speech,that%20may%20threaten%20social%20peace.>

<https://www.legalserviceindia.com/legal/article-572-constitution-of-india-freedom-of-speech-and-expression.html>

<https://indiankanoon.org/doc/493243/>

Q.6) With reference to the Parliament of India, consider the following statements:

1. Each House of the Parliament has separate secretarial staff of its own, though there can be some posts common to both the Houses.
2. The Secretary-General of each House of the Parliament is appointed by the President of India.
3. The tenure of Secretary-General of Lok Sabha is co-terminus with the life of the Lok Sabha.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Each House of Parliament has separate secretarial staff of its own, though there can be some posts common to both the Houses. Their recruitment and service conditions are regulated by Parliament.

Statement 1 is correct: As per article 98, each House of Parliament has separate secretarial staff of its own, though **there can be some posts common to both the Houses.**

Statement 2 is incorrect: The secretariat of each House is headed by a **Secretary-General**. He is appointed by the **presiding officer of the House (Not President of India).**

Statement 3 is incorrect: He is a **permanent officer. His tenure is not directly related to the duration of Lok Sabha.** The Speaker, Lok Sabha is assisted by the Secretary-General, Lok Sabha, whose pay scale, position and status etc. is equivalent to that of the highest ranking official in the Government of India i.e., Cabinet Secretary.

Source: <https://loksabha.nic.in/Secretariat/Functioning.aspx>

Q.7) The words “Adjournment” and “Prorogation” are used frequently during Parliamentary sessions. With reference to them, which of the following statements is/are correct?

1. Adjournment is done by President of India, whereas Prorogation is done by the presiding officer of the House.
2. Adjournment not only terminates a sitting but also a session of the House, whereas Prorogation only terminates a sitting and not a session of the House.
3. Both Adjournment and Prorogation do not affect the bills pending before the House.

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

The president from time to time summons each House of Parliament to meet. But, the maximum gap between two sessions of Parliament cannot be more than six months. A sitting of Parliament can be terminated by adjournment or adjournment sine die or prorogation or dissolution.

Statement 1 is incorrect: Prorogation is done by President of India, whereas Adjournment is done by the presiding officer of the House. A sitting of Parliament can be terminated by adjournment or adjournment sine die or prorogation or dissolution.

Statement 2 is incorrect: Prorogation not only terminates a sitting but also a session of the House, whereas Adjournment only terminates a sitting and not a session of the House.

Statement 3 is correct: Adjournment does not affect the bills or any other business pending before the House and the same can be resumed when the House meets again. **Prorogation also does not affect the bills or any other business** pending before the House. However, all pending notices (other than those for introducing bills) lapse on prorogation and fresh notices have to be given for the next session. In Britain, prorogation brings to an end all bills or any other business pending before the House.

Source: M Laxmikant Ch Parliament

Q.8) In the context of Indian Polity, consider the following statements with respect to “Parliamentary Forums”:

1. They provide a platform for legislative members and political executives of the government to have discussion on critical issues faced by the nation.
2. Ministers of the concerned departments act as the ex-officio chairman of these forums.
3. Each of these forums submit an annual report to the President of India.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 only
- d) 3 only

Ans) c

Exp) Option c is the correct answer.

The first Parliamentary Forum on Water Conservation and Management was constituted by the Speaker of the Lok Sabha in 2005. Subsequently seven more forums were added and presently there are eight parliamentary forums.

Statement 1 is correct: Parliamentary forums provide a platform for **legislative members and political executives (Ministers)** of the government to have discussion on critical issues faced by a nation. The forum facilitates meaningful interaction between Member of Parliaments (MPs) and the concerned Ministers which helps them in making informed decisions.

Statement 2 is incorrect: **The Speaker of Lok Sabha is the ex-officio Chairperson**/president of all the Forums except the **Parliamentary Forum on Population and Public Health** wherein the **Chairman of Rajya Sabha** is the ex-officio President and the Speaker is the ex-officio, Co-President.

Statement 3 is incorrect: The forum's main objective is to bring Member of Parliament (MPs), Ministers, Experts etc. to enable a **meaningful discussion** on critical issues faced by a nation. Parliamentary Forums offer Members an informal forum to familiarise themselves with current issues of interest.

Source: Laxmikanth - Parliamentary Forums

<https://164.100.47.194/our%20parliament/Parliamentary%20Forums.pdf>

https://loksabha.nic.in/writereaddata/Abstract/cell_on_parliamentary_fora.pdf

Q.9) Which of the following statements are correct with respect to the role of state legislatures in deciding the location of capital city of the State concerned?

1. Article 3 of the constitution empowers state legislatures to decide their location of capital.
2. Matters related to establishing the capital of new states are covered under the State List in the Seventh schedule of the constitution.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Matters related to location of States' capital gained currency after Andhra Pradesh proposal of making Visakhapatnam as its executive capital, Amaravati as legislative capital and Kurnool the judicial capital. This attracted the debate of who has the power of deciding the location of states' capital.

Statement 1 is incorrect: **Article 3 does not empower State Legislatures to decide their location of state's capital.** In fact, **Article 3 does not explicitly mention anything about "States' capital"**. Article empowers **Parliament** to form a new state by separating a territory from any state (e.g.: Telangana formed out of Andhra Pradesh), to increase or decrease the area of any states etc.

Statement 2 is incorrect: Matters related to establishing a **capital of a new state are not covered by State list** in the Seventh Schedule of the Indian constitution. Seventh schedule of the constitution provides for **three-fold distribution of legislative powers (Union list, State list and Concurrent list)** between the centre and state governments.

Source: <https://timesofindia.indiatimes.com/city/vijayawada/only-parliament-can-take-final-call-on-location-of-states-capital-legal-experts/articleshow/73061958.cms#:~:text=law%20is%20not-covered,-by%20any%20Entry>

<https://www.thehindu.com/news/national/andhra-pradesh/andhra-hc-cannot-be-town-planner-says-supreme-court-on-high-court-order-for-building-state-capital-in-6-months/article66195253.ece>

Q.10) With reference to North Atlantic Treaty Organisation (NATO), consider the following statements:

1. As per its mandate, NATO can operate only to defend the territories of its members.
2. NATO membership is open to all emerging democracies of Europe that are ready to meet the obligations of membership.

3. All seven member states of G7 were founding members of NATO.
 4. Any decision to invite a country to join the Alliance is taken based on the consensus of all allies.
 Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 4 only
- c) 2 and 3 only
- d) 1, 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

NATO Summit was held in Madrid (Spain) amid Russia-Ukraine War in June 2022. NATO is a security alliance of 30 countries from North America and Europe. NATO's fundamental goal is to safeguard the Allies' freedom and security by political and military means.

Statement 1 is incorrect: NATO not only helps to defend the territory of its members, but also engages where possible and when necessary to project its values further afield, prevent and manage crises, stabilize post-conflict situations and support reconstruction. For example, NATO leads operations in Kosovo and the Mediterranean. In 2018, NATO initiated a **training mission in Iraq**, which aims at developing the capacity of Iraq's security forces, its defence and security institutions, and its national defence academies.

Statement 2 is correct: NATO membership is potentially open to all of Europe's emerging democracies that share the alliance's values and are ready to meet the obligations of membership. Candidates for membership must meet the following five requirements:

- 1) New members must uphold democracy, including tolerating diversity.
- 2) New members must be making progress toward a market economy.
- 3) Their military forces must be under firm civilian control.
- 4) They must be good neighbors and respect sovereignty outside their borders.
- 5) They must be working toward compatibility with NATO forces.

Statement 3 is incorrect: At present, NATO has 30 members. **In 1949, there were 12 founding members of the Alliance: Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom and the United States.** Whereas the G7 is an informal grouping of seven of the world's advanced economies, including Canada, France, **Germany**, Italy, **Japan**, the United Kingdom, and the United States. So, **Germany and Japan** were not the founding members of NATO but are members of G7.

Statement 4 is correct: NATO's "open door policy" is based on **Article 10** of its founding treaty. Any decision to invite a country to join the Alliance is taken by the North Atlantic Council **based on consensus** among all Allies.

Source: [https://www.nato.int/wearenato/why-was-nato-](https://www.nato.int/wearenato/why-was-nato-founded.html#:~:text=The%20Alliance's%20founding%20treaty%20was,European%20and%20North%20American%20countries)

[founded.html#:~:text=The%20Alliance's%20founding%20treaty%20was,European%20and%20North%20American%20countries.](https://www.nato.int/wearenato/why-was-nato-founded.html#:~:text=The%20Alliance's%20founding%20treaty%20was,European%20and%20North%20American%20countries)

<https://www.nato.int/nato-welcome/index.html>

<https://www.aa.com.tr/en/europe/nato-membership-requires-long-multi-step-process/2590397>

https://1997-2001.state.gov/regions/eur/fs_members.html

[https://www.nato.int/cps/en/natolive/topics_49212.htm#:~:text=Countries%20aspiring%20to%20join%20NATO,in%20the%20Euro%2DAtlantic%20area.](https://www.nato.int/cps/en/natolive/topics_49212.htm#:~:text=Countries%20aspiring%20to%20join%20NATO,in%20the%20Euro%2DAtlantic%20area)

https://www.nato.int/cps/en/natohq/topics_67656.htm

https://www.nato.int/cps/en/natohq/topics_52060.htm

https://www.nato.int/cps/en/natohq/topics_68144.htm

Q.11) Which of the following statements rightly describes the power of the State Legislative Council (SLC) over matters other than money bills?

- No ordinary bill can be introduced in the State Legislative Council.
- The SLC can delay an ordinary bill, introduced in Legislative Assembly, for a maximum period of 4 months.
- While SLC can approve the ordinary bills passed by the legislative assembly, they have no power to approve ordinances passed by the Governor.
- They have no power over enlarging the jurisdiction of the State Public Service Commission (SPSC).

Ans) b

Exp) Option b is the correct answer.

Option a is incorrect: The powers and status of the legislative council are broadly equal to that of the assembly in matters concerning the introduction of ordinary bills. Thus, the ordinary bills can be introduced in the **legislative councils** but not the money bills.

Option b is correct: The final power of passing an ordinary bill also lies with the assembly. At the most, the council can detain or delay the bill for the period of four months—three months in the first instance and one month in the second instance. In other words, the council is not even a revising body like the Rajya Sabha; it is only a dilatory chamber or an advisory body.

Option c is incorrect: The State Legislative Council (SLC) **has power to approve** both ordinary bills passed by assembly as well as **ordinances passed by the Governor of state.**

Option d is incorrect: The State Legislative Council (SLC) **has power to enlarge the jurisdiction of the State Public Service Commission (SPSC).** The powers and status of the legislative council are broadly equal to legislative assembly in this context.

Source: M Laxmikant Ch State legislature

Q.12) With reference to Speaker of Lok Sabha, which of the following statements are correct?

- S/he can resign by writing to the President of India.
- When a resolution for the removal of the Speaker is under consideration of the House, s/he can preside at the sitting of the House but cannot vote.
- S/he is the final interpreter of the provisions of the Constitution of India within the House.
- S/he is placed along with the Chief Justice of India in the Order of Precedence.

Select the correct answer using the code given below.

- 3 and 4 only
- 2 and 3 only
- 1 and 4 only
- 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

The Speaker is the head of the Lok Sabha and its representative. He is the guardian of the powers and privileges of the members. He is the principal spokesman of the House, and his decision in all Parliamentary matters is final.

Statement 1 is incorrect: Usually, the Speaker remains in office during the life of the Lok Sabha. However, he has to vacate his office earlier in any of the following three cases:

- if he ceases to be a member of the Lok Sabha;
- if he resigns by writing to the Deputy Speaker; (and not to the President)**
- Such a resolution can be moved only after giving 14 days' advance notice.

Statement 2 is incorrect: When a resolution for the removal of the Speaker is under consideration of the House, **he cannot preside at the sitting of the House**, though he may be present. However, he can speak and take part in the proceedings of the House at such a time and **vote in the first instance, though not in the case of an equality of votes.**

Statement 3 is correct: **The Supreme Court is the final authority for the interpretation of the Constitution. The Speaker is also the final interpreter** of the provisions of the Constitution of India **but only within the house.**

Statement 4 is correct: He is given a very high position in the order of precedence. **He is placed at seventh rank, along with the Chief Justice of India.** He has a higher rank than all cabinet ministers, **except** the Prime Minister or Deputy Prime Minister.

Source: Laxmikanth parliament

Q.13) Consider the following statements with reference to readjustment of seats in Parliament:

1. The orders issued by delimitation commission regarding readjustments of seats cannot be challenged in a court once they are published in the Gazette of India.
2. Present distribution of seats in Parliament, to states, is based on the 2011 census.
3. The Election Commission is empowered to identify seats which are to be reserved for Scheduled Castes and Scheduled Tribes in Parliament.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

Delimitation is the act of redrawing boundaries of Lok Sabha and State Assembly seats to represent changes in population. The main objective of delimitation is to provide equal representation to equal segments of a population. The Delimitation Commission is **appointed by the President** of India. It is composed of the following: a retired Supreme Court judge, the Chief Election Commissioner of India and respective State Election Commissioners.

Statement 1 is correct: The orders issued by the delimitation commission cannot be challenged in any court. Central Government and ECI have told the Supreme Court with reference to a plea that challenges the move of the delimitation commission of redrawing poll constituencies in Jammu and Kashmir, that provisions under the **Delimitation Act, 2002 bars challenge** to the orders of the Commission **once they are published in the Gazette of India.**

Statement 2 is incorrect: Present distribution of seats in Parliament is **based on the 1971 census.** The **representation from each State is not changed by** Delimitation Act, 2002. However, the present **delimitation of constituencies (area wise) has been done on the basis of 2001 census** under the provisions of Delimitation Act, 2002. The 42nd Amendment Act of 1976 had frozen total number of seats till the year 2000 **at the 1971 level.** This ban on readjustment has been extended for another years (**up to year 2026**) by the 84th Amendment Act of 2001 based on **1971 census** with the same objective of encouraging population limiting measures.

Statement 3 is incorrect: **The Delimitation Commission (Not the Election Commission) is tasked with identifying seats reserved for Scheduled Castes and Scheduled Tribes.** The **Delimitation** Commission is supposed to **determine the number and boundaries of constituencies** in a way that the population of all seats, so far as practicable, is the same.

Source: M. Laxmikant ch. 22

<https://indianexpress.com/article/explained/what-is-delimitation-8348977/>

<https://indianexpress.com/article/india/how-are-members-elected-to-rajya-sabha-5108187/>

Q.14) With reference to qualifications for being a Member of the Parliament, consider the following statements:

1. He must be registered as a voter from a parliamentary constituency.
2. He must be not less than 30 years of age in case of the Rajya Sabha and not less than 25 years of age in case of the Lok Sabha.
3. He must be a member of a scheduled caste or scheduled tribe in any state or union territory, if he wants to contest a seat reserved for them.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

A person elected to be a member of Parliament shall have some qualifications under the provisions of the constitution and the Representation of People Act (1951).

Statement 2 is correct: The Constitution lays down the following qualifications for a person to be chosen a member of the Parliament:

- 1) He must be a citizen of India.
- 2) He must make and subscribe to an oath or affirmation before the person authorized by the election commission for this purpose. In his oath or affirmation, he swears.
 - a. To bear true faith and allegiance to the Constitution of India
 - b. To uphold the sovereignty and integrity of India
- 3) **He must be not less than 30 years of age in the case of the Rajya Sabha and not less than 25 years of age in the case of the Lok Sabha.**
- 4) He must possess other qualifications prescribed by Parliament.

Statement 1 and 3 are correct: Some provisions for qualification are **not given in the Constitution**. These provisions are **given in the Representation of People Act (1951)**.

- 1) **He must be registered as an elector for a parliamentary constituency.** This is same in the case of both, the Rajya Sabha and the Lok Sabha. The requirement that a candidate contesting an election to the Rajya Sabha from a particular state should be an elector in that particular state was dispensed with in 2003. In 2006, the Supreme Court upheld the constitutional validity of this change.
- 2) **He must be a member of a scheduled caste or scheduled tribe in any state or union territory, if he wants to contest a seat reserved for them.** However, a member of scheduled castes or scheduled tribes can also contest a seat not reserved for them.

Source: Laxmikanth-Ch Parliament

Q.15) With reference to Indus Water Treaty (IWT), consider the following statements:

1. All the waters of the Jhelum, Chenab and Sutlej Rivers were allocated to India for her unrestricted use under the treaty.
2. India also has the right to generate hydroelectricity through run of the river (RoR) projects on the rivers assigned to Pakistan under the treaty.

3. The treaty required the creation of an ad hoc Indus Commission to resolve questions about implementation of the treaty.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The 118th meeting of the Pakistan-India Permanent Indus Commission (PIC) was held in New Delhi from 30-31 May 2022. The meeting takes place alternatively in Pakistan and India annually. Indus Waters Treaty (IWT) treaty, signed on September 19, 1960, between India and Pakistan and brokered by the World Bank. The treaty fixed and delimited the rights and obligations of both countries concerning the use of the waters of the Indus River system.

Statement 1 is incorrect: The Treaty extends to main rivers of Indus basin i.e., **Sutlej, Beas, Ravi (Eastern rivers)** and **Jhelum, Chenab and Indus (Western rivers)** including their tributaries and sub tributaries and other water bodies. **All the waters of the Eastern Rivers were allocated to India** for her unrestricted use while India is under obligation to let flow all the waters of the Western Rivers, except for the domestic, non-consumptive and other uses permitted in the Treaty.

Statement 2 is correct: **India has also been given the right to generate hydroelectricity through run of the river (RoR) projects on the Western Rivers (Jhelum, Chenab and Indus) i.e., the rivers which have been assigned to Pakistan for unrestricted use under the treaty.** These runs of the river plants are subject to specific criteria for design and operation.

Statement 3 is incorrect: The treaty required the creation of a **Permanent Indus Commission** (not ad hoc), with a commissioner from each country, to maintain a channel for communication and to try to resolve questions about implementation of the treaty.

Source: [https://mofa.gov.pk/118th-meeting-of-the-pakistan-india-permanent-indus-commission-new-delhi-](https://mofa.gov.pk/118th-meeting-of-the-pakistan-india-permanent-indus-commission-new-delhi-india/#:~:text=The%20118th%20meeting%20of%20the,in%20Pakistan%20and%20India%20annually.)

[india/#:~:text=The%20118th%20meeting%20of%20the,in%20Pakistan%20and%20India%20annually.](https://pib.gov.in/PressReleasePage.aspx?PRID=1807862)

<https://pib.gov.in/PressReleasePage.aspx?PRID=1807862>

<https://www.britannica.com/event/Indus-Waters-Treaty>

Q.16) In context of the President's powers over different kinds of bills passed by State legislatures, consider the following statements:

1. The President cannot return the money bill for reconsideration of State legislatures.
2. It is mandatory for the President to give his/her assent to the ordinary bill presented for his/her assent for a second time by State legislatures.
3. The President's prior consent is mandatory to introduce a bill which seeks to curtail the jurisdiction and powers of the high court as specified in Constitution.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Every bill passed by State legislatures need to receive the Governors' assent to become an act. In such circumstances, **the Governor of the State** can either give his **assent** to the bill or **withhold** his assent to the bill or he may **return** the bill for reconsideration or he may **reserve the bill for the consideration of the President**.

Statement 1 is correct: When the Governor of State reserved the money bill for the consideration of the President, then **the President cannot return the money bill for reconsideration of State legislatures**. The President can either give his/her **assent to the bill or withhold his assent** but cannot send it for reconsideration.

Statement 2 is incorrect: When the Governor of State reserved the **Ordinary bill** for the consideration of the President then the President can either give his **assent** to the bill or **withhold** his assent to the bill or **return** the bill for reconsideration of the House. When he/she return the bill for consideration of the state legislatures and **if the state passes the bill for a second time (either with or without changes) to the President, it is not mandatory for the President to give his/her assent to the bill**.

Statement 3 is incorrect: The jurisdiction and powers of a high court as specified in the Constitution **cannot be curtailed** both by the Parliament and the state legislature. But, in other respects, the jurisdiction and powers of a high court can be changed both by the parliament and the state legislature
Source: Laxmikanth - State Legislature

Q.17) Which of the following statements is correct with respect to the procedure to create or abolish a State Legislative Council (SLC)?

- SLCs are created by the Parliament of India based on the resolution passed by state legislatures.
- SLCs are created by State Legislatures with the consent of the President of India.
- SLCs are created by the President of India on the advice of the Union council of Ministers.
- SLCs are created by the Governor of the concerned State on the advice of the State's Council of Ministers.

Ans) a

Exp) Option a is the correct answer.

Beside the State Legislative Assembly, the State Legislative Council acts as a legislative body of the State legislature and states having legislative councils are called bicameral legislature. At present, only six states in India have a legislative council and they are Andhra Pradesh, Telangana, Karnataka, Maharashtra, Bihar, and Uttar Pradesh.

Option a is correct: The Constitution (Article 169) empowers the **Parliament to create or abolish a legislative council**, if the legislative assembly of the **concerned state passes a resolution** to that effect. Such a resolution must be passed by the **state assembly by a special majority**, that is, a majority of the total membership of the assembly and a majority of not less than two-thirds of the members of the assembly present and voting.

The Act by **Parliament** to abolish or create legislative councils is **not to be deemed** as the **Constitutional Amendment under Article 368** and it can be passed like an ordinary bill i.e., by simple majority.

Option b is incorrect: The constitution vests parliament with the power to create or abolish legislative councils in a state. Although a **resolution by the State legislature is required for Parliament** to create or abolish legislative councils, **Parliament is the authority to create or abolish legislative councils in states**.

Option c and d are incorrect: The power to **create or abolish legislative councils in a state is the domain of legislature** (Parliament will make final call and State legislatures would pass resolutions for that effect), thus executives such as the President and Governors have no direct role in this matter.

Source: Laxmikanth - State Legislature

Q.18) With reference to the Speaker of State Legislative Assembly, consider the following statements:

1. He/she decides whether the bill is a money bill or not.
2. The Governor can prorogue the session of the house only with the approval of the Speaker.
3. He/she is the final authority to decide on matters related to defection and his/her decision cannot be reviewed by the Judiciary.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

The Speaker of the State Legislative Assembly is the presiding officer of the house and he/she is elected by the assembly itself from amongst its members. Usually, the Speaker remains in office during the life of the assembly.

Statement 1 is correct: It is true that the **Speaker of the legislative assembly decides whether the bill is a money bill or not**. If he/she certifies the bill as money bill then **the Legislative Council** (in case of bicameral legislature in a state) shall have **no power** over money bills except the council can **delay the passage of money bills for a period of 14 days** and after 14 days the money bill will be deemed to be passed by the legislature.

Statement 2 is incorrect: Usually the Governor prorogue (termination of the session) the house after the Speaker declares adjourned sine die (terminating a sitting of the state legislature for an indefinite period). However, **the Governor can also prorogue the house even when it is in session** which means the **Speaker's declaration of termination of sitting (adjourned sine die) is not necessary** for prorogation of sitting by the Governor. Thus, the **Speaker approval is not mandatory for Prorogation of session by the Governor**.

Statement 3 is incorrect: While it is true that the **Speaker is the final deciding** authority on matters related to defection, his/her decision is **not exempted from judicial review**. The Supreme court held that while the judicial review cannot be available prior to speaker decision, **judicial review can be applied to defection matter after the speaker's decision**.

Source: Laxmikant - State legislature

<https://www.thehindu.com/news/national/judicial-review-cant-be-available-prior-to-speakers-decision/article32106036.ece>

Q.19) Which of the following statements is/are correct with respect to the fate of bills on dissolution of the state legislative assembly?

1. A bill passed by the council but pending in the assembly lapses.
2. A bill pending assent of the Governor lapses, but a bill pending assent of the President does not lapse.
3. A bill passed by the assembly but pending in the council does not lapse.
4. A bill passed by both assembly and council, but returned by the President for reconsideration of the house does not lapse.

Select the correct answer using the code given below:

- a) 1,2 and 4 only
- b) 2 and 3 only
- c) 1 and 4 only
- d) 1, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

The **legislative council**, being a permanent house, is **not subject to dissolution**. Only the legislative assembly is subject to dissolution. Dissolution ends the very life of the existing House and a new House will be constituted after conducting general elections. Thus, dissolution of the house will have varying impacts on multiple bills considered/passed by the assembly.

Statement 1 is correct: A Bill pending in the assembly, even if such a bill was originated and transmitted to the assembly by the council **lapses on the dissolution of legislative assembly**.

Statement 2 is incorrect: A bill **pending assent of the Governor as well as the President does not lapse** on the dissolution of legislative assembly.

Statement 3 is incorrect: A Bill passed by the assembly but pending in the council lapses on the dissolution of assembly. In contrast a Bill pending in the council but not passed by the assembly does not lapse

Statement 4 is correct: It is true that a bill passed by both assembly and council, but **returned by the President for reconsideration of the house does not lapse**.

Source: Laxmikanth - State Legislature

Q.20) With reference to the difference between Gross Domestic Product (GDP) and Gross Value Added (GVA), consider the following statements:

1. The GDP reflects the demand side perspective whereas GVA reflects supply side perspective of calculation of the size of economy.
2. GDP on market price is always higher than GVA on market price.

Which of the statements given above are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

GDP is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific period, **GVA** is the total value of goods and services produced within a country after deducting the cost of inputs and raw materials.

Statement 1 is correct: The **GDP gives the picture from the consumers' angle or demand perspective**, whereas the **GVA gives a picture of the state of economic activity from the producers' perspective or supply side**. Notably, both measures might not match because of the difference in the treatment of net taxes.

Statement 2 is incorrect: Any indicator (**GDP or GVA**) can be higher based on the economic condition. Both are related to each other as shown below.

GDP at market price = GVA at basic price + Taxes earned by the government - subsidies provided by the government

For instance, if the government earned more from taxes than it spent on subsidies, **GDP will be higher than GVA**.

But if the government provided subsidies in excess of its tax revenues, the absolute level of **GVA would be higher than that of GDP**. It happened during COVID19 lockdown time.

Source: <https://www.business-standard.com/article/economy-policy/union-budget-understanding-the-gdp-gva-and-the-difference-between-the-two->

12210900529_1.html#:~:text=The%20difference%20between%20GDP%20and,order%20to%20enhance%20its%20worth.

<https://blog.forumias.com/the-story-behind-the-gdp-gva-gap/>

<https://www.investopedia.com/terms/g/gdp.asp>

<https://www.livemint.com/>

Q.21) In context of the Individual Privileges vested in the members of State legislatures by the Constitution, consider the following statements:

1. No members of the State legislature can be arrested during the session of legislature, even on account of criminal charges.
2. Unlike freedom of Speech granted by Article 19 of the constitution, freedom of speech granted to them is absolute.
3. Members of legislatures can refuse to appear as witnesses in a case pending in court when the state legislature is in session.

Which of the statement/s given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Privileges of a state legislature are a sum of special rights, immunities and exemptions enjoyed by the State legislatures and its members. Privileges are considered necessary to secure the independence and effectiveness of the legislature and actions of legislative members.

Statement 1 is incorrect: No member of state legislature can be arrested during the session of the state legislature and 40 days before the beginning and 40 days after the end of such a session. However, this **privilege is available only in civil cases and not in criminal cases or preventive detention cases.**

Statement 2 is incorrect: Freedom of Speech granted to members of the State legislature are not absolute as such freedom is subject to **restrictions**. Freedom of speech granted to members is subject to the provisions of the **Constitution** and to the rules and standing orders regulating the procedure of the state legislature.

Statement 3 is correct: It is true that **members of the state legislature can refuse to appear as a witness in a case** pending in a court when the state legislature is in session. Members of state legislatures are given such privileges to carry out their constitutional duty without any interference.

Source: Laxmikanth - State legislature

Q.22) With reference to Indian Polity, which of the following statements are correct with respect to “Quorum”?

1. The word ‘quorum’ is not mentioned in the Constitution of India.
2. The Quorum of the State legislature requires a minimum strength of 50 members.
3. It is the duty of the Speaker to adjourn the house or suspend the meeting until there is a quorum.
4. The provision regarding Quorum in Parliament can be amended by simple majority of Parliament.

Select the correct answer using the code given below:

- a) 1, 3 and 4 only
- b) 3 and 4 only
- c) 1 and 3 only
- d) 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

Quorum means the minimum number of people to be present to hold meetings.

Statement 1 is incorrect: The word quorum is mentioned in Article 100 and 189 of the constitution of India.

Article 100 deals with voting in Houses, power of Houses to act notwithstanding vacancies and **quorum in relation to Parliament** and **Article 189** deals with voting in Houses, power of Houses to act notwithstanding vacancies and **quorum in relation to State legislatures**.

Statement 2 is incorrect: The Quorum of the State legislature requires a minimum strength of ten members or one tenth of the total number (and not specifically 50) of members of the house including the Speaker, whichever is greater.

Statement 3 is correct: It is the **duty of the Speaker/Chairman of the house to adjourn the House** or suspend the meeting in **absence of a quorum**.

Statement 4 is correct: A number of provisions in the Constitution can be **amended by a simple majority** of the two Houses of Parliament **outside the scope of Article 368** and **Quorum** in Parliament is one such provisions which can be **amended by the parliament by simple majority**.

Source: Laxmikanth - State legislature

Q.23) Consider the following statements:

1. Advocate General of a state has the right to speak and take part in the proceedings of any legislative committees of which he/she is named a member.
2. State Ministers have a right to vote in the proceedings of a house of which he/she is not a member.
3. Only Minister can introduce money bills in the State Legislative Assembly.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 3 only

Ans) c

Exp) Option c is the correct answer.

In addition to the members of a House, every Minister and the Advocate general of the state have certain rights in relation to proceedings of the house. These rights are conferred on them to enable them to carry out their duties efficiently and effectively.

Statement 1 is correct: Advocate general of the state has the **right to speak and take part in the proceedings of any legislative committees** of which he/she is named a member.

Statement 2 is incorrect: Although Ministers have the right to speak and take part in proceedings of a house, of which he/she is not a member. However, the Minister has the **right to vote only in the house in which he/she is a member**.

Statement 3 is correct: It is true that **only ministers can introduce money bills in the State Legislative Assembly**. Bills introduced by Ministers are called Government bills. While members of legislative assembly who are not ministers are allowed to introduce ordinary bills (other than money bills) and they cannot introduce money bills.

Source: Laxmikanth - State legislature

Q.24) With respect to the composition of the State Legislative Assembly (SLA), consider the following statements:

1. The constitution of India fixes both the maximum as well as the minimum strength of the State Legislative Assemblies.
2. Governor of the state can nominate two members who have legal expertise, to the state legislative assembly.
3. The total number of assembly seats in each state is decided by the Parliament.
4. The 97th Constitutional Amendment Act provided for the delimitation of constituencies based on the 2011 census.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 4 only
- d) 1, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

The legislative assembly consists of representatives directly elected by the people on the basis of universal adult franchise.

Statement 1 is correct: The constitution of India fixes both the maximum as well as the minimum strength of the SLA. Article 170 fixes maximum strength of the State Legislative Assembly at **500** and **minimum strength at 60**. However, in case of Arunachal Pradesh, Sikkim and Goa, the minimum number is fixed at 30 and in case of Mizoram and Nagaland, it is 40 and 46 respectively.

Statement 2 is incorrect: There is no such provision. As per the **Original constitution**, the Governor can nominate one member (President can nominate two members) from the Anglo-Indian community. But the recent **Constitution (One Hundred and Twenty-Sixth Amendment) Bill, 2019** passed by both Lok Sabha and Rajya Sabha, **ended the provision for nomination of Anglo Indians (both by Governor as well as the President).**

Governor of the state can **nominate 1/6th of the members to State legislative council (not assembly)** from amongst persons who have a special knowledge or practical experience of literature, science, art, cooperative movement and social **service**.

Statement 3 is correct: After each census, a readjustment is to be made in the total number of assembly seats in each state and the division of each state into territorial constituencies. The **Parliament is empowered to determine the total number of assembly seats in each state.**

Statement 4 is incorrect: The 97th Constitutional Amendment Act (CAA) is not related to demarcation of constituencies. The 87th CAA 2003 provided for the delimitation of constituencies on the basis of 2001 census. For the purpose of holding direct elections to the assembly, each state is divided into territorial constituencies. The demarcation of these constituencies is done in such a manner that the ratio between the population of each constituency and the number of seats allotted to it is the same throughout the state.

Source: Laxmikanth – State Legislature

<https://www.thehindu.com/news/national/parliament-approves-10-year-extension-to-sc-st-reservation-anglo-indian-nomination-dropped/article30289758.ece>

Q.25) Consider the following statements with reference to Non-Performing Assets (NPAs) in recent years according to the financial stability reports of Reserve Bank of India:

1. The gross NPAs have been continuously declining since last 10 years.
2. Reduction in NPAs of public sector banks (PSBs) in recent years is mainly contributed by the written-off loans.

Which of the statements given above are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

A non-performing asset (NPA) is a loan or advance for which the principal or interest payment remained overdue for a period of **90 days**. For Agricultural loans, the overdue for NPA is **two crop seasons** for short duration crops and **one crop season** for long-duration crops.

Statement 1 is incorrect: Banks' asset quality has shown significant improvement in the first half ending September 30, 2022, period for FY23. As per RBI's data, **banks gross NPA continued to decline and stood at a seven-year low of 5% in September 2022**. Meanwhile, the net NPA stood at a ten-year low of 1.3% under which private bankers' net NPA was below 1%. But this trend of decline in the gross NPAs started in 2018 only, before which the gross NPAs of banks were continuously rising for several years. Hence the gross NPAs of banks in India are not declining since last 10 years.



Statement 2 is correct: The central bank said in its recent Financial Stability reports and its report on Trend and Progress of Banking in India for 2021-2022 that the reduction in NPAs was **mainly contributed by written-off loans in the case of PSBs (public sector banks)**, while upgradation of loans was the primary driver for asset quality improvement for Private Banks.

Knowledge Base:

Gross NPA shows the total of all loan assets that haven't been repaid by the borrowers within the 90-day period. While **Net NPA** shows the amount remaining after deducting the doubtful and unpaid debts from the Gross NPA.

Source: <https://www.livemint.com/news/india/banks-gross-npa-drops-to-7-year-low-at-5-net-npa-at-a-decade-low-rbi-s-fsr-11672318983978.html>

<https://www.thehindubusinessline.com/money-and-banking/banks-gross-npas-decline-to-5-in-h1-on-lower-slippages-recoveries-rbi-report/article66311281.ece>

<https://economictimes.indiatimes.com/definition/non-performing-assets>

Q.26) With reference to various motions in the Parliamentary proceedings in India, consider the following statements:

1. The Privilege Motion is concerned with the breach of parliamentary privileges by a Minister.
2. No-Confidence Motion can only be moved against the entire council of ministers, and not against an individual minister.
3. Passing of Calling Attention Motion in the Lok Sabha will always lead to the resignation of the Council of Ministers.
4. Adjournment motion can only be introduced in the Lok Sabha.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 1, 2 and 4 only
- d) 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

The House (Lok Sabha and Rajya Sabha) expresses its decisions or opinions on various issues through the adoption or rejection of motions moved by either ministers or private members.

Statement 1 is correct: Privilege Motion is concerned with the **breach of parliamentary**

privileges by a minister. It is moved by a member when he feels that a minister has committed a breach of privilege of the House or one or more of its members by withholding facts of a case or by giving wrong or distorted facts. Its **purpose is to censure the minister concerned.**

Rule No 222 in Chapter 20 of the Lok Sabha Rule Book and correspondingly Rule 187 in Chapter 16 of the Rajya Sabha rulebook governs privilege. Rules say that a member may, with the consent of the Speaker or the Chairperson, **raise a question involving a breach of privilege either of a member or of the House or a committee thereof.**

Statement 2 is correct: Article 75 of the Constitution says that the council of ministers shall be collectively responsible to the Lok Sabha. It means that the ministry stays in office so long as it enjoys confidence of the majority of the members of the Lok Sabha. In other words, the Lok Sabha can remove the ministry from office by passing a no-confidence motion. The motion needs the support of 50 members to be admitted. It **can be moved against the entire council of ministers only.**

Statement 3 is incorrect: Calling Attention Motion is introduced in the Parliament by a member to call the attention of a minister to a matter of urgent public importance, and **to seek an authoritative statement from him on that matter.** Calling Attention Motion has no censure element in it, so Council of Ministers need not to resign on the event of passage of this motion.

Censure Motion is moved for censuring the council of ministers for specific policies and actions.

Statement 4 is correct: Adjournment Motion is introduced in the Parliament to draw attention of the House to a definite matter of urgent public importance, and needs the support of 50 members to be admitted. As it interrupts the normal business of the House, it is regarded as an extraordinary device. It involves an element of censure against the government and **hence Rajya Sabha is not permitted to make use of this device.**

Source: Laxmikanth

Q.27) With reference to Money Bill and Ordinary Bill, consider the following statements:

1. Ordinary bill can be introduced either by a minister or by a private member of the house, whereas Money bill can be introduced only by a minister.
2. Unlike Ordinary bill, Money bill requires the certification of the Speaker when transmitted to the Rajya Sabha.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

In a parliamentary system of government, bills are proposed laws or legislative proposals that are introduced in parliament.

Statement 1 is correct: Ordinary Bills can be introduced either in the Lok Sabha or the Rajya Sabha. It **can be introduced either by a minister or by a private member**. Money Bills can be introduced only in the Lok Sabha and not in the Rajya Sabha. It **can be introduced only by a minister**.

Statement 2 is correct: Money Bill requires the **certification of the Speaker when transmitted to the Rajya Sabha**. Ordinary bill does not require the certification of the Speaker when transmitted to the Rajya Sabha (if it has originated in the Lok Sabha).

Source: Laxmikanth

Q.28) Which of the following expenses comes under the category of 'charged' expenditure on the 'Consolidated Fund of India'?

1. Emoluments and allowances of the President
2. Pensions of Judges of High Courts
3. Salary of the Comptroller and Auditor General of India
4. Administrative expenses of Union Public Service Commission
5. Expenses incurred by the office of Attorney General of India

Select the correct answer using the codes given below:

- a) 1, 3 and 4 only
- b) 1, 2, 3 and 4 only
- c) 3 and 5 only
- d) 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

The budget consists of two types of expenditure—the expenditure 'charged' upon the **Consolidated Fund of India** and the expenditure 'made' from the Consolidated Fund of India.

Option 1, 2, 3 and 4 are correct: The charged expenditure is non-votable by the Parliament, that is, it can only be discussed by the Parliament, while the other type has to be voted by the Parliament. The list of the charged expenditure is as follows:

- 1) **Emoluments and allowances of the President** and other expenditure relating to his office.
- 2) Salaries and allowances of the Chairman and the Deputy Chairman of the Rajya Sabha and the Speaker and the Deputy Speaker of the Lok Sabha.
- 3) Salaries, allowances and pensions of the judges of the Supreme Court.
- 4) **Pensions of the judges of high courts.**
- 5) **Salary, allowances and pension of the Comptroller and Auditor General of India**
- 6) Salaries, allowances and pension of the chairman and members of the Union Public Service Commission.
- 7) **Administrative expenses** of the Supreme Court, the office of the Comptroller and Auditor General of India and the **Union Public Service Commission** including the salaries, allowances and pensions of the persons serving in these offices.

- 8) The debt charges for which the Government of India is liable, including interest, sinking fund charges and redemption charges and other expenditure relating to the raising of loans and the service and redemption of debt.
- 9) Any sum required to satisfy any judgement, decree or award of any court or arbitral tribunal.
- 10) Any other expenditure declared by the Parliament to be so charged

Option 5 is incorrect: Expenses incurred by the office of Attorney General of India are not charged upon the Consolidated Fund of India. The remuneration of the AG is not fixed by the Constitution. He receives such remuneration as the president may determine.

Source: Laxmikanth

Q.29) With reference to 'Indian Polity', consider the following pairs:

Parliamentary Grants	Circumstances for approval of the grant
Excess Grant	Meeting an unexpected demand upon the resources of India
Additional Grant	Additional expenditure upon some new service
Vote of Credit	To satisfy the debt obligations of the Indian government

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- All the three pairs
- None of the pairs

Ans) a

Exp) Option a is the correct answer.

In addition to the budget that contains the ordinary estimates of income and expenditure for one financial year, various other grants are made by the Parliament under extraordinary or special circumstances.

Pair 1 is incorrectly matched: Excess Grant is granted when money has been spent on any service during a financial year in excess of the amount granted for that service in the budget for that year. It is voted by the Lok Sabha after the financial year. Before the demands for excess grants are submitted to the Lok Sabha for voting, they must be approved by the Public Accounts Committee of Parliament.

Pair 2 is correctly matched: Additional Grant is granted when a need has arisen during the current financial year for additional expenditure upon some new service not contemplated in the budget for that year.

Pair 3 is incorrectly matched: Vote of Credit is granted for meeting an unexpected demand upon the resources of India, when on account of the magnitude or the indefinite character of the service, the demand cannot be stated with the details ordinarily given in a budget. Hence, it is like a blank cheque given to the Executive by the Lok Sabha.

Source: Laxmikanth

Q.30) What is the twin deficit problem often seen in the news?

- It is a combination of increasing imports and decreasing exports.
- It is a combination of current as well as capital account deficit.
- It is a combination of fiscal deficit as well as the current account deficit.
- It is a scenario where banks are under severe stress and the corporates are not able to repay their debt.

Ans) c

Exp) Option c is the correct answer.

Option a is incorrect: Combination of increasing imports and decreasing exports is related to **Trade deficit**. Trade deficit refers to a situation where the country's import dues exceed the receipts from the exports. A trade deficit is also referred to as a negative balance of trade.

Option b is incorrect: Combination of current and capital account deficit raise **Balance of Payment (BOP) deficit**. It also includes trade deficit.

Option c is correct: **The twin deficit problem is a combination of fiscal and current account deficit.** The **fiscal deficit** is essentially the amount of money that the government has to borrow in any year to fill the gap between its expenditures and revenues. Higher levels of fiscal deficit typically imply the government eats into the pool of investible funds in the market which could have been used by the private sector for its own investment needs. Whereas **Current account deficit** depicts that the money going out of a country for imports, investments, and services is greater than the money coming into the country through the exports, investments and services provided by us.

Option d is incorrect: It is a **twin balance sheet** problem. It is a scenario where **banks are under severe stress and the corporates are overleveraged to the extent that they cannot repay their loans.**

Source: <https://www.indiatimes.com/explainers/news/explained-what-is-twin-deficit-how-is-it-affecting-the-indian-economy-573371.html>

https://www.business-standard.com/podcast/finance/what-is-the-twin-balance-sheet-problem-122080300067_1.html

https://www.investopedia.com/terms/t/trade_deficit.asp

Q.31) Which of the following are the judicial powers and functions performed by Parliament of India?

- Removing of the Vice-President from his office
- Amending the Constitution by repealing any provision
- Punishing outsiders for contempt of the house
- Recommending removal of Chief Election Commissioner
- Scrutinising government spending and financial performance

Select the correct answer using the codes given below:

- 1 and 5 only
- 2, 4 and 5 only
- 1, 3 and 4 only
- 1, 2, 3, and 4 only

Ans) c

Exp) Option c is the correct answer.

In India, the Parliament is primarily responsible for making laws and legislation, while the judiciary is responsible for interpreting and enforcing those laws. However, the Parliament does have certain judicial powers and functions that it can perform under certain circumstances.

Statement 1, 3 and 4 are correct: The judicial powers and functions of the Parliament include the following:

- It can impeach the President for the violation of the Constitution.
- It **can remove the Vice-President from his office.**

(c) It can **recommend the removal** of judges (including chief justice) of the Supreme Court and the high courts, **chief election commissioner**, comptroller and auditor general to the president.

(d) It can **punish its members or outsiders for the breach of its privileges or its contempt**.

Statement 2 is incorrect: The Parliament is vested with the powers to amend the Constitution by way of addition, variation or repeal of any provision. It is the **constituent power of the Parliament**.

Statement 5 is incorrect: The Parliament scrutinises government spending and financial performance with the help of its financial committees. It is one of the **financial power and functions of the Parliament**.

Source: Laxmikanth

Q.32) With reference to ‘Parliamentary Privileges’, consider the following statements:

1. The privilege of Freedom of speech in Parliament is mentioned under Article 105 of the Indian constitution.
2. The Parliamentary privileges are extended to both the President and the Attorney General of India.
3. At present, there is no special law in India to exhaustively codify all the Parliamentary privileges.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

Parliamentary privileges are special rights, immunities and exemptions enjoyed by the two Houses of Parliament, their committees and their members. They are necessary in order to secure the independence and effectiveness of their actions.

Statement 1 is correct: Originally, the Constitution (Article 105) mentioned **two privileges, that is, freedom of speech in Parliament and right of publication of its proceedings**. With regard to other privileges, it provided that they were to be the same as those of the British House of Commons, its committees and its members on the date of its commencement of Constitution (i.e., 26 January, 1950), until defined by Parliament. The 44th Amendment Act of 1978 provided that the other privileges of each House of Parliament, its committees and its members are to be those which they had on the date of its commencement (i.e., 20 June, 1979), until defined by Parliament.

Statement 2 is incorrect: The Constitution has extended the parliamentary privileges to those persons who are entitled to speak and take part in the proceedings of a House of Parliament or any of its committees. These **include the attorney general of India** and Union ministers. It must be clarified here that the **parliamentary privileges do not extend to the president** who is also an integral part of the Parliament.

Statement 3 is correct: The **Indian Parliament has not yet made any special law to exhaustively codify all the privileges enjoyed by its members**. The privileges of the Parliament are derived from various sources, including the Constitution, the rules of procedure, and the customs and traditions of the House.

Source: Laxmikanth

Q.33) With reference to ‘Powers of Lok Sabha and Rajya Sabha’, consider the following statements:

1. The Lok Sabha alone can recommend to the President for the removal of the judges of the Supreme Court.
2. Both Rajya Sabha and Lok Sabha can pass a resolution for the discontinuance of the national emergency.
3. Rajya Sabha can authorize the Parliament to create a new All-India Service.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

In India, the Rajya Sabha and the Lok Sabha are the two houses of the Parliament, with the Lok Sabha being the lower house and the Rajya Sabha being the upper house. While both houses have important roles in the legislative process, there are some key differences in their constitutional positions and powers.

Statement 1 is incorrect: The power to recommend to the President for the removal of Chief Justice and judges of Supreme Court and high courts, chief election commissioner and comptroller and auditor general are **equal to both Lok Sabha and Rajya Sabha**. The President can issue the removal order only after an address by Parliament has been presented to him in the same session for such removal. The address must be supported by a special majority of each House of Parliament (i.e., a majority of the total membership of that House and a majority of not less than two-thirds of the members of that House present and voting).

Statement 2 is incorrect: A **resolution for the discontinuance of the national emergency can be passed only by the Lok Sabha and not by the Rajya Sabha**. The emergency must be revoked if the Lok Sabha passes a resolution by a simple majority disapproving its continuation. There is no provision for resolution for the discontinuance of the national emergency by Rajya Sabha.

Statement 3 is correct: According to Article 312 of the Indian Constitution, the Rajya Sabha (the upper house of Parliament) has the **power to authorize the Parliament to create new All-India Services that are common to both the Centre** (i.e., the federal government) and the states.

Source: Laxmikanth

Q.34) Consider the following statements:

1. The first No Confidence Motion in India's Parliament was moved in 1968 against the Indira Gandhi led government.
2. For the first time, Departmentally-Related Standing Committees were created in 2004 to assist Parliament in its legislative and financial business.
3. The time spent by Lok Sabha on discussing the Union Budget has been continuously decreasing since the 1990s.

Which of the statements given above is/are **incorrect**?

- a) 1 and 3 only
- b) 1, 2 and 3
- c) 2 and 3 only
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

On May 13, 2022, Parliament completes 70 years since its first sitting. The first session of the first Lok Sabha (LS) and Rajya Sabha (RS) commenced on May 13, 1952. Currently, the 17th Lok Sabha (2019-2024) is running.

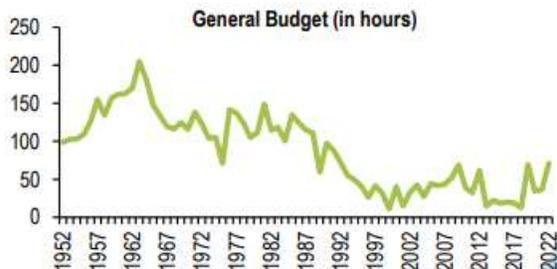
Statement 1 is incorrect: The first no-confidence motion in the history of Lok Sabha was moved against **Jawaharlal Nehru by J B Kripalani, also known as Acharya Kripalani, in August 1963.**

Prime Minister Indira Gandhi faced the most no-confidence motions (15), followed by Lal Bahadur Shastri and P. V. Narasimha Rao (three each), Morarji Desai (two) and Jawaharlal Nehru, Rajiv Gandhi, Atal Bihari Vajpayee, Narendra Modi (one each).

Statement 2 is incorrect: In 1989, in fact, three Standing Committees were constituted which dealt with Agriculture, Science and Technology and Environment and Forests. In 1993, it was finally decided to set up seventeen Department-related Parliamentary Standing Committees to cover various Ministries/ Departments of the Union Government in order to further strengthen the accountability of the Government to Parliament. With the addition of seven more Committees in July 2004, the number of Department-related Parliamentary Standing Committees was raised to 24 out of which 8 were placed within the jurisdiction of the Chairman, Rajya Sabha and 16 within the jurisdiction of the Speaker, Lok Sabha.

Statement 3 is incorrect: From the below graph, we can assume that average time spent by the Lok Sabha on discussing the budget is not continuously increasing or decreasing and there has been a roller coaster pattern.

Discussion on Budget in Lok Sabha declining



Source:

https://prsindia.org/files/parliament/vital_stats/Vital%20Stats_70%20years%20of%20Parliament.pdf

https://rajyasabha.nic.in/Committees/DepartmentRelatedSC_RS?id=17 (statement 2)

Q.35) The USTR “Special 301” Report is an annual report published by the United States Trade Representative (USTR). The USTR “Special 301” Report is related to which of the following?

- Trade Deficit
- Intellectual Property Rights
- Generalized System of Preferences (GSP)
- Amber box subsidies

Ans) b

Exp) Option b is the correct answer.

Option a is incorrect: **Trade deficit** refers to a situation where the country's import dues exceed the receipts from the exports. A trade deficit is also referred to as a negative balance of trade. The USTR “Special 301” report is not concerned with the trade deficit.

Option b is correct: The USTR Special 301 Report is an annual report published by the United States Trade Representative (USTR) that evaluates the **intellectual property (IP) protection and enforcement** practices of U.S. trading partners around the world. The report identifies countries that the USTR deems to be engaging in unfair or inadequate IP practices that harm American businesses and workers.

The report consists of two parts: **the Priority Watch List and the Watch List. The Report retained India on its Priority Watch List** along with six other countries - Argentina, Chile, China, Indonesia, Russia and Venezuela. The report is meant to encourage trading partners to improve their IP protection and

enforcement practices. It seeks to address IP-related trade barriers in its trade relationships with other countries.

Option c is incorrect: U.S. trade preference programs such as the **Generalized System of Preferences (GSP)** provide opportunities for many of the world's poorest countries to use trade to grow their economies and climb out of poverty. It promotes economic development by **eliminating duties on thousands of products**. US **terminated India's designation** as a beneficiary developing nation under the key GSP trade programme.

Option d is incorrect: Amber Box Subsidies are the subsidies that are trade-distorting in nature and need to be curbed at any cost. The Amber Box contains the category of domestic subsidy that is scheduled to reduce based on the formula called "Aggregate Measure of Support" (AMS). The AMS is the amount of money spent by governments on agricultural production, except the money spent in the Blue Box, Green Box and 'de minimis' level. The de minimis' level is the minimum level prescribed in Agreement on Agriculture (AoA) towards product specific and non-product specific (Amber box) subsidies. For Developed countries the de minimis level is 5% and for developing countries it is 10%.

Source: <https://ustr.gov/issue-areas/intellectual-property/special-301>

[https://ustr.gov/issue-areas/trade-development/preference-programs/generalized-system-preference-](https://ustr.gov/issue-areas/trade-development/preference-programs/generalized-system-preference)

[gsp#:~:text=GSP%20is%20the%20largest%20and,basic%20information%20on%20the%20program.](https://ustr.gov/issue-areas/trade-development/preference-programs/generalized-system-preference-gsp#:~:text=GSP%20is%20the%20largest%20and,basic%20information%20on%20the%20program)

<https://blog.forumias.com/wto-terminologies-aoa-blue-green-amber-box-peace-clause/>

Q.36) Consider the following statements:

1. Prime Minister always acts as ex-officio Leader of the House for both Lok Sabha and Rajya Sabha.
2. The Leader of Opposition in the Lok Sabha and the Rajya Sabha were accorded statutory recognition in 1977.
3. The functions of the office of whip are mentioned in the Rules of Procedure and Conduct of Business of Lok Sabha.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

In India, the office of the Leader of the House, the Leader of the Opposition, and the Whip plays an important part in the functioning of the Parliamentary system of India.

Statement 1 is incorrect: The Leader of the House in the Rajya Sabha is the majority party's leader and parliamentary chairperson and is usually a cabinet minister or another nominated minister.

The Leader of the House is in charge of scheduling government meetings and conducting business in the House. Leader of the House in Lok Sabha is the Prime Minister by default if she/he is a member of the Lok Sabha. If the Prime Minister is not a member of Parliament's Lower House, she or he might appoint another minister to serve as Leader of the House.

Statement 2 is correct: The **Salary and Allowances of Leaders of Opposition in Parliament Act, 1977**, was enacted to provide for the salaries and allowances of the Leader of the Opposition in both the Lok Sabha and the Rajya Sabha. The statutory recognition for the position of Leader of the Opposition in the Lok Sabha and the Rajya Sabha was accorded through this act.

Statement 3 is incorrect: Though the offices of the leader of the House and the leader of the Opposition are not mentioned in the Constitution of India, they are mentioned in the Rules of the House and

Parliamentary Statute respectively. The **office of ‘whip’, on the other hand, is mentioned neither in the Constitution of India nor in the Rules of the House nor in a Parliamentary Statute.** It is based on the conventions of the parliamentary government.

Source: Laxmikanth

Q.37) Under which of the following circumstances, does a Member of Parliament vacates his/her seat in either house of the Parliament?

1. If a sitting member of one House is also elected to the other House.
2. If a member is disqualified on the grounds of defection under the provisions of the Anti-defection law.
3. If a censure motion is passed against the member of the parliament by both the houses.

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

A member of Parliament vacates his seat under following circumstances:

Statement 1 is correct: A person cannot be a member of both Houses of Parliament at the same time. If a **sitting member of one House is also elected to the other House, his seat in the first House becomes vacant.** The Representation of People Act (1951) provides for the following: If a person is elected to both the Houses of Parliament, he must intimate within 10 days in which House he desires to serve. In default of such intimation, **his seat in the Rajya Sabha becomes vacant.**

Statement 2 is correct: If a member of Parliament becomes subject to any of the **disqualifications specified in the Constitution, his seat becomes vacant.** Here, the list of disqualifications also includes the disqualification on the **grounds of defection under the provisions of the Tenth Schedule** of the Constitution.

Statement 3 is incorrect: If a censure motion is passed against a member of Parliament by both Houses, it **does not result in the vacation of their seat.** A censure motion is a formal statement of disapproval passed by the House against an individual minister or a group of ministers or the entire council of ministers.

Source: Laxmikanth

Q.38) “The origin of this committee can be traced to the standing financial committee set up in 1921. It suggests alternative policies to bring about efficiency and economy in administration. The Rajya Sabha has no representation in this committee.”

Identify the parliamentary committee mentioned in the above passage.

- a) Committee on Public Undertakings
- b) Public Accounts Committee
- c) Estimates Committee
- d) Committee on Government Assurances

Ans) c

Exp) Option c is the correct answer.

The origin of **Estimates Committee can be traced to the standing financial committee** set up in 1921. The first Estimates Committee in the post-independence era was constituted in 1950 on the recommendation of John Mathai, the then finance minister. The Rajya Sabha has no representation in this committee.

The function of the committee is to examine the **estimates included in the budget and suggest 'economies' in public expenditure**. Hence, it has been described as a '**continuous economy committee**'.

The functions of the Estimate committee are:

- 1) To report what economies, improvements in organisation, efficiency and administrative reform consistent with the policy underlying the estimates, can be affected
 - 2) To **suggest alternative policies in order to bring about efficiency and economy in administration**
 - 3) To examine whether the money is well laid out within the limits of the policy implied in the estimates
- The other options listed are also parliamentary committees in India, but they have different roles and responsibilities.

Option a is incorrect: The **Committee on Public Undertakings** examines the reports of the Comptroller and Auditor General of India on the functioning of public sector undertakings.

Option b is incorrect: The **Public Accounts Committee** examines the accounts showing the appropriation of sums granted by Parliament for the expenditure of the government and makes recommendations to the government to ensure financial propriety and accountability.

Option d is incorrect: The **Committee on Government Assurances** examines the assurances, promises, undertakings, etc. given by the government from time to time and reports on the extent to which such assurances have been implemented.

Source: Laxmikanth

Q.39) Which one of the following statements is correct regarding 'Committee on Subordinate Legislation' within Indian Parliamentary setup?

- a) It can only examine the bills related to the matters of law and order and security.
- b) These committees consist of fifteen members in both the Houses of the Parliament.
- c) The recommendations of the committee are binding on the ministers and the house.
- d) Leader of the opposition in the house is the de-facto chairperson of this committee.

Ans) b

Exp) Option b is the correct answer.

Option a is incorrect and option b is correct: Committee on Subordinate Legislation **examines and reports to the House whether the powers to make regulations, rules, sub-rules and bye-laws delegated by the Parliament** or conferred by the Constitution to the Executive are being properly exercised by it. In **both the Houses, the committee consists of 15 members**. It was constituted in 1953. The Committee on Subordinate Legislation **examines the rules, regulations, and bye-laws made by the executive**, and not all papers laid on the table of the House.

Option c is incorrect: The recommendations of the committee are **not binding on the ministers or the house**. However, the committee's reports are considered influential and are often given due consideration by the House.

Option d is incorrect: The chairperson of the Committee on Subordinate Legislation is **appointed by the Speaker in the Lok Sabha and by the Chairman in the Rajya Sabha**. The leader of the opposition may be appointed as a member of the committee, but they are not the de-facto chairperson.

Source: Laxmikanth

Q.40) With reference to the Forest Conservation Rules 2022, consider the following statements:

1. These rules have been notified under the Forest Act, 1927.
2. The Central government has final authority for diverting forest land for non-forest purposes beyond five hectares.

3. Project Screening Committee to screen project proposals for use of forest land is to be constituted by State Governments or Union territories under these rules.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Forest Conservation Rules, 2022 prescribe the procedure to be followed for diversion of forest land for non-forestry uses such as road construction, highway development, railway lines, and mining.

Statement 1 is incorrect: These rules are notified under the **Forest (Conservation) Act, 1980** (Not Forest Act, 1927) and will replace the Forest (Conservation) Rules, 2003.

Statement 2 is correct: For forest land **beyond five hectares**, approval for diverting land must be **given by the Central government**. This is via a special committee, called the **Forest Advisory Committee (FAC)** constituted by the Central Government.

Statement 3 is correct: Project Screening Committee is to be constituted by State Government or Union territory. Project Screening Committee is to be constituted to screen project proposals for use of forest land for the non-forest purpose for making recommendations to the State Government or Union territory Administration,

Source: <https://www.newindianexpress.com/nation/2022/jul/14/new-forest-conservation-rules-spark-a-fight-2476359.html>

<https://blog.forumias.com/the-debate-around-the-forest-conservation-rules/>

Q.41) With reference to ‘Departmentally-Related Standing Committees (DRSCs)’, consider the following statements:

1. A minister is not eligible to be nominated as a member of any of these standing committees.
2. The term of the office of each standing committee is restricted to single session of the house of the Parliament.
3. These committees cannot examine any of the Demands for Grants of the concerned ministries.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

Departmentally-Related Standing Committees (DRSCs) are a set of parliamentary committees in India that are dedicated to examining the functioning of various departments and ministries of the government.

Statement 1 is correct: According to the rules of Parliament, a **minister is not eligible to be nominated as a member** of any of the standing committees. In case a member, after his nomination to any of the standing committees, is appointed a minister, he then ceases to be a member of the committee.

Statement 2 is incorrect: The term of the office of each standing committee is not restricted to a single session of the house of Parliament. The term of office of **each standing committee is one year from the date of its constitution.**

Statement 3 is incorrect: The functions of each of the standing committees are:

1) To consider the demands for grants of the concerned ministries / departments before they are discussed and voted in the Lok Sabha. Its report should not suggest anything of the nature of cut motions.

2) To examine bills pertaining to the concerned ministries / departments

3) To consider annual reports of ministries / departments

4) To consider national basic long-term policy documents presented to the Houses

Source: Laxmikanth

Q.42) The landmark 'Lilly Thomas judgement' given by the Supreme Court of India is related to which one of the following?

a) Recognition of political parties and allotment of Election symbols

b) Government's right to suspend the fundamental right to life during an emergency

c) Disqualification of Members of Parliament or the state Legislature

d) making the Right to livelihood a fundamental right under the Constitution of India.

Ans) c

Exp) Option c is the correct answer.

Lily Thomas v Union of India (2013) case pertains to the **disqualification of Members of Parliament or the Legislature** as the case may be and was pronounced by a two-judge bench comprised of Justices A.K. Patnaik and S.J. Mukhopadhaya in the year 2013.

It **declared Section 8(4) of the Representation of the People Act, 1951, as unconstitutional**. Section 8(4) of the Act provided a **loophole for convicted legislators to remain in office by allowing them to file an appeal against their conviction and obtain a stay on their disqualification**.

The judgement also held that political parties have a responsibility to ensure that candidates with criminal antecedents are not given tickets to contest elections. The judgement was seen as a significant step towards cleaning up the Indian political system and ensuring that individuals with criminal records or convictions are not able to hold public office.

Source: Laxmikanth

Q.43) Which among the following are Parliamentary Forums working currently in India?

1. Parliamentary forum on Water Conservation and Management.

2. Parliamentary Forum on Global Warming and Climate Change.

3. Parliamentary Forum on Population and Public Health.

4. Parliamentary forum on Socially and Economically Backward Classes (SEBC).

5. Parliamentary forum on Women Empowerment.

Select the correct answer using the code given below:

a) 1, 4 and 5 only

b) 2, 3 and 4 only

c) 1, 2 and 3 only

d) 4 and 5 only

Ans) c

Exp) Option c is the correct answer.

The Parliamentary forums are created to provide a **platform to the Members of Parliament to have interactions with the Ministers concerned, experts and key officials** from the nodal ministries with a view to have a focused and meaningful discussion on critical issues faced by a nation.

Option 1 is correct: The Parliamentary Forum on **Water Conservation and Management** was the **first parliamentary forum** created in India. It was constituted by the Speaker of the Lok Sabha in 2005. One of

the functions of this forum is to identify problems relating to water and make recommendations for consideration and appropriate action by the department concerned.

Option 2 is correct: The Parliamentary Forum on Global Warming and Climate Change was constituted in 2008 and one of the functions of this forum is to identify problems relating to global warming and climate change and make recommendations for consideration and appropriate action by the Government.

Option 3 is correct: The Parliamentary Forum on Population and Public Health was constituted in 2006 and one of the functions of this forum is to have focused discussions on strategies relating to population stabilisation and matters related to it.

Option 4 and 5 is incorrect: There is no Parliamentary forum on Women Empowerment nor on Socially and Economically Backward Classes (SEBC). Currently there are **eight Parliamentary forums in India** which includes, apart from the forums mentioned in the above options, Parliamentary Forum on **Youth**, **Parliamentary Forum on Children**, **Parliamentary Forum on Disaster Management**, **Parliamentary Forum on Artisans and Crafts-people** and **Parliamentary Forum on Millennium Development Goals**.

Source: Laxmikanth - Parliamentary Forums

Q.44) Who among the following is the ex-officio chairperson of the Indian Parliamentary Group (IPG)?

- The President of India.
- Speaker of Lok Sabha.
- Chairperson of Rajya Sabha
- The Secretary-general of the Lok Sabha

Ans) b

Exp) Option b is the correct answer.

The **Indian parliamentary group (IPG)** was formed in 1949 in pursuance of a motion adopted by the Constituent Assembly of India and IPG is an autonomous body. IPG aims to promote personal contacts between Members of the Parliament (MPs) and to study questions of public importance that are likely to come up before the Parliament.

Option a is incorrect: The President of India is not an ex-officio chairman of the Indian Parliamentary Group (IPG). The President is an integral part of the parliament, along with Lok Sabha and Rajya Sabha. Any bill passed by each house requires assent of the president to become an act.

Option b is correct: It is true that the **Speaker of Lok Sabha is an ex-officio chairperson** of the Indian parliamentary group (IPG). Membership of the Indian Parliamentary Group is open to all Members of Parliament and ex-Members of Parliament. The management and control of the affairs of the Group are vested in the **Executive Committee**.

Option c is incorrect: Chairperson of Rajya Sabha is not an ex-officio chairperson of IPG. The Vice President of India acts as an ex-officio chairperson of the Rajya Sabha and chairman of Rajya Sabha is not a member of Rajya Sabha.

Option d is incorrect: The Secretary General of the Lok Sabha is not an ex-officio chairperson of the Indian parliamentary group (IPG). The Secretary General of the Lok Sabha is an **ex-officio Secretary-General of the IPG**.

Knowledge Base: The Inter Parliamentary Group (IPG) aims to promote personal contacts between Members of Parliament and disseminate information to the Members of Parliament by conducting seminars etc. on the issues that are likely to come up before Parliament.

The Group acts as a link between the Parliament of India and the various Parliaments of the world by exchange of delegations, goodwill missions, documents etc. with foreign Parliaments. It also functions as the (a) National Group of the Inter-Parliamentary Union and (b) Main Branch of the Commonwealth Parliamentary Association in India.

Source: Laxmikanth - Parliamentary Group (Chapter 25)

Q.45) With reference to the 'Water Convention', consider the following statements:

1. It was adopted by UN Economic and Social Commission for Asia and the Pacific (ESCAP).
2. It is a regional instrument, membership limited to Asia and Pacific region.
3. It exclusively stresses upon the issues related to ground water conservation and water pollution.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1, 2 and 3
- d) None of the above

Ans) d

Exp) Option d is correct answer.

The 30th anniversary of the Water Convention was marked in 2022. The Convention on the Protection and Use of Transboundary Water and International Lakes (**Water Convention**) was adopted in Helsinki in 1992 and entered into force in 1996.

Statement 1 is incorrect: It was started by **United Nations Economic Commission for Europe (UNECE)** (not ESCAP). It was adopted in Helsinki in 1992 and entered into force in 1996.

Statement 2 is incorrect: Water convention was **initially negotiated as a regional instrument. However,** it has been **opened up for all UN Member States in 2016.**

Statement 3 is incorrect: Water convention **aims to ensure the sustainable use of transboundary water resources by facilitating cooperation. It is not specific to ground water.** It focuses to protect and promote sustainable use of Transboundary Water and International Lakes.

Source: <https://unece.org/environment-policy/water>

Q.46) Which of the following are the functions of the Indian Parliamentary Group (IPG)?

1. It helps Members of Parliament (MPs) to gather required information from Ministers of the concerned departments.
2. The group functions as the National Group of Inter Parliamentary Union (IPU).
3. The group organises conferences of speakers of State legislative assemblies to promote cooperation between states in India.
4. The group aims to study questions of public importance by arranging seminars and discussions among members of this group at national and international level.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 2 and 4 only
- d) 1, 2 and 4 only

Ans) c

Exp) Option c is the correct answer.

The **membership of Parliament Group is open to all members of Parliament.** The former members of Parliament can also become **associate members** of the Group but the associate members are entitled to limited rights only.

Statement 1 is incorrect: Parliament group does not engage in helping MPs to get information from Ministers. The Parliamentary group aims to promote personal contacts between Members of the Parliament of India and also this group act as a bridge between Parliament of India and legislatures of foreign countries.

Statement 2 is correct: It is true that IPG functions as the National Group of the IPU. IPU is the global organization of national parliaments traces its origin to 1889 when it was started as small Parliamentary groups. IPU aims to facilitate parliaments and parliamentarians across the world to promote peace, democracy and sustainable development around the world.

Statement 3 is incorrect: Parliamentary groups do not organise conferences among speakers of State legislative assemblies. However, the group organised the National **Conference of Women Legislators** in New Delhi in **2016** with a theme "Women Legislators: Building Resurgent India".

Statement 4 is correct: It is true that Parliamentary groups aim to study questions of public importance by arranging seminars and discussions among members of this group. The group organises seminars and symposia on parliamentary subjects of topical interest at national as well as international level.

Source: Laxmikant - Parliamentary Group (chapter 25)

<https://ipg.nic.in/ProformaNLC.aspx>

<https://ipg.nic.in/AboutUs.aspx>

Q.47) Consider the following statements:

1. The Council of ministers may not cease to hold office even after the dissolution of the Lok Sabha.
2. The dissolution of Lok Sabha by the President can be challenged in the Supreme Court of India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The Lok Sabha is the lower house of India's bicameral Parliament, with the upper house being the Rajya Sabha. Members of the Lok Sabha are elected by an adult universal suffrage and a first-past-the-post system to represent their respective constituencies, and they hold their seats for five years or until the body **is dissolved by the President** on the advice of the council of ministers.

Statement 1 is correct: Article 74 provides for a council of ministers with the Prime Minister at the head to aid and advise the President in the exercise of his functions. In 1971, the **Supreme Court held that 'even after the dissolution of the Lok Sabha, the council of ministers does not cease to hold office.** Article 74 is mandatory and, therefore, the president cannot exercise the executive power without the aid and advice of the council of ministers.

Statement 2 is incorrect: The dissolution of the House through Presidential proclamation **cannot be challenged in courts** is held by Supreme Court in 2004. Supreme Court said that it has been in consistent constitutional practice that Prime Minister had the sole prerogative to recommend dissolution of Lok Sabha to the President.

Source: Laxmikant Chapter 32 State Council of Ministers

SC upholds dissolution of LS | India News - Times of India (indiatimes.com)

Q.48) With reference to State Legislatures in India, consider the following statements:

1. There is no upper limit on the reservation for SCs and STs in the State Legislatures.
2. The reservation for Anglo Indians in State Legislatures has been discontinued.
3. The maximum size of a Legislative Council is linked to the strength of the Legislative Assembly.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: The Constitution has made provisions for **reservation** of seats in **State Legislative Assemblies** for people belonging to **SC/ ST communities** in order to provide them due representation. There is **no upper or lower limit** on the number of seats reserved for them. Rather the **number of seats reserved** for members of **SC/ ST communities** is **dependent and proportional** to their **population** compared to the total population of the state.

Statement 2 is correct: The Constitution had provided for **reservation of 1 member** from the **Anglo-Indian** community in the State Legislative Assembly. It is **not a compulsory provision**, but rather it is at the **discretion of the Governor**, if he feels the community is **inadequately represented**. This provision was **originally** supposed to last only **until 1960**. However, it has been **extended subsequently every 10 years**. However, in **2019**, the **104th Constitution Amendment Act scrapped this reservation** as it was deemed to have **run out of its utility**. So, there is **no reservation** for the **Anglo-Indian community** in State Legislatures as of today.

Statement 3 is correct: The Constitution states that the minimum strength of the Legislative Council is to be 40, while the **maximum** has been fixed at **1/3 of the total strength** of the legislative assembly. Thus, the **size of the Legislative Council is linked to the strength** of the **Legislative Assembly**.

Source: Indian Polity by Laxmikanth, 5th edition, CH-33;

<https://indianexpress.com/article/explained/anglo-indian-quota-history-mps-6164232/>

Q.49) Consider the following statements:

1. A Member of Parliament can address the House in his or her mother-tongue after taking permission from the presiding officer of the House.
2. Both Hindi and English can be the languages for transacting business in the Parliament.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: The **presiding officer can permit a member** to address the House in his **mother-tongue**. In both the Houses, arrangements are made for simultaneous translation.

Statement 2 is correct: The Constitution (**Article 120**) has declared **Hindi and English** to be the languages for transacting business in the Parliament. Though English was to be discontinued as a floor language after the expiration of fifteen years from the commencement of the Constitution (that is, in 1965), the Official Languages Act (1963) allowed English to be continued along with Hindi.

Source: Official Language Policy.pdf (cuh.ac.in)

Laxmikanth Chapter 22 Parliament

Q.50) Consider the following statements with reference to West Nile Virus:

1. The West Nile Virus outbreak sites are found on all major bird migratory routes.
2. It is a mosquito-borne RNA virus.
3. In India, the virus has been detected for the very first time in 2022.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

In June 2022 Kerala health department issued an alert after the death of a 47-year-old from Thrissur due to the West Nile Virus. According to the WHO, West Nile Virus is “**a member of the flavivirus genus and belongs to the Japanese Encephalitis antigenic complex of the family Flaviviridae**”.

Statement 1 is correct: The **West Nile Virus (WNV) outbreak sites are found on all major bird migratory routes**. Africa, Europe, the Middle East, North America, and West Asia are the regions where the virus is commonly found.

Statement 2 is correct: It is a **mosquito-borne, single-stranded RNA virus**. The West Nile Virus is a **flavivirus** related to the viruses that are also responsible for causing **St. Louis encephalitis, Japanese encephalitis, and yellow fever**.

Statement 3 is incorrect: In Mumbai in the year 1952, the antibodies against WNV were first detected in humans. Since then, the virus activity has been reported in southern, central, and western India. In **1977, 1978 and 1981, serologically confirmed cases of WNV infections** were reported in Vellore and Kolar districts, and in West Bengal in 2017. So, the recent detection of WNV in Kerala is not its first detection with reference to India. Hence the statement is incorrect.

Source: <https://indianexpress.com/article/explained/explained-what-is-the-west-nile-virus-how-does-it-spread-7942629/>

Q.1) Consider the following statements regarding the ‘veto powers’ of the President and the Governor:

1. Only the President and not the Governor is empowered to exercise Suspensive Veto over the Ordinary Bills.
2. Neither the President nor the Governor has any Veto Power in case of Money Bills.
3. The Governor has no veto power once a state bill is reserved for the President’s consideration.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

Article 200 provides that the **assent of the Governor is required to the bills passed by a state legislature**. Similar to the powers of the President, Governor can also give his assent or withhold his assent or can send the bill for the reconsideration of the House. Despite this, **there are certain differences in their powers to exercise veto**.

Statement 1 is incorrect: Suspensive veto means power to send back a bill to the legislature for reconsideration. **Both the President and as well as the Governor can exercise a suspensive veto**. If such a bill is passed again by the legislatures with or without amendment, they are bound to give their assent.

Statement 2 is incorrect: The money bill after it is passed by the Parliament or State Legislature is presented to the President or the Governor respectively for their approval. It becomes an ‘Act’ only after obtaining the approval. **Both the President or the Governor can either give assent or withhold assent. They cannot send it for reconsideration. This implies that both have veto powers against a money bill, except they cannot send it for reconsideration.** Additionally, the Governor can also reserve a money bill for the President’s consideration.

Statement 3 is correct: **The Governor has no further role once he/she reserves a bill for the consideration of the President.** President can give assent or withhold such a bill. The President can also send back the bill to the state legislature for reconsideration. When the House passes the bill again with or without amendment, **it must be presented again for the Presidential assent only**. This means that neither Governor’s assent is required nor can he exercise veto over such bills. Hence, the given statement is correct.

Source: M. Laxmikanth (Page 30.7, Chapter 30)

Q.2) Consider the statement given below as quoted from the Constituent Assembly debates and answer the question that follows:

“These provisions are meant to ensure that all our efforts all these years spent in Constitution-making may not go in vain and those people who will be in power in the future would be adequately empowered to save the Constitution.”

Which of the following provisions of the Constitution is being referred to in the above statement?

- a) Appointment of Governor
- b) Powers of the Election Commission of India
- c) Emergency provisions
- d) Constitution of Finance Commission

Ans) c

Exp) Option c is the correct answer.

The Constituent Assembly had differing opinions over the inclusion of emergency provisions in the Constitution of India. **It attracted fierce criticism.** H.V. Kamath observed that “I fear that by this single chapter we are seeking a totalitarian state, a police state, a state completely opposed to all the ideals and principles that we have held aloft.” Kamath **even accused the Drafting Committee of plagiarizing UK’s Emergency Powers Act, 1920 in a ‘dishonest manner’.** T.T. Krishnamachari was a member of the Drafting Committee, and he **defended the inclusion of emergency provisions** in the Constitution. He said, “**that all our efforts all these years spent in Constitution-making may not go in vain and those people who will be in power in the future would be adequately empowered to save the Constitution.**” The phrase ‘adequately empowered to save the Constitution’ signifies **extraordinary powers to the executive to protect the constitutional machinery.** Hence, option (c) is the correct answer.

Source:

https://www.constitutionofindia.net/blogs/desk_brief__h_v__kamath_s_attack_on_emergency_powers__

Q.3) The Governor has been vested with the power to grant pardon by the Constitution. In this context, consider the following statements:

1. S/he cannot suspend or remit a death sentence.
2. S/he cannot suspend or remit a sentence given by court martial.
3. S/he cannot pardon a sentence without the aid and advice of the Council of Ministers.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Article 161 deals with the powers of the Governor to grant pardons, etc., and to suspend, remit or commute sentences in certain cases. The pardoning powers of the Governor form part of his judicial powers.

Statement 1 is incorrect: The Governor can suspend, remit, reprieve or commute a death sentence. Hence, the given statement is incorrect.

Statement 2 is correct: Article 161 does not grant any power to the Governor to pardon, suspend, remit, commute or reprieve a sentence by the court martial or military court. However, as per Article 72, President can grant pardon in cases of punishment or sentence by a court martial.

Statement 3 is correct: The power to grant pardon is not a discretionary power of the Governor. He is bound by the aid and advice of the council of Ministers. In a recent judgment in **The State of Haryana vs. Raj Kumar**, the Supreme Court has held that Governor is but a shorthand expression for the State Government and hence, he can exercise his pardoning powers only pursuant to the government’s decision.

Knowledge Base: Definition of important terminologies:

- 1) **Commutation** means substitution of one form of punishment with the lighter form.
- 2) **Remission** means reducing the period of sentence without changing its character.
- 3) **Respite** means awarding lesser sentence due to some special fact like physical disability, pregnancy etc.
- 4) **Reprieve** means stay of the execution of a sentence.

Source: M. Laxmikanth (Page 30.9, Chapter 30)

Q.4) Consider the following statements regarding impeachment of the President of India:

1. Impeachment of President of India is a quasi-judicial procedure in Parliament.
2. The ground for the President's impeachment is "violation of the constitution", which is well defined in the Constitution.
3. Both the houses of the Parliament enjoy the same power with respect to impeachment of President.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: Impeachment of the President is considered a quasi-judicial procedure as he stands removed from post if both houses pass resolution after due process.

Statement 2 is incorrect: The President can be removed from his post by the process of impeachment. The only ground mentioned for impeachment of the President is violation of the constitution. However, the Constitution does not define the phrase "violation of Constitution".

Statement 3 is correct: Impeachment charges can be initiated by either house of the Parliament. These need to be signed by one-fourth of the members of the house and a 14 days' notice should be given to the President. After the impeachment resolution is passed by a majority of two-thirds of the total membership of that House, it is sent to the other House, which should investigate the charges. If the other House also sustains the charges and passes the impeachment resolution by a majority of two-thirds of the total membership, then the President stands removed from his office from the date on which the resolution is so passed. Hence, Both the houses of the Parliament enjoy the same power with respect to Impeachment of President.

Knowledge Base: President has the right to appear and to be represented at impeachment investigation in another house. No president has been impeached so far.

Source: <https://indianexpress.com/article/explained/how-impeachment-works-and-why-trump-is-unlikely-to-be-removed-6196598/>

Laxmikanth Chapter 17 President

Q.5) Which of the following statements is/are correct regarding the use of single-use plastics?

1. It accounts for a third of all plastic produced globally.
2. It accounts for half of all the plastic consumed in India.
3. India features in top 10 countries regarding per capita single-use plastic waste generation.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

The Plastic Waste Management Rules, amended in 2021, define single-use plastic as plastic item intended to be used once for the same purpose before being disposed of or recycled.

Option 1 is correct: A 2021 report by the Mindereroo Foundation (Australian philanthropic organization) said **single-use plastics account for a third of all plastic produced globally**. Single-use plastic also accounts

for the majority of plastic discarded – 130 million metric tonnes globally in 2019. All of this is burned, buried in landfills or discarded directly into the environment.

Option 2 is incorrect: Currently, single-use plastics (SUPs) account for about **one-third of the plastic consumed** in India. In other words, 6-7 million tonnes of SUPs are consumed annually, placing it among the top industrial materials consumed in terms of volume.

Option 3 is incorrect: The 2021 report by the Minderoo Foundation found that **India features in the top 100 countries of per capita single-use plastic waste generation – at rank 94**. The top three being Singapore, Australia and Oman. With domestic production of 11.8 million metric tonnes annually, and import of 2.9 MMT, India's net generation of single-use plastic waste is 5.6 MMT, and per capita generation is 4 kg.

Source: <https://blog.forumias.com/ban-on-single-use-plastic/>

<https://blog.forumias.com/indias-ban-on-select-single-use-plastic-items-a-start-but-still-a-long-way-from-blanket-ban/>

Q.6) Article 164 of the Indian Constitution provides for the appointment of a Minister in charge of Tribal Welfare. In which of the following states, does the appointment of such a Minister has been provided by the Constitution?

1. Bihar
2. Jharkhand
3. Chhattisgarh
4. Odisha
5. Rajasthan

Choose the correct answer from the codes given below:

- a) 2, 3, 4 and 5 only
- b) 1, 3 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2 and 5 only

Ans) c

Exp) Option c is the correct answer.

Article 164 deals with the appointment of a Minister in charge of tribal welfare in certain states. The Minister may also be in charge of the welfare of Scheduled Castes and backward classes or any other work. Presently, the Governor needs to appoint such Minister in the **four states**. These are **Jharkhand, Chhattisgarh, Madhya Pradesh and Odisha**. Originally, this provision was applicable to Bihar, Madhya Pradesh and Odisha. **The 94th Amendment Act freed Bihar from this obligation** because there are no Scheduled areas in Bihar now. This Amendment Act, however, to the newly formed states of Chhattisgarh and Jharkhand. **This provision has never been applicable to Rajasthan.**

Source: M. Laxmikanth (Page 32.3, Chapter 32)

Q.7) With reference to Cabinet Committees, which of the following statements are correct?

1. They are the neither statutory nor constitutional bodies.
2. They are set up by the President on the advice of the Prime Minister.
3. They are an organisational device to manage the workload of the Cabinet.

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

A Cabinet committee is a collection of ministers that has the authority to make decisions that are binding on all other ministries and departments.

Statement 1 is correct: They are extra-constitutional in emergence. In other words, **they are not mentioned in the Constitution.** Neither they are established under **any act of Parliament (not statutory).** They are set up under the **Government of India Transaction of Business Rules (TBR), 1961** which states **that** there shall be “Standing Committees of the Cabinet”. The Prime Minister may, from time to time, amend the Schedule by adding to or reducing the numbers of such Committees or by modifying the functions assigned to them.

Statement 2 is incorrect: They are **set up by the Prime Minister** according to the exigencies of the time and requirements of the situation. Hence, their number, nomenclature, and composition varies from time to time.

Statement 3 is correct: They are an organisational device to reduce and manage the enormous workload of the Cabinet. They also facilitate in-depth examination of policy issues and effective coordination. They are based on the principles of division of labour and effective delegation.

Source: Lakshmikant Chap 21

Q.8) With reference to the Prime Minister of India, consider the following statements:

1. S/he is advised by the President with regard to summoning and proroguing of the sessions of the Parliament.
2. S/he advises the President with regard to the appointment of members of the UPSC.
3. S/he is the Chairman of the Inter State Council.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Prime Minister is the leader of the Lower House. In this capacity, he enjoys certain powers.

Statement 1 is incorrect: The **Prime Minister advises the President** with regard to **summoning and proroguing of the sessions** of the **Parliament**. The Prime Minister can recommend dissolution of the Lok Sabha to President at any time. The Prime Minister announces government policies on the floor of the House.

Statement 2 is correct: The **Prime Minister advises the President** with regard to the appointment of important officials like

- 1) Attorney general of India,
- 2) Comptroller and Auditor General of India,
- 3) **Chairman and members of the UPSC,**
- 4) Election commissioners and
- 5) Chairman and members of the finance commission.

Statement 3 is correct: The Prime Minister is the **chairman** of the NITI Aayog (which succeeded the planning commission), National Integration Council, **Inter State Council**, National Water Resources Council and some other bodies.

Knowledge Base:

Article 263 contemplates the establishment of an Inter-State Council to effect coordination between the states and between Centre and states. Thus, the President can establish such a council if at any time it appears to him that the public interest would be served by its establishment. He can define the nature of duties to be performed by such a council and its organization and procedure.

Source: Indian Polity by Laxmikant 6th Edition – Chapter 15 Inter-State Relations, Chapter 19 Prime Minister.

Q.9) Consider the following statements regarding the Council of Ministers in states:

1. The Constitution itself prescribes the maximum and minimum strength of the Council of Ministers in states.
2. The advice given by the Council of Ministers to the Governor cannot be questioned in any court.
3. In the Order of Precedence, Cabinet Ministers in a state rank lower than the Attorney General of India.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Constitution envisages a Parliamentary system of governance in the states. Accordingly, Article 163 provides for the Council of Ministers headed by the Chief Minister to aid and advise the Governor in the exercise of his functions.

Statement 1 is correct: The 91st Constitutional Amendment Act of 2003 added provisions to Article 164 regarding maximum and minimum strength of the Council of Ministers. It states that the total number of Ministers (including the Chief Minister) in the Council of Ministers **shall not exceed 15 percent of the total strength** of the Assembly. It also states that the total number of Ministers (including the Chief Minister) **should not be less than 12**. Hence, it provides for both maximum as well as minimum strength of the Council of Ministers in the States.

Statement 2 is correct: Article 163 expressly provides that the advice tendered by the Ministers to the Governor shall not be questioned in any court. Hence, the given statement is correct.

Statement 3 is correct: The Attorney General of India ranks higher than the State Cabinet Ministers in the order of precedence. The Attorney General is ranked 11th position along with the **Cabinet Secretary**. On the other hand, Cabinet Ministers of State within their respective states are ranked at 15th position, while Cabinet Ministers of State outside their respective state are ranked at the 18th position. Other than the Attorney General, **all the Judges of Supreme Court, Chairperson of Union Public Service Commission, Chief Election Commissioner, Comptroller and Auditor of India, Chief of Staff holding the rank of full General or equivalent** are ranked above the State Cabinet Ministers.

Source: https://www.mha.gov.in/sites/default/files/table_of_precedence.pdf

M. Laxmikanth (Page 32.1, Chapter 32)

Q.10) Consider the following statements with respect to the Registered Unrecognized Political Parties (RUPPs):

1. If a political party has never contested in elections since it got registered with the Election Commission, then it can be called as RUPP.
2. No separate election symbol is reserved for such parties.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: If a party satisfies any one of the below-mentioned criteria, then they are called Registered Unrecognized Political Parties. The conditions are

- 1) If the political party is newly registered.
- 2) If the political parties have not secured enough percentage of votes in Assembly or General Elections to become a state party.
- 3) Political Parties that **never contested in elections since they got registered** with the Election Commission.

Statement 2 is correct: These parties don't enjoy all the benefits extended to the recognized parties such as **reserving a separate symbol for the party**, subsidized land for party office etc.

Source: <https://blog.forumias.com/registered-unrecognised-political-parties-are-not-transparent-adr-report/>

<https://economictimes.indiatimes.com/news/politics-and-nation/registered-unrecognised-political-parties-increased-two-fold-from-2010-to-2019-adr/articleshow/80707642.cms>

Q.11) With reference to the effects of the proclamation of National Emergency on the life of Lok Sabha, consider the following statements:

- 1. The life of Lok Sabha could be extended by only six months at a time.
- 2. The term of 5th Lok Sabha was extended than its normal period, as National emergency was in force at that time.
- 3. Parliament can extend the life of Lok Sabha by passing a law to that effect with simple majority.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1, 2 and 3
- d) 1 and 2 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The term of the Lok Sabha can be extended during the period of national emergency **by a law of Parliament for one year at a time for any length of time**. However, this extension cannot continue beyond a period of six months after the emergency has ceased to operate.

Statement 2 is correct: The term of the Fifth Lok Sabha which was to expire on 18 March, 1976 was extended by one-year up to 18 March, 1977 by the House of the People (Extension of Duration) Act, 1976. It was extend for a further period of one year up to 18 March, 1978 by the House of the People (Extension of Duration) Amendment Act, 1976. However, the House was dissolved on 18 January, 1977, after having been in existence for a period of five years, ten months and six days.

Statement 3 is correct: During National Emergency, the duration of Lok Sabha can be extended to a maximum of 1 year at a time by passing a law in the Parliament. The term of 5th Lok Sabha was extended twice **by-passing House of the People (extension of duration) Act, 1976. And such a law can be passed by a simple majority.**

Source: <https://indiankanoon.org/doc/1463849/>

Q.12) Consider the following statements regarding the constitutional position of the President and the Governor:

1. The Constitution provides much wider discretionary powers to the President than the Governor.
2. The President is the final and only authority to decide on doubts/disputes regarding the discretionary powers of the Governor.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The Office of the President and the Governor the constitutional offices. Article 52 provides for the Office of the President of India and Article 153 provides for the office of Governor for every state. Governor is appointed by the President for a period of 5 years on the advice of the Union Cabinet.

Statement 1 is incorrect: The Constitution empowers Governor to act as per his discretion in certain cases. However, **no such possibility has been envisaged in the Constitution for the President.** Hence, the Constitution provides for wider discretionary powers to the Governor than the President. The Constitution provides that Governor can exercise his discretion in the following matters:

- 1) In **reserving a bill for the President's consideration**
 - 2) For recommending imposition of the **President's rule** in the State,
 - 3) While exercising his functions **as an administrator of an adjoining union territory.**
 - 4) In determining the **amount payable as royalty on license for mineral exploration** to the Autonomous District Councils of Assam, Meghalaya, Tripura and Mizoram.
 - 5) **Seeking information from Chief Minister** regarding both administrative as well as legislative matters.
- Discretion in above matters implies that the Governor is not required to act as per the advice of the Council of Ministers.

Statement 2 is incorrect: Article 163 states that If any question arises whether Governor is by or under this Constitution required to act in his discretion, **the decision of the Governor (and not President) in his discretion shall be final.** It further states that **the validity of anything done by the Governor shall not be called in question** on the ground that he ought or ought not to have acted in his discretion.

Source: <https://indiankanoon.org/doc/127060/>

<https://indiankanoon.org/doc/674146/>

Q.13) According to the Supreme court of India, the imposition of President's rule in a state would be proper in which of the following situations?

1. In the case of hung assembly where no party secures a majority.
2. When governor presents report to the President about maladministration in the state.
3. When the government of a state is deliberately acting against the Constitution of India.
4. When a constitutional direction of the central government to the state is disregarded by the state.

Select the correct answer using the code below:

- a) 1, 2 and 3 only
- b) 1, 3 and 4 only
- c) 1 and 3 only
- d) 2, 3 and 4 only

Ans) b

Exp) Option d is the correct answer.

The Supreme Court in Bommai case (1994) enlisted the situations where the exercise of power under Article 356 could be proper or improper. Proper here signifies those conditions which signifies breakdown of constitutional machinery, prevail in the state. Improper denotes that due procedure is not followed or conditions are not relevant for President's rule.

Statement 1, 3 and 4 are correct: As per Supreme Court directives in case of hung assembly, when no party or coalition has majority or despite having majority are not able to form the government, then it will be **proper to recommend for imposition of President's rule in that state**. Wilful disobedience of constitution or law and when state government disregards constitutional direction from centre, also signifies conditions that can lead to imposition of President's rule.

Statement 2 is incorrect: The maladministration in a state **cannot be stated as a proper** ground of imposition of President's rule in a state. Rather article 356 of the Constitution suggests the condition of failure of the constitutional machinery in the states as the ground for imposition of President's rule.

Knowledge Base: Based on the report of the Sarkaria Commission on Centre-state Relations (1988), the Supreme Court in Bommai case (1994) enlisted the situations where the exercise of power under Article 356 could be proper or improper. Also, the governor should probe for the possibility of alternative government formation and give a suitable chance for proving majority.

Source: <https://www.thehindu.com/news/national/presidents-rule-should-be-based-only-on-objective-material-said-supreme-court-in-bommai-case/article29955153.ece>

Laxmikanth Chapter 16 Emergency Provisions

Q.14) Consider the following statements related to financial emergency in India:

1. In the constitution, no maximum period is prescribed for its operation.
2. Parliamentary approval is required after every six months for continuation of financial emergency.
3. A proclamation of Financial Emergency may be revoked by the President at any time by a subsequent proclamation.

Which of the statements above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: Article 360 empowers the president to proclaim a Financial Emergency if he is satisfied that a situation has arisen due to which the financial stability or credit of India or any part of its territory is threatened. A proclamation declaring financial emergency must be approved by both the Houses of Parliament by a simple majority within two months from the date of its issue. **As per Article 360, no maximum period is prescribed for financial emergency to continue.**

Statement 2 is incorrect: As per Article 360, repeated parliamentary approval is not required for continuation (remaining in force for extended period) of financial emergency which means once approved, financial emergency continues indefinitely till it is revoked.

Statement 3 is correct: A proclamation of Financial Emergency may be revoked by the president at any time by a subsequent proclamation. Such a proclamation does not require parliamentary approval.

Knowledge Base: There has been no proclamation of financial emergency so far.

Source:

<https://blog.forumias.com/answered-under-what-circumstances-can-the-financial-emergency-be-proclaimed-by-the-president-of-india-what-consequences-follow-when-such-a-declaration-remains-in-force/>

Laxmikanth Chapter 16 Emergency Provisions

Q.15) A term, 'nixtamalization' recently seen in the news, is in the context of which of the following?

- Usage of bagasse as fodder in bee-keeping
- fortification of maize by ancient Mayans
- To convert fly ash into a substance that can be used as Polycarbonate material
- The process of converting randomized trial data into coherent series

Ans) b

Exp) Option b is the correct answer.

Nixtamalization is a method by which the **ancient peoples of Mesoamerica like the Maya used to soak and cook their maize in an alkaline solution** and make it more **palatable, nutritious and non-toxic**. Nixtamal is derived from the Nahuatl word nextamalli, meaning 'nixtamalised maize dough'. A study has thrown light on how Maya **people fortified their maize with the chemical process known as 'nixtamalization'** and also built indoor toilets in pits they dug into the limestone bedrock of the Yucatan peninsula in Mesoamerica.

Source: <https://www.sciencedirect.com/topics/food-science/nixtamalization>

<https://www.downtoearth.org.in/news/food/new-evidence-emerges-on-how-mayas-fortified-maize-built-indoor-toilets-83260>

Q.16) Which of the following statement is correct regarding the election of the President of India?

- All doubts and disputes related to the election of the President are decided by a special body constituted by the Central Government.
- The Value of vote of every MLA is same irrespective of the state, so as to maintain uniformity among states.
- When a state legislative assembly stands dissolved, Rajya Sabha members from that state can vote as proxy for the respective state.
- The total value of votes of all elected MLAs of all the states and Union Territories taken together is equal to total value of votes of all elected Members of Parliament.

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: All doubts and disputes in connection with election of the President are **inquired into and decided by the Supreme Court whose decision is final**. The election of a person as President cannot be challenged on the ground that the electoral college was incomplete (ie, existence of any vacancy among the members of electoral college).

Option b is incorrect: Value of vote of each MLA differs from state to state. It maintains uniformity of state representation. Every elected member of the legislative assembly of the state shall have as many votes as there are multiples of one thousand in the quotient obtained by dividing the population of the state by the total number of the elected members of the assembly.

Option c is incorrect: Where an assembly is dissolved, the members cease to be qualified to vote in the presidential election, even if fresh elections to the dissolved assembly are not held before the presidential election. There is no such provision of proxy voting for any member of electoral college in the election of the President of India.

Option d is correct: There has been maintained a parity between the states as a whole and union on the other side. Every elected member of either House of Parliament shall have such number of votes as may be obtained by dividing the total number of votes assigned to members of the legislative assemblies of the states by the total number of the elected members of both the houses of Parliament. This also means that total value of votes of all elected MLAs (including elected members of assembly of UTs) is equal to total value of votes of elected MPs.

Knowledge Base: The electoral college consists of elected members of both the houses of parliament, elected members of legislative assemblies of the states and elected members of legislative assembly of the union territories of Delhi and Puducherry.

Source: <https://www.thehindu.com/news/national/droupadi-murmu-elected-15th-president-of-india/article65667766.ece>

Laxmikanth Chapter 17 President

<https://www.deccanherald.com/content/621283/anti-defection-law-does-not.html>

Q.17) Which of the following can be the advantages of system of 'proportional representation' over the 'first past the post' electoral system?

1. Compared to first past the post system, Proportional representation can provide fairer and better representation to minority sections of the population.
2. There is a much higher chance of electing a stable government under Proportional representation compared to first past the post system.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: First past the post system or simple majority system does not secure due representation to small groups or minority sections of the population as one can easily get elected with support of majority votes. On the other hand, under proportional representation almost all sections of people get due representation according to their population share.

Statement 2 is incorrect: Under the proportional representation electoral system there are high chances of the election of several parties with no one party having a majority in the legislature. This may result in unstable government and uncertainty as parties trade with each other to form coalitions and alliances. On the other hand, there is less likelihood of a proliferation of minor parties under first past the post system. This leads to the higher chances of formation a stable government under first past the post system. Hence the statement is incorrect.

Knowledge Base: The Constitution provides the system of proportional representation in the case of Rajya Sabha and system of territorial representation (First-past-the-post system) for the election of members to the Lok Sabha.

Source: <https://www.thehindu.com/opinion/op-ed/what-is-first-past-the-post-system/article26502467.ece>

Laxmikanth Chapter 17 President

Q.18) With reference to removal of Governor of a state, consider the following statements:

1. The President can remove a Governor even without granting him an opportunity to be heard.
2. As per the Constitution, the Governor of a state can only be removed on the ground of violation of the Constitution.
3. President must remove the Governor if the state legislature passes a resolution to that effect with special majority.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

As per Art. 156, A Governor shall hold office for a term of five years from the date on which he enters upon his office. However, this term of five years is subject to the pleasure of the President. **Further, he can resign at any time by addressing a resignation letter to the President.**

Statement 1 is correct: The President, in effect the central government, has the power to remove a Governor at any time without giving him or her any reason, and **without granting an opportunity to be heard.** However, this power cannot be exercised in an arbitrary, capricious or unreasonable manner. The power of removing Governors should only be exercised in rare and exceptional circumstances for valid and compelling reasons.

Statement 2 is incorrect: The Constitution does not lay down any grounds upon which a governor may be removed by the President.

Statement 3 is incorrect: There is no such provision in the Constitution. The state government is not involved in the removal process as per the provisions of the Constitution. **However, this has been recommended by the Punchhi Commission (2010) that** he or she should be removed only by a resolution of the state legislature.

Source: Lakshikant Chap 30

<https://prsindia.org/theprsblog/removal-of-governors-what-does-the-law-say>

<https://indianexpress.com/article/explained/everyday-explainers/dmk-wants-tamil-nadu-guv-gone-how-a-governor-can-be-sacked-8249686/>

<https://prsindia.org/theprsblog/removal-of-governors-what-does-the-law-say?page=125&per-page=1>

Q.19) The Sarkaria Commission (1983) has made certain recommendations regarding the role of Governor. Which among the following are those recommendations?

1. The Governor should be a person who has been very active in politics in recent past.
2. The Vice-President of India and the Speaker of the Lok Sabha should be consulted by the Prime Minister while selecting a Governor.
3. A comprehensive set of guidelines should be framed for the exercise of the discretionary powers of the Governor.

Which of the statements given above is/ are correct?

- a) 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

The Sarkaria Commission was set up in 1983 to examine the centre-state relationship on various matters and to suggest changes within the framework of the Constitution. The final report consisted of 247 recommendations across 19 chapters.

Statement 1 is incorrect: The Sarkaria Commission has **recommended a set of criteria for appointment of a person to the Office of Governor**. According to the report:

- 1) He should be eminent in some walk of life
- 2) He should be a person from outside the State
- 3) He should be a detached figure and not too intimately connected with the local politics of the State
- 4) **He should be a person who has not taken too great a part in politics generally and particularly in the recent past** (Hence, the given statement is incorrect).

The commission also recommended that person belonging to the minority groups should continue to be given a chance while keeping the above criteria in mind.

Statement 2 is correct: The Sarkaria Commission recommended that **the Vice-President of India and the Speaker of the Lok Sabha should be consulted by the Prime Minister in selecting a Governor**. According to the Commission, such consultation will greatly enhance the credibility of the selection process. Further it recommended that **the consultation should be confidential** so as not to deter the eminent persons from making themselves available for appointment of Governors. **Statement 3 is incorrect: The Commission recommended that the discretionary powers of the Governor as contained in Article 163 should be left untouched.** The commission noted that **it would be neither feasible nor desirable to formulate a comprehensive set of guidelines for the exercise of the discretionary powers of the Governor** (Hence, the given statement is incorrect). A Governor should be free to deal with a situation according to his best judgement, keeping in view the Constitution and the law and the conventions of the Parliamentary system. Source: <http://interstatecouncil.nic.in/wp-content/uploads/2015/06/CHAPTERIV.pdf>

Q.20) Which among the following can be used as feed in the biomass-based boiler technology?

1. Paddy Straw
2. Paddy Husk
3. Crop Stubble
4. Mustard

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 2 and 4 only
- c) 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Recently, a **new biomass-based boiler technology** was launched in **India (Kuruksheetra, Haryana)** that claims to **accommodate all kinds of agricultural residue as fuel** and can be greener and may also help **reduce the burden of stubble burning**. This new **Denmark-based technology** allows the plant to fire a **wide range of fuels with less fuel preparation** and handling. This combustion technology is advantageous because of the **vibrating grate**. The **grate of a steam boiler** supports the solid fuel in the furnace. Vibrating grate **accommodates biomass of every density**.

The **existing conventional boilers are designed only for specific types of agro residue** and thus restrict the biomass contribution in energy generation. **However vibrating grate boiler technology can be a**

solution for firing any kind of biomass thus all biomass can be the feed including the options given above i.e., **Paddy Straw, Paddy Husk, Crop Stubble and Mustard.**

Source: <https://www.downtoearth.org.in/news/energy/biomass-electricity-new-boiler-technology-enables-use-of-all-agricultural-residue-83113>

Q.21) In which of the following conditions, the Vice-President of India can act as the President or discharge the functions of the President?

1. When the President resigns from his/her post.
2. When there is a delay in conducting the election of new President.
3. When the post becomes vacant due to death of the President.
4. When the President is unable to discharge his functions due to absence or illness.

Select the correct answer using the code given below:

- a) 2 only
- b) 1 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Statements 1 and 3 are correct: Article 65 of Constitution of India provides for the Vice-President to act as President of India or to discharge his functions during casual vacancies in the office, or during the absence, of President.

- 1) In the event of the occurrence of any vacancy in the office of the President by reason of **his death, resignation or removal**, or otherwise, the Vice-President shall act as President until the date on which a new President elected in accordance with the provisions of this Chapter to fill such vacancy enters upon his office.

Statement 4 is correct: When the President is unable to discharge his functions owing to absence, illness or any other cause, the Vice-President shall discharge his functions until the date on which the President resumes his duties.

Statement 2 is incorrect: In case of any delay in conducting the election of a new President by any reason, the outgoing President continues to hold office (beyond his term of five years) until his successor assumes charge.

Knowledge Base: In case the office of Vice-President is vacant, the Chief Justice of India acts as the President. When President Dr. Zakir Hussain died in May 1969, the then Vice-President, V.V. Giri was acting as the President. Soon after V.V. Giri resigned to contest the election of the President. Then the Chief Justice of India, M. Hidayatullah worked as the officiating President.

Source: <https://indianexpress.com/article/explained/everyday-explainers/explained-how-is-the-vice-president-of-india-elected-8013376/>

Laxmikanth Chapter 17 President

Q.22) The President cannot use the Suspensive Veto in case of which of the following types of bills?

1. When the bill is sent back to the Parliament by the President and the same is passed again by Parliament, with or without changes, and presented again to the President.
2. When the bill presented to President is a Money Bill.
3. When a Constitutional Amendment Bill comes to the President for his consideration.
4. When state bills are reserved for the President's consideration.

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 1, 2 and 4 only
- c) 1, 3 and 4 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

Suspensive Veto means the power of the President to return a bill for reconsideration of the Parliament. However, if the bill is passed again by Parliament, with or without changes, and presented to the President, the President is required to grant his assent to the bill.

Statement 1 is correct: When the bill is sent back to the parliament by the President and if the same is passed again by Parliament, with or without changes, and presented again to the President, the President is required to grant his assent to the bill. Hence in such case the President cannot use the suspensive veto.

Statement 2 is correct: In the case of money bills, the President does not have a suspensive veto. The President may either grant or withhold his approval to a money measure, but he may not return it to Parliament for reconsideration. Normally, the President gives his assent to the money bill as it is introduced in the Parliament with his previous permission.

Statement 3 is correct: The president does not have any power to use suspensive veto in case of “**the constitutional amendment bills**”. The amendment bills related to the constitution can be amended with the sole intervention of members of parliament by voting procedure. Therefore, it can be noticed that in case of “**the constitutional amendment bills**”, suspensive veto cannot be applied.

Statement 4 is incorrect: The President is not bound to ratify the state bill. The President can withhold his assent to such bills not only in the first instance but also in the second instance. When the President returns a state bill and if the bill is passed again by the state legislature with or without amendments and presented again to the President for his assent, the President is not bound to give his assent to the bill. This means that the state legislature cannot override the suspensive veto power of the President.

Knowledge Base: The President also enjoys Absolute veto (withholding of assent) and Pocket veto (taking no action on bills passed by legislature). There is no qualified veto in case of Indian President (which can be overridden by the legislature with a higher majority).

Source: Laxmikanth Chapter 17 President

Q.23) The Governor submits reports of which of the following bodies to the State Legislature?

1. The State Finance Commission
 2. The State Information Commission
 3. The State Public Service Commission
 4. The State Human Rights Commission
- Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2, 3 and 4 only
- d) 1, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Usually, Reports of Constitutional Bodies are submitted to the Governor who lays those reports before the state legislature.

Options 1 and 3 are correct: Governor lays the reports of the **State Finance Commission, the State Public Service Commission** and the Comptroller and Auditor General relating to the accounts of the state, before the state legislature.

Option 4 is incorrect: In general, reports of Statutory Bodies are submitted to State Government. For example, the State Human Rights Commission submits its annual or special reports to the state government. These reports are laid before the state legislature, along with a memorandum of action taken on the recommendations of the Commission and the reasons for non-acceptance of any of such recommendations.

Option 2 is incorrect: Similarly, the reports of the **State Information Commission** are submitted an annual report to the State Government on the implementation of the provisions of this Act.

Source: Lakshmikant Chap 30, 56, 58.

Q.24) Consider the following statements regarding pardoning power of the President of India:

1. When the punishment or sentence is for an offence against Union Law.
2. When the punishment or sentence is by a court martial (military court).
3. In case of a death sentence.

The Constitution empowers the President to exercise the pardoning powers in which of the above given circumstances?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Under **Article 72 of the Constitution**, the President shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence where the sentence is a sentence of death.

The pardoning power of the President is independent of the Judiciary. But the President while exercising this power, does not sit as a court of appeal. The object of conferring this power on the President to keep the door open for correcting any judicial errors in the operation of law and to afford relief from a sentence, which the President regards as unduly harsh.

Options 1,2 and 3 are correct: The President grants pardons to persons who have been tried and convicted of any offense in all cases where the:

- 1) Punishment or sentence is for an offense against a Union Law or the offense made under Concurrent Lists (A regards laws made under Concurrent Lists; the jurisdiction of the President shall be concurrent with that of Governor) **(Option 1 is correct)**
- 2) Punishment or sentence is by a court martial (military court); and **(Option 2 is correct)**
- 3) The sentence is a sentence of death **(Option 3 is correct)**

Knowledge Base: The President can grant pardons, reprieves, respites and remissions of punishment or suspend, remit and commute the sentence of any person convicted of any offence. Only the President can pardon sentence inflicted by court martial.

Source: <https://www.thehindu.com/news/national/explained-pardon-and-remission-and-who-grants-them/article65413552.ece>

Laxmikant Chapter 17 President

Q.25) Consider the following pairs:

Initiatives/ Reports	Released/ published by
1. Digital News Report	Reuters Institute for the Study of Journalism
2. Dekho Apna Desh Initiative	Ministry of Culture
3. Post-2020 Global Biodiversity Framework	Global Environment Facility

Which of the pairs given above is/are correct?

- 1 only
- 1 and 3 only
- 2 only
- 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

Pair 1 is correct: Reuters Institute for the Study of Journalism has released the **Digital News Report, 2022**. The report gives insights about digital news consumption based on a YouGov survey of over 93,000 online news consumers in 46 markets covering half of the world's population. Some of the **highlights of the report** are:

- 1) People are **trusting news content less** and less.
- 2) Consumption of **traditional news media declined** in nearly all the countries surveyed.
- 3) Proportion of news consumers who say that they “**avoid news**” has **risen sharply** across countries with the report describing the phenomenon as “selective avoidance”.
- 4) **India** registered a **small increase in the level of trust** with 41% trusting news overall.

Pair 2 is incorrect: Dekho Apna Desh is an initiative of the **Ministry of Tourism (and not the Ministry of Culture)** launched in 2020. The primary objective is to promote domestic tourism in India which is intended to enhance tourist footfalls in places of tourist interest so as to help develop the local economy.

Pair 3 is incorrect: The post-2020 framework is **set to be finalised** at the Conference of the Parties to the **Convention on Biological Diversity (CoP15)**. The aim of the framework is to implement broad-based action to bring about a transformation in society's relationship with biodiversity. The framework has 21 action-oriented targets for urgent action over the decade to 2030.

Knowledge Base:

post-2020 framework include:

- 1) To bring at **least 30% of land and sea** under the world's **protected areas**.
- 2) A **50% greater reduction** in the rate of **introduction of invasive alien species**, and controls or eradication of such species to eliminate or reduce their impacts.
- 3) **Reducing nutrients lost** to the environment by at least half, and pesticides by at least two-thirds, and eliminating the discharge of plastic waste.
- 4) **Nature-based contributions** to global climate change mitigation efforts of at least 10 GtCO₂e (gigatonnes of equivalent carbon dioxide) per year.
- 5) A **\$200 billion increase** in international financial flows from all sources to developing countries.

Source: <https://www.thehindu.com/news/a-closer-look-at-the-reuters-institute-digital-news-report-2022/article65526579.ece>

<https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2022>

<https://blog.forumias.com/government-organises-a-dekhoapadesh-webinar-on-exploring-buddhist-circuit-by-train/>

<https://www.downtoearth.org.in/blog/wildlife-and-biodiversity/is-india-ready-for-post-2020-global-biodiversity-framework--83266#:~:text=The%20group%20will%20work%20on,to%20be%20achieved%20by%202030.>

<https://blog.forumias.com/global-biodiversity-framework-what-happened-in-nairobi/>

Q.26) With reference to powers and functions of Governor of a state, consider the following statements:

1. S/he appoints the Advocate General of respective state and determines his/her remuneration.
2. S/he decides on the question of disqualification of members of the state legislature in consultation with the State Election Commission.
3. S/he is consulted by the Chief Justice of India while appointing the judges of High Court of the concerned state.
4. S/he is the ex officio Chancellor of the state universities.

Which of the statements given above are correct?

- a) 2 and 4 only
- b) 1 and 3 only
- c) 1 and 4 only
- d) 1, 2 and 4 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: He appoints the advocate general of a state and determines his remuneration.

The advocate general holds office **during the pleasure of the governor.**

Statement 2 is incorrect: He decides on the question of disqualification of members of the state legislature in consultation with the Election Commission of India (not State Election Commission).

Statement 3 is incorrect: He is consulted by the President (Not Chief Justice of India) while appointing the judges of the concerned state's High Court.

Statement 4 is correct: The Governor of the state is the ex-officio chancellor of the State universities.

The Governor's powers and functions as the Chancellor are laid out in the statutes that govern the universities under a particular state government. While under the Central Universities Act, 2009, and other statutes, the **President of India shall be the Visitor of a central university.** Chancellors in central universities are titular heads, who are appointed by the President in his capacity as Visitor. The Vice-Chancellors too are appointed by the Visitor from panels of names picked by search and selection committees formed by the Union government.

Source: Laxmikanth chap 30

<https://indianexpress.com/article/explained/explained-kerala-row-governors-role-in-universities-7669572/>

Q.27) With reference to Proclamation of emergency under Article 352, consider the following statements:

1. Proclamation of Emergency must be revoked when either house of Parliament passes a resolution.
2. A resolution approving the proclamation of emergency must be passed by the simple majority of the Parliament.
3. Both the houses of the Parliament must approve the proclamation within a specified time period.

Which of the statements given above are **incorrect**?

- a) 1, 2 and 3
- b) 2 and 3 Only
- c) 1 and 3 Only
- d) 1 and 2 Only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: President must revoke a proclamation **if the Lok Sabha (Only) passes a resolution disapproving its continuation.** This safeguard was introduced by the 44th Amendment Act of 1978.

Statement 2 is incorrect: Every resolution approving the proclamation of emergency, or its **continuance must be passed by either House of Parliament by a special majority**, that is, majority of the total membership of that house, and a majority of not less than two-thirds of the members of that house present and voting

Statement 3 is correct: The proclamation of Emergency must be approved by both the Houses of Parliament **within one month from the date of its issue.** Originally, the period allowed for approval by the Parliament was two months but was reduced by the 44th Amendment Act of 1978.

Q.28) With reference to the effects of a National Emergency on Centre –State relations, consider the following statements:

1. The state government is automatically suspended.
2. President can issue ordinances on state subjects if Parliament is not in session.
3. The laws made by Parliament on the state subjects during a National Emergency continue to be operative till they are repealed by the respective state legislatures.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

While a proclamation of Emergency is in force, the normal fabric of the Centre–state relations undergoes a basic change. This can be studied under three heads, namely, **executive, legislative and financial.**

Statement 1 is incorrect: During a national emergency, the **executive power** of the Centre extends to directing any state regarding the manner in which its executive power is to be exercised. The Centre becomes entitled to give executive directions to a state on ‘any’ matter. Thus, the state governments are brought under the complete control of the Centre, **though they are not suspended.**

Statement 2 is correct: While a proclamation of national emergency is in operation, the President can issue ordinances on the state subjects also, if the Parliament is not in session.

Statement 3 is incorrect: The laws made by Parliament on the state subjects during a National Emergency **become inoperative six months after the emergency has ceased to operate.**

Q.29) Consider the following statements about various legal provisions regarding the state executive:

1. A Chief Minister convicted of any offence is disqualified from holding his office with immediate effect.
2. The Governor cannot retain a Minister in the Council of Ministers against the wishes of the Chief Minister.

3. The Governor can sanction the prosecution of Ministers under the Prevention of Corruption Act, 1988.

Which of the statements given above is/ are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 2 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Section 8 of the Representation of the People Act, 1951 provides for disqualification of Member of Parliament (MPs) and Member of Legislative Assembly (MLA) on conviction of certain offences. It classifies offences under different categories. Offences like promoting enmity among different groups on the grounds of religion, race, language etc. would lead to immediate disqualification if conviction results in imprisonment (irrespective of sentence period). On the other hand, there are grounds where disqualification provisions are attracted only if the sentence for imprisonment is for more than 6 months or 2 years. Hence, it is incorrect to say that conviction for any offence will lead to disqualification.

Statement 2 is correct: Though, a Minister in State Government holds office till the pleasure of the Governor. However, **practically it is not the discretion of the Governor and he is bound by the aid and advice of the Chief Minister in this regard.** The Chief Minister decides whom to retain and whom to oust. Thus, Governor cannot retain a minister against the wishes of the Chief Minister.

Statement 3 is correct: The Governor can sanction for the prosecution of the Minister but the proof for the same needs to be satisfactory. There are both kinds of cases when Governor has sanctioned prosecution, that is, **on the advice of the council of ministers as well as without such advice.** For example, in **M.P. Special Police Establishment vs. State of M.P., 2005**, Governor sanctioned for the prosecution of Chief Minister under the Prevention of Corruption Act **without the aid and advice of the Council of Ministers. Supreme Court upheld the validity of such decision of the Governor.**

Knowledge Base: The disqualification provisions under section 8 of Representation of People Act, 1951 can be classified under the following categories:

- 1) **Offences under section 8(1)** which deals with promoting enmity between different groups on the grounds of religion, race, place of birth, residence, language etc., offence of undue personation at an election, offences relating to rape, offences under Foreign Exchange Management Act (FEMA) etc. **and if convicted for imprisonment shall be disqualified with immediate effect**
- 2) **Offences under section 8(2)** like hoarding, profiteering, adulteration of food or drugs, under the provisions of Dowry Prohibition Act (1961) **shall be disqualified only if the imprisonment is for 6 months or more.**
- 3) **Offences under section 8(3) require imprisonment of at least 2 years for attracting disqualification provisions.** These include any sentence other than for offences related to section 8(1) and 8(2) above.

Source: [https://blog.ipleaders.in/the-state-executive-article-153-167-article-](https://blog.ipleaders.in/the-state-executive-article-153-167-article-213/#Can_the_Governor_sanction_for_Prosecution_of_Ministers_under_Corruption_Act)

[213/#Can_the_Governor_sanction_for_Prosecution_of_Ministers_under_Corruption_Act](https://indiankanoon.org/doc/1662686/)

<https://indiankanoon.org/doc/1662686/>

Q.30) Consider the following options with regards to the features of the Agni path Scheme:

1. The scheme is being implemented for the recruitment to commissioned as well as non-commissioned ranks in the armed forces of India.
2. The personnels recruited under this scheme can serve only for a maximum period of 2 years.
3. The recruits under this scheme are entitlement to gratuity and pensionary benefits.

Which of the above given statements is/are correct?

- a) 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) None of the above

Ans) d

Exp) Option d is the correct answer.

Recently, the government has unveiled **Agnipath scheme for recruiting soldiers across the Three services (Army, Navy and Airforce).**

Statement 1 is incorrect: The scheme is only for the recruitment of personnel below officer ranks (those who do not join the forces as commissioned officers).

Statement 2 is incorrect: The Agnipath Scheme allows patriotic and motivated youth to serve in the Armed Forces for a period of four years. Under this scheme, the youth joining the army will be called Agniveer. Youth will be able to be recruited into the army for a short duration. Under the new scheme, around 45,000 to 50,000 soldiers will be recruited annually, **and most will leave the service in just four years.** During this period of service to the nation, the Agniveers will be imparted with various military skills and experience, discipline, physical fitness, leadership qualities, courage and patriotism. Post this stint of four years, the Agniveers will be infused into the civil society where they can contribute immensely towards the nation building process.

Statement 3 is incorrect: There shall be no entitlement to gratuity and pensionary benefits to the Agniveers. Agniveers will be provided non-contributory Life Insurance Cover of Rs 48 lakh for the duration of their engagement period in the Indian Armed Forces. In **case of death, the payout will be over Rs 1 crore,** including pay for the unserved tenure. Upon the completion of the 4-years of service, **a one-time 'Seva Nidhi' package of Rs 11.71 lakhs will be paid to the Agniveers** that will include their accrued interest thereon.

Source: <https://www.pib.gov.in/PressReleaseDetailm.aspx?PRID=1833747>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1833747>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1834269>

Q.31) With reference to Groups of Ministers, which of the following statements is/are correct?

1. They are ad-hoc bodies constituted to look into different issues.
2. They are set up under the Government of India (Allocation of Business) Rules, 1961.
3. No Group of Ministers has been set up after 2014.

Select the correct answer using the code given below.

- a) 1 only
- b) 1 and 2 only
- c) 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

These are ad hoc bodies formed to give recommendations to the cabinet on certain emergent issues and critical problem areas.

Statement 1 is correct: Groups of Ministers are ad hoc bodies formed to give recommendations to the cabinet on certain emergent issues and critical problem areas. Ministers heading the concerned ministries are inducted into the relevant Group of Ministers and when the advice is crystallised, they are disbanded.

Statement 2 is incorrect: A Group of Ministers gets appointed under the Government of India's **Transaction of Business Rules, 1961 (not Government of India (Allocation of Business) Rules, 1961)**, which provides that 'Ad hoc Committees of Ministers including Group of Ministers may be appointed by the Cabinet, or by the Prime Minister for investigating & reporting to the Cabinet on such matters as may be specified.'

Statement 3 is incorrect: The present government abolished all ministerial groups in 2014 after coming into power. **However, the government again set up Group of Ministers in new form.** Now, in their new avatar, they are "informal" and issue-specific, constituted and dissolved on the basis of immediate requirements, without much paperwork. This has resulted in quicker decision making, and there are no elaborate mechanisms. **It means, Group of Ministers are formed even after 2014, which makes statement 3 incorrect.** For example, a **Group of Ministers chaired by the Home Minister** was convened to create greater synergy between ministries on the Juvenile Justice (Care and Protection of Children) Amendment Bill, 2018.

Source: https://www.business-standard.com/article/politics/goms-come-back-in-informal-avatar-116071800003_1.html

[https://arthapedia.in/index.php/Empowered_Group_of_Ministers_\(EGoM\)](https://arthapedia.in/index.php/Empowered_Group_of_Ministers_(EGoM))

Q.32) With reference to Articles 358 and 359 of the Constitution of India, consider the following statements:

1. Article 358 operates only when the Emergency is declared on the ground of armed rebellion.
2. Article 359 authorizes President to suspend Fundamental rights including those provided under Articles 20 and 21.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Articles 358 and 359 describe the effect of a National Emergency on the Fundamental Rights. Article 358 deals with the suspension of the Fundamental Rights guaranteed by Article 19, while Article 359 deals with the suspension of other Fundamental Rights (except those guaranteed by Articles 20 and 21).

Statement 1 is incorrect: Article 358 operates only in case of External Emergency (that is, when the emergency is declared on the grounds of war or external aggression) and not in the case of Internal Emergency (i.e., when the Emergency is declared on the ground of armed rebellion). Article 359, on the other hand, operates in case of both External Emergency as well as Internal Emergency.

Statement 2 is incorrect: Article 359 authorizes the president to suspend the right to move any court for the enforcement of Fundamental Rights during a National Emergency. This means that under Article 359, the Fundamental Rights as such are not suspended, but only their enforcement. The said rights are theoretically alive but the right to seek remedy is suspended. **Further, the 44 Amendment Act mandates that the President cannot suspend the right to move the court for the enforcement of Fundamental Rights guaranteed by Article 20 and 21.**

Q.33) "In India, there is no provision in the Constitution for the system of legal responsibility of a minister". What does the above given statement mean?

- a) Order of the President for a public act are not countersigned by a minister.
- b) Ministers are not responsible to the head of the state.

- c) No criminal cases can be initiated against the minister during the session of the house.
 d) Ministers are not collectively responsible to the Lok Sabha.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: In Britain, every order of the King for any public act is countersigned by a minister. If the order is in violation of any law, the minister would be held responsible and would be liable in the court. The legally accepted phrase in Britain is, "The king can do no wrong." Hence, he cannot be sued in any court. **Whereas in India, there is no provision in the Constitution for the system of legal responsibility of a minister. It means, it is not required that an order of the President for a public act should be countersigned by a minister.** Moreover, the courts are barred from enquiring into the nature of advice rendered by the ministers to the president.

Source: Lakshmikant Chap 20

Q.34) With reference to the effects of President's rule in India, consider the following statements:

1. The President can take powers vested in the Governor or any other executive authority in the state.
2. After the end of the President's rule, laws made by the President during the President's rule cannot be repealed or altered by the state legislature.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The President can take up the functions of the state government and powers vested in the governor or any other executive authority in the state.

Statement 2 is incorrect: A law made by the Parliament or President, or any other specified authority **continues to be operative even after the President's Rule.** This means that the period for which such a law remains in force is not coterminous with the duration of the proclamation. **But it can be repealed or altered or re-enacted by the state legislature.**

Source) Laxmikant Chapter 16

Q.35) Which among the following can be considered as Air Sports as per National Air Sport Policy 2022?

1. Aerobatics
2. Para Motoring
3. Skydiving
4. Ballooning
5. Amateur-built and experimental aircraft

Select the correct answer using the code given below:

- a) 1, 2 and 5 only
- b) 1, 2 and 3 only
- c) 3, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

Option 1, 2, 3, 4 and 5 are correct: Recently, the Ministry of Civil Aviation has launched National Air Sport Policy 2022 (NASP 2022). NASP 2022 lays out the vision of making India as one of the top sports nations by 2030, by providing a safe, affordable, accessible, enjoyable and sustainable air sports ecosystem in India.

The policy will cover the following air sports in India: -

- 1) **Aerobatics**
- 2) Aero modeling and model rocketry
- 3) **Amateur-built and experimental aircraft**
- 4) **Ballooning**
- 5) Drones
- 6) Gliding and powered gliding
- 7) Hang gliding and powered hang gliding
- 8) **Parachuting (including skydiving, BASE jumping and wing suits etc.)**
- 9) Paragliding and para motoring (including powered parachute trikes etc.)
- 10) Powered aircraft (including ultra-light, micro light and light sports aircraft etc.)
- 11) Rotorcraft (including autogyro)

India has the potential to be among the leading nations in the world of air sports. It has a large geographical expanse, diverse topography and fair-weather conditions.

Source: <https://indianexpress.com/article/explained/explained-india-new-policy-air-sports-civil-aviation-ministry-7964609/>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1831844>

Q.36) Which one of the following Articles of the Constitution of India was referred to as 'dead letter' by Dr. B R Ambedkar?

- a) Article 356
- b) Article 352
- c) Article 34
- d) Article 360

Ans) a

Exp) Option a is the correct answer.

Since 1950, the President's Rule has been imposed on more than 100 occasions, that is, on an average twice a year. Further, on a number of occasions, the President's Rule has been imposed in an arbitrary manner for political or personal reasons. Hence, Article 356 has become one of the most controversial and most criticised provision of the Constitution.

Dr BR Ambedkar, while replying to the critics of **Article 356 (President's rule)** provision in the Constituent Assembly, hoped that the drastic power conferred by Article 356 would remain a **dead-letter'** and would be used only as a measure of last resort. He also said, if the Centre is to interfere in the administration of provincial affairs, it must be under some obligation which the Constitution imposes upon the Centre. The proper thing we ought to expect is that **such Articles will never be called into operation and that they would remain a dead-letter.**

Q.37) With reference to the Vice-President of India, consider the following statements:

1. The office of the Indian Vice-President is modelled on the lines of the office of Canadian Vice-President.
2. A motion for the removal of Vice president can only be introduced in the Rajya Sabha.
3. The Open ballot system is followed for the election of the Vice-president.

Which of the statements given above is/are **incorrect**?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Vice-President occupies the second highest office in the country. He is accorded a rank next to the President in the official warrant of precedence.

Statement 1 is incorrect: The office of the Indian Vice-President is modelled on the lines of the American Vice-President (not Canadian Vice-President). He acts as the **ex-officio Chairman of Rajya Sabha**. In this respect, he resembles the American vice-president who also acts as the **Chairman of the Senate** - the Upper House of the American legislature. **However, there is a difference.** The American Vice-President succeeds to the presidency when it falls vacant, and remains President for the unexpired term of his predecessor. The Indian Vice-President, on the other hand, does not assume the office of the President when it falls vacant for the unexpired term. He merely serves as an acting President until the new President assumes charge.

Statement 2 is correct: The Vice-President can be removed from the office before completion of his term. A formal impeachment is not required for his removal. **He can be removed by a resolution passed by a majority of all the then members of the Rajya Sabha and agreed to by the Lok Sabha.** This means that this resolution should be passed in the Rajya Sabha by an effective majority and in the Lok Sabha by a simple majority. Further, **this resolution can be introduced only in the Rajya Sabha and not in the Lok Sabha.** But, no such resolution can be moved unless at least 14 days' advance notice has been given. Notably, no ground has been mentioned in the Constitution for his removal.

Statement 3 is incorrect: The Vice-President's election is like that of the President's election. It is held in accordance with the system of proportional representation by means of the single transferable vote and the **voting is by secret ballot (not by open ballot system).**

Source: Lakshmikant chap 18

Q.38) With reference to the Union Council of Ministers in India, which of the following statements is/are correct?

1. A minister cannot become a member of any of the Parliamentary Committee.
2. Every minister shall have the right to speak and take part in the proceedings of either House of Parliament irrespective of their membership in that house.
3. Prime Minister has disciplinary control over the members of the Council of Ministers.

Select the correct answer using the code given below.

- a) 2 and 3 only
- b) 1 only
- c) 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

As per Art. 74, there shall be a Council of Ministers with the Prime Minister at the head to aid and advise the President who shall, in the exercise of his functions, act in accordance with such advice.

Statement 1 is incorrect: A minister can become a member of some of the Parliamentary Committees.

Statement 2 is correct: A minister who is a member of one House of Parliament has the right to speak and to take part in the proceedings of the other House also.

Statement 3 is incorrect: Prime minister or a chief minister **does not have** disciplinary control over the members of the council of ministers and it is not possible at all times for them to take the whip whenever a disparaging statement is made by a minister.

Source: Lakshmikant Chap 20

<https://timesofindia.indiatimes.com/india/pm-cm-do-not-have-disciplinary-control-over-members-of-council-of-ministers-sc/articleshow/96719110.cms>

Q.39) In order to extend President's rule in a state beyond the period of one year, which of the following conditions must be satisfied?

1. A Proclamation of National Emergency is in operation in the whole or any part of the state.
2. The Election Commission certifies that elections cannot be conducted in the state on account of difficulties.
3. The state has been declared as a disturbed area by the Central Government.

Select the correct answer from the code given below:

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The 44th Amendment Act of 1978 introduced a new provision to put restraint on the power of Parliament to extend a proclamation of President's Rule beyond one year. Thus, it provided that, beyond one year, the President's Rule can be extended by six months at a time only when the following two conditions are fulfilled:

Statement 1 is correct: a proclamation of National Emergency should be in operation in the whole of India, or in the whole or any part of the state; and

Statement 2 is correct: The Election Commission must certify that the general elections to the legislative assembly of the concerned state cannot be held on account of difficulties.

Statement 3 is incorrect: 44th amendment act of 1978 provides only two conditions for extension of president's rule beyond one year of which **declaring state as a disturbed area (Done under Armed Force Special Power Act 1958) by the central Government is not a valid condition.**

Q.40) Consider the following statements:

1. In the Environment Performance Index-2022, India was ranked last among 180 countries.
2. In the QS World University Ranking 2023, there is no Indian institute among the top 100 institutions.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: In the recently released **Environment Performance Index-2022, India was at the bottom among 180 countries.** The Environment Performance Index (EPI) is an **international ranking**

system that measures environmental health and sustainability of countries. The EPI, a biennial index, was started in 2002 as Environmental Sustainability Index by the **World Economic Forum in collaboration with the Yale Center for Environmental Law and Policy and the Columbia University** Center for International Earth Science Information Network.

Statement 2 is correct: In the **QS World University Ranking 2023**, there is **no Indian institute among the top 100 institutions**. The 'QS World University Rankings' is an annual publication of university rankings which comprises the global overall and subject rankings. The highest ranking was achieved by IISc Bangalore at rank 155.

INDIA'S BEST		
Top Indian institutes in QS World University Rankings 2023		
2023	Institute	2022
155	IISc Bangalore	186
172	IIT Bombay	177
174	IIT Delhi	185
250	IIT Madras	255
264	IIT Kanpur	277
270	IIT Kharagpur	280
369	IIT Roorkee	400
384	IIT Guwahati	395

Source: <https://indianexpress.com/article/education/iisc-is-top-indian-university-in-global-rankings-overtakes-iits-7959729/>

<https://www.newindianexpress.com/nation/2022/jun/07/india-ranks-lowest-among-180-countries-in-environmental-performance-index-2462837.html>

<https://frontline.thehindu.com/dispatches/india-ranks-at-the-bottom-in-a-list-180-countries-in-the-2022-environmental-performance-index/article65497256.ece>

Q.41) Which of the following statements is/ are correct regarding the judicial powers of the Governor of a state?

1. He appoints the judges of the State High Court and the District Courts.
2. A death sentence given by a District Court must be confirmed by the Governor.

Select the correct answer from the codes given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: The appointment powers of Governor regarding various judicial positions are:

- 1) He makes appointments, postings and promotions of the **district judge** in consultation with the State High Court.
- 2) He appoints **persons to the judicial services of the state** (other than District Judge) in consultation with the State Public Service Commission (SPSC) and the state high court.

He does not make appointment of the High Court Judges. They are appointed by the President of India. However, while making such appointment, the Governor of the state is consulted by the President.

Statement 2 is incorrect: There is no provision pertaining to Governor's approval/ confirmation on the death sentence passed by a District Court. Instead, death sentence passed by the district court needs to be confirmed by the state High Court.

Source: M. Laxmikanth (Page 30.6, Chapter 30)

Q.42) With regard to the office of Governor, which of the following statements is/are correct?

1. No civil proceedings can be conducted against him during his term of office.
2. The oath of office of the Governor is administered by the President.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The Governor is the nominal head of a state, while the Chief Minister is the executive head. All executive actions of the state are taken in the name of the Governor.

Statement 1 is incorrect: The Governor is **immune from any criminal proceedings**, even in respect of his personal acts, during his term of office. He cannot be arrested or imprisoned. However, **civil proceedings can be instituted against the Governor** during his term of office in respect of his personal acts, **after giving two months' notice**. So, he is not **immune from any civil proceedings**.

Statement 2 is incorrect: The oath of office of the governor is administered by the **chief justice of the concerned state high court** and not by the president. In the absence of him, **the senior most judge of that court** is available.

Source: Laxmikanth 6th edition chapter-30 page- 30.4, 30.5

<https://www.elections.in/government/state-governor.html>

Q.43) With reference to effects of national emergency on Fundamental rights, consider the following statements:

During the period of national emergency:

1. Restrictions can be imposed on the freedom of press
2. A person can be arrested without fair trial
3. State can discriminate among the citizens
4. The writ of habeas corpus cannot be issued by the courts

How many of the statements given above are correct?

- a) Only one statement
- b) Only two statements
- c) Only three statements
- d) All the four statements

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: According to Article 358, when a proclamation of national emergency is made, the **six Fundamental Rights under Article 19 are automatically suspended. So, restrictions can be imposed on the freedom of press.**

Statement 2 is correct: Rights other than the right to protection in respect of conviction for offences (Article 20) and the right to life and personal liberty (Article 21) can be suspended. **Since fair trial is dealt with in article 22, its enforcement can be suspended by the state. Therefore, A person can be arrested without fair trial.**

Statement 3 is correct: Since equality is dealt with in Article 14, its enforcement can also be suspended by the state. Hence State can discriminate among the citizens.

Statement 4 is incorrect: The 44th Amendment, 1978, has provided that Article 21, relating to personal liberty cannot be suspended even during an emergency. In this way personal liberty has been strengthened and the writ of habeas corpus retains its potency even during an emergency.

Source: <https://www.legalserviceindia.com/legal/article-1328-habeas-corpus.html#:~:text=The%2044th%20Amendment%2C%201978%2C%20has,potency%20even%20during%20an%20emergency.>

Q.44) Consider the following statements regarding the election of the President of India:

1. To be elected as the President, the candidate needs to be qualified of becoming a member of the Lok Sabha.
2. A Member of Parliament can contest the election to become the President without resigning from his/her seat.
3. No President of India has been elected unopposed till now.

Which of the above given statements are **incorrect**?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Article 58 of Constitution of India suggests that No person shall be eligible for election as President unless he–

- 1) is a citizen of India,
- 2) has completed the age of thirty-five years, and
- 3) **is qualified for election as a member of the House of the People.**

Hence, to be elected as the President, the candidates need to be qualified to become a member of the Lok Sabha/House of People.

Statement 2 is correct: The President shall not be a member of either House of Parliament or of a House of the Legislature of any state and if any such member is elected President, **he shall be claimed to have vacated his seat in that House on the date on which he enters upon office as President. So, a Member of Parliament may contest for the election of president but he/she have to vacant his seat before he/she enters upon the office of President.**

Statement 3 is incorrect: Neelam Sanjeev Reddy is the only president to be elected unopposed till now. He was elected in 1977 for the post of President of India.

Source: <https://indianexpress.com/article/opinion/editorials/july-22-1977-forty-years-ago-president-reddy-4761688/>

<https://indianexpress.com/article/india/president-elect-murmu-first-tribal-woman-to-be-elected-to-highest-post-in-india-8044459/>

Laxmikanth Chapter 17 President

Q.45) Consider the following statements with reference to the Electric Vertical Take-off and Landing (eVTOL) Aircraft:

1. An eVTOL aircraft can use electric power to take off, and land but not hover.
2. India currently have no manufacturer producing eVTOL aircraft.
3. Most eVTOL use distributed electric propulsion technology.

Which of the above given statements is/are correct?

- a) 1 only
- b) 3 only
- c) 2 and 3 only
- d) 1 and 2 only

Ans) c

Exp) Option c is the correct answer.

The Government of India is exploring the possibility of inviting manufacturers of Electric Vertical Take-off and Landing (eVTOL) aircraft to set up base in India.

Statement 1 is incorrect: An eVTOL aircraft is **one that uses electric power take off, and land vertically. And it can also hover using the electrical power.** In order **to maximize efficiency**, and to also ensure safety, **there are multiple motors.** The eVTOL is one of the newer technologies and developments in the aerospace industry.

Statement 2 is correct: India **currently has no manufacturer producing eVTOL** aircraft and India is exploring the possibility of inviting manufacturers of eVTOL.

Statement 3 is correct: Most eVTOLs also use what is called as **distributed electric propulsion technology** which means integrating a complex propulsion system with the airframe. This is technology that has grown **on account of successes in electric propulsion based on progress in motor, battery, fuel cell and electronic controller technologies** and also fuelled by the need for new vehicle technology that ensures Urban Air Mobility.

Source: <https://www.thehindu.com/business/Industry/the-status-of-evtol-a-soon-to-be-reality/article65497139.ece#:~:text=The%20global%20market%20for%20eVTOLs,for%20new%20modes%20of%20transport.>

Q.46) With reference to National Emergency proclaimed under Article 352, consider the following statements:

1. President can proclaim a national emergency only after receiving a written recommendation from the Union Cabinet.
2. Emergency can be extended for an indefinite period with the approval of Parliament every six months.
3. No proclamation can be made when the Lok Sabha is dissolved.

Select the correct answer using the code given below.

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1 and 2 only

Ans) d

Exp) Option d is the correct answer.

Under **Article 352**, the President can declare a national emergency when the security of India or a part of it is threatened by **war or external aggression or armed rebellion**. When a national emergency is declared on the ground of **'war' or 'external aggression'**, it is known as an **'External Emergency'**. On the other hand, when it is declared on the ground of **'armed rebellion'**, it is known as an **'Internal Emergency'**.

Statement 1 is correct: The President, can proclaim a national emergency only after receiving a written recommendation from the cabinet. This means that the emergency can be declared only on the concurrence of the cabinet and not merely on the advice of the prime minister.

Statement 2 is correct: If approved by both the Houses of Parliament, the emergency continues **for six months** and can be **extended to an indefinite period** with the approval of the Parliament every six months. This provision for periodical parliamentary approval was also added by **the 44th Amendment Act of 1978**.

Statement 3 is incorrect: Proclamation can be made even when the Lok Sabha is dissolved provided the Rajya Sabha meantime approves it.

Q.47) Consider the following statements regarding ordinance making power of the President of India:

1. The ordinance issued by President cannot have a retrospective effect.
2. The President can issue an ordinance even when only one house of Parliament is not in session.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: An ordinance issued by President can be retrospective like any other legislation. It means it may come into force from a backdate. Hence the statement is incorrect.

Statement 2 is correct: The Presidents can promulgate an ordinance when both the houses of parliament are not in session and even when there is only one house is not in session as the laws in parliament can be passed by both houses of parliament and not by just one house.

Knowledge Base: Article 123 of the Constitution empowers the President to promulgate ordinances during the recess of Parliament. These ordinances have the same force and effect as an act of Parliament but are temporary laws. He can promulgate an ordinance only when both the Houses of Parliament are not in session and when either of the two Houses of Parliament is not in session.

Source: Laxmikanth Chapter 17 President

Q.48) With reference to the Constitution of India, consider the following statements:

1. Only the Prime Minister has to take the Oath of Secrecy and not the other ministers.
2. The Prime Minister holds office during the pleasure of the President.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Article 75 of the Indian Constitution mentions that a Prime Minister is one who is appointed by the President. Article 74(1) states that there shall be a Council of Ministers with a Prime Minister at the head to aid and advise the President.

Statement 1 is incorrect: Before the Prime Minister enters upon his office, the President administers to him the oaths of office and secrecy. **Oath of Office and Oath of Secrecy is also subscribed by other Union Ministers and the state ministers.**

Statement 2 is correct: The term of the **Prime Minister** is not fixed and he **holds office during the pleasure of the President**. However, this does not mean that the President can dismiss the Prime Minister at any

time. So long as the Prime Minister enjoys the majority support in the Lok Sabha, he cannot be dismissed by the President. However, if he loses the confidence of the Lok Sabha, he must resign or the President can dismiss him.

Source: Indian Polity by Laxmikant 6th Edition – Chapter 19 Prime Minister.

Q.49) With reference to the Electoral College constituted for the election of Vice-President, consider the following statements:

1. It consists of both elected and nominated members of both the Houses of Parliament.
2. It includes only the elected members of the state legislative assemblies.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The Vice-President of India is the second highest constitutional office in the country. He serves for a five-year term, but can continue to be in office, irrespective of the expiry of the term, until the successor assumes office.

The Vice-President is elected not directly by the people but by the method of indirect election.

Statement 1 is correct: The Vice-President is elected by the members of an electoral college consisting of the members of both Houses of Parliament. Thus, **both elected and nominated members of the Parliament participate** in the election of Vice-President.

Statement 2 is incorrect: The Electoral College constituted for the purpose of election of Vice - President **does not include the members of the state legislative assemblies.**

Source: Indian Polity, M. Laxmikanth, 6th Edition, Chapter-18, Vice-President

Q.50) Which of the following statements correctly explains the “Theri desert”?

- a) It refers to productive cropland that has turned into desert due to large scale deforestation.
- b) These are semi-arid areas that border deserts and are unproductive.
- c) These are cold deserts that are increasing in the Ladakh area due to long winters.
- d) It is small desert consisting of red sand dunes in Tamil Nadu.

Ans) d

Exp) Option d is the correct answer.

Option d is correct: Theri desert is a small desert situated in the state of **Tamil Nadu**. It consists of **red sand dunes and is confined to Thoothukudi district**. The red dunes are called Theri in Tamil. They consist of sediments dating back to the **Quaternary Period** and are made of **marine deposits**. They have very low water and nutrient retention capacity. The dunes are susceptible to aerodynamic lifts. This is the push that lets something move up. It is the force that is the opposite of weight.

Source: <https://www.downtoearth.org.in/blog/environment/there-is-a-desert-in-tamil-nadu-and-the-dunes-are-red-83320>

Q.1) Consider the following statements:

1. District Magistrate is authorized to provide certificate of identity for transgender person.
2. Kerala is the first state in the country to provide one per cent reservation for the 'transgender' community in all the government services.
3. The Supreme Court in NALSA vs Union of India ruled that transgender people should be recognized as a third gender.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 3 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct. The District Magistrate shall issue to the applicant a certificate of identity, indicating the gender of such person as transgender.

Statement 2 is incorrect. Karnataka has become the first state in the country to provide one per cent reservation for the 'transgender' community in all the government services.

Statement 3 is correct. In 2014, the Indian Supreme Court in NALSA vs Union of India ruled that transgender people should be recognized as a third gender and enjoy all fundamental rights, while also being entitled to specific benefits in education and employment.

Source: <https://www.news18.com/news/india/karnataka-becomes-first-state-to-provide-1-reservation-for-transgenders-3988571.html>

<https://socialjustice.nic.in/writereaddata/UploadFile/drafrule1604.pdf>

<https://www.hrw.org/news/2019/12/05/indias-transgender-rights-law-isnt-worth-celebrating>

Q.2) Consider the following statements regarding Gram Panchayat Development Plan (GPDP):

1. The Article 243G of the Indian Constitution provides for local level planning.
2. It brings together both the citizens and their elected representatives in the decentralized planning process.
3. It is conducted by Panchayats every year across the country under the People's Plan Campaign (PPC).

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Article 243G of the Constitution provides that the Legislature of a State may provide for the devolution of powers and responsibilities upon Panchayats with respect to the preparation of local plans for economic development and social justice. The local bodies (GPs) play a significant role in the effective implementation of flagship schemes on subjects of national importance, for transformation of rural India. In terms of above constitutional mandate, Gram Panchayats have been preparing Gram Panchayat Development Plan (GPDP).

Statement 2 is correct: Gram Panchayat Development Plan (GPDP) brings together both the citizens and their elected representatives in the decentralized planning processes. GPDP intends to reflect the development issues, perceived needs and priorities of the community, including that of the marginalized

sections. Apart from the demand related to basic infrastructure and services, resource development and convergence of departmental schemes, GPDP has potential to address the social issues.

Statement 3 is correct: GPDP is conducted from 2nd October to 31st January (earlier was conducted from 2nd October to 31st December), every year across the country, under the People's Plan Campaign (PPC) organised by Ministry of Panchayati Raj.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1652653>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1783869>

Q.3) With reference to local government in India, consider the following statements:

1. The Subject of 'Local Government' is mentioned in the Concurrent List of the Seventh Schedule of Indian Constitution.
2. The issue of any financial irregularities at the Panchayat level is the responsibility of the concerned state government.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: "Local Government" is a state subject mentioned in the State list of Seventh Schedule of Constitution of India. The entry 5 of the State List reads: "5. Local government, that is to say, the constitution and powers of municipal corporations, improvement trusts, districts boards, mining settlement authorities and other local authorities for the purpose of local self-government or village administration."

Statement 2 is correct: The Panchayats are setup and operated through the respective State Panchayati Raj Acts. Accordingly, **Panchayats are primarily the responsibility of concerned State Governments and appropriate actions on complaints relating to all issues of Panchayats including financial irregularities is the responsibility of State Governments.** Any references of complaints against Panchayats including financial irregularities received in the Ministry of Panchayati Raj are duly forwarded to the concern State Government for necessary action. Ministry does not maintain records of follow up action taken by the States on such complaints.

Source: Questions : Lok Sabha

Q.4) With reference to different types of municipal personnel systems in India, consider the following pairs:

Types of Municipal Personnel System	Feature/ description
1. Separate Personnel System	State government appoints, administers, and controls municipal personnel for every local body.
2. United Personnel System	Personnel are transferable between the local bodies in the state.
3. Integrated Personnel System	Each local body appoints, administers, and controls its own personnel

Which of the pairs given above is/are correctly matched?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) None of the Above

Ans) b

Exp) Option b is the correct answer.

There are three types of municipal personnel systems in India. The personnel working in the urban governments may belong to any one or all the three types. These are Separate Personnel System, United Personnel System, Integrated Personnel System.

Pair 1 is incorrectly matched: Under Separate Personnel System, **each local body appoints, administers, and controls its own personnel.** They are not transferable to other local bodies. It is the most widely prevalent system. This system upholds the principle of local autonomy and promotes undivided loyalty.

Pair 2 is correctly matched: Under United Personnel System, the **state government appoints, administers, and controls the municipal personnel.** In other words, state-wise services (cadres) are created for all the urban bodies in the state. They are transferable between the local bodies in the state. This system is prevalent in Andhra Pradesh, Tamil Nadu, Uttar Pradesh, Rajasthan, and Madhya Pradesh and so on.

Pair 3 is incorrectly matched: Under Integrated Personnel System, the **personnel of the state government and those of the local bodies form part of the same service.** In other words, the municipal personnel are the members of the state services.

They are transferable not only between the local bodies in the state but also between local bodies and departments of state government. Thus, there is no distinction between local civil service and state civil service. This system is prevalent in Orissa, Bihar, Karnataka, Punjab, Haryana and others.

Source: Indian Administration- Rajni Goyal

Q.5) With reference to “Right to be Forgotten” in the context of data privacy, consider the following statements:

1. It means the right of individuals to restrict the usage of their data but not the right to remove his/her data from the internet.
2. The right was recognised as an intrinsic part of “Right to Privacy” by the Supreme court in the Puttaswamy case.
3. Currently, India has no law which recognises the “Right to be Forgotten”.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Right to be forgotten is guided by the principle of making individuals the owner of their data. It gives individuals the power to direct data fiduciaries with respect to usage of their data. Right to be forgotten was first recognised by the European Union in 2014 itself, as the result of a ruling by the European Court of Justice.

Statement 1 is incorrect: The right to be forgotten allows a person to **seek deletion of private information from the internet**. So, it is not restricted to individual’s right to seek restricted use of their data but also full control over their data.

Statement 2 is correct: Right to be forgotten was recognised as an **intrinsic part of “Right to Privacy”** by the Supreme court in the **Puttaswamy case**. The Supreme court in 2017, struck down the provision in Aadhar act 2016 which allowed Unique Identification Authority of India (**UIDAI**) **retain Adhar metadata for five years** and ruled that metadata cannot be stored for more than 6 months.

Statement 3 is correct: It is true that in India, currently **there is no law that recognises the Right to be Forgotten**. The **Personal Data Protection Bill** which is yet to become an act, does not explicitly mention the "right to be forgotten" however the bill **subsumed the right to be forgotten under the right to erasure** wherein a data principal can ask for **erasure or correction of their personal data**.

Source: <https://www.firstpost.com/india/explained-right-to-be-forgotten-what-is-it-how-has-the-sc-expanded-it-10955091.html>

<https://www.livelaw.in/columns/digital-data-protection-bill-personal-data-protection-bill-pdp-bill-ministry-of-electronics-and-information-technology-rti-act-216722#:~:text=%22right%20to%20be%20forgotten%22>

Q.6) Consider the following statements with reference to the special provisions for Nagaland under Article 371-A of the Constitution:

1. The Governor of Nagaland has the responsibility for maintaining law and order in the state.
2. The parliamentary laws dealing with the ownership and transfer of land do not apply to Nagaland unless consent is given by the state’s Governor.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The **Article 371-A** for special provisions about Nagaland was **added** by the **13th Constitutional Amendment Act of 1962**.

Statement 1 is correct: The **Governor of Nagaland has special responsibility for law and order** in the state so long as internal disturbances caused by the hostile Nagas continue. In the discharge of this responsibility, the Governor, after consulting the Council of Ministers, exercises his individual judgement and his decision is final. This special responsibility of the Governor ceases as and when the President so directs.

Statement 2 is incorrect: The **Acts of Parliament relating to the following matters do not apply to Nagaland unless the State Legislative Assembly decides: (Not the Governor)**

- 1) religious or social practices of the Nagas;
- 2) Naga customary law and procedure;
- 3) **administration of civil and criminal justice involving decision according to Naga customary law; and**
- 4) ownership and transfer of land and its resources.

Source: Indian Polity by Laxmikanth, 6th Edition, Chapter-37

Q.7) Panchayats in India receives funds from which of the following sources?

1. Allocations for specific programs under Centrally Sponsored Schemes
2. Revenue collections from taxes on land, water and certain other services
3. Funds from Central Bank in form of Gram Development Grant
4. Grants from the Union Government based on the recommendation of Finance Commission
5. Devolution from the State Government in accordance with Article 243

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 4 and 5 only

Ans) d

Exp) Option d is the correct answer.

In India, the Panchayati Raj is now a governance system in which Gram Panchayats are the basic units of local administration. Gram Panchayat (village level), Mandal Parishad or Block Samiti or Panchayat Samiti (block level), and Zila Parishad (district level) are the three levels of the system. The true strength of these institutions in terms of autonomy and efficiency is dependent on their financial position (including their capacity to generate their own resources).

Option 1 is correct: Under the Centrally Sponsored Schemes (CSS), the **central government provides funds to Panchayats for specific programs in areas such as health, education, rural development, sanitation, and others**. The central government usually funds 60% to 90% of the cost of these programs, while the remaining cost is borne by the state government or the Panchayats themselves.

Option 2 is correct: Panchayats also **generate revenue by collecting taxes on land, water, and other services such as sanitation, street lighting, and others**. The revenue collected is used for the maintenance and development of the local infrastructure and services.

For example, Panchayats in rural areas collect property tax from landowners based on the size of the landholding.

Option 3 is incorrect: There is **no provision for the Central Bank to provide funds to the panchayats** in the form of a Gram Development Grant.

Option 4 is correct: The Finance Commission recommends the **grants to be given by the central government to Panchayats**. The grants are given to Panchayats for the development of infrastructure, service delivery, and capacity building.

For example, the 14th Finance Commission recommended that Panchayats should receive 2.87 lakh crore rupees in grants for the period from 2015-16 to 2019-20

Option 5 is correct: According to **Article 243 of the Constitution of India, the State Government is required to devolve funds to Panchayats for the implementation** of various programs and functions.

For example, Panchayats in Andhra Pradesh receive devolution funds from the State Government for the implementation of programs such as the MGNREGA, National Rural Livelihood Mission, and Swachh Bharat Mission.

Source: Laxmikanth

Q.8) Which of the following are the correct objectives of SVAMITVA Yojana launched by Ministry of Panchayati Raj?

1. To enable citizens in rural areas to use their property as a financial asset for taking loans.
2. To largely reduce the dependency of Panchayati system on state government funding
3. To create accurate land records for rural planning
4. To educate elected representatives of Panchayati Raj institution on governance matters

Select the correct answer using the codes given below:

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 2, 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

SVAMITVA (Survey of Villages and Mapping with Improved Technology in Village Areas) scheme is a collaborative effort of the Ministry of Panchayati Raj, State Panchayati Raj Departments, State Revenue Departments and Survey of India.

Statement 1 and 3 are correct: The scheme seeks to achieve the following objectives: -

- 1) To bring financial stability to the citizens in rural India by **enabling them to use their property as a financial asset for taking loans and other financial benefits**.
- 2) **Creation of accurate land records for rural planning**.
- 3) Determination of property tax, which would accrue to the GPs directly in States where it is devolved or else, add to the State exchequer.
- 4) Creation of survey infrastructure and GIS maps that can be leveraged by any department for their use.
- 5) To support in preparation of better-quality Gram Panchayat Development Plan (GPDP) by making use of GIS maps.
- 6) To reduce property related disputes and legal cases.

Statement 2 and 4 are incorrect: Reducing the dependency of Panchayati system on government funding and educating elected representatives of Panchayati Raj institution on governance matters **are not mentioned as an objective of the SVAMITVA Yojana**.

Source: FRAMEWORK FOR IMPLEMENTATION OF SCHEME (panchayat.gov.in)

Q.9) Which of the following statements regarding the dissolution of urban local bodies is/are correct?

1. If a municipality is dissolved before completion of its full term, then the new municipality reconstituted does not enjoy a full term of five years.

2. After dissolution, it is not necessary to hold an election for a new municipality if the remainder of the period, for which dissolved municipality would have reconstituted, is less than 6 months.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: If a **municipality is dissolved earlier than the completion of its full term**, then it is mandatory according to 74th Constitutional Amendment Act to have a new municipality reconstituted. And a municipality thus made, **does not enjoy full term**, rather it exists only the remainder of the original term of the prematurely dissolved municipality. This is unlike state legislatures and Lok Sabha, where reconstituted House after the premature dissolution of the previous one, enjoys full term.

Statement 2 is correct: All municipalities are to have a fixed term of 5 years, subject to premature dissolution if required. But, where the remainder of the period (for which the dissolved municipality would have continued) is **less than six months**, it shall **not be necessary to hold any election** for constituting the new municipality for such period.

Source: Polity by Laxmikanth, 5th edition, Ch-39

Q.10) With reference to Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), consider the following statements:

- 1. It is a United Nations body.
- 2. India is one of the founding members of IPBES.
- 3. The Economics of Ecosystems and Biodiversity (TEEB) is an initiative recently launched by IPBES.

Which of the statement/s given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is an independent intergovernmental body established by States to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity.

Statement 1 is incorrect: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is **not a United Nations body** and it was established in **Panama City in 2012 by 94 Governments**. At the request of the IPBES and with the authorization of the UNEP Governing Council, the United Nations Environment Programme (UNEP) provides secretariat services to IPBES.

Statement 2 is correct: It is true that **India is one of the founding members of** Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) i.e, India has been a **member of IPBES since its inception in 2012**. All Members of the United Nations are eligible for IPBES membership.

Statement 3 is incorrect: **The Economics of Ecosystems and Biodiversity (TEEB) was launched by the United Nations Environment Programme (UNEP) (not IPEBS)** to make nature's values visible. The objective of TEEB is to mainstream the values of biodiversity and ecosystem services into decision-making at all levels and to demonstrate the economic benefits of biodiversity among decision makers of the nation.

Source: <https://ipbes.net/about>

<https://ipbes.net/members-observers?initial=I>

<https://www.unep.org/explore-topics/green-economy/what-we-do/economics-ecosystems-and-biodiversity>

Q.11) The 11th Schedule of Indian constitution specifies the powers, authority and responsibilities of Panchayats. It has listed 29 matters which falls under purview of the Panchayats. Which of the following are the matters mentioned under the 11th Schedule?

1. Fisheries
2. Adult and non-formal education
3. Non-conventional energy sources
4. Family welfare
5. Fire Services

Select the correct answer using the codes given below:

- a) 1, 2 and 5 only
- b) 3, 4 and 5 only
- c) 1, 2, 3 and 4 only
- d) 1, 2, 3, 4 and 5

Ans) c

Exp) Option c is the correct answer.

The 73rd Amendment Act, 1992 has added a new Part-IX to the Constitution of India. This part is entitled as 'The Panchayats' and consists of provisions from Articles 243 to 243 O. In addition, the act has also added a new Eleventh Schedule to the Constitution. This schedule contains 29 functional items of the panchayats. It contains 29 functional items placed within the purview of panchayats. Some of which are-

- 1) Agriculture, including agricultural extension
- 2) Land improvement, implementation of land reforms, land consolidation and soil conservation
- 3) Minor irrigation, water management and watershed development
- 4) Animal husbandry, dairying and poultry
- 5) **Fisheries- Option 1 is correct**
- 6) **Non-conventional energy sources- Option 3 is correct**
- 7) **Adult and non-formal education- Option 2 is correct.**
- 8) **Family welfare- Option 4 is correct.**
- 9) Maintenance of community assets.

Statement 5 is incorrect: Fire Services is not included in the 11th schedule. This subject matter is instead mentioned in the 12th schedule of the Indian Constitution.

Source: Indian Polity by M Laxmikant chapter 38 and 39

Q.12) With reference to panchayats in India, consider the following statements:

1. A state having a population below 20 lakhs may not constitute panchayats at the intermediate level.
2. The provision relating to the reservation of seats in panchayats for the Scheduled Castes is not applicable to Arunachal Pradesh.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. A state having a population **below 20 lakhs** may not constitute panchayats at the intermediate level. The Panchayati Raj act provides for a **three-tier system** of Panchayati raj in every state, that is, panchayats at the village, intermediate, and district levels. However, a state having a population not exceeding 20 lakhs may not constitute panchayats at the intermediate level.

Statement 2 is correct. The provision relating to the **reservation** of seats in panchayats (both members and chairpersons) for the **scheduled castes** is **not applicable** to the state of Arunachal Pradesh. This is because the state is inhabited fully by indigenous tribal people and there are no scheduled castes. This provision was added later by the **83rd Constitutional Amendment** Act of 2000.

Source: Indian polity by M. Laxmikanth chapter 38 Panchayati Raj

Q.13) With reference to the practice of begging in India, consider the following statements.

1. It is a subject matter which comes under the concurrent list of the Constitution.
2. It is banned under various state laws which are modified version of a central law enacted by the parliament.
3. A child being forced to beg is an offence under the Juvenile Justice Act.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Despite of India's rapid economic growth, begging as a social problem has existed in our society since inception of human civilization and still persists even after our government intended to abolish it by taking lot of measures and bringing in legislations.

Statement 1 is incorrect. Begging is a state subject, and there isn't a central law governing this. As per the 7th Schedule of the Constitution of India and under serial no. 9 of State List, the subject matter of "**Relief of the disabled and unemployable**" comes under the purview of State List. The States are responsible for taking necessary preventive and rehabilitative steps.

Statement 2 is incorrect. India has no central law on begging and destitution. As many as 20 States and 2 Union Territories have either enacted their own Anti-Beggary Legislation or adopted legislations enacted by other States/UTs. i.e., the Bombay Prevention of Begging Act, 1959, which carries a penalty of detention of three to 10 years in beggar homes.

Statement 3 is correct. The Juvenile Justice (Care and Protection of Children) Act, 2015 is the primary law for children in the country. As per the law, **whoever employs** or uses any child for the **purpose of begging** or causes any child to beg shall be **punishable** with imprisonment for a term which may extend to **five years** and shall also be liable to fine of **one lakh rupees**.

Source: <https://www.legalserviceindia.com/legal/article-1367-beggary-laws-in-india-a-constitutional-analysis.html>

<https://www.hindustantimes.com/editorials/the-supreme-court-is-right-on-begging-101627471711972.html#:~:text=India%20has%20no%20federal%20law,10%20years%20in%20beggar%20homes.>

<https://pib.gov.in/Pressreleaseshare.aspx?PRID=1564072>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1697420#:~:text=As%20per%20Section%2076%20of,fine%20of%20one%20lakh%20rupees.>

Q.14) Consider the following pairs with reference to Urban Local Bodies:

Types of Urban Local Bodies	Description
1. Notified Area Committee	Created for administration of fast developing town due to industrialization
2. Town Area Committee	Established by large public sector enterprises
3. Township	Created by State Government for administration of a small town
4. Port Trust	It is created by an Act of Parliament

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All the four pairs

Ans) b

Exp) Option b is the correct answer.

In total, 8 types of urban local bodies are created in India for administration of urban areas, few of which are discussed below:

Pair 1 is correctly matched: A notified area committee is created for the administration of two types of areas—a fast developing town due to industrialisation, and a town which does not yet fulfil all the conditions necessary for the constitution of a municipality, but which otherwise is considered important by the state government. Since it is established by a notification in the government gazette, it is called as notified area committee. Its powers are almost equivalent to those of a municipality. But unlike the municipality, it is an entirely nominated body, that is, all the members of a notified area committee including the chairman are nominated by the state government. Thus, it is neither an elected body nor a statutory body.

Pair 2 is incorrectly matched: A town area committee is set up for the administration of a small town. It is a semi municipal authority and is entrusted with a limited number of civic functions like drainage, roads, street lighting, and conservancy. It is created by a separate act of a state legislature. It may be wholly elected or wholly nominated by the state government or partly elected and partly nominated.

Pair 3 is incorrectly matched: Township is established by the large public enterprises to provide civic amenities to its staff and workers who live in the housing colonies built near the plant. It is an extension of the bureaucratic structure of the enterprises.

Pair 4 is correctly matched: The port trusts are established in the port areas like Mumbai, Kolkata, Chennai and so on for two purposes: (a) to manage and protect the ports; and (b) to provide civic amenities. A port trust is created by an **Act of Parliament**. It consists of both elected and nominated members. Its chairman is an official. Its civic functions are more or less similar to those of a municipality.

Source: Indian Polity by M Laxmikant chapter 39

Q.15) With reference to Capacity Building Commission (CBC), consider the following statements:

1. It is a statutory body established under the All India Civil Services Act, 1951.
2. It exercises functional supervision over all Central Training Institutions.
3. It provides financial support for central government departments based on their capacity building plans.

Which of the statement/s given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Capacity building commission was set up by the Government of India under Mission Karmayogi. Mission Karmayogi aims to prepare the Indian Civil Servant for the future by making him more creative, constructive, imaginative, innovative, proactive, progressive, energetic, enabling, transparent and technology-enabled.

Statement 1 is incorrect: The Capacity Building Commission is **not a statutory body, rather it was created through executive resolution in 2021**. Capacity Building Commission acts as the custodian of the civil services capacity building ecosystem and plays a major role in enhancing capacity among the civil servants.

Statement 2 is correct: It is true that the **capacity building commission exercises functional supervision over all Central Training Institutions**. Further it undertakes an audit of Human Resources in Government and outcomes of the Capacity Building efforts of the Government of India.

Statement 3 is incorrect: **Capacity building commission has no such financial power, it only provides technical support** and helps departments or ministries to develop their annual **Capacity Building Plans**. Further the commission organises a global human resource summit to bring best practices of human resource management to the governance in India.

Source: <https://cbc.gov.in/cbc-functions.html>

Q.16) Consider the following statements regarding 74th Constitutional Amendment Act, 1992:

1. Member of Lok Sabha from the respective area can be given representation in the municipality.
2. It provides for the reservation of not less than one-third of the total number of seats in municipality for women.
3. It has a mandatory provision of direct election for the position of the chairperson of a municipality.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 2 only

Ans) b

Exp) Option b is the correct answer.

74th Constitutional Amendment Act, 1992 has added new part- IX-A to the Indian Constitution with its title as 'The Municipalities'. It has given constitutional status to the municipalities. It consists of provisions from Articles 243-P to 243-ZG in the Indian Constitution. In addition, the act has also added a new Twelfth Schedule to the Constitution.

Statement 1 is correct: The constitution has delegated some powers regarding the composition of the municipalities to the state legislatures as voluntary powers. One of these is regarding **representation to people elected as members to Lok Sabha from constituencies falling wholly or partially in a municipal**

area. They may be provided representation depending on the provisions of the State Municipal Act, and so it differs from state to state.

Statement 2 is correct: The act provides for the reservation of seats for the scheduled castes and the scheduled tribes in every municipality in proportion of their population to the total population in the municipal area. Further, **it provides for the reservation of not less than one-third of the total number of seats for women (including the number of seats reserved for woman belonging to the SCs and the STs).**

Statement 3 is incorrect: The 74th Amendment Act, 1992 states that the state legislature may provide the manner of election of the chairperson of a municipality.

Source: Indian Polity by M Laxmikant Chapter 39

Q.17) Consider the following statements regarding the Cantonment Board in India:

1. It works under the administrative control of the Ministry of Home Affairs.
2. It consists of partly elected and partly nominated members.
3. The executive officer of the cantonment board is appointed by the President of India.
4. The president of the board is elected by the elected members from amongst themselves for a term of five years.

Which of the statements given above are correct?

- a) 2 and 3 only
- b) 3 and 4 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

A cantonment board is established for municipal administration for civilian population in the cantonment area. It is set up under the Cantonments Act of 2006—a legislation enacted by the Central government.

Statement 1 is incorrect:

Cantonment Board works under the administrative control of the Defense Ministry of the Central government. Unlike the other types of urban local bodies (Ex. Town area Committee, Notified Area Committee), created and administered by the state government, a cantonment board is created and administered by the Central government.

Statement 2 is correct: A cantonment board consists of partly elected and partly nominated members. The elected members hold office for a term of five years while the nominated members (i.e., ex-officio members) continue so long as they hold the office in that station.

Statement 3 is correct: The executive officer of the cantonment board is appointed by the President of India. He implements all the resolutions and decisions of the board and its committees. He belongs to the central cadre established for the purpose.

Statement 4 is incorrect: The military officer commanding the station is the ex-officio president of the board and presides over its meetings. The nominated members (i.e., ex-officio members) continue so long as they hold the office in that station. The vice-president of the board is elected by the elected members from amongst themselves for a term of five years..

Knowledge Base: The Category I cantonment board consists of the following members:

- 1) A military officer commanding the station
- 2) An executive engineer in the cantonment
- 3) A health officer in the cantonment
- 4) A first class magistrate nominated by the district magistrate
- 5) Three military officers nominated by the officer commanding the station
- 6) Eight members elected by the people of the cantonment area
- 7) Chief Executive Officer of the cantonment board

Source: Indian Polity by M Laxmikant, Chapter 39

Q.18) With reference to Fifth Schedule of the Constitution of India, consider the following statements:

1. Only the Governor can declare an area as Schedule Area in a State under the Fifth Schedule of the Constitution.
2. As per the Constitution, provisions related to the Panchayats as well as Municipalities do not apply to the Fifth Scheduled Areas until Parliament makes a law regarding the same.
3. Any amendment to the Fifth Schedule requires a Constitutional amendment under Article 368 of the Constitution.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 2 only
- c) 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Article 244 in Part X of the Constitution envisages a special system of administration for certain areas designated as scheduled areas and tribal areas. **Fifth Schedule** of the Constitution of India deals with provisions relating to the **administration and control of scheduled areas and scheduled tribes**.

Statement 1 is incorrect: The President of India (not Governor of the State) **declares an area as scheduled area in a state** under the fifth schedule for **any states except in four states of Assam, Meghalaya, Tripura and Mizoram** which are covered under **the Sixth schedule**.

Statement 2 is correct: Article 243M and Article 243 ZC of the constitution of India **exempted Scheduled Areas** declared under fifth schedule from the scope of applicability of provisions related to the **Panchayats (Part IX) and Municipalities (Part IXA) respectively**. However, this Article (243M & 243 ZC) allows Parliament by law to extend Part IX and IXA to scheduled areas with certain exceptions and modifications. Accordingly, the Parliament enacted the **Panchayats Extension to Scheduled Areas (PESA) Act, 1996** to provide for the **extension of the provisions of Part IX** of the Constitution relating to the Panchayats to the Scheduled Areas.

Statement 3 is incorrect: Any change in provisions mentioned in the fifth schedule can be amended by Parliament by simple majority and falls outside scope of Article 368.

Source: Lamikanath - Scheduled and Tribal Areas

Q.19) With reference to Tribes Advisory Council (TAC) under the provisions of Fifth Schedule of Constitution of India, consider the following statements:

1. It is a constitutional body established to advise the state government on the advancement of the Scheduled Tribes in Scheduled areas.
2. It must be established in all states having Scheduled Areas, declared under the Fifth Schedule.
3. Only the Members of the State Legislative Assembly belonging to Scheduled Tribes can become a member of such Council.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

So far, Tribes Advisory Council (TAC) have been constituted in **all ten states having Scheduled Areas declared under fifth schedule** of the constitution namely Andhra Pradesh, Telangana, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha and Rajasthan. Hence there is **no State (mandated to establish TAC), which has not constituted TAC.**

Statement 1 is correct: Tribes advisory council (TAC) is a Constitutional body as it was established under the Article 244 of the Constitution of India. The fifth schedule of the constitution provides for the establishment of **Tribes Advisory Council (TAC) to advise the state government on welfare and advancement of the scheduled tribes in Scheduled Areas.**

Statement 2 is correct: The fifth schedule of the constitution mandates establishment of the Tribes Advisory Councils (TAC) **in all States having Scheduled Areas** declared under the fifth schedule of the constitution. **Further the states which have no notified scheduled area can also be directed by the President to establish TAC.** For instance, **West Bengal, Tamil Nadu and Uttarakhand** not having any notified Scheduled Area have TAC.

Statement 3 is incorrect: Tribes Advisory Council will be made of maximum 20 members out of which **3/4th of the members will have to be a Member of the State Legislative Assembly** belonging to the Scheduled Tribes community. The Constitution (fifth schedule) states that if the number of representatives of STs in State Assembly is less than number of seats in TAC to be filled by such representatives, **remaining seats shall be filled by other members of those tribes** which means **TAC can include those members who is not a ST MLA in state.**

Source: Laxmikanth - Scheduled and Tribal Areas

<https://pib.gov.in/PressReleasePage.aspx?PRID=1778540#:~:text=According%20to%20the%20provisions%20of,Tribes%20but%20not%20Scheduled%20Areas>

Q.20) With reference to “Family Courts” in India, consider the following statements:

1. They can be established by states in consultation with respective high courts.
2. They can be established in cities having a million plus population.
3. Only the Supreme court and High courts have the power to reduce the jurisdiction of family courts.
4. Domestic Violence Act of 2005 prohibits family courts to entertain cases related to domestic violence against women.

Which of the statements given above is/are correct?

- a) 1,2 and 3 only
- b) 1 and 2 only
- c) 2,3 and 4 only
- d) 4 only

Ans) b

Exp) Option b is the correct answer.

Family courts have been created in India mainly for rapid and safe settlement in the disputes arising in family, marriage and other family matters. Recently the **Family Courts (Amendment) Bill, 2022** was passed by the Parliament to establish family courts in **Himachal Pradesh and Nagaland.**

Statement 1 is correct: The Family Courts Act, 1984 states that the **State government can establish family courts after consultation with the High Court.** Also, the State government appoints the judges of the family court after consultation with the High court.

Statement 2 is correct: The Family Courts Act, 1984 empowers the state government to establish the Family Court in every area of the **state where the population is exceeding 1 million or in the area where the State government deems necessary.**

Statement 3 is incorrect: State governments after consultation with respective high courts can limit the jurisdiction of family court. The State government can **reduce, increase, or alter** the limits of the jurisdiction of the Family Court.

Statement 4 is incorrect: The Protection of Women from **Domestic Violence Act, 2005** states that the aggrieved person can **approach family court to seek reliefs**. It is to be noted here that the **Family courts act, 1984** has **not specifically mentioned** the jurisdiction of the family court in matters of domestic violence. Source: <https://indianexpress.com/article/india/lok-sabha-passes-family-courts-bill-8053601/>
https://blog.ipleaders.in/types-cases-addressed-family-courts/#Establishment_of_family_courts_in_India
<https://clpr.org.in/blog/jurisdiction-of-civil-courts-and-family-courts-under-the-domestic-violence-act/#:~:text=aggrieved%20person%20may%20approach%20not%20only%20the%20Magistrate%20but%20also%20the%20Civil%20court%2C%20Family%20court%20or%20any%20other%20courts%20and%20seek%20reliefs%20including%20protection%20orders>

Q.21) With reference to “Scheduled Castes” in India, consider the following statements:

1. The President can declare specific groups as Scheduled Castes in States after consultation with the Governor of the concerned State.
2. A Person declared as Scheduled Caste (SC) in one state must be considered the same in other states also.
3. Removal of any group from the list of Scheduled Castes can be done by the Parliament.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Article 341 of the Constitution of India mentions that who would be considered Scheduled.

Castes with respect to any State or Union Territory of India. Scheduled castes are officially designated groups of people who are regarded as the **most disadvantaged socio-economic groups in India**.

Statement 1 is correct: Article 341(2) of the constitution of India **empowers the President of India to declare a specific group in the State as Scheduled Caste after consultation with the Governor of the concerned State**. States cannot unilaterally add or pull-out castes from the List as the consent of the Parliament is required to exclude or include castes in the List.

Statement 2 is incorrect: A Person declared as Scheduled Caste (**SC**) **in one state may not be considered SC in another state too**. The idea behind this logic is that the **people belonging to the same caste**, but living in different States may not necessarily suffer from the same disabilities/barriers. Hence it is possible that a person belonging to the same caste cannot be considered SCs in both states as **socio economic barriers imposed on them might vary between states**.

Statement 3 is correct: While the President can declare/include a certain group as Scheduled Castes, **Article 341(2)** of the constitution of India empowers the **Parliament to exclude (and include) any groups from the list of Scheduled Castes**.

Source: <https://documents.doptcirculars.nic.in/D2/D02adm/Introductory.pdf>

Q.22) With reference to the financial powers of Urban Local Bodies (ULBs) in India, consider the following statements:

1. The Constitution empowers the ULBs to levy, collect and retain certain taxes without any interference by the State legislatures.
2. The Department of Finance of a state recommends the process for the distribution of net proceeds of taxes and duties leviable by state between the states and ULBs.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The 74th Constitutional Amendment Act of 1992 provides Constitutional status to Urban Local Bodies (ULBs) and this act has added a new Part IX-A to the Constitution of India. Urban Local Government in India means the governance of an urban area by the people through their elected representatives.

Statement 1 is incorrect: Article 243X of the Constitution of India deals with power to impose taxes by Municipalities. Article 243X states that the **legislature of a State by law may authorise ULBs to levy, collect and retain certain taxes. Thus**, the constitution does not restrict state interference in Urban local bodies' power over tax matters.

Statement 2 is incorrect: It is not the Department of Finance of the State, but the State Finance Commission (SFC) determines the principle for the distribution of the net proceeds of the taxes, duties, tolls and fees leviable by the state, between the states and the municipalities.

Source: Laxmikanth - Urban Local Bodies

Q.23) In the context of Urban Local Bodies (ULBs) in India, which of the following statements is/are correct with respect to "Ward Committees"?

1. The 74th Constitutional Amendment Act (CAA) mandates State governments to establish Ward committees for all urban local bodies to ensure grassroot democracy.
2. As per the 74th Constitutional Amendment Act (CAA), only elected members of urban local bodies can become a member of ward committees.
3. The Chairperson of the Ward committee have to vacate his/her office, if he/she ceases to be a member of Ward committee.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

All the members of Urban Local bodies shall be elected directly by the people of the municipal area. For this purpose, each **municipal area shall be divided into territorial constituencies to be known as wards.**

Statement 1 is incorrect: Article 243S added by the 74th Constitutional Amendment Act (CAA) mandates State governments to **establish Ward committees within the territorial area of municipalities having a population of three lakhs or more** (not in all urban areas) to ensure grassroot democracy.

Statement 2 is incorrect: The 74th CAA provides that **State legislatures may by law provide for the manner in which the seats in ward committees shall be filled**. Thus, it varies from state to state as the Constitution gives discretion to states related to this matter. For instance, in Madhya Pradesh besides the elected Councillors, two persons residing within the territorial area of such Wards Committees are nominated to the ward committees.

Statement 3 is correct: The Chairperson of the **Wards Committee** shall be elected by the elected members of ward committees. **The Chairperson will have to vacate his/her office, if he/she ceases to be a member of the Wards Committee.**

Source: Laxmikanth - Urban Local bodies

<https://mohua.gov.in/upload/uploadfiles/files/chap10.pdf>

[https://www.indiacode.nic.in/show-](https://www.indiacode.nic.in/show-data?actid=AC_CEN_17_19_00016_199443_1517807323737&orderno=16)

[data?actid=AC_CEN_17_19_00016_199443_1517807323737&orderno=16](https://www.indiacode.nic.in/show-data?actid=AC_CEN_17_19_00016_199443_1517807323737&orderno=16)

Q.24) Which of the following changes were made by the 104th Constitutional Amendment Act, 2019?

- It removed the constitutional provision of nominating Anglo-Indians to Parliament as well as State legislatures in India.
- It declared Anglo Indian community as a separate Ethnic and Linguistic minority in India.
- It established the “Anglo-Indian Commission” as a constitutional body to safeguard and protect their rights.
- It added the definition of Anglo-Indians to the Indian Constitution for the first time.

Ans) a

Exp) Option a is the correct answer.

The 104 Amendment of Indian Constitution extended the deadline for the abolition of the reservation of seats by 10 years in the Lok Sabha and State Legislative Assemblies for members of Scheduled Castes and Scheduled Tribes and ended the nomination provision for Anglo Indian communities.

Option a is correct: **The 104th Constitutional Amendment Act (CAA) removed the constitutional provision of nominating Anglo-Indian communities to Parliament as well as State legislatures in India.** Prior to this CAA, the President could nominate two members to Lok Sabha and the Governor of the State can nominate one member to the State Legislative Assembly.

Option b is incorrect: **The 104th CAA is not related to declaring the Anglo-Indian communities as a Separate Ethnic and Linguistic minority** in India. Recently the Anglo-Indian communities have been demanding the Parliament to declare them as a Separate Ethnic and Linguistic minority to enable them to protect their rights.

Option c is incorrect: **The 104th CAA is not related to establishing the Anglo-Indian Commission to safeguard the rights of Anglo Indian.** The Anglo-Indian community has been demanding the government to consider constituting an Anglo-Indian Commission as **mentioned in Article 338 (1) of the constitution of India.**

Option d is incorrect: **Article 366 (2) of the Constitution of India already provides that** “an Anglo Indian means a person whose father or any of whose other male progenitors in the male line is or was of European descent but who is domiciled within the territory of India and is or was born within such territory of parents habitually resident therein and not established there for temporary purposes only.” **Hence the 104th Constitutional does not provide the definition of Anglo-Indians for the first time in the Constitution. In-fact the Act is not related to defining the Anglo-Indians as the definition has already been provided in the Constitution.**

Source: <https://egazette.nic.in/WriteReadData/2020/215637.pdf>

<https://www.thehindu.com/news/cities/Hyderabad/anglo-indians-seek-minority-status-representation-in-parliament/article65741473.ece>

<https://www.timesnownews.com/india/article/who-are-the-anglo-indians-and-why-do-they-have-a-quota-in-lok-sabha-and-some-state-legislatures/527529>

Q.25) The term “I2U2”, sometimes seen in news, is related to which of the following?

- An agreement signed by Iran and the USA to ensure peaceful use of nuclear energy.
- A military alliance forged by East European countries to resist Russian invasion.
- It is a forum to discuss common areas of mutual interest, strengthen economic partnership in trade and investment in respective regions and beyond.
- An initiative of the United Nations High Commissioner for Refugees to protect forcibly displaced communities around the world.

Ans) c

Exp) Option c is the correct answer.

The I2U2 Group is a grouping of India, Israel, the United Arab Emirates, and the United States. I2U2 held their first joint meeting virtually in October 2021. I2U2 is hailed as a platform for the 21st century, driven by economic pragmatism, multilateral cooperation, and strategic autonomy.



Option a is incorrect: I2U2 is not related to the Nuclear deal between Iran and USA. The Joint Comprehensive Plan of Action (JCPOA), is a landmark accord reached between Iran and several world powers including the USA. JCPOA placed significant restrictions on Iran’s nuclear program in exchange for sanctions relief.

Option b is incorrect: I2U2 is not related to a military alliance forged between Eastern European Nations. The **Warsaw Pact** was a collective defence treaty established by the Soviet Union and seven other Soviet states in Central and Eastern Europe to balance **NATO** (military alliance forged by the USA with European countries to counter Russia’s dominance in the region).

Option c is correct: I2U2 stands for India, Israel, the UAE, and the US. It is a forum to discuss common areas of mutual interest, strengthen economic partnership in trade and investment in respective regions and beyond. It aims to encourage joint investments in six areas including **Space**, water, energy, transportation, health, and food security.

Option d is incorrect: I2U2 is not an initiative of the United Nations High Commissioner for Refugees (UNHCR). UNHCR is a United Nations agency mandated to aid and protect refugees, forcibly displaced communities and to assist in their voluntary repatriation or rehabilitation.

Source: <https://indianexpress.com/article/explained/everyday-explainers/what-is-i2u2-holding-first-ever-leaders-summit-8027574/>

Q.26) Consider the following Committees and their key recommendations regarding Panchayati Raj system in India:

Committee	Key Recommendations
1. Ashok Mehta Committee	Setting up of Three tier Panchayati Raj system
2. Balwant Rai Mehta Committee	Establishment of Two tier Panchayati Raj system
3. L M Singhvi Committee	Constitutional recognition to Panchayati Raj system

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- All the three pairs
- None of the pairs

Ans) a

Exp) Option a is the correct answer.

Pair 1 is incorrect: Ashok Mehta committee was established in December 1977. This committee advocated a two-tier structure for Panchayat Raj, involving Zilla Parishads at the district level and Mandal Panchayats, as an alternative to the three-tier system proposed by the Balwant Rai committee.

Pair 2 is incorrect: Balwant Rai Mehta Committee was established by the Government of India in 1957. The committee submitted its report in November 1957 and recommended the establishment of the scheme of 'democratic decentralisation'. It recommended establishment of a three-tier Panchayati raj system: village-level grama panchayats, block-level panchayat samitis, and district-level Zila Parishads. Through a system of indirect elections, these tiers should be organically linked.

Pair 3 is correct: Under the chairmanship of L.M.Singhvi, the government of India created a committee to develop a concept paper on "Revitalization of Panchayati Raj Institutions for Democracy and Development" in 1986. It recommended constitutional status for the Panchayat System. It also recommended establishment of the Nyaya Panchayats to mediate and resolve disputes and to give more emphasis to Gram Sabhas. It provided for a plan to gain financial autonomy for the local bodies.

Source: Indian Polity by Laxmikanth, 6th Edition, Chapter-38

Q.27) Which of the following are the Voluntary Provision for States under 73rd Constitutional Amendment Act?

- Fixing tenure of five years for panchayats at all levels
- Indirect elections to the post of chairperson at intermediate and district levels
- Providing reservation of seats for backward classes in panchayats
- Granting financial powers to the panchayats

Select the correct answer using the code given below:

- 3 and 4 only
- 1, 2 and 3 only
- 1, 3 and 4 only
- 2 and 4 only

Ans) a

Exp) Option a is the correct answer.

There are compulsory (obligatory or mandatory) and voluntary (discretionary or optional) provisions (features) found in the 73rd Constitutional Amendment Act (1992) or the Part IX of the Constitution.

Statement 1 and 2 are incorrect: Fixing tenure of five years for panchayats at all levels and holding fresh elections within six months in the event of supersession of any panchayat are **compulsory provisions of 73rd Amendment**. Furthermore, **direct elections to all seats in panchayats at the village, intermediate and district levels** and **indirect elections to the post of chairperson of panchayats at the intermediate and district levels**, are also the **compulsory** provisions of the 73rd Amendment.

Statement 3 and 4 are correct: Providing reservation of seats (both members and chairpersons) for backward classes in panchayats at any level fall under the **voluntary** provisions. **Granting financial powers to the panchayats**, that is, authorizing them to levy, collect and appropriate taxes, duties, tolls and fees is **a voluntary provision under the 73rd Amendment**.

Source: Indian Polity by Laxmikanth, 6th Edition, Chapter-38

Q.28) What was the key reason for Dr. B R Ambedkar, for opposing the idea of democratic decentralization via Panchayat?

- It would have been financial unviable for the new republic.
- The diversity of Indian society was a hinderance to a uniform Panchayati raj system.
- Villages were suffering from problems of illiteracy, caste discrimination and social inequality.
- There is no caste census available till village level, prohibiting implementation of reservation.

Ans) c

Exp) Option c is the correct answer.

According to Ambedkar, **villages were unfit for the democratic decentralization as there was a lot of illiteracy, caste discrimination and social inequality** in the villages. On November 4, 1948 Dr B.R. Ambedkar, while moving a motion in the Constituent Assembly for consideration of the Draft Constitution of India, made certain observations about the village. He said, **“What is the village but a sink of localism, a den of ignorance, narrow mindedness, and communalism [putting your own ethnic group ahead of society]”** This was in contrast to what Gandhiji and many other members of constituent Assembly believe, which was democratic decentralization should be adopted.

Source: <https://www.mainstreamweekly.net/article8636.html>

<https://indiankanoon.org/doc/241801/>

Q.29) With reference to Particularly Vulnerable Tribal Groups (PVTGs) in India, consider the following statements:

- One of the criteria for identification of PVTGs is low level of literacy.
- ‘Development of Particularly Vulnerable Tribal Groups’ scheme is being implemented in all states for development of PVTGs in India.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. Some tribal groups have some specific features such as dependency on hunting, gathering for food, having pre-agriculture level of technology, zero or negative growth of population and **extremely low level of literacy**. These groups are called Particularly Vulnerable Tribal Groups.

Government of India follows the following criteria for identification of PVTGs.

- 1) Pre-agricultural level of technology
- 2) **Low level of literacy**
- 3) Economic backwardness
- 4) A declining or stagnant population.

Statement 2 is incorrect. A scheme named '**Development of Particularly Vulnerable Tribal Groups** (PVTGs)' is implemented by Ministry of Tribal Affairs. This is a Centrally Sponsored Scheme implemented in **18 states (not all) and Union territory** of Andaman & Nicobar Islands where 75 communities identified as PVTGs reside. The scheme of Development of PVTGs aims at **socio-economic development** of PVTGs in a comprehensive manner, while retaining their culture and heritage.

Source: <https://vikaspedia.in/social-welfare/scheduled-tribes-welfare/particularly-vulnerable-tribal-groups>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1705784>

Q.30) With reference to “Supply Chain Ministerial Forum”, consider the following statements:

1. The forum was hosted by the United Nations Conference on Trade and Development (UNCTAD).
2. India is one of the members of this forum.
3. The forum aims to build collective long-term resilient supply chains based on international partnerships.
4. The forum mandates its members to change their domestic laws to realise barrier free global supply chains.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 2 and 3 only
- d) 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

In October 2021, USA's President Biden hosted a supply chain summit with **14 countries and the European Union** to discuss how to collectively tackle the immediate supply chain challenges. **Statement 1 is incorrect:** Supply Chain Ministerial Forum is **hosted by the United States of America (USA)**, not by the United Nations Conference on Trade and Development (UNCTAD). In 2022, Secretary of State for USA hosted the Supply Chain Ministerial forum to build supply chain resiliency to avoid future disruptions.

Statement 2 is correct: **India is one of the members of the Supply Chain Ministerial Forum.** Apart from India and USA, members of this forum include Australia, Brazil, Canada, the Democratic Republic of the Congo, the European Union, France, Germany, India, Indonesia, Italy, Japan, Mexico, the Netherlands, the Republic of Korea, Singapore, Spain, and the United Kingdom.

Statement 3 is correct: It is true that the Supply Chain Ministerial Forum aims to build **collective long-term resilient supply chains based on international partnerships**. Supply chain diplomacy also continues through **bilateral and regional mechanisms** including through the U.S.- E.U. Trade and Technology Council, the Indo-Pacific Economic Framework, and Americas Partnership for Economic Prosperity.

Statement 4 is incorrect: The Supply Chain Ministerial Forum **aims to strengthen global supply chains in pursuance of nations' domestic law** (the forum does not mandate nations to change their domestic laws).

The forum aims to promote transparency in consultation with the private sector, civil society and other stakeholders to build resilient supply chains.

Source: <https://infra.economictimes.indiatimes.com/news/logistics/india-adopts-joint-statement-on-cooperation-on-global-supply-chains/93029583>

<https://www.state.gov/supply-chain-ministerial/>

Q.31) Which of the following initiatives are launched by the Government of India primarily for welfare of tribal people?

1. Pradhan Mantri Jan Vikas Karyakram
2. Eklavya Model Residential Schools
3. Sankalp Se Siddhi initiative
4. Vanbandhu Kalyan Yojana
5. TRIFOOD Scheme

Select the correct answer using the code given below:

- a) 1, 2, 3 and 5 only
- b) 2, 3, 4 and 5 only
- c) 1, 2, 3 and 4 only
- d) 1, 2, 3, 4 and 5

Ans) b

Exp) Option b is the correct answer.

Various initiatives have been launched by government for welfare of tribal people.

Statement 1 is incorrect. Pradhan Mantri Jan Vikas Karyakram (PMJKV) seeks to provide better socio-economic infrastructure facilities to the **minority communities** particularly in the field of education, health & skill development. This would further lead to lessening of the gap between the national average and the minority communities with regard to backwardness parameters. The erstwhile Multi-sectoral Development Programme (MsDP) has been restructured and renamed as Pradhan Mantri Jan Vikas Karyakram for effective implementation since 2018.

Statement 2 is correct. Eklavya Model Residential Schools started in the year 1997-98 to impart quality education to **ST children in remote areas** in order to enable them to avail of opportunities in high and professional educational courses and get employment in various sectors. The schools focus not only on academic education but on the all-round development of the students. Each school has a capacity of 480 students, catering to students from Class VI to XII. Hitherto, grants were given for construction of schools and recurring expenses to the State Governments under Grants under Article 275 (1) of the Constitution.

Statement 3 is correct. The 'Sankalp Se Siddhi' initiative, also known as 'Mission Van Dhan', was introduced by the central government. Through this mission, TRIFED aims to expand its operation through convergence of various schemes of different ministries and departments and launch various tribal development programmes in mission mode. Through this mission, establishment of several -

- 1) Van Dhan Vikas Kendras (VDVKs),
- 2) haat bazaars,
- 3) mini TRIFOOD units,
- 4) common facility centres,
- 5) TRIFOOD parks,
- 6) SFRUTI (Scheme of Fund for regeneration of traditional industries) clusters,
- 7) tribes India retail store, e-commerce platform for trifoed and tribes, India brands are being targeted.

Statement 4 is correct. Vanbandhu Kalyan Yojana is launched for Tribal welfare. It **aims at converging several central and state schemes related to tribal welfare**. Following are the components of this scheme

- 1) Providing quality Infrastructure

- 2) Improving quality of life in tribal areas
- 3) Improving Tribal Human Development Indices
- 4) Providing quality education to tribals
- 5) Providing employment opportunities for tribal families
- 6) Protection of Tribal culture and heritage

Statement 5 is correct. The **TRIFOOD Scheme** has been launched jointly under the Ministry of Food Processing Industries, Ministry of Tribal Affairs, and TRIFED for tertiary value addition to the food products taken out from Forest areas by Tribals. It would ultimately increase their income, and will bring more revenue to India through exports of these items.

Knowledge Base:

National Commission for Scheduled Tribes

National Commission for Scheduled Tribes looks after the constitutional provisions provided for Scheduled tribes and overlooks their implementation issues.

Source: <https://blog.forumias.com/pm-launches-multiple-key-initiatives-for-the-welfare-of-janjatiya-community-at-janjatiya-gaurav-diwasa-mahasammelan/>

<https://blog.forumias.com/initiatives-launched-by-ministry-of-tribal-affairs/>

<https://blog.forumias.com/important-current-affairs-for-upsc-ias-prelims-2021/government-schemes-and-programs/>

<https://vikaspedia.in/social-welfare/minority-welfare-1/pradhan-mantri-jan-vikas-karyakram>

<https://blog.forumias.com/welfare-scheme-for-vulnerable-sections/>

<https://trifed.tribal.gov.in/trifood#:~:text=TRIFOOD%20Scheme%20is%20a%20joint,11%20crores.>

<https://tribal.nic.in/EMRS.aspx> <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1727385>

Q.32) With reference to District Councils for the administration of Autonomous Districts, under the Sixth schedule of the constitution, consider the following statements:

1. The constitution mandates that a District Councils must be represented by the elected members only.
2. They are prohibited by Constitution from being involved in any judicial matters.
3. They are empowered to assess and collect land revenue as well as to impose certain taxes.

Which of the statements given above is/are **incorrect**?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The sixth schedule of the Constitution of India contains provisions related to the Administration of Tribal Areas in the States of Assam, Meghalaya, Tripura and Mizoram. Further the Sixth Schedule provides for the creation of autonomous District Councils by the Governor to work for the advancement of tribal communities in such areas. The sixth schedule of the constitution states that **if there are different tribes in an autonomous district**, then the governor can **divide the district into several autonomous regions. Autonomous regions are carved out of Autonomous districts** by the Governor to ensure representation of homogeneous sections of tribal communities.

Statement 1 is incorrect: The Constitution (sixth schedule) creates a **District council represented both by the elected members as well as nominated members** to administer autonomous districts in the State. Each autonomous district has a district council consisting of 30 members, of whom four are nominated by the governor and the remaining 26 are elected on the basis of adult franchise.

Statement 2 is incorrect: The Sixth schedule of the constitution empowers district councils (and regional councils) within their territorial jurisdictions to constitute village councils or courts for trial of suits and cases between the tribes. They also hear appeals from them; thus, sixth schedule does not prohibit District councils (and regional councils) to involve in judicial functions.

Statement 3 is correct: It is true that district councils are empowered to assess and collect land revenue as well as to impose certain taxes. The district council can establish, construct or manage matter related to primary schools, dispensaries, markets, ferries, fisheries, roads etc., within their territorial jurisdictions.

Source: Laxmikanth - Scheduled and Tribal Areas

Sixth Schedule of the Constitution

Q.33) In the context of powers of the Governor with respect to the sixth schedule of the constitution, consider the following statements:

1. The Governor's assent is mandatory for enforcing the laws created by district councils on matters related to social customs.
2. While the Governor can create a new autonomous district, he/she cannot alter boundaries of the existing autonomous district.
3. The Governor shall make rules to provide for the delimitation of territorial constituencies for the purpose of elections to district councils.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The **Sixth Schedule** of the Constitution of India deals with special provisions related to the administration of tribal areas in the four north-eastern states of Assam, Meghalaya, Tripura and Mizoram. The tribal areas in these four states have been constituted as autonomous districts and executive power of state extends over these regions too.

Statement 1 is correct: The district councils administer the areas under its jurisdiction. They can make laws on the subject of social customs but it requires assent of the governor to become an act. Also, the District council can make laws on matters related to land, forests, canal water, shifting cultivation, village administration, inheritance of property, marriage and divorce, etc. **But all such laws require the assent of the governor.**

Statement 2 is incorrect: According to the sixth schedule of the constitution, the Governor can create a new autonomous district as well as alter boundaries of the autonomous district. The governor is empowered to organise and re-organise the autonomous districts and to increase or decrease their areas or change their names or define their boundaries.

Statement 3 is correct: The sixth schedule of the constitution empowers the Governor to make rules to provide for the delimitation of territorial constituencies for the purpose of elections to district councils. Also, the governor can make rules to provide for the qualifications for being elected as members of district/regional councils constituted in tribal areas.

Source: Laxmikanth - Scheduled and Tribal Areas

Sixth schedule

Q.34) With reference to Special provisions for some states given in part XXI of the Constitution, separate development boards are provided for which of the following regions?

1. Vidarbha, Marathwada and the rest of Maharashtra
2. Saurashtra, Kutch and the rest of Gujarat
3. Hyderabad-Karnataka region
4. Naga Hills-Tuensang Area

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 2, 3 and 4
- d) 1, 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

Articles 371 to 371-J in Part XXI of the constitution contain special provisions for twelve states viz., Maharashtra, Gujarat, Nagaland, Assam, Manipur, Andhra Pradesh, Telangana, Sikkim, Mizoram, Arunachal Pradesh, Goa and Karnataka. The intention behind them is to meet the aspirations of the people of backward regions of the states or to protect the cultural and economic interests of the tribal people of the states or to deal with the disturbed law and order condition in some parts of the states or to protect the interests of the local people of the states.

Statements 1 and 2 are correct. Under Article 371, the President is authorized to provide that the Governor of Maharashtra and that of Gujarat would have special responsibility for: the establishment of **separate development boards for (1) Vidarbha, Marathwada and the rest of Maharashtra, (2) Saurashtra, Kutch and the rest of Gujarat;**

Statements 3 is correct. Under Article 371-J, the President is empowered to provide that the Governor of Karnataka would have special responsibility for the establishment of a separate **development board for Hyderabad-Karnataka region.**

Statement 4 is incorrect. Article 371-A makes special provisions for Nagaland. But it does not include the provision for a development board. However, the Governor may specify on the recommendation of the **regional council, that the administration of the Tuensang district shall be carried on by the Governor.**

Source: M Laxmikanth, 6th edition, Chapter 37 page 690, 800

Q.35) With reference to “District Mineral Foundations (DMF)”, consider the following statements:

1. The Mine and Minerals Development Regulation (Amendment) Act, 2015 mandates state governments to set up DMFs in every district affected by mining.
2. The local Member of Parliament will act as the ex-officio chairman of the governing council of DMFs.
3. Royalty charges which act as a source of finance for this foundation, are fixed by the central government.
4. Recently, the central government prohibited States to transfer DMF funds to any other State level fund.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1, 3 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: The Mines and Minerals Development Regulation (Amendment) Act, 2015 mandates the state governments to establish District Mineral Foundations in every district affected by

mining-related operations, The state government shall, by notification under this act, establish a trust as a non-profit body to be called the District Mineral Foundation.

Statement 2 is incorrect: It is **not true** that the **local Member of Parliament** will act as the **ex-officio chairman** of governing council of District Mineral Foundation (DMF). The standing committee of the Parliament observed that DMF appointed by states are dominated by bureaucrats and it recommended making local MPs as the chairman of governing council of respective DMFs.

Statement 3 is correct: **The central government fixes the royalty rate**, part of royalty rates will act as **source of finance for DMFs**. Every mining lease holder will have to pay a fraction of royalty to the DMFs as per rates prescribed by the Central Government. This fund will be used for **welfare of the people affected** in the mining affected areas.

Statement 4 is correct: In 2021, the **central government issued an order under which States have been prohibited to transfer DMF funds to any other State level fund (by whatever name called) or Chief Minister's Relief Fund or any other funds or scheme**. This move was adopted by the central government over the **allegation of diversion of funds form DMFs by the state governments**. The DMFs are required to use these funds for the welfare of persons and areas affected by mining-related operations, the tribal population being the principal intended beneficiaries.

Knowledge Base: **Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY)** is being **implemented by the DMFs** using the funds accruing to the DMFs. Under PMKKKY, 60% of the DMF funds are required to be utilised for projects in High Priority Sectors, such as health, education, drinking water, sanitation and environment. Remaining 40% funds to be utilised for Other Priority Areas such as Physical infrastructure, Irrigation, Energy & watershed development and Measures for enhancing environmental quality.

Source: <https://mines.gov.in/writereaddata/Content/highlights.pdf> (pg no 2)

<https://mines.gov.in/writereaddata/UploadFile/DMFPMKKKYGuidelines-DrNKSingh-JS18012019.pdf>

<https://prsindia.org/policy/report-summaries/implementation-of-district-mineral-foundation-and-pradhan-mantri-khanij-kshetra-kalyan-yojana>

Q.36) Consider the following statements with reference to elections of members and chairpersons in the Panchayati Raj System in India:

1. All the members of panchayats at the village level are elected directly by the people.
2. All the members of panchayats at district levels are elected indirectly by the people.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

As per the constitution, the legislature of a state makes provisions with respect to the composition of Panchayats. However, method of election is mentioned under Article 243 of the Indian Constitution.

Statement 1 is correct: **Article 243C of the Indian Constitution provides that all the seats in the Panchayats at village level should be filled by persons chosen by direct election from territorial constituencies in the Panchayat area**. It also says that each Panchayat area shall be divided into territorial constituencies in such manner that the ratio between the population of each constituency and the number of seats allotted to it shall, so far as practicable, be the same throughout the Panchayat area.

Statement 2 is incorrect: Article 243C of the Indian Constitution provides for that **all the seats in a Panchayat** should be filled by persons chosen by **direct election (not indirect) from territorial constituencies in the Panchayat area whether at the village, intermediate or the district levels.**

Source: Indian Polity by Laxmikanth, 6th Edition, Chapter-38

Q.37) Consider the following statements about the differences between Central Finance Commission (CFC) and State Finance Commission (SFC) in India:

1. Central Financial Commission is a constitutional body, whereas SFC is a statutory body.
2. The state legislature provides for the composition of the SFC, while Constitution of India provides for the composition of Central Finance Commission.
3. The recommendations of the CFC are binding on the Government of India, while the recommendations of the SFC are advisory in nature.

How many of the above given statements are correct?

- a) Only one statement
- b) Only two statements
- c) All the three statements
- d) None of the statements

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect: The Central Finance Commission (CFC) is a **constitutional body** under **Article 280 of the Constitution**. State Finance Commission (SFC) is also a **constitutional body** that is established in every State of India under **Article 243-I of the Constitution**.

Statement 2 is correct: The **state legislature provides for the composition of the State Finance Commission**, the required qualifications of its members and the manner of their selection. **Constitution of India under Article 280 has provided for composition of Central Finance Commission**. The Finance Commission consists of a chairman and four other members to be appointed by the President. They hold office for such period as specified by the President in his order.

Statement 3 is incorrect: The recommendation of **both the Commissions are advisory in nature**. The President and governor places the recommendations of the commission along with the action taken report before the Parliament and state legislature respectively.

Source: Laxmikanth

Q.38) With reference to '73rd Constitutional Amendment Act', consider the following statements:

1. Power to extend the provisions of this act to any Union Territory lies with the President.
2. The act does not apply to the hill area of Manipur state for which a district council exists.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The 73rd Constitutional Amendment Act, 1992 provides for the establishment of Panchayats in rural areas of India. However, the application of this Act has certain exception.

Statement 1 is correct: The President of India can direct that the provisions of 73rd Constitutional Amendment Act' shall apply to any union territory subject to such exceptions and modifications as he may specify.

Statement 2 is correct: 73rd Constitutional Amendment Act **does not apply to the states of Jammu and Kashmir, Nagaland, Meghalaya and Mizoram and certain other areas.** These areas include **the hill area of Manipur for which a district council exists;** and Darjeeling district of West Bengal for which Darjeeling Gorkha Hill Council exists.

Source: Laxmikanth

Q.39) With reference to 'Election related provisions of Panchayati Raj Institution', consider the following statements:

1. The validity of any law relating to the delimitation of Panchayat constituencies cannot be questioned in any court.
2. In case of any dispute, it is the Governor of state that decides to whom an election petition needs to be submitted.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

In India, the Constitution provides for a system of local self-government through the Panchayati Raj system, which includes elected bodies at the village, block, and district levels. Elections to these bodies are conducted by the State Election Commission.

Statement 1 is correct: 73rd Constitutional Amendment Act **bars the interference by courts in the electoral matters of panchayats.** It declares that the validity of any law relating to the **delimitation of constituencies or the allotment of seats to such constituencies cannot be questioned in any court.**

Statement 2 is incorrect: Constitution of India lays down that no **election to any panchayat is to be questioned** except by an election petition presented to such **authority and in such manner as provided by the state legislature (Governor is not empowered).**

Source: Laxmikanth

Q.40) The term "Cryptojacking", sometimes seen in news, is related to which of the following?

- a) A Cryptocurrency ATMs where individuals can exchange crypto currency for dollars and vice versa.
- b) A cryptocurrency mining practice used specifically by Supercomputers to release large numbers of cryptocurrency into the market.
- c) An illegal practice involving hacking another person's computer resources to mine cryptocurrency.
- d) A practice of encrypting cryptocurrency using quantum technology to make it resilient to hacking.

Ans) c

Exp) Option c is the correct answer.

Cryptocurrency is a digital currency that uses cryptography to secure transactions. According to a report, **Cryptojacking attacks** on computer systems have gone up by 30% to **66.7 million** in the first half of 2022 as compared to the first half of 2021.

Option c is correct: Cryptojacking is a cybercrime in which another party's computing resources are hijacked to mine cryptocurrency. Cryptojacking allows hackers to mine cryptocurrency without paying for electricity, hardware and other mining resources. Cryptojacking is **hard to detect** and the victims of these attacks mostly remain unaware that their systems have been compromised.

Source: <https://indianexpress.com/article/explained/everyday-explainers/explained-what-is-cryptojacking-cyber-attacks-carried-out-by-crypto-miners-8055585/>

Q.41) With reference to “Other Backward Classes (OBC)” in India, consider the following statements:

1. The Constitution of India does not define the term “Other Backward Classes”.
2. The Constitution of India provides reservation benefits for OBCs in the Lok Sabha in proportion to their total population.
3. The 105th Constitutional Amendment Act (CAA) denied State Governments the authority to identify Backward Classes (BCs) for the purpose of reserving State government jobs.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Other Backward classes (OBCs) means such backward classes of citizens, other than the Scheduled Castes and Scheduled Tribes, as may be specified by the **Central Government** in the lists. **Backward Class (BC) category** contains communities that are classified as economically and educationally backward by a **particular state**.

Statement 1 is correct: It is true that the Constitution of India does not define Other Backward classes (OBCs). Article 366 of the constitution of India which defines various terms mentioned in the constitution, does not define what constitutes Backward classes in India.

Statement 2 is incorrect: While the **Constitution of India** provides reservation benefits for **Scheduled castes and Scheduled Tribes in the Lok Sabha and State Legislative Assemblies** in proportion to their total population in the country, it **does not provide the same benefits to backward classes** in Parliament (Rajya Sabha & Lok Sabha) nor State legislatures.

Statement 3 is incorrect: The 102nd Constitutional Amendment Act (CAA) added **Article 342A** to the constitution of India, empowers **the President to declare specific group as Backward Classes** in States/Union Territories, after in consultation with the Governor. The Supreme court with respect to Article 342A held that State government has no power to identify Backward classes. **This was amended by the 105th CAA which restored the State Government's power to include Backward classes in state list for the purpose of providing reservation benefits in the State Government jobs.**

Source: Laxmikanth - National Commission for BCs

https://blog.ipleaders.in/article-340-of-the-indian-constitution-have-the-commissions-helped-in-improving-the-lives-of-other-backward-classes/#Identification_of_OBCs:-:text=there%20exists%20a-constitutional,-limitation%20on%20the

http://www.ncbc.nic.in/User_Panel/UserView.aspx?TypeID=1025

<https://indianexpress.com/article/india/ls-passes-key-bill-to-restore-states-power-to-make-their-own-obc-lists-7447786/>

Q.42) With reference to Panchayats (Extension to the Scheduled Areas) Act, 1996, consider the following statements:

1. It was formulated based on the recommendation of Bhuria Committee report.
2. One of the objectives of the act is to safeguard and preserve the traditions and customs of tribal communities.
3. It extends the provisions of 73rd Constitutional Amendment Act to the sixth schedule areas.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 2 only

Ans) b

Exp) Option b is the correct answer.

The **provisions of Part IX of the constitution** relating to the Panchayats **are not applicable to the Fifth Schedule areas**. However, the Parliament may extend these provisions to such areas, subject to such exceptions and modifications as it may specify. Under this provision, the Parliament has enacted the **“Provisions of the Panchayats (Extension to the Scheduled Areas) Act”, 1996, popularly known as the PESA Act or the Extension Act.**

Statement 1 is correct: On the recommendation of **Bhuria Committee recommendations in 1995**, Panchayat Extension to Scheduled Areas (PESA) Act 1996 came into existence for ensuring tribal self-rule for people living in scheduled areas of India.

Statement 2 is correct: The objectives of the PESA Act are as follows

- 1) To extend the provisions of Part IX of the Constitution relating to the panchayats to the scheduled areas with certain modifications
- 2) To provide **self-rule for the bulk of the tribal population**
- 3) To have village governance with participatory democracy and to make the gram sabha a nucleus of all activities
- 4) To evolve a suitable administrative framework consistent with traditional practices
- 5) To **safeguard and to preserve the traditions and customs of tribal communities**

Statement 3 is incorrect: Since the laws do not automatically cover the scheduled areas, the PESA Act was in acted on 24 December 1996 to enable Tribal Self Rule in these areas. **The Act extended the provisions of Panchayats to the tribal areas of ten states that have Fifth Schedule Areas. Most of the North eastern states under Sixth Schedule Areas (where autonomous councils exist) are not covered by PESA, as these states have their own Autonomous councils for governance.** The nine states with Fifth Schedule areas are: Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Telangana have Fifth Schedule Areas.

Source: https://www.mha.gov.in/sites/default/files/PESAAct1996_0.pdf

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Q.43) Which of the following powers are given to Gram Sabha under PESA Act, 1996?

1. Right to plan and manage minor water bodies in the Scheduled Areas.
2. Collection of taxes from services of primary education, healthcare and water supply in tribal areas
3. Right to be consulted before making acquisition of land in the Scheduled Areas for development projects.
4. Power to restrict the sale and consumption of any intoxicant.

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

The **Panchayat Extension to Scheduled Areas (PESA) Act, 1996** provides certain powers to the Gram Sabha, which is the traditional decision-making body of the village community in scheduled areas.

Statement 1, 3 and 4 are correct: The powers given to the Gram Sabha under PESA Act, 1996 are:

- 1) **Right to plan and manage minor water bodies** in the Scheduled Areas.
- 2) **Right to be consulted before making acquisition of land** in the Scheduled Areas for development projects and before re-settling or rehabilitating persons affected by such projects in the Scheduled Areas.
- 3) Power to **enforce prohibition or to regulate or restrict the sale and consumption** of any intoxicant.

Statement 2 is incorrect: Collection taxes from services of primary education, healthcare and water supply in tribal areas **is not the power given to Gram Sabha** under PESA Act, 1996.

Knowledge Base:

Other powers of Gram Sabha under PESA Act:

- 1) Identification or selection of persons as beneficiaries under the poverty alleviation and other programmes.
- 2) Safeguard and preserve the traditions and customs of the people, their cultural identity, community resources and the customary mode of dispute resolution.
- 3) Approve plans, programmes and projects for social and economic development before such plans, programmes and projects are taken up for implementation by the Panchayat at the village level.
- 4) Power to manage village markets.
- 5) Power to exercise control over institutions and functionaries in all social sectors.
- 6) Power to control over local plans and resources for such plans including tribal subplans.

Source: [https://panchayat.gov.in/documents/20126/0/FAQ+-+PESA+-+12042019.pdf/5cfb9c63-9e55-8522-63fd-](https://panchayat.gov.in/documents/20126/0/FAQ+-+PESA+-+12042019.pdf/5cfb9c63-9e55-8522-63fd-15e13407c26c?t=1555072755144#:~:text=Answer%3A%20PESA%20empowers%20Gram%20Sabha,transfer red%20to%20non%2D%20ST%20persons.)

[15e13407c26c?t=1555072755144#:~:text=Answer%3A%20PESA%20empowers%20Gram%20Sabha,transfer red%20to%20non%2D%20ST%20persons.](https://panchayat.gov.in/documents/20126/0/FAQ+-+PESA+-+12042019.pdf/5cfb9c63-9e55-8522-63fd-15e13407c26c?t=1555072755144#:~:text=Answer%3A%20PESA%20empowers%20Gram%20Sabha,transfer red%20to%20non%2D%20ST%20persons.)

Q.44) Consider the following statements regarding disqualification of a person as a member of a municipality under 74th Amendment Act, 1992:

- 1. If a person is disqualified under any law made by the state legislature, then he/she will be disqualified as a member of a municipality.
- 2. Any person below 25 years of age is disqualified from being a member of panchayat.
- 3. All disputes regarding disqualification of a member are referred to and decided by the State Election Commission.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

74th Constitutional Amendment Act, 1992 has added new part- IX-A to the Indian Constitution with its title as 'The Municipalities'. It has given constitutional status to the municipalities. The act contains various provisions regarding composition of municipality, reservation of seats for some section of members, grounds of disqualification of members and so on.

Provisions under the act regarding disqualification of members are as follows-

Statement 1 is correct:

A person shall be disqualified for being chosen as or for being a member of a municipality if he is so disqualified.

- 1) under any law for the time being in force for the purposes of elections to the legislature of the state concerned; or
- 2) **under any law made by the state legislature.**

Statement 2 is incorrect: The 74th Amendment Act, 1992 states that no person shall be disqualified on the ground that he is less than 25 years of age if he has attained the age of 21 years.

Statement 3 is incorrect: According to 74th Amendment Act, 1992, **all questions of disqualifications are referred to such authority as the state legislature determines.**

Here, State Election Commission is responsible for the superintendence, direction and control of the preparation of electoral rolls and the conduct of all elections to the municipalities.

Source: Indian Polity by M Laxmikant Chapter 39

Q.45) Consider the following pairs regarding festivals of India:

Regional Festivals - Associated States

1. Ashadhi Bij - Gujarat
2. Kharchi Puja - Manipur
3. Navreh - Kashmir

Which of the pairs given above are correctly matched?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Pair 1 is correctly matched: Ashadhi Bij falls on the **second day of Shukla paksha** of Ashadha month of **Hindu calendar**. The festival is associated with the **beginning of rains** in the **Kutch region of Gujarat**. During Ashadhi Bij, the moisture in the atmosphere is checked to predict which crop would do best in the coming monsoon.

Pair 2 is incorrectly matched: Kharchi Puja is one of the most popular festivals in **Tripura**. It is celebrated at Agartala in the **temple premises of fourteen gods**. It's a week-long royal Puja which falls in the **month of July on the eighth day of the new moon**. The word 'Kharchi' is derived from the word 'Khya' which means earth. Kharchi Puja is basically done **to clean the post menstrual phase of mother earth's menstruation**.

Pair 3 is correctly matched: Navreh is the **lunar new year** that is celebrated in **Kashmir**. It falls on the **first day of the Chaitra Navratri**. On this day, Kashmiri pandits look at **a bowl of rice which** is considered as a **symbol of riches and fertility**. It is the Sanskrit word 'Nav-Varsha' from where the word 'Navreh' has been derived.

Source: 7-centuries-old Kharchi Puja begins in Tripura - Sentinelassam

Ashadhi Bij - JournalsOfIndia

Navreh 2022: Date, Goddess Sharika, Quotes, Wishes & Celebrations - Edudwar

Q.46) Consider the following statements with reference to the Metropolitan Planning Committee (MPC):

1. Two-thirds of the members are elected by the elected members of the municipalities and chairpersons of panchayats in the metropolitan area from amongst themselves.
2. The Constitution lays down detailed provisions regarding the manner of election of members of MPC.
3. The state legislature is empowered to lay down the functions of the committee regarding planning and coordination for the metropolitan area.

Which of the statements given above is/are correct?

- a) 1 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

One of the compulsory provisions of the 74th Amendment Act of 1992 states that every metropolitan area shall have a metropolitan planning committee to prepare a draft development plan.

Statement 1 is correct: The 74th Amendment Act, 1992 lays down that **two-thirds of the members of a metropolitan planning committee should be elected by the elected members of the municipalities and chairpersons of the panchayats in the metropolitan area from amongst themselves.** The representation of members in the committee should be in proportion to the ratio between the population of the municipalities and the panchayats in that metropolitan area.

Statement 2 is incorrect and statement 3 is correct:

The 74th Amendment Act 1992 provides that the **state legislature** may make provisions with respect to the following aspects of Metropolitan Planning Committee:

- 1) The composition of such committees;
- 2) **The manner of election of members of such committees;**
- 3) The representation in such committees of the Central government, state government and other organisations;
- 4) **The functions of such committees in relation to planning and coordination for the metropolitan area;**
- 5) The manner of election of chairpersons of such committees.

Source: Indian Polity by M Laxmikant Chapter 39

Q.47) With reference to Scheduled Areas mentioned under the Fifth schedule of the Constitution of India, consider the following statements:

1. Normally, the executive power of state governments does not extend to these areas unless permitted by the central government.
2. The Governor of a state having Scheduled area is empowered to direct that any particular act of Parliament does not apply to a scheduled area.
3. The Governor of a state having Scheduled area can prohibit the transfer of land by Scheduled Tribes in these areas.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The scheduled areas are treated differently from the other areas in the country because they are inhabited by people who are socially and economically backward. This requires special administrative machinery for those areas to equip them with better social and economic opportunities.

Statement 1 is incorrect: Normally the **executive power of the state government does extend** to scheduled areas mentioned in the Fifth schedule of the constitution, thus **central government approval is not necessary to exercise executive power by State Governments** over scheduled areas. Special powers given to the central government by this schedule is that the **executive power of the Union shall extend to the giving of directions to the State** as to the administration of the said areas.

Statement 2 is correct: It is true that **Governors** of the state **can amend laws made by Parliament** as well as State legislatures which are applicable to these areas **with the assent of the President**. The governor is empowered to direct that any particular act of Parliament or the state legislature does not apply to a scheduled area or apply with specified modifications and exceptions.

Statement 3 is correct: **Governors of the state can issue regulations prohibiting the transfer of land by Scheduled Tribes or among themselves** in the Scheduled areas mentioned under the fifth schedule. The Governor of the State can also issue regulations to regulate the allotment of land to members of the Scheduled Tribes and to regulate the business of money lenders who lend money to Schedule tribes in scheduled areas.

Source: Laxmikanth - Scheduled and Tribal Areas

Q.48) Arrange the following committees related to Panchayati Raj in the correct chronological order of their constitution.

1. Balwant Rai Mehta Committee
2. L M Singhvi Committee
3. Ashok Mehta Committee
4. G V K Rao Committee

Select the correct answer using the code given below:

- a) 1-3-4-2
- b) 2-3-4-1
- c) 2-1-4-3
- d) 3-2-1-4

Ans) a

Exp) Option a is the correct answer.

The correct chronological order is: 1-3-4-2

Option 1: Balwant Rai Mehta Committee was established by the Government of India in 1957 to investigate the operation of the **Community Development Programme (1952) and the National Extension Service (1953)** and to **suggest measures for their better working**.

Option 3: Ashok Mehta committee was established in December **1977**.

Option 4: G V K Rao Committee was appointed by the planning commission in **1985**.

Option 2: The **L M Singhvi Committee** was formed in **1986** under Rajiv Gandhi's administration to investigate the challenges that Panchayati Raj institutions administrations were facing.

Source: <http://agropedia.iitk.ac.in/content/national-extension-service-1953>

Indian Polity by Laxmikanth, 6th Edition, Chapter-38

Q.49) With reference to the Central Council of Local Government, which of the following statements is/are correct?

1. The council was constituted under Article 263 of the Constitution.

2. It deals with matters related to Urban and rural local governments.

3. The President of India is the ex-officio chairman of the council.

Choose the correct answer using the codes given below:

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

The Central Council of Local Government performs important functions like proposing legislations, considering and recommending the policy matters, drawing up a common program of action, recommending central financial assistance etc. Features of the council are as follows:

Statement 1 is correct - The Central Council of Local Government was set up in 1954. **It was constituted under Article 263 of the Constitution of India by an order of the President of India.** Originally, it was known as the Central Council of Local Self-Government. However, the term 'self-government' was found to be superfluous and hence was replaced by the term 'government' in the 1980s.

Statement 2 is incorrect - Till 1958, it dealt with both urban as well as rural local governments, but after 1958 it has been dealing with matters of urban local government only. **It is currently only for the urban and not rural local government.** The Council is an advisory body.

Statement 3 is incorrect - President is not the chairman of the council. **The Union Minister of Urban Development acts as the Chairman of the Council.** It consists of the Minister for Urban Development in the Government of India and the ministers for local self-government in states.

Source: M Laxmikant – Chapter – 39 – Municipalities

Q.50) Consider the following statements regarding 'Windfall Tax':

1. It is a reduction of taxes imposed on companies that have incurred losses due to global economic disruption.

2. It is aimed at encouraging the taxed entities to lower their prices for the benefit of consumers.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

This question is based on the article **"Explained: Why India has cut windfall tax on diesel, aviation fuel exports"** published in **Indian Express** on **20th July 2022**.

Statement 1 is incorrect: A windfall tax is a higher tax rate on sudden big profits levied on a particular company or industry. When a company benefits from something that they are not responsible for, the financial gain that ensues is called windfall profits.

Governments, typically, **levy a one-time tax over and above the normal rates of tax** on such profits and that is called windfall tax. Since, energy companies are gaining profit not because of any improvement in their processes but because of the geopolitical situation, many governments are considering to impose such tax. This will boost the government's finances, and help fund efforts to protect vulnerable sections from rampant inflation.

Statement 2 is correct: Windfall profits are taxed to **encourage the taxed entities to lower their prices** for the benefit of consumers. For instance, in May 2018, the Indian government was considering imposing a windfall tax on oil producers to **moderate the retail prices of fuel and diesel**. Under the scheme, oil producers, who get paid international rates for the oil they produce from domestic fields, would have to part with any revenue they earn from prices crossing a certain threshold.

Knowledge Base:

On July 1, the **Government-imposed windfall gain taxes** on the export of petrol, diesel and aviation turbine fuel (ATF), and on the domestic production of crude oil. **However, on 22nd July**, the government of India has **slashed windfall tax on domestically produced crude, diesel and aviation turbine fuel**, withdrew the levy on petrol and exempted exports of fuels **due to fears of a recession in the US and overall global recession on 12% fall in benchmark contract of crude oil** on the Intercontinental exchange. The move will offer relief for top fuel exporters like Reliance Industries and state-run Oil & Natural Gas Corp.

Source: Explained: Why India has cut windfall tax on diesel, aviation fuel exports (forumias.com)

SFG 2023 | LEVEL 2 | Test #9 – Solutions (CSAT) | ForumIAS

Q.1) A ball is dropped from a height of 2 meters. Every time the ball hits the ground, it bounces back to attain a height of $\frac{3}{4}$ of the previous height. The ball stops bouncing when its height is less than or equal to 50 cm. What is the number of times the ball hits the ground before it stops bouncing?

- a) 4
- b) 5
- c) 6
- d) 7

Ans) b

Exp) Option b is the correct answer.

Given height = 2 meters = 200 cm

When the ball hits the ground for the 1st time, its height = $(\frac{3}{4}) \times 200 = 150$ cm

When the ball hits the ground for the 2nd time, its height = $(\frac{3}{4}) \times 150 = 112.5$ cm

When the ball hits the ground for the 3rd time, its height = $(\frac{3}{4}) \times 112.5 = 84.375$ cm

When the ball hits the ground for the 4th time, its height = $(\frac{3}{4}) \times 84.375 = 63.28125$ cm

When the ball hits the ground for the 5th time, its height = $(\frac{3}{4}) \times 63.28125 = 47.46094$ cm

Since the ball stops bouncing when its height is less than or equal to 50 cm, the ball stops bouncing after the 5th time it hits the ground.

Q.2) The ratio of the salary of Ram in August to that in December was $3\frac{1}{3} : 3\frac{1}{6}$. By what % was the salary of August more than the salary of December?

- a) 5%
- b) 10%
- c) 7.5%
- d) 2.5%

Ans) a

Exp) Option a is the correct answer.

Let's salary of August = $\frac{10}{3}x$

And the salary of December = $\frac{19}{6}x$

Salary of August more than that of December

Per cent = $\frac{\text{difference}}{\text{salary of august}} \times 100$

$$= \frac{(\frac{10}{3} - \frac{19}{6})x}{\frac{10}{3}x} = 5\%$$

Q.3) The marked price of a laptop is 10,500. Aman bought it for two successive discounts of 20% and 5%. He spent Rs. 20 on transportation and sold it for 11,000. His profit was;

- a) $37\frac{1}{2}\%$
- b) 40%
- c) $33\frac{1}{2}\%$
- d) 35%

Ans) a

Exp) Option a is the correct answer.

Marked price = Rs. 10,500

$$\text{Price after two successive discounts} = 10,500 \times \frac{100-20}{100} \times \frac{100-5}{100}$$

$$= \text{Rs. } 7,980$$

$$\text{Total cost price} = \text{Rs. } (7,980+20) = \text{Rs. } 8,000$$

$$\text{Profit percentage} = \frac{11,000-8,000}{8,000} \times 100 = \frac{3,000}{8,000} \times 100 = 37\frac{1}{2} \%$$

Q.4) In an objective type test of 90 questions, 5 marks are allotted for every correct answer and 2 marks are deducted for every wrong answer. If a student attempts 70 questions and gets a score of 245, find the number of correct and incorrect answers.

- a) Correct: 60, Incorrect: 10
- b) Correct: 55, Incorrect: 15
- c) Correct: 50, Incorrect: 20
- d) Correct: 45, Incorrect: 25

Ans) b

Exp) Option b is the correct answer.

Let the number of correct answers be x and the number of incorrect answers be y .

Total number of attempted questions = 70

Total marks obtained = $5x - 2y$

Given, the total score is 245. Therefore, we have:

$$5x - 2y = 245$$

Also, we know that the total number of attempted questions is equal to the sum of correct and incorrect answers, i.e.:

$$x + y = 70$$

Solving the above two equations simultaneously, we get:

$$5x - 2(70 - x) = 245$$

$$5x - 140 + 2x = 245$$

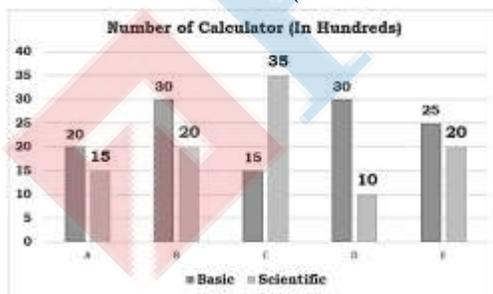
$$7x = 385$$

$$x = 55$$

Therefore, the number of correct answers is 55 and the number of incorrect answers is 15.

Directions (Q.5 – Q.8): Study the following information carefully and answer the given questions:

The following bar graph shows the basic and scientific calculators (In hundreds) stock in different stores and the table shows the (Basic + Scientific) calculators sold by the different stores.



Calculator (Basic + scientific)	Sold%
Store A	20%
Store B	40%
Store C	30%
Store D	40%
Store E	30%

Q.5) Find the average number of basic calculators in store B, C, and D together?

- a) 2200
- b) 2000
- c) 2500
- d) 1800

Ans) c

Exp) Option c is the correct answer.

The average number of basic calculators in store B, C and D together

$$= > (3000 + 1500 + 3000)/3$$

$$= > 7500/3 = 2500$$

Q.6) Find the difference between the (Basic + Scientific) calculators sold by store A to that of store C?

- a) 550
- b) 900
- c) 1050
- d) 800

Ans) d

Exp) Option d is the correct answer.

The (Basic + Scientific) calculators sold by store A

$$= > 3500 \times (20/100) = 700$$

The (Basic + Scientific) calculators sold by store C

$$= > 5000 \times (30/100) = 1500$$

$$\text{Required difference} = 1500 - 700 = 800$$

Q.7) Find the ratio of the number of (Basic + Scientific) calculators sold by store B to that of store D?

- a) 4: 7
- b) 5: 4
- c) 3: 2
- d) 9: 8

Ans) b

Exp) Option b is the correct answer.

The number of (Basic + Scientific) calculators sold by store B = > $5000 \times (40/100) = 2000$

The number of (Basic + Scientific) calculators sold by store D = > $4000 \times (40/100) = 1600$

$$\text{Required ratio} = 2000: 1600 = 5: 4$$

Q.8) The total number of scientific calculators in store B is what percentage of the total number of Basic calculators in store E?

- a) 55 %
- b) 100 %
- c) 80 %
- d) 90 %

Ans) c

Exp) Option c is the correct answer.

The total number of Scientific calculators in store B = 2000

The total number of Basic calculators in store E = 2500

Required % = $(2000/2500)*100 = 80\%$.

Q.9) The monthly average salary paid to all the employees of a company was Rs. 12000. The monthly average salary paid to male and female employees was Rs. 14000 and Rs. 10000 respectively. Then the percentage of males employed in the company is:

- a) 40%
- b) 60%
- c) 50%
- d) 80%

Ans) c

Exp) Option c is the correct answer.

Let total no of the male employee be x

Total no of the female be y

Then total salary of all male = $14000 \times x$

The total salary of all female = $10000 \times y$

But as per question total salary of all the employee = $12000(x + y)$

So $[(14000 \times x) + (10000 \times y)] = 12000(x + y)$

By equating we will find $\frac{x}{y} = \frac{1}{1}$

So, the percentage of male employee = $\frac{1}{2} \times 100 = 50\%$

Q.10) If the price of an article is increased by 30% and then the new price is decreased by 40%, then what is the net change in the price?

- a) 10% increase
- b) 12% decrease
- c) 22% decrease
- d) No change

Ans) c

Exp) Option c is the correct answer.

Let's say the original price of the article is 100.

If it's increased by 30%, the new price would be $100 + (30/100) \times 100 = 130$.

Now if this new price is decreased by 40%,

then the final price would be $130 - (40/100) \times 130 = 78$.

So, there is a net change of $(78-100)/100 \times 100 = 22\%$ decrease in the price.

Q.11) A piece of tin is in the form of a rectangle having length 64 cm and width 54 cm. This is used to construct a closed cube. The side of the cube is:

- a) 36 cm
- b) 72 cm
- c) 12 cm
- d) 24 cm

Ans) d

Exp) Option d is the correct answer.

Since, the same tin is used to make the cube, therefore,

The area of the rectangle = The area of the cube

[(length of rectangle) × (breadth of rectangle) = (6 × side²)

$$(64 \times 54) = 6 \times \text{side}^2$$

$$\text{side}^2 = 64 \times 9$$

$$\text{side} = 8 \times 3 = 24 \text{ cm}$$

Q.12) A can do a piece of work in 12 days and B can do the same work in 20 days. With the help of C, they did the work in 6 days only. Then, C alone can do the work in;

- a) 15 days
- b) 45 days
- c) 30 days
- d) 60 days

Ans) c

Exp) Option c is the correct answer.

$$(A+B+C)\text{'s one day work} = \frac{1}{6}$$

$$A\text{'s one day work} = \frac{1}{12}$$

$$B\text{'s one day work} = \frac{1}{20}$$

$$C\text{'s one day work} = (A + B + C)\text{'s one day work} - [A\text{'s one day work} + B\text{'s one day work}]$$

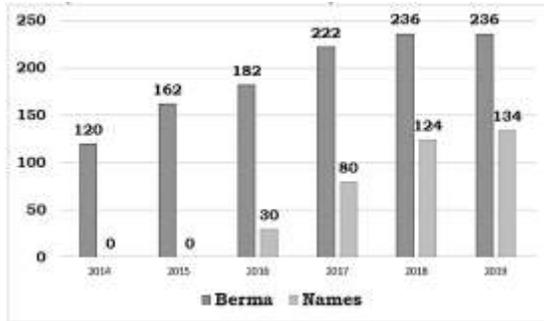
$$= \frac{1}{6} - \left(\frac{1}{12} + \frac{1}{20} \right) \Rightarrow \frac{1}{6} - \frac{2}{15} \Rightarrow \frac{1}{30}$$

$$C\text{'s one day work} = \frac{1}{30}$$

So, C completes the work in 30 days.

Direction for (Q.13 – Q.16): Answer the questions based on the information given below.

Berma and Names are two brands of kitchen knives available in the local market. Berma is an old brand that was introduced in 2010, while Names was introduced in 2016. For both these brands, 20% of the knives bought in a particular year are disposed of as junk exactly two years later. It is known that 10 Berma knives were disposed of in 2014. The following figures show the number of Berma and Names knives in operation from 2014 to 2019, as at the end of the year.



Q.13) How many new Names knives were purchased in 2018?

- a) 44
- b) 50
- c) 55
- d) 64

Ans) b

Exp) option b is the correct answer.

There were 30 Names knives in 16' which will also work in 17' thus we have 50 new knives in 17'. Now in 18' 20% of 30 i.e. 6 are thrown in the junk.

Therefore, in 18' we have $24 + 50 = 74$ Names knives of previous years.

Therefore, Names knives purchased in 18' is $124 - 74 = 50$.

Q.14) How many Names knives were disposed of by the end of 2019?

- a) 10
- b) 16
- c) 22
- d) Cannot be determined from the data

Ans) b

Exp) Option b is the correct answer.

The number of Names knives that were disposed of by the end of 2018 is 6 and at the end of 2019 are 10. So, in total 16 Names knives are disposed of.

Q.15) How many Berma knives were disposed of in 2019?

- a) 0
- b) 5
- c) 6
- d) Cannot be determined from the data

Ans) d

Exp) Option d is the correct answer.

Since 10 Berma were disposed of in 2014, it means 50 new have been bought in 2014, which implies that 70 were already in use. The breakup of 70 knives Berma cannot be determined. So the number of Berma disposed of in 2019 cannot be calculated.

Q.16) How many Berma knives were purchased in 2018?

- a) 20
- b) 23
- c) 50
- d) Cannot be determined from the data

Ans) a

Exp) Option a is the correct answer.

Berma knives were purchased in 2018 = 236 – 222 + Disposed of in 2018
 = 236 - 222 + 20% (Berma knives were purchased in 2016)
 = 236 - 222 + 20% (182 - 162 + 10) = 236 - 222 + 6 = 20

Q.17) A train travelling at 80 km/h overtakes a small object travelling at 26 km/h in 30 seconds. What is the length of the train in meters?

- a) 900 m
- b) 450 m
- c) 1020 m
- d) 560 m

Ans) b

Exp) Option b is the correct answer.

When a train overtakes another object such as a motorbike, whose length is negligible compared to the length of the train, then the distance travelled by train while overtaking the motorbike is the same as the length of the train.

The length of the train:

= distance travelled by train while overtaking the motorbike
 = relative speed between the train and the motorbike × time taken

In this case, as both the objects i.e., the train and the motorbike are moving in the same direction, the relative speed between them = difference between their respective speeds = 80 – 26 = 54 km/h

Distance travelled by train while overtaking the motorbike
 = 54 km/h × 30 seconds.

The final answer is given in meters and the speed is given in km/h and the time in seconds.

So, let us convert the given speed from km/h to m/sec.

$$1 \text{ km/h} = \frac{5}{18} \text{ m/sec}$$

$$\text{Therefore, } 54 \text{ km/h} = 54 \times \frac{5}{18} = 15 \text{ m/sec}$$

Relative speed = 15 m/sec.

Time taken = 30 seconds.

Therefore, distance travelled = 15 × 30 = 450 meters

Q.18) The ratio of the sum of m and n terms of an AP is $m^2 : n^2$ find the ratio of m^{th} and n^{th} term.

- a) $\frac{t_m}{t_n} = \left[\frac{2m-1}{2n-1} \right]^2$
- b) $\frac{t_m}{t_n} = \left[\frac{2n-1}{2m-1} \right]^{\frac{1}{2}}$
- c) $\frac{t_m}{t_n} = \left[\frac{2m-1}{2n-1} \right]$
- d) $\frac{t_m}{t_n} = \left[\frac{2n-1}{2m-1} \right]$

Ans) c**Exp) Option c is the correct answer.**

Let "a" be the first term and "d" be the difference of this AP. Then, the sum of m and n term is given by

$$s_m = \frac{m}{2} [2a + (m-1)d] \text{ and } s_n = \frac{n}{2} [2a + (n-1)d] \text{ respectively}$$

$$= \frac{s_m}{s_n} = \frac{m^2}{n^2}$$

$$\Rightarrow \frac{\frac{m}{2}[2a+(m-1)d]}{\frac{n}{2}[2a+(n-1)d]} = \frac{m^2}{n^2}$$

$$\Rightarrow \frac{[2a+(m-1)d]}{[2a+(n-1)d]} = \frac{m}{n}$$

$$\Rightarrow \{2a + (m-1)d\} n = \{2a + (n-1)d\} m$$

$$\Rightarrow 2a(n-m) = d\{(n-1)m - (m-1)n\}$$

$$\Rightarrow 2a(n-m) = d(n-m)$$

$$\Rightarrow d = 2a$$

$$= \frac{t_m}{t_n} = \frac{[a+(m-1)d]}{[a+(n-1)d]}$$

$$\Rightarrow \frac{t_m}{t_n} = \frac{[a+2am-2a]}{[a+2an-2a]}$$

$$\Rightarrow \frac{t_m}{t_n} = \frac{2m-1}{2n-1}$$

Q.19) In a class of 60 students, a boy is ranked 15th. When five boys joined, his rank was dropped by two. What is his new rank from the end?

- a) 42nd
- b) 45th
- c) 48th
- d) 49th

Ans) d**Exp) Option d is the correct answer.**

After 5 boys joined, total strength of class = 60 + 5 = 65

As rank was dropped by two from 15th rank, new rank is 17th.

Rank of the boy from the beginning = 17

Number of students below his rank = 65 - 17 = 48

Rank from the end = (65 - 17) + 1 = 49

Q.20) A train travels at a certain average speed for a distance of 72 km and then travels a distance of 84 km at an average speed of 6 km/hr more than its initial speed. If it takes 4 hours to complete the total journey, what is the original speed of the train in km/hr?

- a) 24
- b) 36
- c) 42
- d) 66

Ans) b**Exp) Option b is the correct answer.**

Let the initial speed of the train be x km/h.

Then, time taken to travel 72 km = 72/x hours

New speed = (x + 6) km/hr

Time taken to travel 84 km = 84 / (x + 6) hours

According to the question,

$$= \left[\frac{72}{x} + \frac{84}{x+6} \right] = 4$$

$$= (72x + 432 + 84x = 4x^2 + 24x)$$

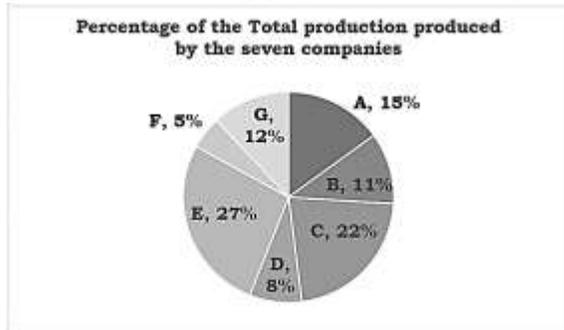
$$= x^2 - 33x - 108 = 0$$

$$= x = 36 \text{ or } x = -3$$

As the speed cannot be negative, $x = 36$

Thus, the average speed of the train is 36 km/hr.

Direction for (Q.21 – Q.24): Seven companies A, B, C, D, E, F, and G are engaged in the production of mobile phones and laptops. Comparative data about the production of these items by the companies are given in the following graph and table. Study them carefully and answer the questions given below.



Cost of the total production (both items together) by seven companies = Rs 25 crores.

The ratio of production between mobile phones and laptop and the percent profit earned for the two items.

Company	Ratio of Production		Percent Profit earned	
	Mobile Phone	Laptops	Mobile Phone	Laptops
A	2	3	25	20
B	3	2	32	35
C	4	1	20	22
D	3	5	15	25
E	5	3	28	30
F	1	4	35	25
G	1	2	30	24

Q.21) What is the total cost of the production of mobile phones by companies A and C together in Rs crore?

- 9.25
- 5.9
- 4.1625
- 4.9

Ans) b

Exp) Option b is the correct answer.

The total cost of production by Company A = $\frac{15}{100} \times 25 = 3.75$ crore

The total cost of production by Company C = $\frac{22}{100} \times 25 = 5.5$ crore

Cost of production of mobile phones by company A = $\frac{2}{5} \times 3.75 = 1.5$ crore

Cost of production of mobile phones by company C = $\frac{4}{5} \times 5.5 = 4.4$ crore

∴ Required Total cost = 1.5 + 4.4 = 5.9 crores

Q.22) What is the amount of profit earned by company D on the laptop?

- a) Rs 3.125cr
- b) Rs 31.25 cr
- c) Rs 3.125 lakhs
- d) Rs 31.25 lakhs

Ans) d

Exp) Option d is the correct answer.

Required profit earned - $\frac{25}{100} \times \frac{5}{8} \times \frac{8}{100} \times 25 = 0.3125$ crore = 31.25 lakhs

Q.23) Cost of production of mobile phone by company F is what percent of the cost of production of laptop by company D?

- a) 16%
- b) 33.33%
- c) 66.67%
- d) 20%

Ans) d

Exp) Option d is the correct answer.

Required % = $\frac{\frac{5}{100} \times \frac{1}{5} \times 25}{\frac{8}{100} \times \frac{5}{8} \times 25} \times 100 = \frac{0.25}{1.25} \times 100 = 20\%$

Q.24) What is the total profit earned by company B on the production of mobile phone and the profit earned by company A on the production of the laptop?

- a) Rs 9.78 cr
- b) Rs 97.8 lakhs
- c) Rs 52.8 lakhs
- d) Rs 5.28 cr

Ans) b

Exp) Option b is the correct answer.

Required total profit = $\left(\frac{32}{100} \times \frac{3}{5} \times \frac{11}{100} \times 25\right) + \left(\frac{20}{100} \times \frac{3}{5} \times \frac{15}{100} \times 25\right) = 0.528 + 0.45 = 0.978$ crores
= 97.8 lakhs

Q.25) A man invests 1/3 of his capital at 7% return, 1/4 at 8% return and the remainder at 10% return. If his annual income from investment is 561, what is the capital he started with?

- a) Rs. 2928
- b) Rs. 3000
- c) Rs. 3834
- d) Rs. 4000

Ans) a

Exp) Option a is the correct answer.

Let's assume that the man's capital is C.

According to the problem, he invests 1/3 of his capital at 7% return, which means he earns (1/3)C multiplied by 0.07 from this investment.

He also invests 1/4 of his capital at 8% return,

which means he earns $(1/4)C$ multiplied by 0.08 from this investment.

The remainder of his capital is invested at a 10% return, which means he earns $[C - (1/3)C - (1/4)C]$ multiplied by 0.01 from this investment.

Adding all three returns together and equating it to his annual income of Rs.561

we get: $(1/3)C \times 0.07 + (1/4)C \times 0.08 + [C - (1/3)C - (1/4)C] \times 0.10 = \text{Rs.}561$

Solving for C, we get:

$$C = \text{Rs.}(561 \times 12) / (7 + 6 + 10) =$$

$$\text{Rs.}(6732) / 23 = \text{Rs.}2928$$

Q.26) A man has Rs. 480 in the denominations of one-rupee notes, five-rupee notes and ten-rupee notes. The number of notes of each denomination is equal. What is the total number of notes that he has?

- a) 45
- b) 60
- c) 75
- d) 90

Ans) d

Exp) d is the correct answer.

Let's assume that the number of notes of each denomination is x.

Then the total amount he has is $x + 5x + 10x = \text{Rs.}480$

which means $x=30$.

Since the number of notes of each denomination is equal

So, he has a total of $30+30+30=90$ notes.

Q.27) Sachin can cover a distance in 1hr 24 min by covering $2/3$ of the distance at 4 km/h and the rest at 5 km/h. The total distance is?

- a) 7 km
- b) 5 km
- c) 6 km
- d) 8 km

Ans) c

Exp) Option c is the correct answer.

Let total distance = D

Distance travelled at 4 km/h speed = $(2/3) D$

Distance travelled at 5 km/h speed = $(1-2/3) D = (1/3) D$

Total time = 1 hr 24 min = $(60+24) \text{ min} = \frac{84}{60} \text{ hr} = \frac{21}{15} \text{ hr}$

We know,

$$= \text{Time} = \frac{\text{Distance}}{\text{Speed}}$$

$$= \frac{21}{15} = \frac{2/3}{4} D + \frac{1/3}{5} D$$

$$= > 42 = 7D$$

$$D = 6 \text{ km}$$

Q.28) A coffee shop sells two types of coffee beans - A and B. Coffee made from A costs Rs. 6 per cup, while coffee made from B costs Rs. 8 per cup. The shop owner mixes the two types of beans in the ratio of 3:2 to make a blend. If the shop owner sells a cup of this blend for Rs. 7.20, what is the percentage profit or loss made by the owner on each cup sold?

- a) 10% loss
- b) 10% profit
- c) 12.5% loss
- d) 12.5% profit

Ans) d

Exp) Option d is the correct answer.

Let the quantities of coffee beans A and B used to make one cup of the blend be $3x$ and $2x$, respectively.

The cost of one cup of the blend can then be calculated as:

$$\text{Cost} = (3x * \text{Rs. } 6 + 2x * \text{Rs. } 8) / 5 = \text{Rs. } 6.40$$

Since the shop owner sells one cup of the blend for Rs. 7.20, the profit made on each cup sold is:

$$\text{Profit} = \text{Selling price} - \text{Cost price} = \text{Rs. } 7.20 - \text{Rs. } 6.40 = \text{Rs. } 0.80$$

The percentage profit or loss can be calculated as:

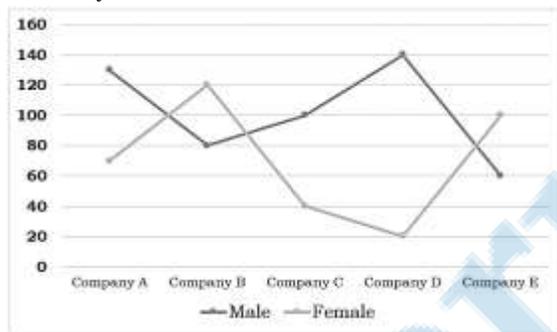
$$\text{Percentage profit or loss} = (\text{Profit} / \text{Cost price}) \times 100\%$$

$$= (\text{Rs. } 0.80 / \text{Rs. } 6.40) \times 100\%$$

$$= 12.5\% \text{ profit}$$

Directions (Q.29 – Q.30): Study the following information carefully and answer the given questions:

The following line graph shows the total number of males and females working in different companies in a certain year.



Q.29) Find the ratio of the total number of males in company B to that of the total number of females in company E?

- a) 4: 5
- b) 5: 6
- c) 2: 3
- d) 3: 4

Ans) a

Exp) Option a is the correct answer.

Total number of male in company B = 80

Total number of female in company E = 100

Required ratio = 80: 100 = 4 : 5

Q.30) Find the difference between the number of males in company D to that of the number of females in company A?

- a) 90
- b) 70
- c) 100
- d) 115

Ans) b

Exp) The number of male in company D = 140

The number of female in company A = 70

Required difference = 140 – 70 = 70

Directions (Q.31 – Q.32): Study the following information carefully and answer the given questions:

The table below shows the percentage distribution of the types of vehicles sold by five automobile companies in the year 2022:

Automobile Company	Sedans	SUVs	Hatchbacks	Luxury Cars
A	35	20	25	20
B	40	25	20	15
C	20	40	30	10
D	30	15	50	5
E	25	30	35	10

Q.31) Which automobile company had the highest percentage of SUVs sold in 2022?

- a) A
- b) B
- c) C
- d) D

Ans) c

Exp) Option c is the correct answer.

To find out which automobile company had the highest percentage of SUVs sold in 2022, we need to look at the SUV column and compare the percentages across all the companies. The highest percentage is 40%, which is sold by Company C.

Q.32) Which type of vehicle had the highest percentage sold by all the companies combined in 2022?

- a) Sedans
- b) SUVs
- c) Hatchbacks
- d) Luxury Cars

Ans) c

Exp) Option c is the correct answer.

To find out which type of vehicle had the highest percentage sold by all the companies combined in 2022, we need to add up the percentages for each vehicle type across all the companies and compare them.

The total percentages are:

- 1) Sedans: 150%
- 2) SUVs: 130%
- 3) Hatchbacks: 160%
- 4) Luxury Cars: 60%

The type of vehicle with the highest percentage sold by all the companies combined in 2022 is Hatchbacks, with a total of 160%.

Q.33) What is the remainder left after dividing $(1! + 2! + \dots + 50!)$ by 5?

- a) 3
- b) 5
- c) 2
- d) 0

Ans) a

Exp) Option a is the correct answer.

$5! + 6! + 7! + \dots + 50!$ is completely divisible by 5.

Now, $1! + 2! + 3! + 4! = 33$

When 33 is divided by 5 it leaves a remainder = 3.

Q.34) When a particular positive number is divided by 4, the remainder is 2. If the same number is divided by 7, the remainder is 1. If the difference between the quotients of the division is 2, then find the number.

- a) 78
- b) 22
- c) 106
- d) 25

Ans) b

Exp) Option b is the correct answer.

Let the quotients when this number is divided by 4 and 7 be x and y respectively.

(Note that x will be greater than y as 4 is smaller than 7).

Number = $4x + 2 = 7y + 1$

Given that, $x - y = 2$

On solving both equation we get, $x=5, y=3$

Thus, the number is $4 \times 5 + 2 = 22$.

Q.35) A student appeared in an examination consisting of six papers, each of which had a maximum weightage of 100 marks. The marks he scored in each of the subjects form an arithmetic progression with common difference of 5. He calculated the average for the best five subjects and found the average marks to be equal to the marks obtained in Mathematics. What is the difference between the average marks for all the six subjects and the marks obtained in Mathematics?

- a) 2.5
- b) 5
- c) 10
- d) Cannot be determined

Ans) a

Exp) Option a is the correct answer.

Let the subjects be A_1, A_2, A_3, A_4, A_5 and A_6 , in the increasing order of marks obtained.

common difference between each terms (i.e. Marks obtained) = 5

So, average of best five subjects (A2, A3, A4, A5 and A6) will be equal to the marks obtained in A4 (middle term), i.e. Mathematics.

Now, when calculating the average of all the six subjects, (A1, A2, A3, A4, A5 and A6), the average will be the mean of A3 and A4.

It is known that the common difference between marks of A3 and A4 = 5

Mean of A3 and A4 = $(A3 + A4)/2 = (A4 - 5 + A4)/2 = A4 - 2.5$

Therefore, the average will be 2.5 marks less than the marks obtained in Mathematics.

Q.36) A and B run a 4 km race along a circular course of length 400 m. Their speeds are in the ratio 5:3. If they start together in the same direction, how many times would A pass B (the start-off is not counted as passing)?

- a) 4 times
- b) 5 times
- c) 6 times
- d) 7 times

Ans) c

Exp) Option c is the correct answer.

The length of the circular course is 400 m, so the number of complete rounds they will run to complete a 4 km race is:

$$4000 \text{ m} / 400 \text{ m} = 10 \text{ rounds}$$

Let's assume that A is faster than B. Since A's speed is in the ratio 5:3 with B's speed, A will complete one round in $5/3$ times the time taken by B to complete one round.

Therefore, in the time taken by B to complete one round, A will complete $(5/3)$ rounds.

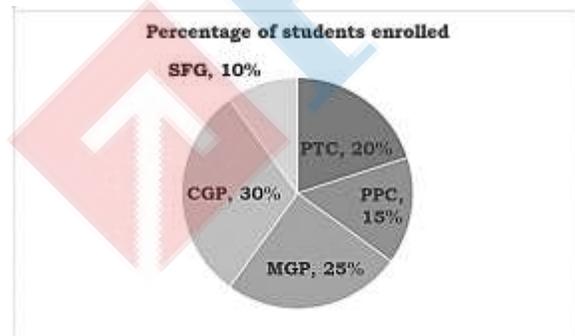
In other words, A will pass B once every $(5/3 - 1) = 2/3$ rounds.

So, the number of times A will pass B in a complete race is:

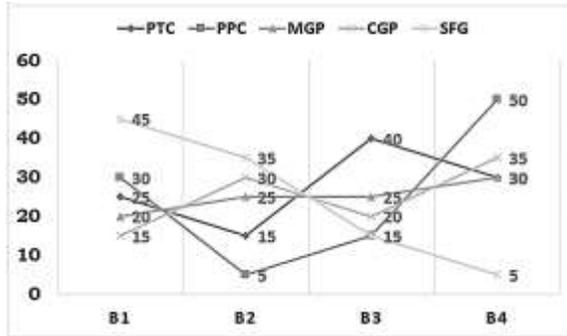
$$10 \text{ rounds} \times 2/3 = 6.67 \text{ times}$$

Since A cannot pass B a fractional number of times, we need to round down to the nearest integer. Therefore, A will pass B 6 times (excluding the start-off) in a complete 4 km race.

Direction for (Q.37 - Q.40): The pie chart shown below gives the percentage distribution of students enrolled (in numbers) in five programs of an institute- PTC, PPC, MGP, CGP, and SFG during the year 2022- 2023. The total number of students enrolled in the institute in 2022 - 2023 is four thousand.



The line graph shown below gives the percentage distribution of students enrolled in each of the five programs in the four different batches.



Q.37) In which program maximum number of students enrolled in the second batch?

- PTC
- PPC
- MGP
- CGP

Ans) d

Exp) Option d is the correct answer.

The data given in the pie chart and the line chart can be tabulated into the following table

Program	Students				Total
	Batch 1	Batch 2	Batch 3	Batch 4	
PTC	200	120	320	160	800
PPC	180	30	90	300	600
MGP	200	250	250	300	1000
CGP	180	360	240	420	1200
SFG	180	140	60	20	400

From the table, we can see the highest number of students enrolled in the second batch.

Q.38) What is the ratio of the number of students in CGP in the third batch and the number of students in PPC in the first batch?

- 1: 2
- 4: 3
- 4: 5
- 1: 3

Ans) b

Exp) Option b is the correct answer.

The data given in the pie chart and the line chart can be tabulated into the following table

Program	Students				Total
	Batch 1	Batch 2	Batch 3	Batch 4	
PTC	200	120	320	160	800
PPC	180	30	90	300	600
MGP	200	250	250	300	1000
CGP	180	360	240	420	1200
SFG	180	140	60	20	400

From the table, the number of students in CGP in the third batch and the number of student in PPC in the first batch = 240: 180 = 4:3

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Q.39) In how many batches were the number of students in any two programs in that batch is the same?

- a) 0
- b) 1
- c) 2
- d) 3

Ans) c

Exp) Option c is the correct answer

The data given in the pie chart and the line chart can be tabulated into the following table

Program	Students				Total
	Batch 1	Batch 2	Batch 3	Batch 4	
PTC	200	120	320	160	800
PPC	180	30	90	300	600
MGP	200	250	250	300	1000
CGP	180	360	240	420	1200

We can see that in B1 and B4 there are programs in which the number of students enrolled is the same. Thus, (c) is the right choice.

Q.40) In how many instances there was a decrease in the number of students enrolled in a particular batch in any program as compared to the previous batch?

Note: If in PPC number of students in B2 is less than B1, then it is counted as 1 instance

- a) 5
- b) 6
- c) 7
- d) 8

Ans) c

Exp) Option c is the correct answer.

The data given in the pie chart and the line chart can be tabulated into the following table.

Program	Students				Total
	Batch 1	Batch 2	Batch 3	Batch 4	
PTC	200	120	320	160	800
PPC	180	30	90	300	600
MGP	200	250	250	300	1000
CGP	180	360	240	420	1200
SFG	180	140	60	20	400

From the table, we can see that there are seven instances where the number of students in a program in a batch is less compared to the previous batch.

Q.1) A Constitutional Amendment Bill seeking to amend Article 368, which deals with the procedure to amend the Constitution, needs to be passed in which of the following manner?

- By the simple majority of the Parliament
- By the special majority of the Parliament
- By the special majority of the Parliament and consent of half of the State Legislatures
- It cannot be amended at all.

Ans) c

Exp) Option c is the correct answer.

The Constitution of India is a blend of rigidity and flexibility. The Constitution can be amended to keep it relevant with the changing times. At the same time, the procedure to amend the Constitution is difficult and does not allow the ruling party to change it according to their whims. **Article 368 in Part XX deals with the process to amend the Constitution.** It provides two types of amendments- a) amendment by special majority and b) amendment by special majority subject to the ratification of half of the states.

Article 368 itself can be amended by the Parliament by passing a Constitutional Amendment Bill with special majority (by more than 50 percent of the membership of the House and 2/3rd of the members of each House present and Voting). This is, however, subject to the ratification by at least half of the State Legislatures by a simple majority. Hence, option c is correct.

Knowledge Base: As held in the **Keshavananda Bharti vs. State of Kerala (1973)**, the power of the Parliament to amend the Constitution is not unlimited and it does not confer the power to amend the basic structure of the Constitution.

Source: M. Laxmikant Ch: Amendment in the Constitution

Q.2) Consider the following pairs regarding officers on election duty and their roles:

Officers on election duty	Descriptions of roles
1. Chief electoral officer	Supervise the election work in the state/Union Territory
2. Returning officer	In-charge of a polling station, who conducts the poll
3. Electoral registration officer	Responsible for the preparation of electoral rolls for constituency.
4. Presiding officer	Responsible for the conduct of elections in the constituency

Which of the pairs given above is/are correctly matched?

- 1 and 2 only
- 1 and 3 only
- 2 and 3 only
- 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Under Article 324 of the Constitution of India, the Election Commission of India is vested with the power of superintendence, direction and control of conducting the elections to the Lok Sabha and State Legislative Assemblies.

Statement 1 is correct: The Chief Electoral Officer of a state/ Union Territory is authorised to supervise the election work in the state/Union Territory subject to the overall superintendence, direction and control of the Election Commission.

Statement 2 is incorrect: The Returning Officer of a Parliamentary or assembly constituency is responsible for the conduct of elections in the Parliamentary or assembly constituency concerned. The Election Commission of India nominates or designates an officer of the Government or a local authority as the Returning Officer for each of the assembly and parliamentary constituencies.

Statement 3 is correct: The Electoral Registration Officer is responsible for the preparation of electoral rolls for a Parliamentary / assembly constituency. The Election Commission of India, in consultation with the state / UT government, appoints an officer of the government or the local authorities as the Electoral Registration Officer.

Statement 4 is incorrect: The Presiding Officer with the assistance of polling officers conducts the poll at a polling station. The District Election Officer appoints the Presiding Officers and the Polling Officers. In the case of Union Territories, such appointments are made by the Returning Officers.

Source: M. Laxmikant chapter 71 Elections

Q.3) With reference to the jurisdiction of the Union Public Service Commission (UPSC), which of the following statements are correct?

1. It serves the needs of a state on the request of the State Governor and the approval of the President of India.
2. It must be consulted for the selection of chairman or members of commissions or tribunals and posts of the highest diplomatic nature.
3. It shall be consulted for matters related to temporary appointments for a period exceeding one year.
4. The President cannot exclude posts, services and matters from the purview of the UPSC.

Select the correct answer using the code given below.

- a) 2 and 4 only
- b) 1 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2, and 3 only

Ans) b

Exp) Option b is the correct answer.

The Constitution visualizes the UPSC to be the ‘**watchdog of merit system**’ in India. It is concerned with the recruitment to the all-India services and Central services–group A and group B and advises the government, when consulted, on promotion and disciplinary matters.

Statement 1 is correct: The UPSC performs the following functions:

- 1) It conducts examinations for appointments to the all-India services, Central services and public services of the centrally administered territories.
- 2) It assists the states (if requested by two or more states to do so) in framing and operating schemes of joint recruitment for any services.
- 3) **It serves all or any of the needs of a state on the request of the state governor and with the approval of the president of India.**

Statement 2 is incorrect: The following matters are kept outside the functional jurisdiction of the UPSC.

In other words, the **UPSC is not consulted** on the following matters:

- 1) While making reservations of appointments or posts in favour of any backward class of citizens.

- 2) While taking into consideration the claims of scheduled castes and scheduled tribes in making appointments to services and posts.
- 3) **With regard to the selections for chairmanship or membership of commissions or tribunals, posts of the highest diplomatic nature and a bulk of group C and group D services. (Hence, Statement 2 is incorrect)**
- 4) With regard to the selection for temporary or officiating appointment to a post less **than one year.**

Statement 3 is correct: It shall be consulted on the following matters related to personnel management:

- 1) The suitability of candidates for appointments to civil service; for promotions and transfers from one service another; and appointments by transfer or deputation. The concerned departments make recommendations for promotion and request the UPSC to ratify them.
- 2) **Matters of temporary appointments for period exceeding one year.**
- 3) Matters related to grant of extension of service and re-employment of certain retired civil servants.
- 4) Any claim for the award of a pension in respect of injury sustained by a person while serving under the Government India and any question as to the amount of any such award, etc.

Statement 4 is incorrect: The President can exclude posts, services and matters from the purview of the UPSC. But all such regulations made by the president shall be laid before each House of Parliament for at least 14 days. The Parliament can amend or repeal them.

Source: laxmikant ch 43

Q.4) Consider the following statements regarding exit polls and opinion polls:

1. Opinion poll is an opinion survey regarding how electors have voted at an election.
2. There is provision of regulation of exit polls in Representation of People Act, 1951.
3. Currently, exit polls can be telecast only after the conclusion of the last phase of the election.

Which of the statements given above are **correct**?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Opinion polls is a pre-election survey to know voters' views on a range of election-related issues. Voters are asked various questions to analyse issues affecting them and the outcome of election.

Exit poll is an opinion survey regarding how electors have voted at an election. These are conducted outside polling booths to predict and gauge voting behaviour and simultaneous outcome of election results.

Statement 2 is correct: Section 126A of the Representation of the People's Act, 1951, puts a ban on exit polls from the period between the commencements of the poll until the closing of the final phase of the poll.

Statement 3 is correct: Currently, exit polls can be telecast only after the conclusion of the last phase of the election.

Knowledge Base: As per law no person shall conduct any exit poll and publish or publicise by means of the print or electronic media or disseminate in any other manner, the result of any exit poll during the period notified by the Election Commission in this regard. Further, any person who contravenes this provision shall be punishable with imprisonment of upto two years or with fine or with both.

Source: <https://indianexpress.com/elections/tripura-meghalaya-nagaland-exit-polls-live-updates-8469280/>

<https://eci.gov.in/files/file/1614-guidelines-for-publication-and-dissemination-of-results-of-opinion-pollsexit-polls/>

<https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1586312#:~:text=The%20Commission%20has%20clarified%20in,of%20poll%20in%20a%20constituency.>

M. Laxmikant chapter 71 Elections

Q.5) Consider the following pairs regarding festivals of India:

Regional Festivals - Associated States

1. Ashadhi Bij - Gujarat
2. Kharchi Puja - Manipur
3. Navreh - Kashmir

Which of the pairs given above are correctly matched?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Pair 1 is correctly matched: Ashadhi Bij falls on the **second day of Shukla paksha** of **Ashadha** month of **Hindu calendar**. The festival is associated with the **beginning of rains in the Kutch region of Gujarat**. During Ashadhi Bij, the moisture in the atmosphere is checked to predict which crop would do best in the coming monsoon.

Pair 2 is incorrectly matched: Kharchi Puja is one of the most popular festivals in **Tripura**. It is celebrated at Agartala in the **temple premises of fourteen gods**. It's a week-long royal Puja which falls in the **month of July on the eighth day of the new moon**. The word 'Kharchi' is derived from the word 'Khya' which means earth. Kharchi Puja is basically done **to clean the post menstrual phase of mother earth's menstruation**.

Pair 3 is correctly matched: Navreh is the **lunar new year** that is celebrated in **Kashmir**. It falls on the **first day of the Chaitra Navratri**. On this day, Kashmiri pandits look at **a bowl of rice which is considered as a symbol of riches and fertility**. It is the Sanskrit word '**Nav-Varsha**' from where the word 'Navreh' has been derived.

Source: 7-centuries-old Kharchi Puja begins in Tripura - Sentinelassam

Ashadhi Bij - JournalsOfIndia

Navreh 2022: Date, Goddess Sharika, Quotes, Wishes & Celebrations - Edudwar

Q.6) With reference to the roles and responsibilities of the Election Commission of India, which of the following statements is/are correct?

1. It conducts elections for Lok Sabha, State Legislative Assemblies and Municipalities.
2. It is empowered to de-register parties on the ground of violating the Constitution.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect. ECI conducts elections only for Lok Sabha, Rajya Sabha and Vidhan Sabha and not for Gram Sabha and municipalities. State Election commission is responsible for conducting elections of Gram Sabha and Municipalities.

Statement 2 is incorrect. The ECI is not empowered to de-register parties on the grounds of violating the Constitution or breaching the undertaking given to it at the time of registration. A party can only be de-registered if its registration was obtained by fraud; if it is declared illegal by the Central Government; or if a party amends its internal Constitution and notifies the ECI that it can no longer abide by the Indian Constitution.

Source: <http://egyankosh.ac.in/bitstream/123456789/21056/1/Unit-21.pdf>

Q.7) Consider the following statements regarding the procedure to amend the Constitution as laid down in Article 368:

1. A Constitutional Amendment Bill can only be introduced by a Minister and not by a private member.
2. A Constitutional Amendment Bill cannot be passed at a joint sitting of both the Houses.
3. Article 368 explicitly mentions that amendment to the VII Schedule of the Constitution requires ratification by at least half of the states.
4. Article 368 provides for amending the Constitution by the way of simple as well special majority of the Parliament.

Which of the statements given above are **incorrect**?

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1 and 4 only

Ans) d

Exp) Option d is the correct answer.

The procedure and powers to amend the Constitution are laid down under Article 368 of the Constitution. It states that Parliament may amend by way of addition, variation or repeal any provision of the Constitution.

Statement 1 is incorrect: A Bill to amend the Constitution **can be introduced either by a Minister or private member**. In other words, a private member is eligible to introduce a Constitutional Amendment Bill. Further, prior permission of the President is not required for the introduction of such Bill.

Statement 2 is correct: The provision of passing a bill in a joint sitting of both the Houses is applicable only to the ordinary bills and not to the Constitutional Amendment Bills. **There is no provision for holding a joint sitting for the purpose of deliberation over a Constitutional Amendment Bill.**

Statement 3 is correct: Article 368 explicitly mentions certain provisions of the Constitution which require ratification of at least half of the states (in addition to the special majority of the Parliament). **Amendment to any of the Lists of the VII Schedule has been explicitly mentioned under this Article.**

Statement 4 is incorrect: Though there are provisions of the constitution which can be amended by a simple majority of the Parliament, but Article 368 mentions/ provides for only two types of amendments- a) Special majority of the Parliament, b) Special majority of the Parliament subject to ratification by at least half of the states. **It does not deal with passing an amendment bill by the way of simple majority of the Parliament.**

Source: <https://indiankanoon.org/doc/594125/>

Q.8) Which of the following statements are correct regarding role of various types of election observers?

1. General Observers are deployed for close watch on every stage of the electoral process and ensure smooth conduct of elections.
2. Micro Observers are deployed only to oversee the process of voter awareness and voter education.
3. Expenditure Observers are appointed to keep a close watch on election expenditure of candidates.
4. Central Awareness Observers are appointed only in critical polling stations to observe the entire electoral proceedings at the Polling Stations on the poll day.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

The Election Commission of India nominates officers of Government as Observers for Parliamentary and Assembly Constituencies. These observers are of various kinds.

Statement 1 is correct: The Commission deploys General Observers in adequate number to ensure smooth conduct of elections. These Observers are asked to keep a close watch on every stage of the electoral process to ensure free and fair elections.

Statement 2 is incorrect: In addition to General Observers, the Commission also deploys Micro Observers to observe the poll proceedings on the poll day in selected critical polling stations. They observe the proceedings at the Polling Stations on the poll day right from the mock poll to the completion of poll and the process of sealing of EVMs and other documents to ensure that all instructions of the Commission are complied with by the Polling Parties and the Polling Agents.

Statement 3 is correct: Expenditure Observers from Central Government Services are appointed to keep a close watch on election expenditure of the candidates and to ensure that no inducement is offered to the electors during the entire election process for exercise of their franchise.

Statement 4 is incorrect: For the first time in the 16th Lok Sabha Elections (2014), the Commission deployed Central Awareness Observers to oversee the efficient and effective management of the electoral process at the field level, mainly in respect of voter awareness and facilitation.

Knowledge Base: The Commission deployed Central Awareness Observers to oversee the efficient and effective management of the electoral process at the field level, mainly in respect of voter awareness and facilitation. In addition to Expenditure Observers, Assistant Expenditure Observers are appointed for each Assembly segment to ensure that all major election campaign events are video graphed and complaints of electoral malpractices are promptly attended.

Source: M. Laxmikant chapter 71 Elections

Q.9) Consider the following statements regarding the provisions of the Representation of People Act (RPA) 1951:

1. RPA, 1951 covers provisions related to qualifications of membership of Parliament and State Legislature, conduct of elections, corrupt practices and electoral offences.
2. Political parties must reveal donations received through electoral bonds as per RPA, 1951.
3. The Election Commission can reduce the period of disqualification of a person under RPA, 1951.
4. As per RPA, one candidate can contest from maximum two constituencies in a general election.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1, 2 and 3 only
- c) 1, 3 and 4 only
- d) 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

The provisions for the actual conduct of elections to the Houses of Parliament and to the House or Houses of the Legislature of each State. To provide for these provisions, the Representation of the People Act, 1951 was enacted.

Statement 1 is correct: Representation of People Act, 1951 contains provisions relating to qualifications and disqualifications for membership of Parliament and State Legislature, notification of general election, administrative machinery for the conduct of election, registration of political parties, conduct of elections, free supply of certain material to candidates of recognised political parties, disputes regarding election, corrupt practices and electoral offences, bye-elections and time limit for filling vacancies.

Statement 2 is incorrect: By virtue of the 2017 amendment made to Section 29C of the Representation of Peoples Act 1951(RPA), a donor may buy an electoral bond at specified banks and branches using electronic modes of payment and after having completed the KYC requirements. However, political parties are not required to disclose the source of these bonds to the Election Commission of India.

Statement 3 is correct: As per section 8 of Representation of the People Act, 1951 anyone sentenced to imprisonment of two years or more faces disqualification, from the date of such conviction and a bar of six years is imposed for contesting elections after serving a term in prison. The RPA itself provides a remedy through the Election Commission. Under Sec. 11 of the Act, the EC may record reasons and either remove, or reduce the period of, a person's disqualification. The EC exercised this power for Sikkim Chief Minister P.S. Tamang, who served a one-year sentence for corruption, and reduced his disqualification so as to contest a byelection and remain in office.

Statement 4 is correct: As per Section 33(7) of the RPA (Representation of the People Act), 1951, one candidate can contest from a maximum of two constituencies. More than two constituencies were allowed until 1996 when the RPA was amended to set the cap at two constituencies.

Knowledge Base: Section 62(5) of the Representation of the People Act, 1951, which prevents persons with criminal background (in confinement) from participating in election.

Sections 123(3A) and 125 of the RPA bars the promotion of animosity on the grounds of race, religion, community, caste, or language in reference to elections and include it under corrupt electoral practices.

Source: <https://www.thehindu.com/opinion/op-ed/a-problematic-provision/article65576265.ece>

<https://indiankanoon.org/doc/70252546/>

<https://www.thehindu.com/news/national/explained-can-convicted-legislators-be-disqualified-from-assembly/article66088235.ece>

<https://www.livelaw.in/top-stories/electoral-bonds-case-supreme-court-bifurcates-petitions-in-three-sets-decides-to-hear-each-set-separately-220304>

<https://indiankanoon.org/doc/35641423/>

M. Laxmikant chapter 72 Elections Laws

Q.10) Consider the following statements regarding Stratospheric Ozone and Tropospheric Ozone:

1. Stratospheric ozone forms naturally in the upper atmosphere, whereas Tropospheric ozone is mainly created by man-made emissions.
2. The chemical composition of ozone in both stratosphere and troposphere is the same.
3. Tropospheric ozone concentration is very high as compared to the concentration of stratospheric ozone.

4. Stratospheric ozone shields us from the detrimental impact of solar radiation, whereas tropospheric ozone is characterized as air pollutant.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Ozone (O₃) is a reactive gas that exists in **two layers of the atmosphere: the stratosphere (upper layer) and the troposphere (at ground level and up to 15km)**. It is both a natural and a man-made product that occurs in the Earth's upper atmosphere (the stratosphere) and lower atmosphere (the troposphere). Depending on where it is in the atmosphere, ozone affects life on Earth in either good or bad ways.

Statement 1 is correct: Stratospheric ozone is formed naturally through the **interaction of solar ultraviolet (UV)** radiation with molecular oxygen (O₂). **Tropospheric or ground-level ozone** – what we breathe – is formed primarily from photochemical reactions between two major classes of air pollutants, volatile organic compounds (VOC) and nitrogen oxides (NO_x).

Statement 2 is correct: Ozone (O₃) is a highly reactive gas composed of three oxygen atoms. **Chemically Ozone in both stratosphere and troposphere are same (O₃)**. However, the formation processes are completely different. In both the cases, the atmosphere has to produce nascent Oxygen, a highly reactive species, which can react with molecular oxygen (O=O). In stratosphere, the high energy UV rays can photolyze (O=O) to form [O], which can combine with another (O=O) to form O₃, whereas in troposphere, the source of [O] is from the photolytic dissociation of NO₂. The NO₂ needs much less energy that can be available in troposphere.

Statement 3 is incorrect: The easiest way to **distinguish between stratospheric ozone and tropospheric ozone** is by looking at the difference in the ozone concentrations in each atmospheric layer. **Stratospheric ozone concentration is very high**, whereas tropospheric ozone concentration is low. **Ozone layer is a region of Earth's stratosphere containing a high concentration of ozone** compared to ozone content in other parts of the atmosphere. Typically, the ozone layer consists of an average of 0.3 ppm ozone gas. About 90% of the total ozone concentration in the atmosphere of Earth occurs in the stratospheric layer.

Statement 4 is correct: Stratospheric ozone is found in the altitude range between approximately 10-50 km above the sea level (depending on geomagnetic latitude: equatorial, mid-latitude, and high latitude region). This atmospheric region **shields us from the detrimental impact of solar UV radiation**. On the other hand, tropospheric ozone **is nothing but air pollutant**. They are found from ground level to about 10 km above the sea level. This type of ozone is concentrated in metropolitan areas as smog.

Source: The Ozone Problem | Ground-level Ozone | New England | US EPA

Tropospheric ozone | Climate & Clean Air Coalition (ccacoalition.org)

What is Ozone? | US EPA

Q.11) A Constitutional Amendment Bill duly passed by both the Houses of the Parliament is presented to the President for assent. What are the options available with President in this regard?

- a) He must give his assent to that Bill.
- b) He can either give his assent or withhold his assent
- c) He can give his assent, withhold his assent or return the bill for reconsideration.
- d) He can give his assent, withhold his assent or refer the bill to the Supreme Court to decide its constitutionality.

Ans) a

Exp) Option a is the correct answer.

Article 368 provides that when a Constitutional Amendment Bill is presented to the President then 'he shall give his assent'. This implies that **it is mandatory for the President to give his assent to the Constitutional Amendment Bill** passed by both the Houses of the Parliament. **He can neither withhold his assent nor can return the bill to Parliament for reconsideration. The 24th Constitutional Amendment Act of 1971 made it mandatory for the President to give assent** to the Constitutional Amendment Bill.

Knowledge Base: M. Laxmikanth (Page 10, Chapter 10.1)

Source: M. Laxmikant chapter 10 Amendment of the Constitution

Q.12) Consider the following statements regarding the regulation of elections and the related campaigns:

1. The Model Code of Conduct (MCC) comes into effect as soon as the Election Commission announces the election schedule.
2. Election Commission has mandated pre-certification of political advertisements on social media.
3. The Election Commission has launched an ENCORE Nodal App to report electoral malpractices by the candidates.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 1 and 2 only
- c) 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: The Model Code of Conduct (MCC) lays down the minimum standard of behavior for political parties and their candidates contesting elections. It was adopted by the Election Commission (EC) during the mid-term elections in 1968 and 1969. It comes into effect immediately on the notification of the election schedule by the Commission and is operational till the process of elections is completed.

Statement 2 is correct: Election Commission has issued directions for pre-certification of advertisements over electronic media, including social media, by the political parties and the candidates. This also includes advertisements on TV channels or on cable networks. Media Certification and Monitoring Committees at district and State levels have been given the responsibilities of pre-certification of such advertisement along with other functions like acting against Paid News etc.

Statement 3 is incorrect: ENCORE Nodal App is an app where nodal officers of various departments issue no-objection regarding a contesting candidate to the Returning Officer. Thus, this is an integrated app for election permissions where the no-objections are received electronically, the Returning officer needs not to approach individual departments like police etc. **c-VIGIL app** has been launched to enable citizens to register complaint against a candidate for electoral malpractices. Both the apps have been launched by the Election Commission.

Source: <https://eci.gov.in/files/file/6629-instructions-of-the-commission-with-respect-to-use-of-social-media-in-election-campaigning/>

<https://eci.gov.in/it-applications/mobile-applications/nodal-app-election-permission-r53/>

Q.13) In the context of efforts of Election Commission of India (ECI) to improve voters' awareness and voters' turnout in election, consider the following statements:

1. Systematic Voters Education and Electoral Participation (SVEEP) is a joint initiative of ECI and Association of Democratic Reforms (ADR).
2. "Accessible elections" initiative mainly aims to promote the electoral participation of tribal people.

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3. The ECI launched Model Polling Stations (MPS) to provide basic minimum facilities to voters in the polling booth.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: Systematic Voters Education and Electoral Participation (SVEEP) is the flagship program of the Election Commission of India (not a joint initiative with Association of Democratic Reforms (ADR) for voter education, spreading voter awareness and promoting voter literacy in India. SVEEP aims to enlighten, enable and empower every citizen to register as a voter and cast his/her vote at every election in an informed and ethical manner.

Statement 2 is incorrect: While it is true that Accessible elections is an initiative launched by Election Commission of India, it does not aim to increase the tribal participation in the election process. Accessible Elections aims to improve the participation of Disabled/Differently abled people in election by Construction of ramps, entering polling stations without waiting in the queue and facility granted to take wheelchairs inside polling stations.

Statement 3 is correct: The Election Commission of India (ECI) introduced the concept of Model Polling Stations (MPS) to provide basic minimum facilities to voters in the polling booth. MPS aims to provide Assured Minimum Facilities (AMFs) like drinking water, shed, toilets, ramps at all the polling stations, Model Polling Stations attempted to give a sense of festivity to the exercise of voting and provided additional comforts like waiting halls, first aid kits etc. Thus, MPS is believed to improve the voter turnout in election process.

Source: <https://ecisveep.nic.in/>

<https://vikaspedia.in/social-welfare/differently-abled-welfare/schemes-programmes/accessible-elections>

<https://ceobihar.nic.in/SveepPublication/1.pdf> (pg no 20)

Q.14) Which of the following statements is correct with respect to disqualification of nominated members of the Parliament under the provisions of Anti defection law?

- a) They cannot be disqualified under the provisions of Anti-defection law if they have been nominated for Rajya Sabha.
- b) They can be disqualified if they refuse to join any political party within six months of their nomination.
- c) They can be disqualified if they join any political party at any time during their tenure.
- d) They can be disqualified if they join any political party after six months of their nomination.

Ans) d

Exp) Option d is the correct answer.

The 52nd Constitutional Amendment Act, 1985 provided for the disqualification of the members of Parliament and the state legislatures on the ground of **defection from one political party to another**. The purpose of Anti defection law is to bring stability to governments by deterring MPs and MLAs from changing their political parties on whose ticket they were elected.

Option a is incorrect: Anti defection law applies equally to both the houses of Parliament (and State legislatures). Thus, nominated members irrespective of their membership of house are subject to provisions

of Anti defection law. Hence **nominated members of Rajya Sabha can be disqualified under defection charges if he/she joins political parties after six months of their nomination.**

Option b is incorrect: Nominated member of the Parliament **cannot be disqualified on the ground of his/her refusal to join any political party within six months** of their nomination to the house. The tenth schedule (Anti defection law) provides **nominated members a choice to join any political parties within six months of their nomination** and by doing so they cannot attract defection charges.

Option c is incorrect: The tenth schedule (and Anti defection law) provides **nominated members a choice to join any political parties within six months of their nomination** and by doing so they cannot attract defection charges. So, the statement is incorrect.

Option d is correct: It is true that nominated members can be disqualified on the ground of defection, if he/she **joins any political party after six months of their nomination.**

Source: Laxmikanth _ Anti Defection

<https://prsindia.org/articles-by-prs-team/anti-defection-law-when-a-nominated-mp-loses-rajya-sabha-membership>

Q.15) Consider the following statements regarding ‘Off Budget Borrowings’:

1. It refers to loans taken by Public Sector Units (PSUs) on the directions of the government.
2. The interest on off budget borrowings is to be repaid from the revenues generated by the borrowing entity.
3. State government entities in India are barred from raising capital through off-budget borrowings mechanism.
4. Off Budget Borrowings of PSUs are not considered as a part of the fiscal deficit calculation of the public balance sheet.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 4 only
- c) 1, 3 and 4 only
- d) 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

Recently, the Union Government has relaxed norms for **adjusting states off-budget loans** and said such liabilities of last fiscal year can be adjusted against their borrowing ceilings of **next four years till March 2026.**

Statement 1 is correct: Off-budget borrowings are **loans that are taken not by a government directly**, but by another public institution which borrows on the directions of the government. The government can ask any implementing agency to raise the required funds from the market through loans or by issuing bonds. In the Budget 2020-21, the government paid only half the amount budgeted for the food subsidy bill to the Food Corporation of India. The shortfall was met through **a loan from the National Small Savings Fund (NSSF).** This led to halving of the food subsidy of Union Government.

Statement 2 is incorrect: Off-budget borrowings refer to loans taken by centre/state government entities, special purpose vehicles, etc, where **principal and interest would be repaid from centre/state government's own budget**, instead of the cash flows or revenues generated by the borrowing entity.

Statement 3 is incorrect: State government entities in India **can raise capital through off-budget borrowings** mechanism. To bring in transparency in state finances, the Centre in March informed states that **off-budget borrowings are to be equated with the states' own debt** and any such fund raised by the governments in 2020-21 and 2021-22 would need to be adjusted out of the borrowing ceiling this year. Over

the last two years, many states have resorted to off-budget borrowing to fund their capital expenditures and minimise the impact of an economic downturn induced by COVID-19.

Statement 4 is correct: According to the last Budget documents, in the current financial year the Centre was set to borrow Rs 5.36 lakh crore. However, this figure did not include the loans that public sector undertakings were supposed to take on their behalf or the deferred payments of bills and loans by the Centre. These items constitute the “off-budget borrowings” because these loans and deferred payments are not part of the fiscal deficit calculation.

Source: What are off-budget borrowings? (indianexpress.com)

Off-Budget Borrowings: Centre eases norms for adjusting states' off-budget borrowings - The Economic Times (indiatimes.com)

Equating states' off-budget borrowings with their debt will clarify extent of indebtedness - ForumIAS Blog

Q.16) The amendment to which of the following provisions of the Constitution requires consent of at least half of the state legislatures, in addition to the special majority of the Parliament?

1. Altering the existing boundaries of the States.
2. Representation of States in Parliament.
3. Election process of both the President and the Vice-President
4. Fundamental Rights
5. Delimitation of constituencies

Choose the correct answer from the codes given below:

- a) 2 only
- b) 1, 2 and 5 only
- c) 3 and 4 only
- d) 1, 2, 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

Article 368 deals with the cases where consent of half of the states is needed along with a special majority of the Parliament for amending certain constitutional provisions.

Option 1 is incorrect: Article 4 of the Constitution itself declares that laws made for altering the boundaries of states are not to be considered as amendment to the Constitution under Article 368. This implies that such laws can be passed by a simple majority and by the ordinary legislative process of Parliament.

Option 2 is correct: Article 368 specifically mentions that Constitutional amendments regarding representation of States in the Parliament needs consent of at least half of the state legislatures.

Option 3 is incorrect: Any Constitutional amendments in provisions of election of President and its manner require consent of half of the states. However, this requirement is not applicable for making amendments to the election process of the Vice-President.

Option 4 is incorrect: Amendments to the Fundamental Rights contained in Part III of the Constitution can be made with special majority of the Parliament. It does not require the consent of the states.

Option 5 is incorrect: Amendments regarding delimitation of constituencies can be made with simple majority. Neither special majority nor ratification by states is needed for such matters.

Knowledge Base: Other amendments for which ratification by state legislatures is needed:

- 1) Extent of executive powers of the Union and the States
- 2) Distribution of legislative powers between the Union and the States
- 3) Any of the lists in the VII Schedule
- 4) Supreme Court and High Courts
- 5) Power of Parliament to amend Article 368 itself.

Source: <https://www.thehindu.com/news/national/explained-indias-cooperative-sector-and-the-multi-state-cooperative-societies-amendment-bill-2022/article66247417.ece>

<https://indianexpress.com/article/india/election-commission-law-panel-likely-to-discuss-simultaneous-polls-next-week-5170002/>

M. Laxmikant chapter 10 Amendment of the Constitution

Q.17) With reference to the provisions related to the Chairman and Member of the Union Public Service Commission (UPSC) and the State Public Service Commission (SPSC), consider the following statements:

1. A member of UPSC, on ceasing to hold office, is eligible only for appointment as the chairman of UPSC.
2. The chairman of UPSC, on ceasing to hold office, is not eligible for further employment in the Government of India or a state.
3. The chairman of a SPSC, on ceasing to hold office, is only eligible for appointment as the chairman of the UPSC.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

The UPSC consists of a chairman and other members appointed by the president of India. The Constitution, without specifying the strength of the Commission has left the matter to the discretion of the president, who determines its composition.

Statement 1 is incorrect: A member of UPSC (on ceasing to hold office) is eligible for appointment as the **chairman of UPSC or a State Public Service Commission (SPSC)**, but not for any other employment in the Government of India or a state.

Statement 2 is correct: The chairman of UPSC (on ceasing to hold office) is not eligible for further employment in the Government of India or a state. In 1979, the Supreme Court upheld the validity of appointment of A.R. Kidwai, **a former Chairman of UPSC, as the governor of Bihar**. It ruled that the office of the governor is a 'constitutional office' and not an employment under the government.

Statement 3 is incorrect: The chairman of a SPSC (on ceasing to hold office) is eligible for appointment as the **chairman or a member of the UPSC or as the chairman of any other SPSC**, but not for any other employment under the Government of India or a state.

Knowledge Base:

The chairman or a member of UPSC is (after having completed his first term) not eligible for reappointment to that office (i.e., not eligible for second term).

Source: laxmikant ch 43

Q.18) With reference to various Constitutional Amendments and their subject matter, consider the following pairs:

Constitutional Amendments	Subject matter
1. 42nd Amendment Act,1976	Deleted Fundamental right to property
2. 52nd Amendment Act, 1985	Anti defection law
3. 61st Amendment Act,1989	Reduced voting age from 21 to 18
4. 100th Amendment Act,2015	Replaced collegium system with National Judicial Appointments Commission

How many pairs given above are correct?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

Ans) b

Exp) Option b is the correct answer.

Here only two pairs are correctly matched.

Statement 1 is incorrect: It was the 44th Constitutional Amendment Act,1978 that deleted the right to property from the list of Fundamental Rights and made it only a legal right. 42nd Constitutional Amendment Act,1976 also called mini constitution led to addition of new words (socialist, secular and integrity) in preamble, provided for tribunals, added fundamental duties to the constitution.

Statement 2 is correct: 52nd Constitutional Amendment Act, 1985 provided for disqualification of members of Parliament and state legislatures on the ground of defection and added a new Tenth Schedule containing the details in this regard.

Statement 3 is correct: 61st Constitutional Amendment Act,1989 Reduced the voting age from 21 years to 18 years for the Lok Sabha and state legislative assembly elections and gave youth rightful participation in electoral politics.

Statement 4 is incorrect: 99th Constitutional Amendment Act,2015 Replaced the collegium system of appointing judges to the Supreme Court and High Courts with a new body called the National Judicial Appointments Commission (NJAC). However, in 2015, the Supreme Court declared this amendment act as unconstitutional and void. The 100th Constitutional Amendment Act,2015 gave effect to the acquiring of certain territories by India and transfer of certain other territories to Bangladesh to settle land boundary disputes.

Knowledge Base: 101st Constitutional Amendment Act, 2016 paved the way for the introduction of the goods and services tax (GST) regime in the country.

102nd Constitutional Amendment Act, 2018 conferred a constitutional status on the National Commission for Backward Classes.

103rd Constitutional Amendment Act, 2019 provided reservation of 10% in addition to the existing reservation for economically weaker section of citizens.

104th Constitutional Amendment Act, 2019 ended the reservation of seats for the Anglo-Indians in the Lok Sabha and State Legislative Assemblies. It also extended the reservations for SCs and STs for up to ten years.

105th Constitutional Amendment Act, 2021 gave state governments power to prepare the Socially and Educationally Backward Classes list.

Source: <https://legislative.gov.in/amendment-acts>

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Q.19) With reference to the Union Public Service Commission (UPSC), which of the following statements is/are **incorrect**?

1. The conditions of service of the chairman or a member can only be determined by the Parliament.
2. The salaries and pensions of the chairman and members are 'made' from the Consolidated Fund of India, and thus are subjected to the vote of Parliament.
3. UPSC shall be consulted for all disciplinary matters affecting a person serving under the Government of India in a civil capacity.

Select the correct answer using the code given below.

- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Constitution has made the many provisions to safeguard and ensure the independent and impartial functioning of the UPSC. Some are discussed here.

Statement 1 is incorrect: The conditions of service of the chairman or a member is **determined by the President**. It cannot be varied to his disadvantage after his appointment.

Statement 2 is incorrect: The entire expenses including the salaries, allowances and pensions of the chairman and members of the UPSC are '**charged**' on the **Consolidated Fund of India**. Thus, they are not subject to vote of Parliament. Actually, the budget consists of **two types of expenditure—the expenditure 'charged' upon the Consolidated Fund of India and the expenditure 'made' from the Consolidated Fund of India**. The charged expenditure is non-votable by the Parliament, that is, it can only be discussed by the Parliament, while the other type has to be voted by the Parliament.

Statement 3 is correct: **UPSC shall be consulted for all disciplinary matters affecting a person serving under the Government of India in a civil capacity.** Such matters include:

- 1) Censure (Severe disapproval)
- 2) Withholding of increments
- 3) Withholding of promotions
- 4) Recovery of pecuniary loss
- 5) Reduction to lower service or rank (Demotion)
- 6) Compulsory retirement
- 7) Removal from service
- 8) Dismissal from service

However, the Supreme Court has held that any irregularity in consultation with the UPSC or acting without consultation does not invalidate the decision of the government.

Source: m laxmikant ch 43

Q.20) With reference to the election of Vice President of India, consider the following statements:

1. Only elected members of state Legislative Assemblies are part of the electoral college.
2. Both nominated as well as elected members of Parliament are a part of the electoral college
3. The Supreme Court is the final authority for deciding all disputes regarding this election.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Vice President is the Ex-Officio chairman of the Rajya Sabha, who is next in precedence to the President. He too, like the President, is elected indirectly based on proportional representation with single transferable vote. So, for the purpose of electing the Vice President in this indirect fashion, an electoral college is constituted, which has the following features.

Statement 1 is incorrect: Neither elected nor nominated members of State Legislative Assemblies are a part of the electoral college that elects the Vice President.

This is unlike the President's election, wherein the elected members of state Legislative Assemblies are a part of their electoral college.

Statement 2 is correct: In the election of the Vice President, both elected as well as nominated members in both the Houses of the Parliament (Rajya Sabha + Lok Sabha) take part in the electoral college.

By contrast, in the election of the President, only elected members of both the Houses (as well as state legislative assemblies) are a part of the electoral college.

Statement 3 is correct: In case of any disputes regarding the election of Vice President (as well as that of the President), the Supreme Court is the only and final authority to be deciding this matter.

Source: Indian Polity by Laxmikanth, 6th edition, Ch-18;

<http://164.100.47.5/Chairman-Rajyasabha/VPElection.htm>

Q.21) Who has the final ownership rights over the sea-wealth within the territorial waters of India?

- a) The Union of India
- b) The concerned coastal states
- c) Shared by the concerned coastal states and the Union
- d) Decided by the Supreme Court of India under its original and exclusive jurisdiction

Ans) a

Exp) Option a is the correct answer.

All lands, minerals and other things of value under the waters of the ocean within the territorial waters of India, the continental shelf of India and the exclusive economic zone of India vests in the **Union**. Hence, a bordering state near the ocean cannot claim jurisdiction over these things. India's territorial waters extend to a distance of 12 nautical miles from the appropriate base line. Similarly, India's exclusive economic zone extends upto 200 nautical miles.

Source: m laxmikant ch 67

Q.22) If the government wants to compulsorily acquire the private property, then in which of the following cases it is a constitutional obligation to provide the compensation to the property owner?

1. When the government acquires the property of a minority educational institution.
2. When the government acquires the property of the persons belonging to the Schedule Tribes.
3. When the government acquires the land held by a person under his personal cultivation and the land is within the statutory ceiling limits.

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Only Statements 1 and 3 are correct.

The **Parliament as well as the state legislatures** are empowered to make laws for the compulsory acquisition and requisitioning of private property by the governments. The 44th Amendment Act (1978) has also abolished the constitutional obligation to pay compensation. However, **there are only two cases** where the government has the **constitutional obligation to pay compensation**.

- 1) when the government acquires the property of a minority educational institution;
- 2) when the government acquires the land held by a person under his personal cultivation and the land is within the statutory ceiling limits.

Source: m laxmikant ch 67

Q.23) With respect to the Indian Constitution, which of the following statements regarding the 'Doctrine of Pleasure' is/are correct?

1. Every person who is a member of the civil service of a state holds office during the pleasure of the Governor of the state.
2. Members of the defense services in India are excluded from the purview of the doctrine of pleasure.

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is correct answer.

The doctrine of Pleasure is a concept derived from English common law, under which the crown can dispense with the services of anyone in its employ at any time. In India, Article 310 of the Constitution says every person in the defence or civil service of the Union holds office during the pleasure of the President, and every member of the civil service in the States holds office during the pleasure of the Governor.

Statement 1 is correct: In Indian context, Article 310 of the Constitution says every member of the civil service in the States holds office during the pleasure of the Governor. Hence the statement is correct.

Statement 2 is incorrect: Article 310 (1) of Constitution of India states that "Except as expressly provided by this Constitution, **every person who is a member of a defence service** or of a civil service of the Union or of an all-India service or **holds any post connected with defence** or any civil post under the Union, **holds office during the pleasure of the President**. Hence the members of defense services are not out of purview of the Doctrine of Pleasure.

Knowledge Base: The following are expressly excluded by the Constitution from the Doctrine of Pleasure. They are:

- 1) Supreme Court Judges Article 124,
- 2) Auditor General (Article 148)
- 3) High Court Judges (Article 217, 218)
- 4) A member of Public Service Commission (Article 317)
- 5) The Chief Election Commissioner.

Source: <https://www.legalserviceindia.com/legal/article-2388-constitutional-provisions-regarding-civil-servants-in-india.html>

<https://www.legalserviceindia.com/legal/article-7352-an-overview-of-doctrine-of-colourable-legislation.html>

<https://www.thehindu.com/news/national/explained-what-is-the-doctrine-of-pleasure/article66070566.ece>

Q.24) With reference to immunity provided to the Civil Servant, which of the following is/are correct?

1. Criminal proceedings cannot be initiated against them for acts done in their official capacity.
2. Civil proceedings can be instituted against them for anything done in their official capacity after giving a two months' advance notice.
3. It is always compulsory to hold an inquiry before dismissing or removing a civil servant.

Select the correct answer using the code given below.

- a) 2 only
- b) 1 and 2 only
- c) 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Under the Constitution, the civil servants are conferred personal immunity from legal liability for official contracts. This means that the civil servant who made a contract in his official capacity is not personally liable in respect of that contract but it is the government (Central or state) that is liable for the contract.

Statement 1 is incorrect: Criminal proceedings can be instituted against them for acts done in their official capacity, **with the prior permission of the president or the governor**, where necessary.

Statement 2 is correct: Civil proceedings can be instituted against them for anything done in their official capacity after giving a two months' advance notice. However, **no such notice is required** when the action is to be brought against them for the acts done **outside the scope of their official duties**.

Statement 3 is incorrect: **Article 311** places two restrictions on the 'doctrine of pleasure'. In other words, it provides two safeguards to civil servants against any arbitrary dismissal from their posts:

- 1) A civil servant cannot be dismissed or removed by an authority subordinate to that by which he was appointed.
- 2) A civil servant cannot be dismissed or removed or reduced in rank except after an inquiry in which he has been informed of the charges against him and given a reasonable opportunity of being heard in respect of those charges.

However, the second safeguard (holding inquiry) is not available in the following three cases. In these three cases, a civil servant can be dismissed or removed without an inquiry.

- 1) Where a civil servant is dismissed or removed or reduced in rank on the ground of conduct which has led to his conviction on a criminal charge; or
- 2) Where the authority empowered to dismiss or remove a civil servant or to reduce him in rank is satisfied that for some reason (to be recorded in writing), it is not reasonably practicable to hold such inquiry; or

- 3) Where the president or the governor is satisfied that in the interest of the security of the state, it is not expedient to hold such inquiry.

Source: Laxmikant - ch 66 and 67

Q.25) With reference to Zero Coupon Zero Principal instruments, consider the following statements:

1. It is a financial instrument that can be issued only by the Government of India.
2. It is a type of 'security' that can be listed on Social Stock Exchange segment of a recognised Stock Exchange.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The government on July 16, 2022, declared the so-called zero-coupon, zero-principal instruments as securities that can be listed on particular exchanges. These are financial instruments to facilitate donations to non-profits in a more transparent and organised manner.

Statement 1 is incorrect: Zero Coupon Zero Principal (ZCZP) is a financial instrument resembling a debt raising bond that is **issued** by a **not-for-profit organization, not the Government of India**. Hence this statement is **incorrect**.

Statement 2 is correct: Like other marketable securities, the **SEBI** has rolled out **rules** relating to these financial instruments. One of them is that **these instruments will be listed like securities** are listed on stock exchanges. They will be listed on a **special subcategory of recognised stock exchanges**, called the **Social Stock Exchanges**, which was announced by the SEBI in 2021.

The **concept of Social Stock Exchanges** was announced in the **Budget Speech of 2019-20**. They were **first cleared by Sebi in September 2021**. They are meant to be **exchanges-like the NSE and BSE**—except they **will list only securities that raise money for non-profit or for-profit social enterprises**. These exchanges are still in the works.

Source: <https://www.moneycontrol.com/news/business/markets/mc-explains-what-is-a-zero-coupon-zero-principal-instrument-8855131.html>

<https://economictimes.indiatimes.com/markets/stocks/news/govt-declares-zero-coupon-zero-principal-instruments-as-securities/articleshow/92959209.cms?from=mdr>

https://www.sebi.gov.in/legal/gazette-notification/jul-2022/declaration-of-zero-coupon-zero-principal-instruments-as-securities-under-the-securities-contracts-regulation-act-1956_60875.html

Q.26) With reference to provisions related to Joint State Public Service Commission (JSPSC), consider the following statements:

1. The Government of India Act of 1935 provided for the establishment of Joint Public Service Commission.
2. Only the Parliament decides the number of members in a JSPSC and their conditions of service through an act.
3. The Chairman and Members can be suspended by the Governor but can be removed by the President only.
4. A JSPSC presents its annual performance report to the Governors of concerned states.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 4 only
- d) 1, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

The Constitution makes a provision for the establishment of a Joint State Public Service Commission (JSPSC) for two or more states. While the UPSC and the SPSC are created directly by the Constitution, a JSPSC can be created by an act of Parliament on the request of the state legislatures concerned. Thus, a JSPSC is a **statutory and not a constitutional body**.

Statement 1 is correct: The Government of India Act of 1919 provides a **Central Public Service Commission** which was set up in 1926 and entrusted with the task of recruiting civil servants. **The Government of India Act of 1935** provided for the establishment of not only a Federal Public Service Commission but also a Provincial Public Service Commission and **Joint Public Service Commission for two or more provinces**.

Statement 2 is incorrect: The **President (not Parliament)** decides the number of members of a JSPSC and their conditions of service.

Statement 3 is incorrect: The chairman and members of a JSPSC are appointed by the President. They hold office for a term of six years or until they attain the age of 62 years, whichever is earlier. They can be **suspended or removed by the President**. They can also resign from their offices at any time by submitting their resignation letters to the president. The Governor has no role in appointment and removal.

Statement 4 is correct: A JSPSC presents its annual performance report to **each of the concerned state Governors**. Each Governor places the report before the state legislature.

Source: laxmikant ch 44

Q.27) With reference to Electoral reforms in India, consider the following pairs:

Committees	Recommendations/ Reforms
1. Indrajit Gupta Committee	Candidate should not contest in more than two constituencies.
2. J.S. Verma Committee	Disqualification of candidates for committing sexual offences.
3. Y B Chavan Committee	Banning defecting legislators from holding ministerial positions for a year

How many pairs is/are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) All three pairs
- d) None of the pairs.

Ans) b

Exp) Option b is the correct answer.

In India, various committees and commissions have been formed to reform the electoral system. Those committees have examined the Indian electoral system and its election machinery and suggested reforms to ensure free and fair elections in India.

Pair 1 is incorrect: The Indrajit Gupta Committee formed in 1998 did not recommend the candidate to contest in not more than two constituencies (Parliamentary as well as Legislative assembly). It was the **recommendation of Dinesh Goswami committee formed in 1990.**

Pair 2 is correct: It is true that the **J.S. Verma committee formed in 2012** recommended that candidates should be **disqualified for committing sexual offences**. The committee further recommended that filing of charge sheet and cognizance by the Court should be sufficient for disqualification of a candidate.

Pair 3 is correct: It is true that **Y B Chavan Committee (1967) recommended barring defecting legislators from holding ministerial positions for a year**. The committee defined defection as the voluntary giving up of allegiance of a political party on whose symbol a legislator was elected, except when such action was the result of the decision of the party.

Source: Laxmikanth - Election Reforms

<https://prsindia.org/policy/report-summaries/justice-verma-committee-report-summary>

<https://prsindia.org/articles-by-prs-team/explained-the-limits-of-anti-defection>

<https://prsindia.org/theprsblog/state-funding-of-elections?page=29&per-page=1>

Q.28) With reference to elections in India, consider the following statements:

1. The 17th Constitutional Amendment Act (CAA) made the procedure for removal of other Election Commissioners as the same as that of Chief Election Commissioner.
2. The candidate contesting elections for State and Central legislature must declare his/her - own assets, spouses' assets and dependants' assets.
3. It is mandatory for political parties to publish criminal records of their candidates on their websites and to publish them in at least two newspapers.
4. Legislatures can be removed from his/her post immediately after his/her conviction of offences which amounts to at least 2-year imprisonment.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 2 and 3 only
- c) 2, 3 and 4 only
- d) 1 and 4 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect: To ensure the independence of the Election Commission Article 324 (5) of the Constitution provides that the **Chief Election Commissioner shall not be removed from his office except in like manner** as a Judge of the Supreme Court. However, Article 324 (5) does not provide similar protection to the **Election Commissioners**, and it merely says that **they cannot be removed from office except on the recommendation of the Chief Election Commissioner** and **this provision has not changed so far by the Government of India**. The **Seventeenth Constitutional Amendment Act (CAA), 1964** prohibited the **acquisition of land** under personal cultivation unless the market value of the land is paid as compensation and included **44 more acts in the Ninth Schedule** of the constitution.

Statement 2 is correct: In 2003, the **Election Commission** issued an order directing every candidate seeking election to the Parliament or a State legislature **to declare his/her - own assets, spouses' assets and dependants' assets.**

Statement 3 is correct: In 2020 the Supreme court in relation to the Bihar Assembly election, ruled that **parties must publish criminal records of its candidates in their website and to publish such details in at least two newspapers.** The court held that such details must be published by political parties within 48 hours of their selection or at least two weeks before the first date for filing of nomination papers.

Statement 4 is correct: Section 8 of the Representation of the People Act (RPA), 1951, states that a candidate can be disqualified, if he/she was convicted of any offences which amounts to at least 2-year imprisonment, but it provided exemption stating that **disqualification will not take effect for three months** after his/her conviction. However, the **Supreme court has struck down this exception in the Lily Thomas case and enabled immediate disqualification after conviction of offences** which amounts to at least 2-year imprisonment.

Source:

https://prsindia.org/files/bills_acts/bills_parliament/2008/bill200_20081202200_Election_Commission_Proposed_Electoral_Reforms.pdf

<https://www.indiatoday.in/law/story/supreme-court-parties-criminal-records-of-candidates-1839008-2021-08-10>

<https://www.thehindu.com/news/national/explained-can-convicted-legislators-be-disqualified-from-assembly/article66088235.ece>

Q.29) In the context of Indian Polity, which of the following are the National Parties?

1. Nationalist Congress Party (NCP).
2. Communist Party of India (Marxist).
3. Bahujan Samaj Party (BSP).
4. Dravida Munnetra Kuzhagan (DMK)
5. National People's Party (NPP).

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 1, 2, 3 and 5 only
- c) 2, 3 and 4 only
- d) 1, 2, 3, 4 and 5

Ans) b

Exp) Option b is the correct answer.

The Election Commission registers political parties for the purpose of elections and grants them recognition as **national or state parties based on their poll performance.** The other parties are simply declared as registered-unrecognised parties.

Option 1, 2, 3 and 5 are correct: There are nine political parties which have secured a status of National Parties in India (Recently Aam Aadmi Party secured the status of a National Party). The eight other National Political Parties are National Congress Party, Communist Party of India (Marxist), Bahujan Samaj Party (BSP), Communist party of India, Indian National Congress, Bhartiya Janata Party, All India Trinamool Congress, National People's Party. The **National People's Party (NPP)** which is dominant in **Meghalaya** has been recognised as the **eighth national party by the Election Commission of India in 2019**, making it the first regional party of the north-east to be accorded the status.

Option 4 is incorrect: Dravida Munnetra Kazhagam (DMK) is not a national party, it is a recognised state party and is dominant political party in the state of Tamil Nadu.

Source: <https://www.thehindu.com/news/national/aap-to-turn-national-party-kejirwal-says-will-conquer-gujarat-fortress-next-time/article66239580.ece>
https://indianexpress-com.cdn.ampproject.org/v/s/indianexpress.com/article/explained/explained-politics/aap-set-to-become-a-national-party-after-gujarat-8313695/lite/?usqp=mq331AQKKAFQArABIACAw%3D%3D&_js_v=0.1
<https://adrindia.org/content/4-national-parties-5509-their-total-income-donations-through-electoral-bonds#:~:text=The-,National,-Parties%20include%20Bharatiya>
<https://nppindia.in/history-and-philosophy/>
<https://www.financialexpress.com/india-news/aap-gains-national-party-tag-but-challenges-galore/2932786/>
<https://www.outlookindia.com/national/explained-is-aap-india-s-ninth-national-party-here-s-what-eci-guidelines-say-news-243537>
<https://www.telegraphindia.com/india/aap-becomes-indias-9th-national-party/cid/1902788>
<https://indianexpress.com/article/explained/explained-politics/aap-set-to-become-a-national-party-after-gujarat-8313695/>

Q.30) Consider the following pairs:

Region in news - **Location**

1. Luhansk - Russia
2. Parcel Islands - South China sea
3. Donetsk - Ukraine
4. Snake Islands - Mediterranean Sea

Which of pairs given above are correctly matched?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.



Source: Natural Earth; United Nations Office for the Coordination of Humanitarian Affairs (OCHA)

Donetsk and Luhansk in Ukraine

Pair 1 is incorrectly matched, and Pair 3 is correctly matched: Donetsk and Luhansk are two states located in **eastern Ukraine**, which share a border with Russia. This entire region, which includes Donetsk, Luhansk and their respective separatist territories, is generally referred to as the **'Donbas' region**.

Pair 2 is correctly matched: The **Parcel Islands** commonly referred as **Hoang Sa Archipelago** are a disputed archipelago in the **South China Sea**. The archipelago includes about **130 small coral islands and**

reefs. China, Vietnam, the Philippines, Taiwan, Malaysia, and Brunei all have competing claims. Recently, US sent destroyer near Paracel Islands angering China.



Paracel Islands

Pair 4 is incorrectly matched: Zmiinyi Island, also known as Snake Island, is a small piece of rock less than 700 meters from end to end in Black Sea, that has been described as being “X-shaped”. The island, which has been known since ancient times and is marked on the map by the tiny village of Bile that is located on it, belongs to Ukraine. Recently, Russia had control over this island.



Source: Snake Island | Battle for the Black Sea - The Hindu

US sends destroyer near Paracel Islands angering China | South China Sea News | Al Jazeera

After losing Luhansk, Ukraine forces regather for defence of Donetsk | World News, The Indian Express

Q.31) With reference to Anti defection law in India, consider the following statements:

1. Presiding officer of the house can disqualify a member on the grounds of defection, only after consultation with the Election Commission of India
2. Presiding officers' decision over cases related to anti-defection cannot be questioned in any court.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The Tenth Schedule was inserted in the Constitution in 1985 through 52nd Constitutional Amendment Act and it lays down the process by which legislators may be disqualified on grounds of defection by the Presiding Officer of a legislature. A legislator is deemed to have defected if he either **voluntarily gives up**

the membership of his/her party or disobeys the directives of the party leadership on a vote. **Statement 1 is incorrect:** It is true that the **Presiding officer of the house disqualifies a member of the house on the ground of defection, but** consultation with the Election commission is not necessary. Any question regarding disqualification arising out of defection is to be decided by the presiding officer of the House.

Statement 2 is incorrect: Although originally the act provided that the **decision of the presiding officer is final and cannot be questioned in any court.** However, in the **Kihoto Hollohan case (1993)**, the Supreme Court declared this provision as unconstitutional and **ruled that the Presiding officer's decision is subject to judicial review.**

Source: Laxmikanth - Anti Defection

Q.32) With reference to the State Public Service Commission (SPSC), which of the following statements are correct?

1. The Constitution does not specify the strength of the Commission but has left the matter to the discretion of the Governor.
2. The Constitution does not prescribe any qualification for the commission's membership.
3. The present tenure of the chairman and members of the Commission is same as it was prescribed in the original constitution.
4. The State legislature can confer on SPSC the additional functions relating to the services of the state.

Select the correct answer using the code given below.

- a) 1 and 4 only
- b) 2 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

Parallel to the Union Public Service Commission (UPSC) at the Centre, there is a State Public Service Commission (SPSC) in a state.

Statement 1 is correct: A State Public Service Commission consists of a chairman and other members appointed by the governor of the state. **The Constitution does not specify the strength of the Commission but has left the matter to the discretion of the Governor.** The Constitution also authorises the Governor to determine the conditions of service of the chairman and members of the Commission.

Statement 2 is incorrect: The Constitution prescribes only one qualification for the commission's membership. That **one-half of the members of the commission** should be such persons who have held office for at least ten years either under the government of India or under the Government of a state.

Statement 3 is incorrect: The chairman and members of the Commission hold office for a term of six years or until they attain the age of 62 years. **In original Constitution, it was 60 years. The 41st Amendment Act of 1976 raised it to 62 years.**

Statement 4 is correct: The State legislature can confer on SPSC the additional functions relating to the services of the state. It can also place the personnel system of any local authority, corporate body or public institution within the jurisdiction of the SPSC. **Hence the jurisdiction of SPSC can be extended by an Act made by the state legislature.**

Source: m laxmikant ch 44

Q.33) With reference to Voting rights of citizens in India, consider the following statements:

1. While the convicted person on bail can vote, the person in prison is not entitled to vote.
2. Undertrial prisoners are allowed to vote if their names are on the electoral rolls.
3. The person under preventive detention can cast his/her vote through postal ballots.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The right to vote is a constitutional right under **Article 326** of the Constitution. Recently, the Supreme Court has decided to examine a petition challenging a provision in the election law that imposes a **blanket ban on under trials** and convicts serving their sentence in jails from casting their votes.

Statement 1 is correct: It is true that a **convicted person can vote if he/she is out on bail, while a person in prison** irrespective of his/her conviction or nature of crime, **cannot vote**. Section 62(5) of the Representation of the People Act, 1951, mandates that **No person shall vote at any election if he/she is confined in a prison** which means those who are **outside prison can vote in elections**.

Statement 2 is incorrect: **Undertrial prisoners cannot vote even if their names are on the electoral rolls**. This amounts to denying a large group of the population the right to vote. According to the National Crime Reports Bureau (NCRB) **report of 2021, there are over 4,27,165 undertrial prisoners** in jails across India. Section 62(5) of the Representation of People Act, 1951 states that No person shall vote at any election if he/she is confined in a prison, which includes under trial prisoners.

Statement 3 is correct: It is true that the **persons detained preventive detention can cast their vote through postal ballots**. Section 62(5) of the Representation of People Act, 1951 states that those who are under preventive detention can cast their vote through postal ballot.

Source: <https://www.thehindu.com/news/national/supreme-court-examines-poll-law-which-deprives-under-trials-civil-prison-detainees-their-right-to-vote/article66076670.ece>

Q.34) With reference to the removal process related to the Chairman and members of the Union Public Service Commission (UPSC), which of the following statements are correct?

1. The President has to refer the matter to the Supreme Court for an enquiry only when the ground of removal is misbehavior.
2. There is no difference in the grounds of removal for CAG and the members of UPSC.
3. The advice tendered by the Supreme Court with regard to enquiry is binding on the President.

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Union Public Service Commission (UPSC) is the central recruiting agency in India. It is an independent constitutional body in the sense that it has been directly created by the Constitution.

Statement 1 is correct: The President can remove the chairman or any other member of UPSC from the office under the following circumstances:

- (a) If he is adjudged an insolvent (that is, has gone bankrupt);
- (b) If he engages, during his term of office, in any paid employment outside the duties of his office;
- (c) If he is, in the opinion of the president, unfit to continue in office by reason of infirmity of mind or body.

In all the above three cases, It is not necessary to refer the case by the President to the Supreme Court for an enquiry. However, when the president removes the chairman.

or any other member of UPSC for misbehaviour. In this case, the president has to refer the matter to the Supreme Court for an enquiry.

Statement 2 is incorrect: There is considerable difference between the removal process and grounds of removal. **CAG can be removed by the president on same grounds and in the same manner as a judge of the Supreme Court (not same as members of UPSC).** He can be removed by the president on the basis of a **resolution passed to that effect by both the Houses of Parliament with special majority**, either on the ground of proved misbehaviour or incapacity. **Whereas, in case of UPSC, there is no involvement of Parliament.**

Statement 3 is correct: If the Supreme Court, after the enquiry, upholds the cause of removal and advises so, the president can remove the chairman or a member. **Under the provisions of the Constitution, the advice tendered by the Supreme Court in this regard is binding on the president.** During the course of enquiry by the Supreme Court, the president can suspend the chairman or the member of UPSC.

Source: laxmikant ch 43

Q.35) With reference to the cultivation of Opium in India, consider the following statements:

1. Cultivation of opium is legally allowed under regulated circumstances in India.
2. It is only cultivated in the states of Rajasthan, Madhya Pradesh & Uttar Pradesh
3. Private sector is not allowed to cultivate or sell opium in India.

Which of the statements given above is/ are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Opium is a natural substance obtained from poppy seeds and its derivatives are mainly used for pain management. “The extracts from opium poppy such as morphine are potent painkillers and are mainly prescribed to cancer patients,”. The opium product codeine is helpful in cough suppression. It is used illicitly for smoking, drinking, or even eating as pills. The addictive properties of opium are the reason that the cultivation of poppy is highly regulated around the world. Recently the government opened the highly regulated sector of opium cultivation to the private sector.

Statement 1 is correct: India is one of the few (12) countries in the world where Opium is legally cultivated.

India is **signatory** to the **United Nations Single Convention on Narcotic Drugs, 1961** and as a licit producer of opium, India is required to adhere to the regulations under the said convention. In India opium poppy cultivation is **prohibited** under **Section 8 of NDPS Act, 1985, except** under a **licence** issued by the **Central Bureau of Narcotics under Rule 8 of NDPS Rules, 1985.** So, growing of opium is legal but heavily regulated.

Statement 2 is correct: At present, the licit opium poppy cultivation is **permitted by the Govt.** of India in **selected tracts in three traditionally opium growing States** namely **Madhya Pradesh, Uttar Pradesh and Rajasthan.**

Statement 3 is incorrect: Up until recently, the cultivation and sale of opium was very heavily regulated, and the private sector was not allowed to participate on a large scale. However, the NDPS Act empowers the Central Government to permit and regulate cultivation of opium poppy for **medical and scientific purposes**. Using this very power, the government in **July 2022 opened the cultivation and sale to the private sector for medicinal purposes**. Bajaj Healthcare has become the first company to win tenders for producing concentrated poppy straw that is used to derive alkaloids that are the active pharmaceutical ingredient in pain medication and cough syrups.

Knowledge Base:

History of Opium trade in India:

India has been growing poppy at least since the 15th century, as per Ain-i-Akbari

The British East India Company assumed monopoly on the cultivation of poppy when the Mughal Empire was on the decline, and the entire trade was brought under government control by 1873.

After India gained independence, the cultivation and trade of opium passed on to the Indian government, with the activity being controlled by The Opium Act, 1857, The Opium Act, 1878, and The Dangerous Drugs Act, 1930. At present, the cultivation and processing of poppy and opium is controlled by the provisions of The Narcotic Drugs and Psychotropic Substances (NDPS) Act and Rules.

India's Opium Policies:

The government announces the licensing policy for opium cultivation every year, providing details on minimum qualifying yield, the maximum area that can be cultivated by a single cultivator, and the maximum benefit that is allowed to cultivators for damage to the crop due to natural causes.

The cultivation of opium poppy is strictly monitored and the government uses satellite images to check for illicit cultivation. Once the crop is ready, they have a formula on how much the yield should be.

This entire quantity is then bought by the government and processed in its own factories. The opium produced in the country is currently processed entirely at the Government Opium and Alkaloid Factories in Uttar Pradesh's Ghazipur and Madhya Pradesh's Neemuch. Products such as morphine, codeine, thebaine, and oxycodone are produced.

Source: <https://dor.gov.in/narcoticdrugspsychotropic/licensed-cultivation-opium#:~:text=Opium%20cultivation%20is%20permitted%20in,license%20in%20the%20succeeding%20year.>

<https://indianexpress.com/article/explained/india-opium-production-regulation-bajaj-healthcare-8040545/>

<http://cbn.nic.in/html/operations.html>

Q.36) With reference to Anti defection law of India, consider the following statements:

1. Casting of vote by members of parliament against the direction of their parties is considered one of the grounds of defection.
2. An independent member joining any other party within six months of his/her election cannot be disqualified on the ground of defection.
3. In India, Speaker/Deputy Speaker of the Lok Sabha who voluntarily gives up his/her membership of the party are exempted from defection charges.
4. Currently, defection by more than one third of the members of a political party is not considered defection under Anti defection law.

Which of the statements given above are correct?

- a) 1, 3 and 4 only
- b) 2 and 4 only
- c) 1 and 3 only
- d) 1, 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

In 1985 the tenth Schedule, popularly known as the anti-defection law, was added to the Constitution. It was added on the backdrop of toppling of multiple state governments after MLAs changed their political loyalties. The law specifies the circumstances under which changing of political parties by MPs/MLAs invites action under the law.

Statement 1 is correct: Casting of vote by members against the direction of his/her parties is considered one of the grounds of **defection**. The **Tenth Schedule** states that a member can be disqualified on the ground of defection **if he/she votes or abstains from voting** in contrary to any direction of his/her parties. He/she cannot be disqualified if members committed such actions with **prior permission** of such party and such act has **been condoned by the party within 15 days**.

Statement 2 is incorrect: An independent member joining any other party after his/her election can be disqualified on the ground of defection, regardless of the time period in which he/she joins another party.

Statement 3 is correct: It is true that Anti defection law provides exemption to the Speaker as well as Deputy Speaker of Lok Sabha. If a member, after being elected as the **Speaker/Deputy Speaker of the House, voluntarily gives up the membership of his party** or re-joins it after he ceases to hold that office cannot be disqualified on the grounds of defection. This exemption has been provided in view of the dignity and impartiality of the Speakers' office.

Statement 4 is incorrect: As per the **original Anti defection law**, defection by more than one third of the members of political parties are not considered defection by Anti defection law. But this exemption was **deleted by the 91st Constitutional Amendment Act of 2003** which means that the defectors have no more protection on grounds of splits.

Source: Laxmikanth - Anti Defection

Tenth Schedule of the Constitution of India

Q.37) With reference to Contracts exercised by the Union government, consider the following statements:

1. They must be executed by such person or in such manner as the President may direct or authorize.
2. President is not personally liable in respect of any contracts executed in his name.

Which of the above given statements is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Under the exercise of its executive power, the Union or a state can enter contracts for the acquisition, holding and disposal of property, or to carry on any trade or business, or for any other purpose. But the Constitution lays down three conditions which must be fulfilled by such contracts: (a) They must be expressed to be made by the president or governor, as the case may be;

(b) They must be executed on behalf of the president or governor, as the case may be; and

(c) They must be executed by such person or in such manner as the **president or governor** may direct or authorize. **Hence, Statement 1 is correct.**

Statement 2 is correct: The president or the governor is not personally liable in respect of any contract executed in his name. Similarly, the officer executing the contract is also not personally liable. This immunity is purely personal and does not immunize the government from contractual liability, making the government suable in contracts.

Source) Laxmikant

Q.38) With reference to Coalition governments in India, consider the following statements:

1. India's first-ever coalition government at the Centre was under the Prime Ministership of Morarji Desai.
2. At the Centre, National Democratic Alliance (NDA) was the first non-Congress coalition government to govern for a full term of five years.

Which of the above given statements is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) option c is the correct answer.

Statement 1 is correct: India's **first-ever coalition government formed at the Centre was under the Prime Ministership of Morarji Desai.** This was also the first non-Congress government at Centre, headed by the Janata Party.

Statement 2 is correct: The NDA won an absolute majority in the Parliament and became **the first non-Congress coalition government** in post-independence India to govern for a full term of five years from 1999 to 2004.

Source: <https://www.ilkogretim-online.org/fulltext/218-1639053033.pdf>

Q.39) With reference to the Representation of the People Act of 1951, consider the following statements:

1. It prohibits displaying any election matter by means of cinematograph or television during the polling in an election.
2. It mandates that election pamphlets must bear the name and address of the publisher.

Which of the above given statements is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Section 126 of the Representation of the People Act, 1951 prohibits **displaying any election matter by mean** of cinematograph, **television** or other similar apparatus, **during the period of 48 hours ending with the hour fixed for conclusion of poll.**

Statement 2 is correct: Section 127A of the Representation of the People Act, 1951: **The printing and publication of election pamphlets, posters, etc. is governed by its provisions, which make it mandatory to bear on its face the names and addresses of the printer and the publisher.**

Source: <https://eci.gov.in/mcc/>

Q.40) Which of the following statements regarding the Flag Code of India, seen in news recently is correct?

- a) The national flag is made exclusively from handmade/ spun fabric.
- b) The national flag can be displayed by the public only on Republic Day & Independence Day.
- c) The national flag can never be burned or buried.
- d) The national flag cannot be worn as a part of any costume below the waist.

Ans) d

Exp) Option d is the correct answer.

The Flag Code of India, 2022, which was amended vide Order dated 30 December 2021, laid down rules on how to use, display and hoist the national flag. It took effect on 26 January 2022. It has been in news because of the campaign of hoisting the tricolour on every home to celebrate 75 years of independence. The flag code was tweaked for three days (between August 13-15) earlier in July by the government of India keeping in mind the Azadi Ka Amrit Mahotsav. The instructions regarding the National Flag are contained in the Flag Code of India 2002 and upheld by the Prevention of Insults to National Honour Act, 1971.

Statement a is incorrect: Earlier the tricolour used to be made **exclusively out of hand spun material** using hand making techniques. However, in **recent amendments (December 2021)**, the **machine production** of the tricolour was **allowed**. It allowed the national flag to be made of **polyester or stitched using machines**. Now, the Tricolour can be made of **hand-spun, hand-woven or machine-made cotton, polyester, wool, silk and khadi bunting**.

Statement b is incorrect: The tricolour **may be displayed by any organisation or any member of the public on any special occasion**, such as the Republic or Independence Day, **or any ordinary day as well**. The only caveat is that they must ensure that **all rules for ensuring the respect and dignity of the flag are maintained**.

Statement c is incorrect: The Code **permits the burning or burial** of the tricolour, in order to **dispose of it**, if it has been **badly damaged**. Although it is encouraged to store the flags properly, in case they have been damaged **beyond repair** due to some reason, they may be disposed of by **burning, but only in private in a dignified manner**. They may also be **disposed of by burial**, but only **after being folded properly and being placed in a wooden box**.

Statement d is correct: The code **prohibits the use of the national flag “as a portion of costume or uniform”**. It **cannot be used as an accessory to be worn below the waist** of any person “nor shall it be embroidered or printed on cushions, handkerchiefs, napkins, undergarments or any dress material.

Knowledge Base:

The flag can be as big or small as one wants “but the ratio of the length to the height (width) of the National Flag shall be 3:2. The flag must always be a rectangle rather than square or any other shape.

It is against rules to display a damaged or dishevelled National Flag

No other flag or bunting shall be placed higher than or above or side by side with the National Flag; nor shall any object including flowers or garlands, or emblem be placed on or above the flag mast from which the National Flag is flown”. The Tricolour should never be used as a festoon, rosette, bunting or for a decorative purpose. No advertisements should be festooned to the pole from which it flies.

The National Flag cannot be flown on any vehicle except those of the President, Vice President, Prime Minister, Governor and other dignitaries. The flag should also not be used to cover the sides, back, and top of any vehicle.

People, who are waving flags made of paper, should not throw these on the ground after the ceremony.

The flag “shall not be allowed to touch the ground or the floor or trail in the water.

Source: [https://www.firstpost.com/explainers/har-ghar-tiranga-how-to-disposing-of-the-national-flag-flag-code-india-independence-day-](https://www.firstpost.com/explainers/har-ghar-tiranga-how-to-disposing-of-the-national-flag-flag-code-india-independence-day-11061961.html#:~:text=The%20Flag%20Code%20of%20India%2C%202022%2C%20which%20was%20ame)

[11061961.html#:~:text=The%20Flag%20Code%20of%20India%2C%202022%2C%20which%20was%20ame](https://www.firstpost.com/explainers/har-ghar-tiranga-how-to-disposing-of-the-national-flag-flag-code-india-independence-day-11061961.html#:~:text=The%20Flag%20Code%20of%20India%2C%202022%2C%20which%20was%20ame)
nded%20vide,polyester%20or%20stitched%20using%20machines.

<https://indianexpress.com/article/explained/tricolour-display-rules-independence-day-explained-8086735/>

Q.41) With reference to the Right to Information Act of 2005, consider the following statements:

1. The act provides that, in case of matters involving a petitioner's life and liberty, the information has to be provided within two days.
2. Records of deliberations of the Council of Ministers cannot be accessed through the Act.
3. According to the act, appeals against the decision of Public Information Officer lies only to the High court of the respective state.

Which of the above given statements is/are correct?

- a) 1 and 2 Only
- b) 1 and 3 Only
- c) 2 and 3 Only
- d) 1 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: Generally, a Public Information Officer needs to provide the information requested by the application either immediately (if possible) or within 30 days. **But, in the case of matters involving a petitioner's life and liberty, the information has to be provided within two days.**

Statement 2 is correct: One of the exemptions from disclosure of information under this act is cabinet papers including **records of deliberations of the Council of Ministers**, Secretaries and other officers.

Statement 3 is incorrect: An appeal over the decision of Public Information Officer can be **made to a departmental Appellate Authority**, who is an officer senior in rank to the PIO but in the same public authority.

Source: <https://www.newindianexpress.com/nation/2021/feb/22/sc-pulls-up-centre-for-not-filing-reply-on-jairam-rameshs-plea-against-amended-rti-act-2267440.html> <https://blog.forumias.com/rti-act-benefits-and-concerns/> [https://rti.gov.in/RTI%20Act,%202005%20\(Amended\)-English%20Version.pdf](https://rti.gov.in/RTI%20Act,%202005%20(Amended)-English%20Version.pdf)

Q.42) With reference to Citizens' Charter in India, consider the following statements:

1. Citizen's charters are not legally enforceable documents.
2. In India, for the first time, the Citizens' Charter was proposed in the report of 2nd Administrative Reforms Commission.
3. At the central level, the task of coordinating and operationalizing of Citizen's Charters are vested with the Ministry of Home Affairs.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

Citizens' Charters initiative is a response to the quest for solving the problems which a citizen encounters, day in and day out, while dealing with the organizations providing public services. The concept of Citizens' Charter enshrines the trust between the service provider and its users.

Statement 1 is correct: Citizen's charters are not legally enforceable documents. They are just guidelines to enhance service delivery to citizens.

Statement 2 is incorrect: In a **Conference of Chief Ministers of various States and Union Territories held on 24 May 1997 in New Delhi**, presided over by the Prime Minister of India, an **'Action Plan for Effective**

and Responsive Government' at the Centre and State levels was adopted. One of the major decisions at that Conference was that the Central and State Governments would formulate Citizens' Charters, starting with those sectors that have a large public interface. 2nd ARC was constituted in the year of 2005; hence the concept of Citizens' Charter was prominent in India even before the appointment of the 2nd ARC.

Statement 3 is incorrect: Department of Administrative Reforms and Public Grievances in Government of India (DARPG) initiated the task of coordinating, formulating and operationalizing Citizens' Charters. The DARPG website lists more than 700 charters adopted by various government agencies across India.

Source: <https://darpg.gov.in/en/citizens-charters-historical-background>

Q.43) Consider the following initiatives by the government to promote e-governance in the country:

e-governance Initiative	Purpose
1. DigiLocker	Facilitating paperless availability of public documents.
2. MeriPehchaan	National Single Sign-on platform to facilitate citizens ease of access to government portals.
3. Diksha	A national platform to help school students and teachers achieve learning goals.

How many pairs given above are correctly matched?

- Only one pair
- Only two pairs
- All the three pairs
- None of the pairs

Ans) c

Exp) Option c is the correct answer.

Pair 1 is correctly matched: DigiLocker: It is facilitating paperless availability of public documents. Digital Locker has more than 11.7 crore users and more than 532 crore documents are made available through DigiLocker from 2,167 issuer organizations.

Pair 2 is correctly matched: MeriPehchaan – National Single Sign-on platform called MeriPehchaan has been launched in July 2022 to facilitate citizens ease of access to government portals.

Pair 3 is correctly matched: Diksha – Diksha is a national level educational platform that helps students and teachers to participate, contribute and leverage a common platform to achieve learning goals at scale for the country. As on 27th July 2022, 7,633 courses are available, and more than 15 crore enrolments have been done.

Source: <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1847837>

Q.44) With reference to All India Judicial Services, Consider the following statements:

- The 44th Constitutional Amendment Act provided for the creation of All India Judicial Services.
- The all-India judicial service should not include any post inferior to that of a district judge.

Which of the above given statements is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The 42nd Constitutional amendment (not 44th Constitutional amendment) in 1976 amended Article 312 (1) empowering Parliament to make laws for the creation of one or more All-India Services, including an AIJS, common to the Union and the States. Under Article 312, Rajya Sabha is required to pass a resolution supported by not less than two-thirds of its members present and voting. Thereafter, Parliament has to enact a law creating the AIJS.

Statement 2 is correct: The all-India judicial service should not include any post inferior to that of a district judge. A law providing for the creation of this service is not to be deemed as an amendment of the Constitution for the purposes of Article 368.

Q.45) With reference to the Foreign Contributions Regulation Act, consider the following statements:

1. It prohibits journalists, members of parliament, and political parties from accepting foreign donations.
2. The licence granted under it needs to be renewed annually.
3. All foreign contributions must be received in a separate escrow account.
4. The foreign donations received may be transferred between entities after submitting an application.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

The Foreign Contributions Regulation Act (FCRA) seeks to regulate foreign donations to individuals and associations so that they functioned in a manner consistent with the values of a sovereign democratic republic. An amended FCRA was enacted in 2010 to “consolidate the law” on utilisation of foreign funds, and “to prohibit” their use for “any activities detrimental to national interest. The law was amended again by the current government in 2020, giving the government tighter control and scrutiny over the receipt and utilisation of foreign funds by NGOs.

Broadly, the FCRA requires every person or NGO seeking to receive foreign donations to be (1) registered under the Act, (2) to open a bank account for the receipt of the foreign funds in State Bank of India, Delhi, and (3) to utilise those funds only for the purpose for which they have been received and as stipulated in the Act.

Statement 1 is correct: Among the **entities** that are **prohibited from receiving foreign donations** are - **candidates for elections, journalists or newspaper and media broadcast companies, judges and government servants, members of legislature and political parties or their office-bearers, and organisations of a political nature.**

This has been done with the objective of preventing any undue influence of outside forces (from other countries) on the democratic processes of our countries, as the actors mentioned in the list are important influences on the democratic process.

Statement 2 is incorrect: Earlier, licence once granted never ever need be renewed, but by the **2020 amendments**, a licence once granted is **only valid for 5 years (not 1 year)**, after which it needs to be renewed. Hence this statement is **incorrect**.

Statement 3 is correct: One of the **2020 amendments mandated** that **all foreign contributions** that are received by the entities must be **deposited in a separate escrow account in Delhi branch of the SBI, and registered with the government**, so that all its **activities may be monitored**. These **donations may not be transferred** to any other accounts. This has been done so that foreign donations may not be misused to subvert democratic processes or arouse chaos and sedition in the country.

Statement 4 is incorrect: The **foreign donations** received under this Act **cannot be transferred from one entity to another under any circumstances**. Hence this statement is **incorrect**. The amended **Section 7 of the FCRA 2010** prevents a recipient of foreign contribution from transferring the same to any other entity.

Source: <https://indianexpress.com/article/explained/everyday-explainers/what-is-fcra-ngo-funding-mha-explained-8026895/>

<https://thewire.in/law/explained-amendments-to-fcra-law-that-the-supreme-court-has-upheld#:~:text=the%20limit%20of%20usage%20of%20foreign%20contribution%20for%20administrative%20expenses%20from%2050%25%20to%2020%25>

<https://www.livewlaw.in/top-stories/supreme-court-upholds-fcra-amendment-act-foreign-contribution-regulation-2020-196149>

Q.46) The Dinesh Goswami Committee was formed to make recommendations on

- Civil services reforms
- Electoral reforms
- Police reforms
- Centre state relations

Ans) b

Exp) Option b is the correct answer.

Dinesh Goswami was a politician in India. In 1989, he served as the Law and Justice Minister in the V.P. Singh government. In 1990, the Dinesh Goswami Committee was formed to make recommendations **on electoral reforms. Its recommendations were:**

- It proposed giving political parties in-kind governmental money (state funding)
- It also suggested that a candidate should not be permitted to contest in more than two constituencies.
- Need for amendment of Anti-defection law to restrict disqualification where elected member voluntarily gives up his membership.
- Fresh delimitation based on 1981 census
- Reduce age of candidates from 25 to 21 for assembly seats
- Discourage non-serious candidates - increasing the security deposit to Rs 5000 for Lok Sabha and Rs 2500 for Assembly elections.
- The issue of disqualification should be decided by the President/ Governor on the advice of the Election Commission.

Source) Laxmikant

Q.47) With reference to 91st Constitutional Amendment Act of 2003, consider the following statements:

- As per the Act, a member of parliament disqualified on the grounds of defection is also disqualified to be appointed as a minister.
- It limits the total number of ministers in the Central council of ministers to 15 percent of the total strength of the Parliament.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The 91st Amendment Act of 2003 has made the following provisions to limit the size of Council of Ministers, to debar defectors from holding public offices, and to strengthen the anti-defection law:

Statement 1 is correct: A member of either House of Parliament belonging to any political party who is disqualified on the grounds of defection shall also be disqualified to be appointed as a minister (Article 75).

Statement 2 is incorrect: The total number of ministers, including the Prime Minister, in the Central Council of Ministers shall not exceed 15 per cent of the total strength of the **Lok Sabha (not parliament)** (Article 75).

Source) Laxmikant

Q.48) Consider the following statements with reference to the Delimitation Commission of India:

1. More than three Delimitation Commissions have been constituted so far since Independence.
2. The Commission is always headed by the Chief Election Commissioner of India.
3. The order of the commission cannot be challenged in the court of law.

Which of the statements given above is/are correct?

- a) 1, 2 and 3
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1 only

Ans) c

Exp) Option c is the correct answer.

Delimitation means the act or process of **fixing limits** or **boundaries** of territorial constituencies in a country or a province having a legislative body. The job of delimitation has been assigned to a high-power body in India. Such a body is known as Delimitation Commission.

Statement 1 is correct. Delimitation Commissions have been constituted **4 times in India** (a) In 1952 under the Delimitation Commission Act, 1952, (b) In 1963 under Delimitation Commission Act, 1962, (c) In 1973 under Delimitation Act, 1972 and (d) In 2002 under Delimitation Act, 2002.

Statement 2 is incorrect. The Delimitation Commission is a **three-member commission**. It is headed by a **retired judge** of the Supreme Court. It draws other members from the Election Commission of India and the state election commissions.

Statement 3 is correct. The order of the Delimitation Commission **cannot be challenged in question before any court**. They come into force on a date to be specified by the President of India. Such orders have the force of law.

Source: <https://eci.gov.in/delimitation-website/delimitation/>

<https://www.thehindu.com/news/national/delimitation-commission-accepts-some-suggestions-of-jk-mps/article65081272.ece>

Q.49) With respect to the provisions regarding public servants in India, consider the following statements:

1. The recruitment rules of all types of public servants in India are made by the Parliament.
2. The Constitution empowers only the Parliament to impose reasonable restrictions on the fundamental rights of public servants.

Which of the above statements is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: This statement is **incorrect** as the **Parliament frames the rules only** with regards to **recruitment** of public servants belonging to the **All-India services** and the **Central Services**. The recruitment of public servants belonging to the **third category** - i.e., **State Services** is **regulated** by the laws and rules framed by the **Legislative Assembly** of the **state concerned**.

Statement 2 is incorrect: Although the **Part III** of the Constitution **guarantees certain basic rights** to all citizens of India as they have been recognized as **essential to well-being** of citizen individuals, it also makes the **provision to curtail some** of these rights for the people who have been chosen as **public servants**. The Constitution empowers the **Parliament** or the **State Legislature** to impose “**reasonable restrictions**” on the **Fundamental Rights** of **public servants** in the interest of the **integrity, efficiency, and impartiality** of the public servants. For example, the **Central Services (Conduct) Rules** put restrictions on the **Right to Freedom of Speech and Expression** of public servants as they are barred from revealing classified matters to the public or writing or speaking against the policies of the government, etc.

Source: Indian Polity by Laxmikanth. 5th edition. Ch-62

Q.50) With respect to Model Tenancy Act of 2021, consider the following statements:

1. The act is not applicable to premises rented for industrial uses.
2. Written lawful rent agreement between the owner and tenant is mandatory under this act.
3. Implementation of this act is a prerequisite for states to get any financial support from the centre, under Prime Minister Awas Yojana (Urban).
4. The act has been adopted by all states, except Tamil Nadu and Andhra Pradesh.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

The Model Tenancy act, 2021 was proposed by the Union government under the **aegis of the Ministry of Housing and Urban Affairs**. The act aims to bridge the trust deficit between tenants and landlords by clearly delineating their obligations. It aims to create a vibrant, sustainable, and inclusive rental housing market in the country.

Statement 1 is correct: It is true that the **Model Tenancy act, 2021 does not apply to premises rented for industrial uses** and also it won't apply to hotels, lodging, etc. At present the law is **applicable to premises rented for residential, commercial, or educational use**.

Statement 2 is correct: The Model Tenancy act, 2021 made it **mandatory to create a written lawful rent agreement** between the owner and tenant. Further the act requires establishing **rent authorities in every district** to regulate renting of premises.

Statement 3 is incorrect: Adoption of model tenancy act is not a prerequisite for states to get financial support under Prime Minister Awas Yojana. Pradhan Mantri Awas Yojana – Urban (PMAY-U) being implemented by the Ministry of Housing and Urban Affairs (MoHUA) to ensure pucca housing to all eligible urban households by the year 2022. Under PMAY the centre provides financial assistance to States/Union Territories (UTs).

Statement 4 is incorrect: So far, the Model Tenancy act has been **adopted by four states only** and they are **Tamil Nādu, Andhra Pradesh, Uttar Pradesh and Assam.**

Source: <https://blog.forumias.com/model-tenancy-act-need-and-challenges/>
<https://www.thehindu.com/news/national/a-year-on-only-four-states-adopt-model-tenancy-law/article65681473.ece>

Q.1) Consider the following statements regarding the Union Territory of Delhi:

1. The Lieutenant Governor can promulgate an ordinance when the assembly is dissolved.
2. Any ordinance can be promulgated by the Lieutenant Governor without the prior permission of the President.
3. Every ordinance must be approved by the assembly within six weeks from its reassembly.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The 69th Constitutional Amendment Act of 1991 provided a special status to the Union Territory of Delhi, and redesignated it the National Capital Territory of Delhi and designated the administrator of Delhi as the lieutenant (Lt.) governor. It created a legislative assembly and a council of ministers for Delhi.

Ordinance making Power in the UT of Delhi:

Statement 1 is incorrect: The Lieutenant Governor is empowered to promulgate ordinances only during recess of the assembly. But, **he/she cannot promulgate an ordinance when the assembly is dissolved or suspended.**

Statement 2 is incorrect and 3 is correct: Every ordinance must be approved by the assembly within six weeks from its reassembly. Lieutenant Governor can also withdraw an ordinance at any time. But, he cannot promulgate an ordinance when the assembly is dissolved or suspended. Further, **no such ordinance can be promulgated or withdrawn without the prior permission of the President.**

Source: Indian Polity by M Laxmikant, chapter 40

<https://www.thehindu.com/news/cities/Delhi/the-debate-over-the-delhi-assembly/article65651965.ece>

Q.2) Consider the following statements regarding various initiatives related to the North Eastern region of India:

1. An agreement to end Bru-Reang refugee crisis has been signed between the state governments of Manipur and Tripura and the insurgent groups of Tripura.
2. Armed Forces Special Powers Act (AFSPA) has been completely withdrawn from the States of Tripura and Meghalaya.
3. Karbi-Anglong Peace Agreement has been signed between the Central Government, the Government of Nagaland and the insurgent groups of Nagaland.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

One of the core objectives of the government has been to end all disputes in the North East and to make it a peaceful region. The North Eastern region comprises of eight states- Arunachal Pradesh, Nagaland, Manipur, Mizoram, Meghalaya, Assam, Tripura and Sikkim. Government has signed various border dispute

settlement agreements and peace accords to curb insurgency, extremism and ethnic cleansing of the region.

Statement 1 is incorrect: Bru or Reang is a community living mostly in Tripura, Mizoram and Assam. Violent conflict between Bru and Mizo tribes of Mizoram had erupted in 1997. More than 30,000 Bru-Reang tribals were forced to flee Mizoram and sought shelter in Tripura. **In 2020, an agreement has been signed between the Central Government, Governments of Tripura and Mizoram and representatives of Bru Tribe to resolve the refugee crisis.** The agreements provides for settlement of the Bru-Reangs in Tripura along with a financial package. Government of Manipur is not a party to the agreement.

Statement 2 is correct: Armed Forces Special Powers Act (AFSPA) has been a major reason for the dispute between the locals and the governments, giving more fuel to the insurgency movements. Over the years, there has been significant improvement in the security situation in the North East. Accordingly, **AFSPA has been completely withdrawn from the states of Tripura and Meghalaya.**

Statement 3 is incorrect: Karbi Anglong Peace Agreement is a tripartite agreement signed in 2021 between the Central Government, Government of Assam and the insurgent groups of Assam. Karbi Anglong is the largest district of Assam. The core demand of the insurgents has been creation of a separate state. More than 1000 armed cadres renounced violence and joined the mainstream society after this agreement.

Knowledge Base: AFSPA has been reduced from a large part of North East. It is still present in the areas of Assam, Nagaland, Manipur and Arunachal Pradesh.

Source: https://www.mha.gov.in/sites/default/files/PR_BruAccord_17012020.pdf

<https://pib.gov.in/FeaturesDeatils.aspx?NoteId=151186&ModuleId%20=%202>

Q.3) In the context of India's Nuclear Policy, consider the following statements:

1. India is the world's only country to have adopted 'no-first use' policy.
 2. Only the Political Council of the Nuclear Command Authority can authorize the use of nuclear weapons.
- Which of the above given statements is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

A nuclear doctrine is meant to provide a framework **regarding the use of nuclear weapons by a nuclear-weapon state both during peace and war.** India had officially adopted the nuclear doctrine in 2003.

Statement 1 is incorrect: In 1964, China had already declared its no-first use policy. India had adopted this policy in 1998 after the successful completion of nuclear tests in Pokhran. Presently, **only India and China have declared policy of 'no first use'.** The policy asserts that the arsenal would be used only as a nuclear deterrent. However, the government reserves the right to use nuclear weapons for retaliation **against nuclear attack on Indian territory or on Indian Forces anywhere.** In case of **biological or chemical weapons attack** also, the government reserves right for retaliatory nuclear strike.

Statement 2 is correct: The Nuclear Command Authority comprises a Political Council and an Executive Council. **The Political Council is chaired by the Prime Minister. It is the sole body which can authorize the use of nuclear weapons.** The Executive Council is chaired by the National Security Advisor. It provides inputs for decision making by the Nuclear Command Authority and executes the directives given to it by the Political Council.

Source:

<https://archive.pib.gov.in/archive/releases98/lyr2003/rjan2003/04012003/r040120033.html#:~:text=Building%20and%20maintaining%20a%20credible,designed%20to%20inflict%20unacceptable%20damag>
e.

<https://timesofindia.indiatimes.com/india/no-first-use-nuclear-policy-explained/articleshow/70844818.cms>

Q.4) Which among the following is/are the Constitutional provisions related to the Multi-state Cooperative Societies in India?

1. The accounts of every co-operative society shall be audited within six months of the close of the financial year.
2. The conduct of elections to a co-operative society shall be vested in such body, as may be provided by the Election Commission of India.

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Part IX-B of the constitution contains provisions with respect to the cooperative societies. Few of them are:

Statement 1 is correct: Audit of Accounts of Multi-state Co-operative Societies- The parliament may make provisions for the maintenance of accounts by the multi-state co-operative societies and the auditing of such accounts at least once in each financial year. **The accounts of every multi-state co-operative society shall be audited within six months of the close of the financial year.** The audit report of the accounts of an apex multi-state co-operative society shall be laid before the parliament.

Statement 2 is incorrect: Election of Members of Board- The election of a board shall be conducted before the expiry of the term of the board so as to ensure that the newly elected members assume office immediately on the expiry of the term of the office of members of the outgoing board. **The superintendence, direction and control of the preparation of electoral rolls and the conduct of elections to a multi-state co-operative society shall vest in such body, as may be provided by the Parliament.**

Source: Indian Polity by M Laxmikant, Chapter 64

Q.5) Consider the following statements with reference to Data protection in India:

1. CERT-In is the national nodal agency for responding to cybersecurity threats.
2. As per RBI, the payment data shall be stored in systems located only in India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Data protection is the **process of safeguarding important information from corruption, compromise, or loss.**

Statement 1 is correct: Computer Emergency Response Team - India (CERT-In) is an organization of the Ministry of Electronics and Information Technology with the objective of securing Indian cyberspace. CERT-In is empowered under **Section 70B of the Information Technology Act** to collect, analyze and disseminate information on cyber security incidents. **It is the national nodal agency which deals with cybersecurity threats like hacking and phishing.**

Statement 2 is correct: With data localization, RBI **aims to protect personal data of the country's citizens by restricting data on servers outside the country's geographical boundaries.** As per the RBI data localization rules, **the entire payment data shall be stored in systems located only in India.**

Source: <https://m.rbi.org.in/scripts/FAQView.aspx?Id=130>

<https://www.cert-in.org.in/>

https://www.business-standard.com/article/economy-policy/centre-withdraws-personal-data-protection-bill-2019-to-present-new-bill-122080301226_1.html#:~:text=The%20PDP%20bill%20was%20first,personal%20and%20non%2Dpersonal%20datasets.

122080301226_1.html#:~:text=The%20PDP%20bill%20was%20first,personal%20and%20non%2Dpersonal%20datasets.

Q.6) The 'Panchsheel (Five Principles of Peaceful Coexistence) presented an alternative path to the path of contentions and conflicts. In this context, consider the following statements regarding the 'Panchsheel' doctrine:

1. These principles were enunciated for the first time during the Bandung Conference in 1955.
2. Both India as well as China has accepted the Panchsheel principles in the matters of foreign policy.
3. 'Peaceful co-existence' is one of the stated principles under Panchsheel.

Which of the statements given above is/ are correct?

- a) 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Panchsheel gave voice to the newly independent countries who were trying to secure their hard won independence. It provided an alternative ideology dedicated to **peace and development of all as the basis of international interaction.**

Statement 1 is incorrect: The Panchsheel principles had been formally enunciated for the first time in the **Agreement on Trade and Intercourse between the Tibet region of China and India**, signed in 1954. **The Agreement specifically stated the 5 principles of Panchsheel.** The vision caught the attention of the peoples of Asia and Africa. These were also incorporated into the 10 principles of International Peace and Cooperation issued in 1955 by the Bandung Conference of 29 Afro-Asian countries.

Statement 2 is correct: Since India and China have signed the Agreement on Trade and Intercourse between the Tibet region of China and India, **both have formally accepted these principles.** Also, **Prime Minister Jawaharlal Nehru and Premier Zhou Enlai issued a joint statement that elaborated the vision for Panchsheel. They stated that the framework was applicable not only between India-China relations, but also for their relations with other countries.**

Statement 3 is correct: 'Peaceful co-existence' is one of the stated principles under the Panchsheel. Other four principles include:

- 1) Mutual respect for each other's territorial integrity and sovereignty.
- 2) Mutual non-aggression
- 3) Mutual non-interference

4) Equality and mutual benefit

Source: https://www.mea.gov.in/Uploads/PublicationDocs/191_panchsheel.pdf

<https://ncert.nic.in/ncerts/1/leps204.pdf>

Q.7) Which of the following statements correctly describes the differences between pressure groups and political parties?

1. Pressure groups do not contest elections while political parties contest elections.
 2. Pressure groups use only legal and legitimate methods, while political parties also use extra-constitutional methods.
 3. Government employee can be a member of Pressure group but cannot be a member of a political party.
- Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

A **pressure group** is a group of people who are organised actively for promoting and defending their common interest, while **political party** is a group of persons organized to acquire and exercise political power.

Statement 1 is correct: The pressure groups are also called interest groups or vested groups. **The pressure groups are different from the political parties as they neither contest elections nor try to capture political power.**

Statement 2 is incorrect: **The pressure groups** influence the policymaking and policy implementation in the government **through legal and legitimate methods** like lobbying, correspondence, publicity, propagandising, petitioning, public debating, maintaining contacts with their legislators and so forth. **However, sometimes they resort to illegitimate and illegal methods** like strikes, violent activities and corruption which damages public interest and administrative integrity. The **Naxalite movement** started in 1967 in West Bengal is one such example. **Whereas Political parties** try to gain political **power through constitutional means (by contesting the election)** and desire to work for promoting the national interest.

Statement 3 is correct: There are many professional pressure groups for the improvement of service conditions. Even government employees can be the members of pressure group. For example, **Indian Medical Association (IMA) and All India Federation of University and College Teachers (AIFUCT)**. While the **All-India Services (Conduct) Rules, 1968 states that no member of the Service shall be a member of, or be otherwise associated with, any political party or any organization which takes part in politics.**

Source: Lakshmikant Chap - 69 and 77

https://dopt.gov.in/sites/default/files/AIS_ConductRules1968.pdf

Q.8) Consider the following statements regarding the integration of Princely States into the Indian Union:

1. Travancore was the first princely state to formally join the Indian Union.
2. K.M. Panikkar supported the idea of integration of Princely States into the Indian Union.
3. V.P. Menon was made the Minister-in-charge of the States Department, formed to supervise the integration process.

Which of the statements given above is/ are correct?

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

The constitutional status of Princely States during the deliberations of 1940s had remained largely ambiguous. The Cabinet Mission (1946) focused on United India vs Pakistan question. Similarly, on 3rd June, 1947, British announced both the date of their final withdrawal and creation of two dominions, but did not make clear the position of states. This complicated the integration process as some Princes had started dreaming of their independent nations.

Statement 1 is incorrect: Around 560 states had already joined the Union before the State of Travancore. Travancore was the first state to question the right of the Congress to succeed the British as paramount power. Geographically, it was strategically placed at the Southernmost tip of the sub-continent. Its dewan was **Sir C.P. Ramaswamy Aiyar, who had made clear his vision to make Travancore an independent state once the British left India.**

Statement 2 is correct: The State of Bikaner was amongst the first ones to join the Indian Union. **K.M. Panikkar was its dewan.** He **strongly urged other states to join Indian union and opined that integration is beneficial for the security of the states and unity of India.** After Bikaner, dozens of other rulers joined Indian Union on the appeal of Panikkar.

Statement 3 is incorrect: A new States Department was set up by the Government of India to supervise the integration process. **Vallabhai Patel was made the Minister in charge of this department. V.P. Menon was chosen as Secretary by Patel.** He travelled different parts of India, persuaded Princes and acted as a mediator between Lord Mountbatten and Sardar Patel. He was instrumental in doing the groundwork for the integration of different Princely States.

Source: <https://ncert.nic.in/textbook/pdf/leps201.pdf>

Q.9) Which of the following initiatives have been launched by the Indian Army or the Government to tackle the issue of militancy/insurgency in Kashmir?

- 1. Operation Sarp Vinash
- 2. Operation All Out
- 3. Operation Sunrise

Which of the options given above is/are correct?

- a) 2 and 3 only
- b) 1 only
- c) 1 and 2 only
- d) 1 and 3 only

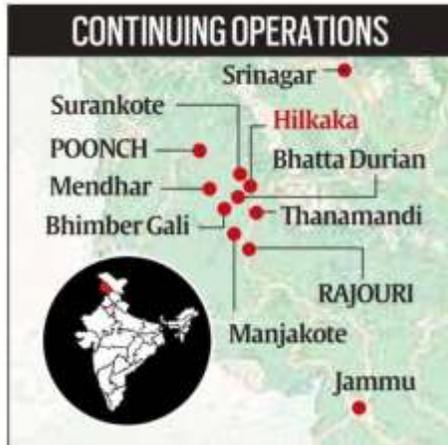
Ans) c

Exp) Option c is the correct answer.

The militancy in Kashmir region is primarily due to the reasons like demand for an independent country, demand for accession to Pakistan and greater regional autonomy. The militancy including hybrid militancy and over-the-ground workers have remained persistent challenge to the peace and security in the state.

Option 1 is correct: The Indian Army has carried out Operation Sarp Vinash (snake destroyer) in the **Hilkaka Poonch-Surankot area of the Pir Panjal Range in Kashmir.** The operation aimed to eliminate terrorists

who have made bases in the region. More than 60 militants were killed by the Army. It was one of the biggest counter-insurgency operations in Jammu and Kashmir.



(Source: Indian Express)

Option 2 is correct: The Operation All Out (OAO) was a joint offensive launched by Indian Security Forces in 2017 to flush out militants and terrorists in the Kashmir region. **It included the personnel from Indian Army, CRPF, Jammu and Kashmir Police, Border Security Force (BSF) and the Intelligence Bureau (IB).**

Option 3 is incorrect: Operation Sunrise was the joint effort of India and Myanmar to destroy militant camps in the Northeast region. The armies carried a coordinated operation targeting militant groups operating in Assam, Manipur and Nagaland. It aimed to bust the camps of Kamtapur Liberation Organisation, the National Socialist Council of Nagaland (Khaplang), the United Liberation Front of Assam, etc.

Source: <https://indianexpress.com/article/explained/jammu-kashmir-poonch-encounter-army-militants-search-operation-7582447/>

<https://thediplomat.com/2018/05/kashmir-killing-militants-wont-kill-militancy/>

<https://indianarmy.nic.in/Site/FormTemplete/frmTempSimple.aspx?MnId=FvlonQelyVylhicECoulvA==&ParentID=3yeGZZ0yYf/31Qlcaiu5BQ==>

Q.10) Consider the following statements about the conservation of Tiger (*Panthera Tigris*):

1. Tiger (*Panthera Tigris*) has been classified as “Endangered” under the IUCN Red List.
2. Government of India has launched Project Tiger in 1973, to comply with St. Petersburg Declaration on Tiger Conservation.
3. India achieved the goal of doubling the tiger numbers in 2018, four years in advance from the targeted year 2022.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Recently, India has hosted the Pre-Summit meeting of Tiger Range Countries (TRCs). The Tiger Range Countries Summit is scheduled to be held at Vladivostok, Russia on 5th September 2022.

Statement 1 is correct. Panthera Tigris is categorized as Endangered as per the IUCN red data book.

Statement 2 is incorrect. St. Petersburg Declaration on Tiger Conservation was an outcome of St. Petersburg Tiger Summit, 2010. As per this declaration the 13 tiger range countries pledged to achieve a target of doubling the number of Tigers. As, Project Tiger was launched in 1973, it was not a consequence of St. Petersburg Tiger Summit.

Statement 3 is correct.

A per the data released by the MoEF&CC,

- 1) India is home to 53 Tiger Reserves covering approximately 75,000 Sq. Km area in 18 States with approximately 75% population of the wild tiger at global level.
- 2) **India achieved the goal of doubling the tiger numbers in 2018 itself, four years in advance from the targeted year 2022.**
- 3) Also, so far 17 Tiger Reserves in the country have got CA|TS international accreditation and two Tiger Reserves have got International Tx2 Award.

Source: <https://www.worldwildlife.org/species/tiger>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1850581#:~:text=Pre%2Dsummit%20meeting%20of%20the%20Tiger%20Range%20Countries%20as%20a,in%20progress%20in%20New%20Delhi.>

Q.11) Consider the following statements regarding safeguards for languages in the Constitution of India:

1. The Constitution provides for a Special Officer for Linguistic Minorities, to be appointed by the President.
2. As per the Constitution, the Governor of a state can direct a language to be recognised officially in the state.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct:

Article 350B of Constitution of India provides for a Special Officer for linguistic minorities. According to the article:

- 1) **There shall be a Special Officer for linguistic minorities to be appointed by the President.**
- 2) It shall be the duty of the Special officer to investigate all matters relating to the safeguards provided for linguistic minorities under this Constitution and report to the President upon those matters at such intervals as the President may direct, and the president shall cause all such reports to be laid before each House of Parliament and sent to the Government of the States concerned.

Statement 2 is incorrect: According to the Constitution, when **the President (not the Governor of State)** is satisfied that a substantial proportion of the population of a state desire the use of any language spoken by them to be recognised by that state, then he may direct that such language shall also be officially recognised in that state. This provision aims at protecting the linguistic interests of minorities in the states. So, it is the President and not the Governor who can give direction about the official language in a state.

Source: M. Laxmikanth Chapter 65 Official Language

Q.12) Consider the following statements regarding the post-independence partition of Punjab into the states of Punjab and Haryana:

1. The Punjab Suba Movement demanded a separate state of Punjab for the Punjabi speaking people.
2. The Das Commission (1961) advocated for the partition of Punjab on the basis of language.
3. The division of Punjab came into effect during the Prime Ministership of Pandit Jawaharlal Nehru.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The Punjab Suba Movement was a political agitation demanding a **separate state of Punjab for the Punjabi speaking people**. It was primarily led by the Shiromani Akali Dal under the leadership of Master Tara Singh and Sant Fateh Singh.

Statement 2 is incorrect: Due to the ongoing agitation for a separate state, **the Central Government had appointed a three-member commission chaired by S.R. Das in 1961 to address Sikh grievances**. Akali Dal objected to the composition as well as scope of the Commission. It did not present its case to the Commission. **Das Commission had rejected the idea of a separate state for the Punjabi speaking population**. The Commission observed that Sikhs in Punjab had been adequately represented in the Government and various other public services. The Commission also held that no case of discrimination against Sikhs in Punjab has been made out.

Statement 3 is incorrect: The division of Punjab came into effect **in November 1966 during the Prime Ministership of Indira Gandhi with the passage of Punjab Reorganization Act, 1966**. The Act created two new states – Punjab and Haryana. The hill areas were merged with the then Union Territory of Himachal Pradesh. The city of Chandigarh became a temporary Union Territory to serve as the provisional capital of both Punjab and Haryana.

Source: <https://indianculture.gov.in/reports-proceedings/report-punjab-commission>

Q.13) Which of the following Union Ministries acts as a nodal ministry for all matters of Union Territories relating to legislation, finance and budget?

- a) Ministry of Home Affairs
- b) Ministry of Defense
- c) Ministry of Finance
- d) None of the above.

Ans) a

Exp) Option a is the correct answer.

Under the Government of India (Allocation of Business) Rules 1961, Ministry of Home Affairs is the nodal ministry for all matters of Union Territories relating to legislation, finance and budget, services and appointment of Lt. Governors and Administrators. All the UTs without legislature (Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli and Daman and Diu, Lakshadweep and Ladakh) have the forum of Home Minister's Advisory Committee (HMAC)/Administrator's Advisory Committee (AAC).

Source: Indian Polity by M Laxmikant, chapter 40

Q.14) Consider the following statements regarding the Union Territories in India:

1. A Union Territory is administered by the President through an administrator appointed by him/her.
2. The President can appoint the Governor of a state as the administrator of an adjoining union territory.
3. The President can specify the designation of the administrator of the Union Territory.

Which of the statements given above is/are correct?

- a) 1, 2 and 3
- b) 2 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Articles 239 to 241 in Part VIII of the Constitution deal with the union territories. Even though all the union territories belong to one category, there is no uniformity in their administrative system.

Statement 1 is correct.: Every union territory is administered by the President acting through an administrator appointed by him. **An administrator of a union territory is an agent of the President and not head of state like a governor.**

Statement 2 is correct: The President can appoint the governor of a state as the administrator of an adjoining union territory. In that capacity, the governor is to act independently of his council of ministers.

Statement 3 is correct.

The President can specify the designation of an administrator; it may be Lieutenant Governor or Chief Commissioner or Administrator. At present, it is Lieutenant Governor in the case of Delhi, Puducherry, Andaman and Nicobar Islands, Jammu and Kashmir and Ladakh and Administrator in the case of Chandigarh, Dadra and Nagar Haveli, Daman and Diu and Lakshadweep.

Source: Indian Polity by M Laxmikant, chapter 40

Q.15) With reference to SMILE-75 initiative, recently seen in news, consider the following statements

1. It primarily aims to identify and rehabilitate the victims of child trafficking in 75 most vulnerable cities
2. It is being implemented by the Union Ministry of Social Justice and Empowerment.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. The Government of India has formulated a comprehensive scheme of SMILE (Support for Marginalised Individuals for Livelihood and Enterprise) **to address the persisting problem of destitution and beggary.** Under the “SMILE-75” Initiative, 75 Municipal Corporations will undertake comprehensive rehabilitation of persons engaged in the act of begging in the spirit of Azadi ka Amrit Mahotsav.

Objectives:

- 1) To make cities/town and municipal areas begging-free.
- 2) To make a strategy for comprehensive rehabilitation of the persons engaged in the act of begging through the coordinated action of various stakeholders.

Statement 2 is correct. Implementing Ministry: The Ministry of Social Justice and Empowerment.

Source: <https://www.thehindu.com/news/national/social-justice-ministry-launches-smile-75-initiative/article65762276.ece>.

Q.16) Consider the following statements with reference to the special constitutional provisions relating to the languages in India:

1. An aggrieved person can use any of the languages used in the Union or in the state for representing his/her grievances to any officer or authorities.
2. The right to conservation of language of the minorities is one of their Fundamental Rights.
3. States should facilitate instruction in the mother-tongue at the primary stage of education for children belonging to linguistic minority groups.

Which of the above statements are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: As per the Constitution (Article 350) every aggrieved person has the right to submit a representation for the redress of any grievance to any officer or authority of the Union or a state in any of the languages used in the Union or in the state, as the case may be. This means that a representation cannot be rejected on the ground that it is not in the official language.

Statement 2 is correct: Article 29 of the Constitution provides that any section of the citizens residing in any part of India having a distinct language, script or culture of its own, shall have the right to conserve the same. Article 29 grants protection to both religious minorities as well as linguistic minorities. However, the Supreme Court held that the scope of this article is not necessarily restricted to minorities only, as it is commonly assumed to be.

Statement 3 is correct: As per the Constitution (Article 350A) every state and a local authority in the state should provide adequate facilities for instruction in the mother-tongue at the primary stage of education to children belonging to linguistic minority groups. The president can issue necessary directions for this purpose.

Knowledge Base: The new National Curriculum Framework (NCF) for the foundational stages of education, has recommended that mother tongue should be the primary medium of instruction in schools, both public and private, for children up to eight years of age. This is in accordance with the provisions of the New Education Policy, 2020.

Source: <https://indianexpress.com/article/explained/teaching-in-mother-tongue-what-curriculum-guidelines-said-in-the-past-8230462/#:~:text=The%20new%20National%20Curriculum%20Framework,to%20eight%20years%20of%20age.>

M. Laxmikanth Chapter 7 Fundamental Rights

M. Laxmikanth Chapter 65 Official Language

Q.17) Consider the following statements regarding the Home Minister's Advisory Committee (HMAC):

1. All the Union Territories (UTs) except Ladakh have the forum of HMAC.
2. The HMAC discusses the general issues relating to social and economic development of the UTs.
3. Elected members of local bodies of respective UTs can become members of the corresponding HMAC.

Which of the statements given above is/are correct?

- a) 2 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Under the Government of India (Allocation of Business) Rules 1961, Ministry of Home Affairs is the nodal ministry for all matters of Union Territories relating to legislation, finance and budget, services and appointment of Lt. Governors and Administrators.

Statement 1 is incorrect: All the UTs without legislature (Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli and Daman and Diu, Lakshadweep and Ladakh) have the forum of Home Minister's Advisory Committee (HMAC).

Statement 2 is correct: The Committee discusses the general issues relating to social and economic development of the UTs.

Statement 3 is correct: HMAC is chaired by the union Home minister. **The Member of Parliament and elected members from the local bodies e.g., District Panchayats and Municipal Council of the respective UTs are members of these committees among others.**

Source: Indian Polity by M Laxmikant, chapter 40

Q.18) Which of the following languages are included in the Eighth Schedule of the Constitution of India?

1. Sanskrit
2. Bhil
3. Urdu
4. Maithili
5. English
6. Nepali

Choose the correct answer from the code given below:

- a) 1, 2, 3 and 4 only
- b) 1, 3, 4 and 6 only
- c) 2, 4, 5 and 6 only
- d) 1, 2, 3, 5 and 6 only

Ans) b

Exp) Option b is the correct answer.

Statements 1, 3, 4 and 6 are correct: At present (2023), the Eighth Schedule of the Constitution specifies 22 languages (originally 14 languages). These are Assamese, Bengali, Bodo, Dogri (Dongri), Gujarati, Hindi, Kannada, Kashmiri, Konkani, **Mathili (Maithili)**, Malayalam, Manipuri, Marathi, **Nepali**, Odia, Punjabi, **Sanskrit**, Santhali, Sindhi, Tamil, Telugu and **Urdu**.

Statements 2 and 5 are incorrect: English which is the official language of India is not recognised in the 8th schedule of the constitution of India. Also, some languages like Bhil (10 million speakers), Tulu etc. are also not recognised under the 8th schedule of the Constitution.

Source: <https://indianexpress.com/article/explained/tulu-language-protest-history-7358953/>
M. Laxmikant Chapter 65 Official Language

Q.19) Consider the following statements regarding Multi-state Cooperative Societies in India:

1. The board of a cooperative society consists of such number of directors as may be provided by Parliament.
2. The functional directors of a co-operative society cannot become the members of the board.
3. The term of office of elected members of the board shall be five years.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Part IX-B of the constitution contains the provisions with respect to the cooperative societies.

Incorporation of Multi-state Co-operative Societies:

The Parliament may make provisions for the incorporation, regulation and winding-up of co-operative societies based on the principles of voluntary formation, democratic member control, member economic participation and autonomous functioning.

Number and Term of Members of Board and its Office Bearers:

- 1) **The board shall consist of such number of directors as may be provided by the Parliament. But, the maximum number of directors of a co-operative society shall not exceed twenty-one. Hence statements 1 is correct.**
- 2) **The term of office of elected members of the board and its office bearers shall be five years from the date of election. Hence statements 3 is correct.**
- 3) Further, the coopted members shall not have the right to vote in any election of the co-operative society or be eligible to be elected as office bearers of the board.
- 4) **The functional directors of a co-operative society shall also be the members of the board and such members shall be excluded for the purpose of counting the total number of directors (that is, twenty-one). Hence statement 2 is incorrect.**

Source: Indian Polity by M Laxmikant, Chapter 64

Q.20) The PEN-Plus Strategy, recently seen in news, is related to which of the following?

- a) Encouraging adult education in rural areas
- b) Containing non-communicable diseases
- c) Reducing infant mortality rate
- d) Addressing the problem of Left-Wing Extremism in central India

Ans) b

Exp) Option b is the correct answer.

- 1) “PEN-Plus” refers to the approach to address severe NCDs through an integrated outpatient service at first level hospitals.
- 2) Africa has adopted the PEN Plus strategy to tackle severe non-communicable diseases (NCD) such as type 1 diabetes (T1D), rheumatic heart disease (RHD) and sickle cell disease. o Package of Essential NCD Interventions (PEN) was adopted by the WHO in 2010 to support the decentralization of services to the primary care level.

Source: <https://www.downtoearth.org.in/news/africa/african-health-ministers-adopt-pen-plus-strategy-against-non-communicable-diseases-84500>.

Q.21) Consider the following statements regarding the creation of a Union territory (UT) from an existing state:

1. The President has the power to create a UT by issuing a public notification.
2. Before the creation of a new UT from an existing State, the President has to refer the matter to the concerned State Legislature for expressing its views.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Article 3 authorizes the **Parliament** to form a new state by separation of territory from any state or by uniting two or more states or parts of states or by uniting any territory to a part of any state. The power of Parliament to form new states includes the power to form a new state or union territory by uniting a part of any state or union territory to any other state or union territory.

Statement 2 is correct: Article 3 lays down two conditions with regard to creation of state/UT: one, a bill contemplating the above changes can be introduced in the Parliament only with the prior recommendation of the President; and two, before recommending the bill, **the President has to refer the same to the state legislature concerned for expressing its views within a specified period.**

In case of a union territory, no reference need be made to the concerned legislature to ascertain its views and the Parliament can itself take any action as it deems fit. Since in this question the UT is formed from an existing state, so the views of the state legislature is taken.

Source: Indian Polity by M Laxmikant, chapter 5

Q.22) Consider the following developments with respect to the cooperative movement in India:

1. Establishment of National Bank for Agricultural and Rural Development (NABARD)
2. Establishment of the National Dairy Development Board (NDDB)
3. Enunciation of National Cooperative Policy
4. Creation of Union Ministry of Cooperation

Which of the sequences given in the options below correctly represents the chronology of the above developments?

- a) 2-1-3-4
- b) 1-2-4-3
- c) 2-3-1-4
- d) 2-3-4-1

Ans) a

Exp) option a is the correct answer.

After independence, the nation adopted the approach of planned economic development for establishment of a mixed economy consisting of three sector namely Public, Private and Cooperative Sectors. Cooperatives were visualized to play the role of a balancing factor between public and private sectors. Pandit Nehru considered Cooperatives as one of the three pillars of Democracy, the other two being the Panchayat and the School. Some of the prominent development in the Indian Cooperative Movement in the post-independence era are discussed below:

Option 2. The National Dairy Development Board (NDDB): It was founded in **1965** to replace exploitation with empowerment, tradition with modernity, stagnation with growth, transforming dairying into an instrument for the development of India's rural people. NDDB began its operations with the mission of making dairying a vehicle to a better future for millions of grassroots milk producers. The mission achieved thrust and direction with the launching of "Operation Flood", a programme extending over 26 years and which used World Bank loan to finance India's emergence as the world's largest milk producing nation.

Operation Flood's third phase was completed in 1996 and has to its credit a number of significant achievements.

Option 1. NABARD Act, 1981: The National Bank for Agriculture and Rural Development (NABARD) Act was passed in 1981 and NABARD was set up in 1982 to provide re-finance support to Cooperative Banks and to supplement the resources of Commercial Banks and Regional Rural Banks to enhance credit flow to the agriculture and rural sector.

Option 3. National Cooperative Policy (2002): In 2002, the Government of India enunciated a National Cooperative Policy. The objective of the Policy is to facilitate an all-round development of cooperatives in the country. The policy promises to provide cooperatives with the necessary support, encouragement and assistance, to ensure their functioning as autonomous, self-reliant and democratically managed institutions, accountable to their members, and making a significant contribution to the national economy.

Option 4. Ministry of Cooperation was created by transferring the existing entries related to cooperation and cooperative in the business of the erstwhile Ministry of Agriculture, Cooperation and Farmers Welfare vide Cabinet Secretariat's Gazette Notification dated 6th July, 2021.

Source: [https://cooperation.gov.in/sites/default/files/2022-](https://cooperation.gov.in/sites/default/files/2022-12/History_of_cooperatives_Movement.pdf)

[12/History_of_cooperatives_Movement.pdf](https://www.nddb.coop/about/genesis#:~:text=The%20National%20Dairy%20Development%20Board,development%20of%20India's%20rural%20people.)

<https://www.nddb.coop/about/genesis#:~:text=The%20National%20Dairy%20Development%20Board,development%20of%20India's%20rural%20people.>

<https://www.nabard.org/content.aspx?id=2>

https://apcooperation.nic.in/cooperation_movement.php

Q.23) Consider the following statements regarding provisions related to the development of the Hindi language in India:

1. The Constitution imposes a duty upon the Union to promote the spread and development of Hindi language.
2. The Union is directed by the Constitution to secure the enrichment of Hindi by assimilating the forms, style and expressions used in the languages specified in the Eighth Schedule.
3. The Constitution provides for the setting up of a Committee of Parliament to review the progress made in the use of Hindi for official purposes of the Union.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The Constitution under Article 351 imposes a duty upon the Union to promote the spread and development of the Hindi language so that it may become the language of the composite culture of India.

Statement 2 is correct: As per the provisions of the Constitution (Article 351) the Union is directed to secure the enrichment of Hindi by assimilating the forms, style and expressions used in hindustani and in other languages specified in the Eighth Schedule and by drawing its vocabulary, primarily on Sanskrit and secondarily on other languages.

Statement 3 is incorrect: The Official Language Act, 1963 (and not the Constitution) provided for the setting up of a Committee of Parliament on Official Language to review the progress made in the use of Hindi for the official purpose of the Union.

Source: M. Laxmikanth Chapter 65 Official Language

Q.24) Consider the following events regarding the integration of Princely States into the Indian Union:

1. Signing of Instrument of Accession by the Maharaja of Jodhpur.
2. Police action for the accession of Hyderabad.
3. Referendum in Junagarh.
4. Signing of Instrument of Accession by the Maharaja of Kashmir.

Choose the correct chronological order of the events given above.

- a) 1-3-2-4
- b) 1-4-2-3
- c) 3-1-2-4
- d) 1-4-3-2

Ans) d

Exp) Option d is the correct answer.

The integration of Princely States was one of the biggest challenges faced by the nationalist leaders. With the combined efforts of Sardar Patel and V.P. Menon, most of the States had given their consent for accession to India. However, states of Travencore, Bhopal, Jodhpur, Kashmir, Junagarh and Hyderabad had troublesome history regarding the integration into the Indian Union.

Accession of Jodhpur:

At the time of independence, Jodhpur had a Hindu king as well as largely Hindu population. Jinnah offered very lucrative terms to Jodhpur and it was **suspected the state to join Pakistan**. From the Indian side, Patel intervened and additionally **offered free import of arms and adequate grains**. Maharaja Hanwant Singh, thereafter, signed Instrument of Accession on **11th August, 1947**.

Accession of Kashmir

In October, 1947, the **Maharaja Hari Singh of Kashmir signed the Instrument of Accession**. It was on the backdrop of **invasion by Pashtun tribesmen** from Pakistan's North West Frontier Province (NWFP). After the signing of the Instrument, the Indian Army airlifted its troops to Kashmir and stopped the invaders within two weeks.

Accession of Junagarh

Junagarh had announced that it would accede to Pakistan. Junagarh had a Muslim Nawab ruling over chiefly Hindu population (approximately 82%). However, geographically, its accession to Pakistan made little sense. To resolve the matter, **it was decided to conduct a plebiscite. A referendum was held on 20th February 1948** resulted in 91% of the electorates voting for accession to India.

Accession of Hyderabad

Hyderabad was also a state ruled by Muslim Nawab having majority Hindu population. The Nawab was not keen on the issue of accession to India. **Operation Polo** was conducted in September, 1948 and a **contingent of Indian troops was sent to Hyderabad**. On **17th September, 1948** the troops had full control over the State and Nizam announced on radio to 'live in peace and harmony with rest of the people of India.'

Source: India After Gandhi by Ramachandra Guha, 10th Edition (Chapter 3- Apples in the Basket)

Q.25) With reference to regulation of higher educational institutions in India, consider the following statements

1. Under the current framework, degrees can be awarded only by a university set up by an Act of Parliament or state legislatures.
2. If any higher educational institution fails to comply with specified norms, the University Grants Commission can order the closure of such an institution.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: *Permission to grant degrees:* Under the current framework, degrees can be awarded only by a university set up by an Act of Parliament or state legislatures, **deemed to be a university and an institution specially empowered by Parliament.** They do not need further approval from the UGC.

Statement 2 is incorrect: *Shutting down of institutions:* Currently, if any higher educational institution fails to comply with specified norms, **the UGC may stop providing grants to it. However, the UGC cannot order closure of institutions.**

Knowledge base:

Currently, in India Higher education is regulated by multiple authorities. The University Grants Commission (UGC) regulates universities and colleges teaching general subjects. The All-India Council for Technical Education (AICTE) regulates technical education. Further, institutions offering courses related to medical, legal, nursing or teacher education are regulated by 14 professional councils such as the Medical Council, the Bar Council, and the Nursing Council.

In the recent past, the government has undertaken various measures to promote autonomy in the sector, one of the important among them being introduction of the Draft Higher Education Commission of India (Repeal of University Grants Commission Act, 1956) Bill in 2018.

Source: The Draft Higher Education Commission of India (Repeal of University Grants Commission Act, 1956) Bill, 2018 (prsindia.org)

Draft bill almost ready, single higher education regulator could become a reality this year (theprint.in)

Q.26) What were the possible reasons for the introduction of 97th Constitutional Amendment Act of 2011, about cooperative societies in India?

1. To make cooperative societies more democratic and member-oriented.
2. To make it easier for multinational corporations to enter the cooperative sector.
3. To ensure the accountability of management to the members of the society.
4. To keep the co-operatives free from unnecessary outside interferences.

Select the correct answer using the code given below.

- a) 1 and 3 only
- b) 1, 2 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

According to the International Labour Organization (ILO), a Co-operative is an organisation that is autonomously run by people who have voluntarily come together to address a shared economic, social, or cultural need through a joint and democratically controlled enterprise.

Statement 1 is correct: Co-operatives need to run on well-established democratic principles and elections held on time and in a free and fair manner. Therefore, there was a need to initiate fundamental reforms to revitalise these institutions in order to ensure their contribution in the economic development of the

country and to **serve the interests of members and public at large** and also **to ensure their autonomy, democratic functioning** and professional management.

Statement 2 is incorrect: There is no such provision related to multinational corporations.

Statement 3 is correct: It was expected that these provisions will not only ensure the autonomous and democratic functioning of co-operatives, but also ensure the accountability of management to the members and other stakeholders and **shall provide for deterrence for violation of the provisions of the law.**

Statement 4 is correct: A strong need has been felt for amending the Constitution so as **to keep the co-operatives free from unnecessary outside interferences** and also to ensure their autonomous organizational set up and their democratic functioning.

Source: Lakshmikant chap 64

Q.27) With reference to Pressure Groups in India, which of the following statements is/are correct?

1. Pressure groups use only non-political methods to influence policy-making.
2. All Pressure Groups are formally organized groups, formed to promote their interests.
3. All pressure groups are registered under the Societies Registration Act, 1860.

Select the correct answer using the code given below.

- a) 2 only
- b) 3 only
- c) 1 and 3 only
- d) None of the above

Ans) d

Exp) Option d is the correct answer.

A pressure group is a group of people who are organised actively for promoting and defending their common interest. A large number of pressure groups exist in India.

Statement 1 is incorrect: Pressure groups generally use non-electoral methods to influence policy-making and promote their interests. But this not true in all cases. Some pressure groups may also **use political methods such as supporting a particular political party.** These indirectly play a crucial role in elections. When the political parties are selecting their candidates, these groups try to influence the choice. They try for the inclusion of favourable provisions in the election manifestoes of political parties.

Statement 2 is incorrect: Pressure Groups **can be political, non-political groups, formally or informally organized groups.** Examples of formally organised groups are **FICCI, AITUC** and examples of informally organised groups are **Naxalite movement, Jammu and Kashmir Liberation Front (JKLF) etc.**

Statement 3 is incorrect: In India, all **pressure groups are not registered under any specific act.** However, depending on their nature and activities, they may need to register under various laws and regulations. For example, if a pressure group is formed as a non-profit organization or a non-governmental organization (NGO), they may need to register under the **Indian Societies Registration Act, 1860 or the Indian Trusts Act, 1882.** While Trade Union are registered under **the Trade Unions Act, 1926.**

Source: Lakshmikant Chap 77

<https://blog.forumias.com/answered-discuss-the-role-and-function-of-pressure-groups-in-india-do-you-think-pressure-groups-in-india-has-been-able-to-successfully-deliver-on-their-mandate/>

Q.28) With reference to recent Supreme Court judgement related to the Co-operative Societies in India, consider the following statements:

1. The 97th Constitutional (Amendment) Act, 2011 has been partly struck down because the amendment act was passed without the requisite ratification by the States.

2. The 97th Constitutional (Amendment) Act, 2011 would still be applicable to local co-operative societies, but not to multi-State co-operative societies.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Recently the Supreme Court struck down Part IXB inserted by the Constitution (97th Amendment) Act, 2011 on the ground that the amendment was passed without the requisite ratification by the States.

Statement 1 is correct: The act was struck down stating that **the subject matter (co-operative societies) fell in the state list** and belongs wholly and exclusively to the State legislatures to legislate upon and **any change would require the ratification by at least one-half of the state legislatures as per Article 368(2) of the Constitution. But this amendment act was passed without any ratification by States.**

Statement 2 is incorrect: The Supreme Court held that Part IX B inserted by the Constitution (97th Amendment) Act, 2011 would **not be applicable to the local co-operative societies** and the same would be applicable to the multi-State co-operative societies and the societies within the Union territories.

Source: <https://www.livelaw.in/top-stories/constitution-97th-amendment-not-applicable-to-local-co-operative-societies-applies-only-to-multi-state-societies-societies-in-uts-supreme-court-212008>

Q.29) Consider the following statements regarding Union Territories in India:

- President has power to establish a separate high court for any union territory.
- Delhi is the only union territory that has a separate high court of its own, which is not shared with any other state or union territory.
- Union Territory of Lakshadweep comes under the jurisdiction of Madras High Court.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- 2 and 3 only
- 1 and 2 only

Ans) b

Exp) Option b is the correct answer.

Articles 239 to 241 in Part VIII of the Constitution deal with the union territories. Even though all the union territories belong to one category, there is no uniformity in their administrative system.

Statement 1 is incorrect: **The Parliament (not President) can establish a high court for a union territory or put it under the jurisdiction of the high court of adjacent state.**

Statement 2 is correct: **Delhi is the only union territory that has a high court of its own (since 1966),** which is not shared with any other state or union territory. Jammu and Kashmir also has a high court of its own, but it is shared with Ladakh.

Statement 3 is incorrect: **Lakshadweep comes under Kerala High Court whereas Puducherry is placed under Madras High Courts.** The Jammu and Kashmir High Court is the common high court for the two union territories of Jammu and Kashmir, and Ladakh.

Source: Indian Polity by M Laxmikant, chapter 40

Q.30) With reference to 'Aridity Anomaly Outlook (AAO) Index', consider the following statements:

1. The index is released bi-annually by the global organisation AccuWeather Inc.
 2. It monitors the situation of agricultural drought that causes crop stress across a specific region.
 3. As per the recent outlook, Bihar has the highest number of districts experiencing arid conditions in India.
- Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Indian Meteorological Department (not AccuWeather Inc) releases the Aridity Anomaly Outlook (AAO) Index. **The index is computed** for weekly or two-week periods. For each period, the actual aridity for the period is compared to the normal aridity for that period.

Statement 2 is correct: Aridity Anomaly Outlook (AAO) Index monitors agricultural drought, a situation when rainfall and soil moisture are inadequate to support healthy crop growth till maturity, causing crop stress. An anomaly from the normal value signifies a water shortage in these districts that could directly impact agricultural activity.

Statement 3 is incorrect: The key findings of the index are: At least 85% of districts face arid conditions across India. Some 196 districts are in the grip of a 'severe' degree of dryness and 65 of these are in Uttar Pradesh (highest).

Bihar had the second-highest number of districts (33) experiencing arid conditions. The state also has a high rainfall deficit of 45%.

Source: Aridity Anomaly Outlook(AAO) Index: Some 85% districts in India now face arid conditions - ForumIAS Blog

Some 85% districts in India now face arid conditions (downtoearth.org.in)

Q.31) Consider the following statements regarding the 'Dravidian Movement':

1. It largely used non-violent means to achieve its objectives.
2. It received widespread public support in the States of Tamil Nadu, Karnataka and Andhra Pradesh.
3. It led to the formation of Dravidar Kazhagam (DK) party by E.V. Ramaswamy Naicker.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Dravidian Movement was one of the first regional movements in Indian politics. It was aimed to **protect the regional identity of the South and was against the alleged domination of North India.**

Statement 1 is correct: There had been separatist tendencies in some of the sections of the movement as they made demand for a separate **Dravida Nadu**. However, **the movement was largely non-violent and did not take to arms.** It used democratic means like public debates and electoral platform to achieve its objectives. The strategy was successful as the movement acquired political power and influence at the State and the National levels.

Statement 2 is incorrect: Initially, the movement was perceived as a representative of the whole of the South India. But **due to lack of support from other states, it remained confined only to the State of Tamil Nadu**. Hence, there was no widespread support for the movement in the States like Karnataka and Andhra Pradesh.

Statement 3 is correct: The Dravidian Movement led to the formation of a new party called as Dravidar Kazhagam (DK). **It had been founded by E.V. Ramaswamy Naicker**. The organization opposed the Brahmins' dominance and affirmed regional pride against political, economic and cultural domination of the North

Knowledge Base: **About E.V. Ramaswamy Naicker:**

- 1) He is also known as 'Periyar' which means 'the respected'.
- 2) He was a strong supporter of atheism and was also known for his anti-caste struggle.
- 3) He was a worker of the Congress Party, worked for the Justice Party and also started the Self-Respect Movement in 1925.

Source: <https://ncert.nic.in/ncerts/l/leps208.pdf>

Q.32) Consider the following statements regarding Non-Governmental Organisations (NGOs) in India:

1. To become eligible to get tax exemption from the government, an NGO must register itself as a legal entity.
2. Raising funds from outside India is a Fundamental Right of an NGO.
3. It is mandatory for an NGO registered under Foreign Contribution Regulation Act to spend minimum 25% of its foreign contributions for administrative purposes.

Which of the above statements are **incorrect**?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

NGOs or Non-Governmental Organisations are entities that operate independent of the government. Ex. NGO Pratham in field of education. They operate on large scale to help people with their programmes and activities.

Statement 1 is correct: A registered NGO can qualify for financial assistance from government agencies and local, national and international donor. Also, registration of an NGO is necessary to seek tax exemption from the Income Tax department of the government. NGOs are registered legally as a society, trust or under Companies Act, 2013.

Statement 2 is incorrect: NGOs are funded by volunteering individuals and companies. Some NGOs also receive funds from foreign countries. These funds are regulated under the Foreign Exchange Management Act, 1999. As per Supreme Court judgement no one has fundamental right to receive foreign donations. Also, the Court upheld FCRA Amendment Act, 2020.

Statement 3 is incorrect: The FCRA Amendment Act, 2020 prescribes to revise the ceiling limit of administrative expenses to 20% from 50% of the total foreign funds received in a particular year. In other words, a Foreign Contribution (FC) registered organization cannot spend more than 20% of the FC utilised in that particular year on administrative expenses. However, the option to spend more than 20% on administrative expenses with prior approval of the central government remains.

Source: <https://www.thehindu.com/news/national/no-one-has-fundamental-or-absolute-right-to-receive-foreign-donations-supreme-court/article65303313.ece>

<https://www.fcraforngos.org/administrative-expenditures>

M. Laxmikanth

Q.33) With reference to the Grand Alliance of 1971, which of the following statements is/are correct?

1. It was an electoral alliance of non-communist, non-Congress parties.
2. The Grand Alliance was successful in removing Indian National Congress from power in 1971 at the Centre.

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

For the fifth general election to Lok Sabha (1971), the electoral contest was against Congress rule at the Centre. The Grand Alliance of 1971 was a pre-poll alliance formed against the Indian National Congress.

Statement 1 is correct. All the major non-communist, non-Congress opposition parties formed an electoral alliance known as the **Grand Alliance**. The SSP, PSP, Bharatiya Jana Sangh, Swatantra Party and the Bharatiya Kranti Dal came together under this umbrella.

Statement 2 is incorrect. The Grand Alliance did not have a coherent political programme and any clear agenda. Grand alliance failed against Indira Gandhi in 1971. Defying the Grand Alliance, Indian National Congress won the 1971 elections.

Source: NCERT Class XII: Politics in India since Independence Chapters 5, Page no. 96

Q.34) Consider the following statements regarding Union Territories (UTs) of Delhi and Puducherry:

1. Legislative Assemblies of both the UTs can make laws on any subject of the State List and the Concurrent List.
2. Lieutenant Governor of Delhi and Puducherry both are guided only by the Government of Union Territories Act, 1963.

Which of the statements given above is/are **incorrect**?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Articles 239 to 241 in Part VIII of the Constitution deal with the union territories. Even though all the union territories belong to one category, there is no uniformity in their administrative system.

Statement 1 is incorrect: The Parliament can make laws on any subject of the three lists (including the State List) for the union territories. The legislative power of Parliament for the union territories on subjects of the State List remain unaffected even after establishing a local legislature for them. But, **the legislative assembly of Puducherry can also make laws on any subject of the State List and the Concurrent List. Similarly, the legislative assembly of Delhi can make laws on any subject of the State List (except public order, police and land) and the Concurrent List.**

Statement 2 is incorrect: While the LG of Delhi is guided by the Government of National Capital Territory of Delhi Act, 1991, and the Transaction of Business of the Government of National Capital Territory of Delhi Rules, 1993; the LG of Puducherry is guided mostly by the Government of Union Territories Act, 1963.

Source: Indian Polity by M Laxmikant, chapter 40

<https://www.thehindu.com/news/cities/Delhi/the-debate-over-the-delhi-assembly/article65651965.ece>

Q.35) Consider the following pairs:

Military Exercises - Countries

1. AL Najah - India and Qatar
2. Sampriti - Bangladesh and India
3. Khanjar - Kazakhstan and India

Which of the pairs given above is/are correctly matched?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Pair 1 is incorrectly matched: Joint Military Exercise 'AL NAJAH-IV' is conducted between contingents of **Indian Army and the Royal Army of Oman**. The joint exercise would focus on Counter Terrorism Operations, Regional Security Operations and Peace Keeping Operations under United Nations charter apart from organizing joint physical training schedules, tactical drills. Other military exercises with Oman are 'NASEEM-AL-BAHR' and 'EASTERN BRIDGE'. The 4th Edition of India Oman Joint Military Exercise 'AL NAJAH-IV' is scheduled to take place at the Foreign Training Node of Mahajan Field Firing Ranges (Rajasthan).

Pair 2 is correctly matched: Sampriti Exercise is a bilateral defence cooperation exercise between the armies of India and Bangladesh.

Exercise Sampriti is an important bilateral defence cooperation endeavour conducted alternately by both countries which aims to strengthen and widen the aspects of interoperability and cooperation between both the armies.

Pair 3 is incorrectly matched: 'Khanjar' exercise is **9th Edition of the India-Kyrgyzstan Joint Special Forces Exercise** was held in March-April, 2022 at Special Forces Training School, Bakloh (HP). It holds annually between India and Kyrgyzstan since 2011. Special Forces contingents from India and Kyrgyzstan have shared their experience and best practices in terms of tactics, techniques, and procedures for countering present and emerging threats throughout the conflict spectrum.

Source: Exercise Pitch Black 2020 -ForumIAS Blog

IAF will participate in Multinational "Exercise Desert Flag" |ForumIAS Blog

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1846679>

Q.36) With reference to Minorities in India, consider the following statements:

1. The Indian Constitution defines minority as 'a community notified as such by the Central Government.'
2. The States can declare communities as minorities within their territorial jurisdiction.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The constitution mentioned the term 'minority' only on two occasions in Article 29 and in Article 30, **but it nowhere defines the term. It was left at the discretion of central government.**

Using this discretionary power the central government enacted **the National Commission for Minorities Act, 1992 which defines minorities as** those belonging to the communities notified under Section 2(c) of the Minorities Act.

Statement 2 is correct: State governments can **declare any religious or linguistic community, including Hindus, as a minority within the said state.** For instance, the Maharashtra government has notified 'Jews' as a minority community within the state. Moreover, the Karnataka government has notified Urdu, Telugu, Tamil, Malayalam, Marathi, Tulu, Lamani, Hindi, Konkani and Gujarati languages as minority languages within the state of Karnataka.

Source:<https://www.indiatoday.in/india/story/states-too-can-declare-religious-or-linguistic-community-including-hindus-as-minority-centre-to-sc-1930189-2022-03-27>

<https://www.indiatoday.in/india/story/minority-citizen-in-india-supreme-court-minorities-1931455-2022-03-30>

<https://www.thehindu.com/news/national/states-free-to-identify-minorities-and-allow-them-to-administer-educational-institutions/article65265596.ece>

<https://www.legalserviceindia.com/legal/article-720-who-are-minorities.html#:~:text=%E2%80%9CLinguistic%20and%20religious%20minorities%20are,not%20the%20whole%20of%20India.>

Q.37) Consider the following statements regarding the use of languages in the High Courts:

1. The Constitution of India provides that the Governor of a state, with the previous consent of the President, can authorise the use of Hindi in the proceedings of the high court.
 2. Currently, only English is used for the judgments, decrees and orders in the High Courts of all the states.
- Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: According to the article 348 of Constitution, the governor of a state, with the previous consent of the President, can authorise the use of Hindi or any other official language of the state, in the **proceedings in the High court of the state.**

Statement 2 is incorrect: The Official Language Act, 1963 enables the governor of a state, with the previous consent of the President, to authorise the use of Hindi or any other official language of the state for judgements, decrees and orders passed by the high court of the state but they should be accompanied by an English translation. The use of Hindi has been authorized long back in the proceedings as well in the judgments, decrees or orders in the High Courts of the States of Rajasthan, Madhya Pradesh, Uttar Pradesh and Bihar. Hence the statement is incorrect.

Source: M. Laxmikanth Chapter 65 Official Language

Q.38) Consider the following statements regarding the recommendations made by the Fazl Ali Commission (1953) on the reorganization of States:

1. It accepted 'Linguistic homogeneity' as the basis of reorganization of the States.
2. It provided for the partition of Bombay between Gujarati and Marathi speaking people.
3. It recommended for the creation of a Sikh state for the Punjabi speaking population.
4. It rejected the demand to carve out tribal states from Assam and Bihar.

Which of the options given above are correct?

- a) 1 and 2 only
- b) 1 and 4 only
- c) 1, 2 and 4 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

In India, the most vigorous movement for linguistic autonomy was started by the Telugu speakers. They demanded separate state for Telugu speaking population as Andhra Pradesh. In 1952, Potti Sriramulu started fast-unto-death to support his demand for a separate state and died after 56-day hunger strike for the cause. **Government of India acceded to the demand and also appointed a 3-member commission in 1953, called as Fazl Ali Commission to recommend reorganization of the States.**

Statement 1 is correct: The Commission accepted 'linguistic homogeneity' as the basis for reorganization. It accepted language as an important factor conducive to administrative convenience and efficiency. However, **it rejected the theory of 'one language one state'**. According to the Commission, **unity and integrity of India should be the primary consideration** in re-drawing of the borders. It accepted language not as an exclusive or binding principle, overriding all other considerations.

Statement 2 is incorrect: The Commission was **not in favor of creating a separate state of Maharashtra for Marathi speaking people and Gujarat for the Gujarati speaking people.** It recommended Bombay to remain as it was, that is, a bilingual province of Gujarati and Marathi speakers. However, due to ongoing unrest, the State of Bombay was finally divided into two separate states (Maharashtra and Gujarat) in 1960.

Statement 3 is incorrect: The demand for separate Sikh state was made by Akali Dal under the leadership of Master Tara Singh. **The Fazl Ali Commission rejected the demand for creation of a Sikh state.** However, in 1966, on the recommendation of **Shah Commission**, the Punjabi speaking areas were constituted into the unilingual state of Punjab and Hindi-speaking areas were constituted into the state of Haryana and the hill areas were merged with the Himachal Pradesh.

Statement 4 is correct: The Commission had rejected creation of separate tribal states from the states of Bihar and Assam. The Commission observed that the separation of Bihar **will affect the economy of the entire state.** The tribal region of Chottanagpur Plateau provided an important industrial base. For Assam, the Commission had held that demand by tribals for a separate Hill State reflects the separatist pull of the extremist elements.

Source:

https://www.mha.gov.in/sites/default/files/State%20Reorganisation%20Commisison%20Report%20of%201955_270614.pdf

M. Laxmikanth (Page 5.4, Chapter 5)

India After Gandhi by Ramachandra Guha (Page 191, 10th Edition)

Q.39) Consider the following statements with respect to languages in India:

1. India has the largest number of endangered languages in the world as per UNESCO's 'Atlas of The World's Languages in Danger of Disappearing.
2. The Scheme for Protection and Preservation of Endangered Languages is monitored by the Ministry of Culture.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

UNESCO has recognized India as one of the most linguistically diverse countries. As per census 2011, more than 19,500 languages or dialects are spoken in India as mother tongues while only 121 languages are spoken by 10,000 or more people. This shows the quantum of endangered languages in India.

Statement 1 is correct: There are 197 languages in India whose survival is in peril. This is the largest number for any country in the world, going by UNESCO's Atlas of The World's Languages in Danger of Disappearing.

Statement 2 is incorrect: Scheme for Protection and Preservation of Endangered Languages (SPPEL): It started with a short-term goal of providing a grammar, dictionary and ethnolinguistic sketch for 117 languages that have 10,000 or fewer speakers. In the long term, it aspires to cover around 500 languages in the future. **The scheme is monitored by the Central Institute of Indian Languages (CIIL) (under the Ministry of Education), located in Mysuru, Karnataka.**

Source: <https://blog.forumias.com/endangered-languages-in-india/>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1777333>

<https://www.downtoearth.org.in/blog/governance/seven-decades-after-independence-many-tribal-languages-in-india-face-extinction-threat-73071>

Q.40) With reference to 'Mineral Security Partnership', consider the following statements:

1. It is US-led partnership to secure supply chains of critical minerals by reducing dependency on China.
2. The partnership exclusively focuses on transport and usage of radioactive nuclear minerals like Uranium and Thorium.
3. India has vehemently opposed the Partnership on the grounds of creating the distinction of the 'haves and have-nots' in the global order.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

This question is based on the article "**Explained: What are rare earth elements, and why is India keen to join a global alliance to ensure their supply?**" published in Indian Express.

Statement 1 is correct: Mineral Security Partnership (MSP) is a US-led partnership to secure supply chains of critical minerals, aimed at **reducing dependency on China**. It aims to **catalyse investment from governments and the private sector** to develop strategic opportunities.

Statement 2 is incorrect: The **Mineral Security Partnership** will focus on the supply chains of minerals such as Cobalt, Nickel, Lithium, and also the **17 'rare earth' minerals (not exclusive to radioactive minerals)**. The alliance is also seen as primarily focused on evolving as an alternative to China, which has created processing infrastructure in rare earth minerals and has acquired mines in Africa for elements such as Cobalt.

Statement 3 is incorrect: India is **exploring the possibilities of joining** the Minerals Security Partnership. It is working through its diplomatic channels to fetch an entry into the Mineral Security Partnership. According to experts, the **reason India would not have found a place in the MSP** grouping is because India does not bring any expertise to the table. In the group, countries like Australia and Canada have reserves and also the technology to extract them, and countries like Japan have the technology to process REEs.

Source: Explained: What are rare earth elements, and why is India keen to join a global alliance to ensure their supply? -ForumIAS Blog

Concern in Delhi over not being part of US-led Minerals Security Partnership -ForumIAS Blog

Q.41) Consider the following statements regarding the authoritative text of the Constitution of India:

1. The Original Constitution of India had provisions with respect to an authoritative text of the Constitution in the Hindi language.

2. The Constitution of India originally adopted by the Constituent Assembly on 26th November 1949 was both in Hindi and English languages.

Which of the above given statements is/are correct?

a) 1 only

b) 2 only

c) Both 1 and 2

d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: Originally, the Constitution of India did not make any provision with respect to an authoritative text of the Constitution in the Hindi language. Later, a provision in this regard was made by the 58th Constitutional Amendment Act of 1987 (Article 394-A).

Statement 2 is incorrect: The Constitution of India adopted by the Constituent Assembly on 26 November, 1949, was in English language. A Hindi translation of the Constitution signed by the members of the Constituent Assembly was published in 1950.

Source: Laxmikant-Official Language

Q.42) Consider the following statements:

1. The provision of universal adult franchise of Indian Constitution came into force on November 26, 1949.

2. Since independence, India has followed the system of single member parliamentary and assembly constituencies.

Which of the above given statements is/are correct?

a) 1 only

b) 2 only

c) Both 1 and 2

d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Franchise refers to right to vote of the people to vote and choose their representative. The Indian Constitution adopts universal adult franchise as a basis of elections to the Lok Sabha and the state legislative assemblies. Every citizen who is not less than 18 years of age has a right to vote without any discrimination of caste, race, religion, sex, literacy, wealth and so on. The voting age was reduced to 18 years from 21 years in 1989 by the 61st Constitutional Amendment Act of 1988.

Statement 1 is incorrect: Provisions related to universal adult franchise are incorporated under Article 326 of the Constitution. The first draft electoral roll based on universal franchise was ready just before the enactment of the constitution. The provision of universal adult franchise was finally enacted in the Constitution in 1949 and **came into force on January 26, 1950.**

Statement 2 is incorrect: The Two- Member Constituencies (Abolition) Act, 1961 provided for the **abolition of two- member parliamentary and assembly constituencies and for the creation of single- member constituencies in their place.**

Source: <https://legislativebodiesinindia.nic.in/States/manipur/manipur-w.htm>

Q.43) With reference to the Commission for Scientific and Technical Terminology (CSTT), consider the following statements:

1. It is functioning under the Ministry of Science and Technology.
2. The main function of the Commission is to evolve and define scientific and technical terms in Hindi and all Indian languages.
3. It was constituted on the recommendations of the Official Language Commission.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Commission for Scientific and Technical Terminology was established on October 01, 1961 in pursuance of a Presidential Order dated April 27, 1960 with the objective to evolve technical terminology in all Indian Languages. The Commission was established under clause (4) of Article 344 of the Constitution of India as a follow up of recommendations of a committee in this regard.

Statement 1 is incorrect: CSTT is functioning under Department of Higher Education, **Ministry of Education (not the ministry of Science and Technology)** with its headquarters at New Delhi.

Statement 2 is correct: One of the duties and functions of the Commission, at present, is **to evolve and define scientific and technical terms in Hindi and all Indian Languages** and publish technical glossaries, definitional dictionaries, encyclopedia etc.

Statement 3 is correct: In pursuance of the article 344 of Constitution of India, the President has constituted the Official Language Commission which has recommended to constitute a Standing Commission for the evolution of scientific and technical terminology.

Source: <http://cstt.education.gov.in/en>

<https://fact.co.in/home/Dynamicpages?MenuId=830>

<https://blog.forumias.com/shabd-shala-initiative-finding-indian-language-equivalents-for-selfie-drones/> <http://cstt.education.gov.in/duties-and-functions-commission>

Q.44) Consider the following statements regarding the integration of the State of Manipur into the Indian Union:

1. Accession to the Indian Union was completed only after it was duly approved by the Manipur's Legislative Assembly.
2. Manipur became part of the State of Assam immediately after its accession to the Indian Union.

Which of the statements given above is/ are **incorrect**?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The integration of the Princely State of Manipur was completed on September 21, 1949. It was one of the most adamant opponents of integration into the Indian Union. The State had already drafted its own Constitution in the year 1947. The Assembly elections in Manipur were held in 1948 under the Manipur Constitution Act of 1947. Manipur was the first part of India to hold an election based on universal adult franchise. A coalition government was created after the elections. It was a monarchical government Maharaja of Manipur, Bodhachandra as its Head.

Statement 1 is incorrect: There were sharp differences in the state legislative assembly regarding the merger of Manipur with the Indian Union. The state Congress wanted merger, but other political parties were opposed to it. **The Government of India succeeded in pressurizing Maharaja Bodhchandra into signing a Merger Agreement in September 1949, without consulting the elected Legislative Assembly of Manipur.** Neither the Council of Ministers, nor the Assembly was consulted before signing this Merger Agreement.

Statement 2 is incorrect: After the accession, **Manipur did not become part of the state of Assam.** It was **integrated as a Part-C state** which was equivalent to a Chief Commissioner's Province during the colonial government. It **got the status of Union Territory and was governed by the Chief Commissioner appointed by the Indian Government.** The Legislative Assembly of Manipur was abolished. **In 1972, Manipur got statehood and became the 19th State of the Indian Union.**

Source: <https://ncert.nic.in/textbook/pdf/leps201.pdf>

<https://www.news9live.com/knowledge/manipur-merger-all-about-north-eastern-states-incorporation-into-india-121420>

Q.45) With reference to the Pradhan Mantri Adi Adarsh Gram Yojana, consider the following statements:

1. It aims to develop Adarsh Gram villages by improving the living conditions of these villages.
2. It has a component of preparing the Village Development Plan to promote integrated socio-economic development.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The Central Government has modified the earlier scheme of 'Special Central Assistance to Tribal Sub-Scheme (SCA to TSS) with nomenclature 'Pradhan Mantri Adi Adarsh Gram Yojana (PMAAGY)', for implementation during 2021-22 to 2025-26.

Statement 1 is correct: Pradhan Mantri Adi Adarsh Gram Yojana seeks to develop Adarsh Gram villages by improving the living conditions of these villages, providing them with better education healthcare facilities and **facilitating their products to be linked directly with the market.**

Statement 2 is correct: The main objective of this scheme is to achieve **integrated socio-economic development** of selected villages through convergence approach. It includes the following components.

- 1) **Preparing Village Development Plan** based on the needs, potential, and aspirations;
- 2) Maximizing the coverage of individual / family benefit schemes of the Central / State Governments;
- 3) **Improving the infrastructure in vital sectors like health, education, connectivity and livelihood.**

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1849956>

Q.46) With reference to various provisions under the Constitution of India, consider the following statements:

1. All proceedings in the Supreme Court of India are to be in the Hindi language only.
2. The states can choose only the Eighth Scheduled languages as their official language.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Part XVII of the Constitution deals with the official language in Articles 343 to 351. Its provisions are divided into four heads-Language of the Union, Regional languages, Language of the judiciary and texts of laws and Special directives.

Statement 1 is incorrect: Until Parliament provides otherwise, **the following are to be in the English language only:**

- (a) **All proceedings in the Supreme Court and in every high court.**
- (b) The authoritative texts of all bills, ordinances, orders, rules, regulations byelaws at the Central and state levels.

Statement 2 is incorrect: The legislature of a state may adopt any one or more of the languages in use in the state or Hindi as the official language of that state. Notably, the **choice of the state is not limited to the languages enumerated in the Eighth Schedule of the Constitution.**

Q.47) In India, if a religious sect/community is given the status of a national minority, then what special advantages it is entitled to?

1. It can establish and administer educational institutions.
2. The President of India has to nominate a representative of the community to Lok Sabha.
3. It can derive benefits from the Prime Minister's 15-Point Program.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

At present Muslims, Sikhs, Buddhists, Jains, Christians, and Parsis (Zoroastrians) are notified as minority religious communities by Government of India. There are certain special advantages that these communities are entitled by the Constitution of India as well as various other legislative and administrative measures.

Statement 1 is correct: Article 30 of the Indian Constitution upholds the right of religious and linguistic minorities to establish and administer educational institutions of their choice.

Statement 2 is incorrect: There is no provision for the President of India to automatically nominate a member of a minority religious community to the Lok Sabha. This provision was earlier available for members of Anglo-Indian community under Article 331 of the Constitution.

Statement 3 is correct: Religious minorities can derive benefits from the Prime Minister's 15-Point Programme. The programme was launched in 2005 to ensure the welfare of minorities in the fields of education, skill development, employment and prevention of communal conflicts.

Source : <https://www.thehindu.com/news/national/karnataka/minority-status-to-benefit-jain-students/article5643369.ece> <https://www.legalserviceindia.com/article/l93-minorities-rights.html>

Q.48) In context of post-Independence political scenario, consider the following statements:

1. In 1955, Congress declared its goal for the socialist pattern of society.
2. Ram Manohar Lohia left the Congress after independence and became a member of the Praja Socialist Party.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The socialists believed in the ideology of democratic socialism which distinguished them both from the Congress as well as from the Communists. They criticised the Congress for favouring capitalists and landlords and for ignoring the workers and the peasants.

Statements 1 is correct. The Avadi Session, 1955 represented the Congress's distinct shift towards socialism. The Congress declared the socialist pattern of society to be its goal. The party resolution also stated that planning must take place with a view towards the establishment of such a society.

Statements 2 is correct. Ram Manohar Lohia left the Congress in 1948. He became a member of the Praja Socialist Party upon its formation in 1952 and served as general secretary for a brief period, but internal conflicts led to his resignation in 1955.

Source: NCERT Class XII: Politics in India since Independence Chapters 2, Page no.34

Q.49) Consider the following statements with reference to the National Foundation for Communal Harmony:

1. It is an autonomous organization under the Ministry of Social Justice and Empowerment.
2. It aims to provide assistance to the children of families affected by communal, caste, ethnic or terrorist violence.
3. The Foundation seeks support from Central Public Sector Enterprises under Corporate Social Responsibility.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The National Foundation for Communal Harmony (NFCH) is an autonomous organization with the **Ministry of the Home Affairs**. It was registered on the 19 February 1992 under the Societies Registration Act, 1860.

Statement 2 is correct: National Foundation for Communal Harmony aims to provide assistance to the children of families affected by **communal, caste, ethnic or terrorists' violence** which fracture social harmony. This as may be decided by the Governing Council from time to time, in particular for their care, education and training. It aims to promote communal harmony and national integration, through scholarships, fellowships and studies which will highlight and strengthen the bonds of unity and affinity amongst different religious and social groups in the country.

Statement 3 is correct: The Foundation seeks support from **Central Public Sector Enterprises** under the **Corporate Social Responsibility (CSR)** for providing financial support to child victims of communal, caste, ethnic, terrorist violence for their education. The Foundation has signed MoU with some of the Central Public Sector Enterprises for providing assistance to children covered under Project 'Assist' in Assam, Chhattisgarh, Manipur, Gujarat and Jammu & Kashmir.

Source:

[https://nfch.nic.in/#::~:~:text=National%20Foundation%20for%20Communal%20Harmony\(NFCH\)%20was%20set%20up%20as,victims%20of%20communal%20caste%2C%20ethnic](https://nfch.nic.in/#::~:~:text=National%20Foundation%20for%20Communal%20Harmony(NFCH)%20was%20set%20up%20as,victims%20of%20communal%20caste%2C%20ethnic)

Q.50) With reference to the Small Satellite Launch Vehicle, consider the following statements:

1. It is a two-stage launch vehicle powered by liquid fuels only.
2. It cannot launch a satellite weighing more than 50 Kg into Low Earth Orbit.
3. It would help in increasing the frequency of satellite launch by reducing the Turn-around time.

Which of the statements given above is/are correct?

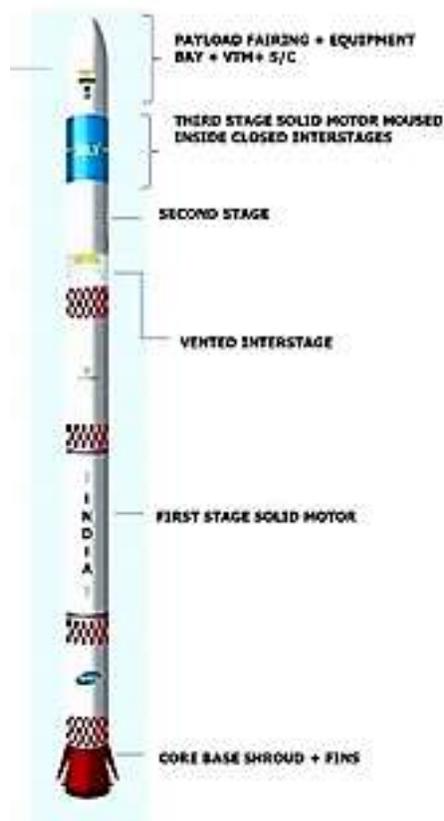
- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Small Satellite Launch Vehicle is a small-lift launch vehicle being developed by the Indian Space Research Organisation (ISRO). SSLV is ideal for the on-demand, quick turn-around launch of small satellites.

Statement 1 is incorrect: A Small Satellite Launch Vehicle (SSLV) is an **all-solid three-stage vehicle**.



Statement 2 is incorrect: Small Satellite Launch Vehicle has a payload capability of 500 kg satellite mass into 500 km Low Earth Orbit (LEO) or 300 kg to Sun-Synchronous Polar Orbit.

Statement 3 is correct: The SSLV has been developed to cater to a market for the launch of small satellites into low earth orbits. The SSLV would help in a) Reduced Turn-around Time b) Launch on Demand c) Cost Optimization for Realization and Operation d) Flexibility in accommodating Multiple Satellites and e) Minimum launch infrastructure requirements.

Turnaround time is the amount of time it takes to complete a process. **The SSLV has a low turnaround time and can be assembled within a fortnight**, allowing the space agency to provide launch on demand service in the fast-growing low earth orbit launch sector.

Source: <https://blog.forumias.com/explained-isros-sslv-a-small-satellite-launcher-with-big-prospects-ahead/>

<https://blog.forumias.com/azaadi-sat-isro-to-send-small-satellite-launch-vehicle-from-sriharikota/>

<https://www.nsilindia.co.in/sites/default/files/u1/SSLV%20Technical%20Brochure%20V12.pdf>

Q.1) Consider the following statements regarding findings of Economic Survey 2022-23:

1. Capital expenditure by the central government has more than doubled in the last five years.
2. Revenue expenditure by the central government has seen a consistent growth in the last five years.
3. GST collection has increased by more than 5 times in the past five years.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

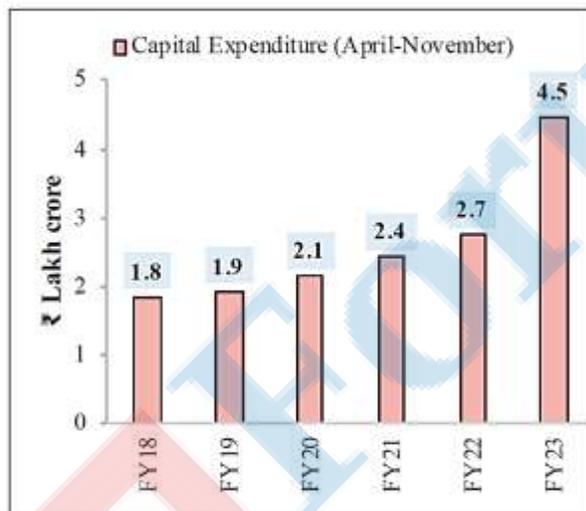
Ans) a

Exp) Option a is the correct answer.

Economic Survey 2022-23 has pointed out that India's economic growth in FY23 has been principally led by private consumption and Capital formation. It has identified consistent rise in Capital expenditure (Capex), balanced revenue expenditure and buoyant tax collection as few growth drivers for India's resilient economy.

Statement 1 is correct: Capital expenditure by the government has seen rise in the past five years as it has nearly doubled from Rs 1.9 lakh crores in FY19 to Rs. 4.5 lakh crores in FY23. This rising trend was seen not only at the centre but also by the state governments as well. The capex was increased not only to address the infrastructure gap but also to crowd-in private investment into an economic landscape.

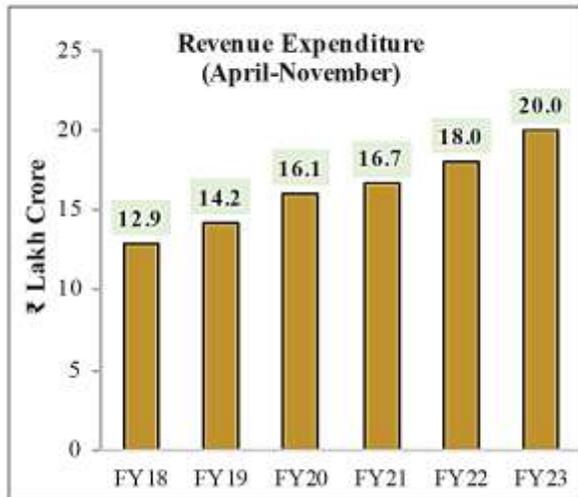
Figure I.22: Capex doubled in the past five years



Source: CGA

Statement 2 is correct: The higher growth in the capex by the governments was possible majorly due to limited growth in revenue expenditure over the past five years. **The revenue expenditure of government has witnessed consistent growth in last 5 years, but the growth of revenue expenditure was limited as can be seen in the graph given below.**

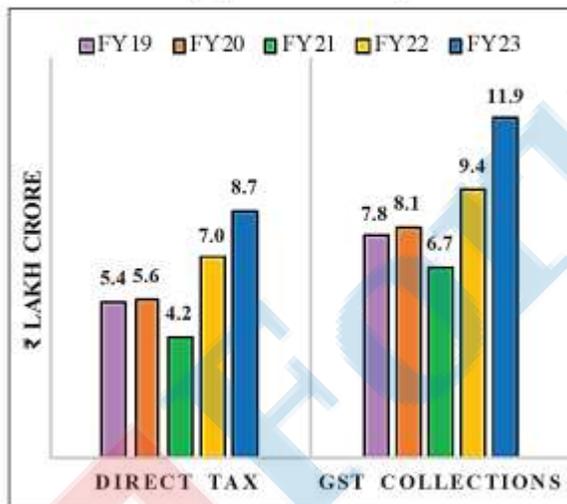
Figure I.25: Limited growth in revenue expenditure



Source: CGA

Statement 3 is incorrect: As can be seen from the graph given below, the GST collections in India have not increased 5 time in last 5 years.

Figure I.24: Buoyant tax collections (April-November)



Source: CGA

Source : <https://www.indiabudget.gov.in/economicsurvey/doc/eschapter/echap01.pdf>

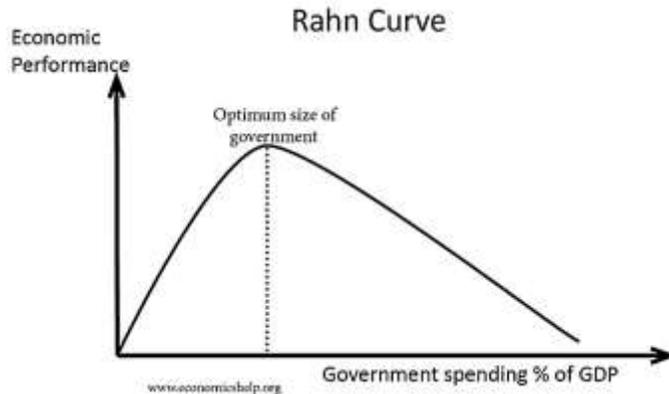
Q.2) In the context of microeconomics, Rahn curve establishes relationship between which of the followings?

- Economic growth and government's spending as a per cent of GDP.
- Environmental degradation and stage of economic development.
- Cumulative portion of income to cumulative per cent of population.
- Relationship between income inequality and per capita income.

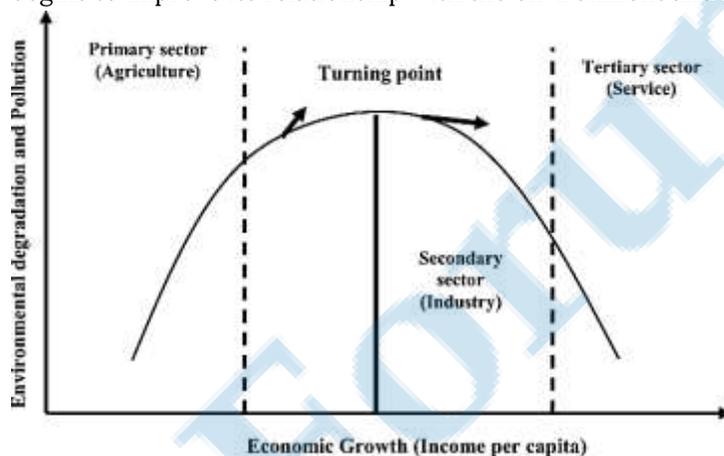
Ans) a

Exp) Option a is the correct answer.

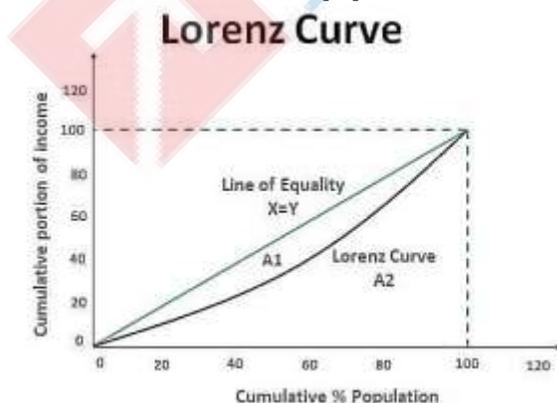
Option a is correct. Rahn curve establishes the relationship between economic growth and government's spending as a per cent of GDP (size of the government). It suggests that there is an optimal level of government spending which maximises the rate of economic growth.



Option b is incorrect. Environmental Kuznets Curve establishes the relationship between environmental degradation and stage of economic development. It suggests that economic development initially leads to a deterioration in the environment, but after a certain level of economic growth, a society begins to improve its relationship with the environment and levels of environmental degradation reduces.

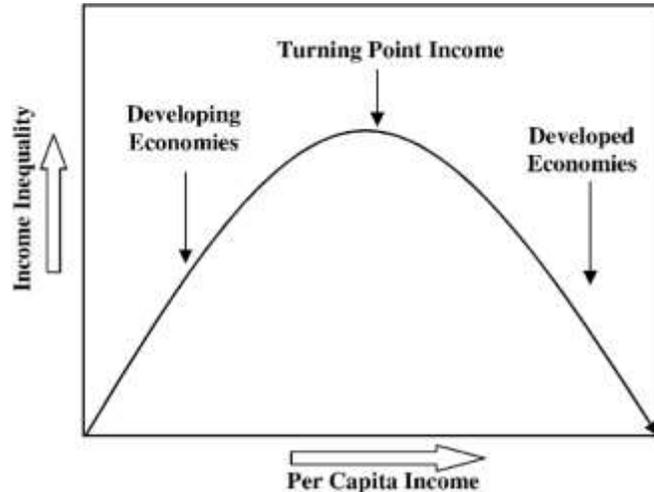


Option c is incorrect. Lorenz curve establishes the relationship between Cumulative share/portion of income to the section or per cent of population. It is a graphical representation of the distribution of income or wealth within a population.



Option d is incorrect: Kuznets curve is used to demonstrate the hypothesis that economic growth initially leads to a greater inequality, followed later by the reduction of inequality. It was first proposed by an American economist Simon Kuznets.

His work on economic growth and income distribution led him to hypothesize that industrializing nations experience a rise and subsequent decline in economic inequality, characterized as an inverted “U”–the “Kuznets curve.” **It establishes a relationship between income inequality and per capita income.** It shows that as per capita income rises, the income inequality rises in developing countries, then it reaches a tipping point and drops as income rises in the case of developed economies.



Source : investopedia.com

<https://link.springer.com/article/10.1007/s11356-020-07648-0>

Q.3) Consider the following pairs about various microeconomic terminologies:

Terminologies	Meaning
1. Private cost	It is a cost incurred by firm to purchase all the inputs required for the production.
2. Social cost	It is sum of private cost and cost to society arising from the production or consumption of goods and services.
3. Money cost	It is the total expense incurred by a firm to produce a commodity.

Which of the pairs given above are correctly matched?

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The concept of cost of production is very significant in economics because it influences the production, supply, sales and the determination of price in the market. There are various types of costs in economics which help a firm or business houses to take apt economic decisions.

Pair 1 is correct: The private cost is any cost incurred by a **firm to purchase** capital equipment, hire labours, and buy material or other inputs to produce **goods and services**.

Pair 2 is correct: In neoclassical economics, social costs consist of:

- A) Private costs
- B) External costs

The total social cost is equal to the sum of the two. If we write it down mathematically, the social cost formula is as follows:

Social cost = Private cost + External cost

Social cost includes **both the private cost and any other external cost (cost of externalities)** to society arising from the production or consumption of goods and services. External costs are not reflected in the company's production costs. It is not seen on the company's income statement. Likewise, it is also not reflected in the price borne by consumers. Nonetheless, external costs remain costs to society, regardless of who pays them. For example, a textile company might try to save money. They then did not install water pollution control equipment or factory waste. Due to the company's actions, cities located downstream of the river must pay for the adverse effects of waste or pollution. River water becomes unfit for drinking. To fulfill their drinking needs, they have to buy clean water.

Pair 3 is correct: Cost of production measured in terms of money is called **Money cost**. It is the **expense incurred by a firm to produce a commodity**. In other words, it is the sum of all the payments to the factors of production engaged in the production of the commodity.

Source : http://www.lscollge.ac.in/sites/default/files/e-content/CONCEPTS%20OF%20COST_0.pdf

<https://www.frbsf.org/education/publications/doctor-econ/2002/november/private-social-costs-pollution-production/>

Q.4) Consider the following pairs regarding types of market and their examples:

Types of market	Examples in real life
1. Monopoly	The Indian Railways
2. Oligopoly	Hotel industry in tourist places
3. Monopolistic Competition	Supermarkets
4. Perfect Competition	The agricultural market

How many of the pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

Ans) b

Exp) Option b is the correct answer.

Markets can be differentiated based on market structure, which is represented by the nature and the level of competition that exists for the goods and services in the market.

Pair 1 is correct: In a **monopoly** market a single firm or business provides the required goods or services in the market without any significant competition by another firm. Hence, the said firm constitutes the entire industry. E.g., **the Indian Railways, Microsoft in cloud computing**, etc.

Pair 2 is incorrect: **Oligopoly** is a market form in which there are few firms or providers which provide or sell homogenous or differentiated products. It majorly occurs when a small number of firms come together to restrict output or fix prices. E.g., **the mobile phone operators' market in India** consists of a very few operators like JIO, Airtel, BSNL, which determine the demand and supply of the market.

Pair 3 is incorrect: As the name suggests **Monopolistic Competition** has the features of both Monopoly and Perfect competition. Unlike monopoly, it has numerous providers but is characterised by product differentiation (unique changes in the product design or quality). Prima facie, this market looks like a perfect competition but little adjustments in the product/service quality give it the structure of monopolistic competition. E.g., **The hotel industries in tourist places, though provide overall same facilities but add little product differentiation in terms of swimming pool, cuisine, spa, freebies, etc.**

Supermarkets are example of perfect competition where they stock their aisles from the same set of companies. There is little to distinguish products from one another between two supermarkets and their pricing remains almost the same.

Pair 4 is correct: **Perfect competition** exists when there are large number of buyers and sellers exist in the market, such that no one can influence the demand or supply in the market on its own. The commodity/services traded in these markets is also homogenous. E.g., **Agricultural market wherein, homogenous goods are sold at a uniform price.**

Source: investopedia.com

Q.5) Reserve Bank of India recently released guidelines on 'Digital Lending'. Consider the following statements regarding the provisions mentioned in the guidelines:

1. Non-Banking Financial Companies (NBFCs) are excluded from the scope of the guidelines.
2. Regulated Entities under these guidelines must ensure that any lending done through their Digital Lending App is reported to Credit Information Companies.
3. Regulated entities under these guidelines must ensure that all data is stored only in servers located within India.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Reserve bank of India has recently released its guidelines on Digital Lending. Some important provisions from the guidelines are discussed below:

Statement 1 is incorrect: Scope of Application: These guidelines are applicable to digital lending extended by (these entities are called the Regulated entities):

- 1) All Commercial Banks,
- 2) Primary (Urban) Co-operative Banks, State Co-operative Banks, District Central Co-operative Banks;
- 3) Non-Banking Financial Companies (including Housing Finance Companies) [Hence Statement 1 is incorrect.]**

Statement 2 is correct: As per the provisions of the Credit Information Companies (CIC) (Regulation) Act, 2005; CIC Rules, 2006; CIC Regulations, 2006 and related guidelines issued by RBI from time to time, **Regulated Entities (Res) shall ensure that any lending done through their Digital Lending Apps (DLA) and/or DLAs of Lending Service Provider (LSP) is reported to CICs irrespective of its nature/ tenor.**

Statement 3 is correct: REs shall ensure that all data is stored only in servers located within India, while ensuring compliance with statutory obligations/ regulatory instructions. REs shall also ensure that no biometric data is stored/ collected in the systems associated with the DLA of REs/ their LSPs, unless allowed under extant statutory guidelines.

Source:

<https://rbidocs.rbi.org.in/rdocs/notification/PDFs/GUIDELINESDIGITALENDINGD5C35A71D8124A0E92AEB940A7D25BB3.PDF>

Q.6) Which of the following situations best represent the concept of Liquidity Trap?

- a) It is a situation in which the Forex reserves of a country are depleted to the level of managing only 15 days of imports.
- b) It is a situation in which a central bank does not have enough liquid cash to meet its financial obligation on time.
- c) It is a financial situation in which rising interest rates lead to depletion of disposable cash in the hands of consumers.
- d) It is a situation in which the consumers and investors hoard cash rather than spending or investing despite the interest rates being low.

Ans) d

Exp) Option d is the correct answer.

A liquidity trap is an adverse economic situation in which the consumers and investors hoard cash rather than spending or investing even when interest rates are low, thus making it difficult for the monetary policy makers to stimulate economic growth in the nation.

The term 'Liquidity Trap' was first used by economist John Maynard Keynes, who defined a liquidity trap as a condition that can occur when interest rates fall so low that most people prefer to let cash sit in their bank accounts rather than put money into bonds and other debt instruments. The consumers and investors in the apprehension of rising interest rates keep their cash with themselves or in saving accounts. Henceforth, it leads to fall in bond price in the market. Whereas the situation in which a bank doesn't have enough cash to meet its financial obligations on time is called as liquidity crisis/ cash crisis.

Source: Investopedia.com

Q.7) Consider the following statements regarding common goods and public goods:

1. If one individual consumes public goods, their availability to other individuals is reduced.
2. Common goods can be consumed without reducing their availability to other individuals.
3. Both Public Goods and Common Goods are non-excludable in nature.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 3 only
- c) 2 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Public goods describe products that are non-excludable and non-rival. That means no one can be prevented from consuming them, and individuals can use them without reducing their availability to other individuals. Examples of public goods include fresh air, knowledge, national defense, street lighting, etc.

Statements 2 is incorrect: Common goods/resources are defined as products or resources that are non-excludable but rival. That means virtually anyone can use them. However, if one individual consumes common resources, their availability to other individuals is reduced. The combination of those two characteristics often results in an overuse of common resources. Examples of common resources include freshwater, fish, timber, pasture, etc.

Statement 3 is correct: Both public goods and common goods are **non-excludable in nature**. It means that no one consumer can be stopped from benefiting from the goods.

Source: <https://www.law.wvu.edu/files/d/27b7e09b-1dae-4ec5-9dca-0a334b004bac/2021-8-11-water-as-property-richardson.pdf>

Q.8) Which one of the following is **not correct** regarding the assumptions made in the law of demand?

- There are no changes in the taste and preferences of consumers.
- Income of consumers remains constant.
- The consumer expects a change in the price of the product in future and considers it in the present.
- There are no changes in the price of substitute goods.

Ans) c

Exp) Option c is the correct answer.

The **law of demand** states that, other things remaining the same, **the quantity demanded of a commodity is inversely related to its price**. Other things being equal, if a price of a commodity falls, the quantity demanded of it will rise, and if the price of the commodity rises, its quantity demanded will decline. This law will be applicable only if the below mentioned points are fulfilled:

- Prices of substitute goods do not change.**
- Prices of complementary goods do not change.**
- Income of the buyer remains the same.**
- There is no change in the tastes and preferences of the buyer.**
- No expectation regarding future change in price.**

Option c is correct. If there is expectation of change in future price of product, then the consumers may change their present demand though the prices being constant in present. This may affect the present demand for the product. So, the law of demand has an assumption that there is no expectation regarding the change in the price of the product in future and the consumer should consider only the present price of the product.

Source :

https://nios.ac.in/media/documents/SrSec318NEW/318_Economics_Eng/318_Economics_Eng_Lesson15.pdf (Page 52)

<https://www.investopedia.com/terms/l/lawofdemand.asp>

<https://corporatefinanceinstitute.com/resources/economics/law-of-demand/>

<https://economictimes.indiatimes.com/definition/law-of-demand>

<https://www.taxmann.com/post/blog/law-of-demand-elasticity-of-demand-explained-via-examples-charts-tables/>

Q.9) Consider the following pair of type of economic goods and their description:

Goods	Description
1. Veblen good	goods whose consumption increases as the price increases
2. Inferior good	goods whose demand drops when people's incomes rise.
3. Giffen good	goods whose demand drops when people's incomes decrease

Which of the pairs given above is/are correctly matched?

- 1 only
- 1 and 2 only
- 2 and 3 only
- 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correct: Veblen good is a type of luxury good named after American economist Thorstein Veblen. It shows a positive relationship between price and demand, and thus an upward-sloping demand curve. The demand for a Veblen good rise when its price increases. Veblen goods generally are considered a high-quality exclusive product and a status symbol. When the price goes higher, its status symbol makes the Veblen good more desirable to consumers with high social and economic standing. Some common examples of Veblen goods include **luxury cars, wines, handbags, fine jewelry and watches etc.**

Pair 2 is correct: An inferior good is an economic term that describes a good whose demand drops when people's incomes rise. These goods fall out of favor as incomes and the economy improve as consumers begin buying more costly substitutes instead. Inferior goods are the opposite of normal goods, whose demand increases even when incomes increase.

Pair 3 is incorrect: The goods that increase consumption as the price increases are known as the Giffen goods. Thus, it violates the law of demand by showing an upwards sloping curve of the demand. Moreover, all the Giffen goods are always inferior. However, not all the inferior goods shall be considered as the Giffen. Some examples of it are wheat, potatoes and Rice. **Veblen goods are sometimes confused with Giffen goods. Both these types of goods violate the law of demand by selling more as prices rise.** However, a critical distinction sets these goods apart: **Veblen goods are luxury items, while Giffen goods are inferior goods for which no close substitutes exist.**

Source : <https://www.investopedia.com/terms/g/giffen-good.asp>

<https://economictimes.indiatimes.com/definition/giffen-good>

<https://corporatefinanceinstitute.com/resources/economics/veblen-goods/>

Q.10) Recently United Nations Conference to Support the Implementation of Sustainable Development Goal 14 (SDG-14) was held in Portugal. In this context, consider the following statements regarding the 'Lisbon Declaration':

- It is a commitment to follow science-based and innovative actions for the conservation of lands from further degradation.
- All the United Nations members have unanimously adopted this declaration.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

United Nations Ocean Conference, 2022 was held to ensure global cooperation towards protection and sustenance of the Ocean ecosystem of the world. It was held to support the implementation of Sustainable Development Goal 14 (SDG 14), and has been recently held in Lisbon, Portugal.

Statement 1 is incorrect: The Lisbon conservation **deals with ocean conservation and not land conservation**. It aims to **follow science-based and innovative actions on an urgent basis** for the conservation of oceans. It also calls to urgently improving health, sustainable use and resilience of the oceans. Participants also agreed to work on preventing, reducing and **controlling marine pollution like-nutrient pollution, untreated wastewater, solid waste discharges, Hazardous substances, emissions from maritime sectors (including shipping) and anthropogenic underwater noise**.

Statement 2 is correct: The Lisbon Declaration has been **unanimously adopted** by all the 198 members of the United Nations. The move is significant for building sustainable ocean-based economies. It is an example of collective efforts in the direction of sustainable ocean management.

Knowledge Base: **SDG 14 deals with 'life below water' whereas SDG 15 deals with 'life on land'**.

Source: <https://www.unep.org/news-and-stories/story/new-declaration-help-save-our-oceans>
<https://www.downtoearth.org.in/news/governance/un-ocean-conference-198-countries-adopt-lisbon-declaration-83521>

Q.11) It is a concept of microeconomics in which no individual or group can be made better off without making someone else worse off. Which of the following options best describes the above microeconomic concept?

- a) Pareto Optimality
- b) Concept of Diminishing Marginal Utility
- c) Taylor Rule
- d) Paradox of Thrift

Ans) a

Exp) Option a is the correct answer.

Option a is correct: **Pareto optimality or Pareto efficiency**, is an economic state where **resources cannot be reallocated to make one individual better off without making at least one individual worse off**. Hypothetically, if there were perfect competition and resources were used to maximum efficient capacity, then everyone would be at their highest standard of living, or at Pareto efficiency.

Option b is incorrect: The **law of diminishing marginal utility** states that all else equal, as consumption increases, the marginal utility derived from each additional unit declines. In simple terms, it means that the more of an item that you use or consume, the less satisfaction you get from each additional unit consumed or used.

Option c is incorrect: The Taylor Rule (sometimes referred to as Taylor's rule or Taylor principle) is an equation linking the United States of America's Federal Reserve Bank's benchmark interest rate to levels of inflation and economic growth. The Taylor Rule's formula ties the Fed's key interest rate policy instrument, the federal funds rate, to two factors: the difference between the actual and targeted inflation rates and that between the desired and apparent growth in the real Gross Domestic Product (GDP).

Option d is incorrect: The paradox of thrift is a microeconomic theory that argues that **personal savings can be detrimental to overall economic growth**. It is based on a circular flow of the economy in which current spending drives future spending. It calls for a lowering of interest rates to boost spending levels during an economic recession.

Source: <https://www.investopedia.com/terms/p/pareto-efficiency.asp>

<https://www.investopedia.com/terms/l/lawofdiminishingutility.asp>

<https://www.investopedia.com/terms/p/paretoprinciple.asp>

<https://www.investopedia.com/terms/p/paradox-of-thrift.asp>

Q.12) Which one of the following statements correctly describes ‘Shadow pricing’?

- It is a practice of assigning a monetary value to an item, commodity, or service that is ordinarily not bought and sold in the marketplace.
- It is a method used to set prices for goods and services before their release in the open market.
- It is a process used by companies to estimate the cost of producing a product or service.
- It is a pricing strategy used by companies to inflate the price of their products or services above the market rate.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: Shadow pricing is the practice of assigning a monetary value to an item, commodity, or service that is not ordinarily bought and sold in any marketplace. Shadow pricing is used in many different areas and comes with a specific definition based on the context it is used in.

- A common context where shadow pricing is applied is that of what economists refer to as societal value. In such a context, shadow prices are **utilized to estimate the benefits to society that may be gained from things** such as public parks or libraries.
- Shadow pricing may also be used to estimate costs, as well as benefits, to society. An area where it is frequently seen now is that of climate change. Shadow pricing is used to approximate the unseen costs to society of using carbon-based energy sources.
- In a business context, shadow pricing is often utilized as part of the decision-making process when a company is considering making a major capital investment.

Source : <https://corporatefinanceinstitute.com/resources/economics/shadow-pricing/>

<https://www.investopedia.com/terms/s/shadowpricing.asp>

Q.13) Which among the following is the best description of ‘Production Possibility Frontier’?

- It represents the maximum amount of goods and services that a country can produce.
- It represents the minimum amount of goods and services that a country can produce.
- It represents the possible quantities of production of two commodities when the production of these commodities depends on the same finite resources.
- It represents the total amount of resources available to a country that can be used for producing goods.

Ans) c

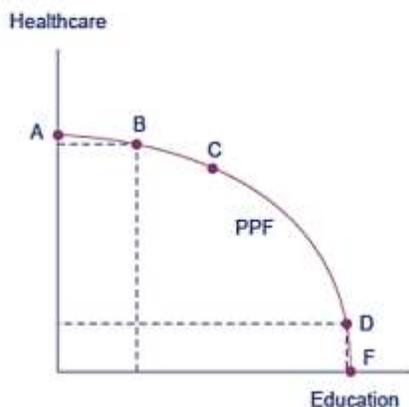
Exp) Option c is the correct answer.

The production possibility frontier (PPF) is a curve that illustrates the possible quantities that can be produced of two products if both depend upon the same finite resource for their manufacture. The PPF is also referred to as the production possibility curve.

The production of one commodity can only be increased by sacrificing the production of the other commodity. **It is also called the production possibility curve or product transformation curve.** The state of technology is taken to be constant. Since the production of one commodity can be increased only by

decreasing the production of the other commodity, production possibility curve also measures the production efficiency of the commodities. The production possibility frontier helps in deciding the commodities most beneficial to society, but this response is limited as there is a choice between two commodities only.

A Healthcare vs. Education Production Possibilities Frontier



This production possibilities frontier shows a tradeoff between devoting social resources to healthcare and devoting them to education. At A all resources go to healthcare and at B, most go to healthcare. At D most resources go to education, and at F, all go to education.

Source : <https://economictimes.indiatimes.com/definition/production-possibility-frontier>
<https://www.khanacademy.org/economics-finance-domain/microeconomics/basic-economic-concepts-gen-micro/production-possibilities/a/the-production-possibilities-frontier-and-social-choices-cnx-2>

Q.14) Which among the following is correct method to arrive at the Disposable Personal income?

- It is the income available for household consumption, savings, and spending after accounting for income tax.
- It is the income available for household consumption, savings, and spending before accounting for income tax.
- It is the income available for only consumption after savings and investments.
- It is the income available for household consumption before accounting for any other expense.

Ans) a

Exp) Option a is the correct answer.

Disposable income, also known as disposable personal income (DPI), is the amount of money that an individual or household has to spend or **save after income taxes have been deducted**.

It is an important indicator that is used by economists in determining the demand in an economy. Also, it is used to estimate the overall state of the country's economy.

Disposable income = Personal income – Personal income taxes

Source : <https://ncert.nic.in/ncerts/l/leec102.pdf>

https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:National_disposable_income

Q.15) Consider the following statements regarding recently launched Initiative 'Nari Adalat':

1. It is a programme under the umbrella scheme of Mission Shakti.
2. The initiative is being implemented under Ministry of Social Justice and Empowerment.
3. Remuneration of the members of Nari Adalat is equivalent to that of a district judge.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Nari Adalat is a new initiative for providing women with an alternate Grievance Redressal Mechanism for resolving cases of petty nature (harassment, subversion, curtailment of rights or entitlements) faced by women at Gram Panchayat level and it will be implemented in a phased manner. Nari Adalats or women collectives will be formed of committed and socially respected women chosen for that purpose. This platform will also be utilized for engaging with the public for awareness generation and getting feedback for improvement in the schemes and for effective public delivery of services.

Statement 1 is correct: 'Nari Adalat' is one of the components included in Mission Shakti. Initially, Nari Adalats will be launched in identified States/UTs, preferably where Elected Women Representatives (EWRs) are heading the Gram Panchayats (GPs) in Aspirational Districts.

Statement 2 is incorrect: Nari Adalats will be provided logistic support through Gram Panchayats in convergence with the Ministry of Panchayati Raj, Ministry of Rural Development, and Common Service Centres (CSCs) run by the Ministry of Electronics and Information Technology.

Statement 3 is incorrect: In the first year of the initiative, an awareness drive regarding legal, constitutional rights and entitlements under 16 various schemes/ programs will be undertaken. In the second year, committed and socially respected women will be identified and extensively trained in all women-related laws and schemes and a formal setup of women collectives having 7 to 11 members will be made who will address the socio, economic, and cultural issues faced by the women of that area. **No remuneration to the selected members shall be provided. However, out-of-pocket expenses will be provided by the Ministry for organising the meetings and for providing the badge/ uniform to the members.**

Source:

<https://wcd.nic.in/sites/default/files/Mission%20Shakti%20Guidelines%20for%20implementation%20during%2015th%20Finance%20Commission%20period%202021-22%20to%202025-26.pdf>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1809709>

<https://www.thehindu.com/news/national/naari-adalat-to-be-set-up-in-a-phased-manner/article65640414.ece>

Q.16) Which of the following can be considered as the limitations of GDP (Gross Domestic Product) as an indicator of economic scenario?

1. GDP fails to capture the income distribution pattern within a country.
2. GDP does not consider the level of prices in a country.
3. It does not consider non-market activities.
4. It does not include what is spent on environmental protection.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 3 and 4 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

GDP only measures economic activity that takes place in the market, such as the production of goods and services that are sold for a price. GDP should not be taken as an all-encompassing indicator of a society's well-being.

Statement 1 is correct: GDP disregards the income distribution pattern. The increase in aggregate national income may be a result of the increase in income of a few individuals. Thus, this may lead to a false interpretation of social welfare.

Statement 2 is correct: GDP does not consider the level of prices in a country. Because of inflation, the cost-of-living increases leading to a decrease in the standard of living. The loss of welfare due to this decrease is not taken into consideration by GDP as an index of welfare.

Statement 3 is correct: GDP includes production that is exchanged in the market, but it does not cover production that is not exchanged in the market. For example, hiring someone to mow your lawn or clean your house is part of GDP, but doing these tasks yourself is not part of GDP.

Statement 4 is incorrect: GDP includes what is spent on environmental protection, healthcare, and education, but it does not include actual levels of environmental cleanliness, health, and learning. For example, GDP includes the cost of buying pollution-control equipment, but it does not address whether the air and water are actually cleaner or dirtier. GDP includes spending on medical care, but it does not address whether life expectancy or infant mortality have risen or fallen.

Source : <https://corporatefinanceinstitute.com/resources/economics/gross-domestic-product-limitations/>

Q.17) The term “Wealth effect” represents an economic theory in which-

- a) Overall demand rises due to an increase in GDP.
- b) Individual spends more due to perception of increased disposable income.
- c) Per capita income increases due to the increase in the price of assets.
- d) Value of stocks decline in bear market.

Ans) b

Exp) Option b is the correct answer.

Option b is correct: Wealth Effect-It is a behavioral economic theory in which people spend more as they **feel more financially secure** and confident about their wealth when **their homes or investment portfolios increase in value**. They are made to feel richer, even if their income and fixed costs are the same as before. So due to **perception of increased disposable income**, individuals or households see an increase in wealth and spend more.

Source:

<https://www.investopedia.com/terms/w/wealtheffect.asp#:~:text=%20Key%20Takeaways%20%201%20The%20wealth%20effect,around%2C%20and%20that%20only%20higher%20home...%20More%20>
<https://www.intelligenteconomist.com/wealth-effect/>

Q.18) During the Covid 19 pandemic crisis, people started saving more and spending less. Even after the pandemic has ended, still people continue to spend less, this phenomenon is known as?

- a) Monetarism theory
- b) Keynesian Economics
- c) Capital flight
- d) Hysteresis in Economics

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: **Monetarism** is a macroeconomic theory which argues that governments can maintain economic stability by **targeting the growth rate of money supply**. It states that the total amount of money in an economy is the primary determinant of economic growth. **As the availability of money increases, so too does demand for goods and services.**

Option b is incorrect: ‘**Keynesian Economics**’ is based on the idea that **government intervention can stabilize an economy**. It argued that an economy’s output of goods and services is the sum of four factors: consumption, investment, government purchases and net exports - and any increase in demand has to come from one of these. But during a recession, external forces often dampen demand, risking a reduction in spending and as such, investment in businesses making these goods.

Option c is incorrect: **Capital flight** is a large-scale **exodus of financial assets and capital from a nation due to events** such as political or economic instability, currency devaluation or the imposition of capital controls.

Option d is correct: **Hysteresis** in the field of economics **refers to an event in the economy that persists even after the factors that led to that event have been removed or otherwise run their course**. Hysteresis often occurs following extreme or prolonged economic events such as an economic crash or recession. After a recession, for example, the unemployment rate may continue to increase despite growth in the economy and the technical end of the recession. Another example is that of CORONA crisis, people started saving more and spending less. Even though the pandemic has ended, still people continue to spend less.

Source:

<https://www.investopedia.com/terms/h/hysteresis.asp#:~:text=Hysteresis%20in%20economics%20refers%20to,after%20the%20economy%20has%20recovered.>

Q.19) Consider the following statement regarding the different indexes used to measure inflation:

1. Both Wholesale Price Index (WPI) and Consumer Price Index (CPI) capture the changes in the prices of goods and services.
2. The Reserve Bank of India (RBI) has adopted the CPI as its key measure of inflation.
3. The basket of goods and services used to compute the GDP deflator changes automatically over time.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

A **wholesale price index (WPI)** measures overall **change in producer prices over time**. It is a measure of inflation based on the prices of goods before they reach consumers.

The **Consumer Price Index** measures the overall **change in consumer prices** based on a representative basket of goods and services over time.

Statement 1 is incorrect: WPI does not capture changes in the prices of services, while CPI captures the changes in both goods and services. WPI tracks the inflation at the producer level and CPI captures the inflation at the consumer level. WPI is released by Office of Economic Advisor and CPI is released by Central Statistics Office

Statement 2 is correct: In 2014, the Reserve Bank of India has adopted the new Consumer Price Index (CPI) (combined) as the key measure of inflation.

Statement 3 is correct: The GDP price deflator measures the changes in prices for all the goods and services produced in an economy. Using the GDP price deflator helps economists compare the levels of real economic activity from one year to another. The GDP price deflator is a more comprehensive inflation measure as it **is not based on a fixed basket of goods**. The Basket of goods and services used to compute the GDP deflator changes automatically over time.

Source : https://www.business-standard.com/budget/article/measures-of-inflation-understanding-cpi-and-wpi-and-how-they-differ-123020100153_1.html#:~:text=CPI%20captures%20price%20change%20at,CPI%20uses%20the%20calendar%20year.

<https://www.thehindu.com/business/Economy/rbi-adopts-new-cpi-as-key-measure-of-inflation/article5859713.ece>

<https://www.investopedia.com/terms/g/gdppricedeflator.asp>

Q.20) The Markets in Crypto Assets (MiCA) Regulations, recently seen in news, is passed by which of the following organizations?

- The Organization for Economic Co-operation and Development (OECD)
- The Association of Southeast Asian Nations (ASEAN)
- The European Union (EU)
- The Shanghai Cooperation Organisation (SCO)

Ans) c

Exp) Option c is the correct answer.

European Union legislators recently approved a new bill on regulating crypto assets, named the Markets in Crypto Assets (MiCA) Regulation. This major law aims to impose regulations on the use of digital assets within the European Union.

According to the MiCA Bill, people who are creating cryptocurrency, are required to make their project details available via a “crypto-asset white paper”. Additionally, it mandates that Stablecoin businesses meet capital criteria. If their tokens are not pegged to the Euro or another currency accepted by EU member states, there will be a limit to the number of tokens they can issue.

Source: <https://www.outlookindia.com/business/crypto-news-update-coinbase-enters-singapore-eu-lawmakers-pass-landmark-bill-regulating-crypto-assets-news-229065>

Q.21) With reference to 'Economic Growth of a Country', consider the following pairs:

Economic Recovery Type	Significance
1. Z-shaped recovery	Economy, after falling, struggles around a low growth rate for some time, before rising gradually to usual levels.
2. L-shaped recovery	Economic growth recovers sharply after a fall
3. W-shaped recovery	Rise and fall of economic growth are witnessed

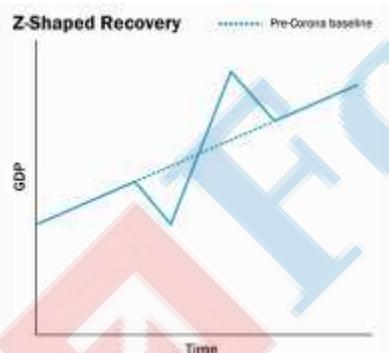
Which of the pairs given above is/are correctly matched?

- 1 and 3 only
- 2 only
- 2 and 3 only
- 3 only

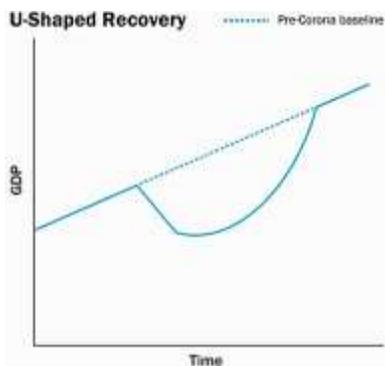
Ans) d

Exp) Option d is the correct answer.

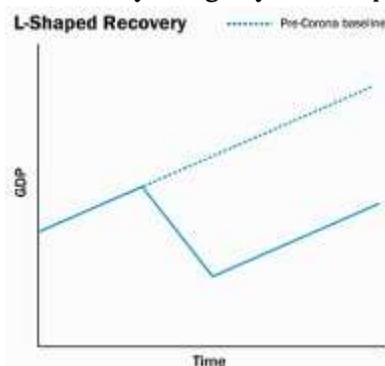
Pair 1 is incorrectly matched. Z-shaped recovery: It is the most-optimistic scenario in which the **economy quickly rises after an economic crash**. It makes up more than for lost ground before settling back to the normal trend-line, thus forming a Z-shaped chart. In this **economic disruption lasts for a small period** wherein more than people's incomes, it is their ability to spend is restricted.



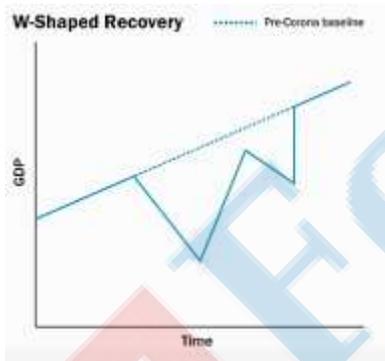
On the other hand, U-shaped recovery is a scenario in which the economy, after falling, struggles around a low growth rate for some time, before rising gradually to usual levels.



Pair 2 is **incorrectly** matched. **L-shaped recovery**: In this, the economy **fails to regain the level of GDP even after years go by**. The shape shows that there is permanent loss to the economy's ability to produce.



Pair 3 is **correctly** matched. **W-shaped recovery**: In W-shaped recovery **growth falls and rises, but falls again before recovering, thus forming a W-like chart**. The double-dip depicted by a W-shaped recovery can be due to the second wave of the pandemic.



Source: Explain Speaking: When and how will Indian economy recover, what the shape of its recovery will be? | Explained News, The Indian Express

Q.22) Consider the following statements regarding the National Infrastructure Pipeline (NIP):

1. It clearly defines the term 'Infrastructure' for the first time in India.
2. It includes investment in both greenfield and brownfield infrastructure projects.
3. It will be wholly funded by the public sector Banks.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: India's National Infrastructure Pipeline (NIP) envisages an **infrastructure investment of Rs 111 lakh crore over the period from FY 2019 till FY 2025**. Financing of infrastructure investments at such a scale necessitates a re-imagined approach and tapping alternative financing through innovative ways. **But the NIP does not define the term 'Infrastructure' as such.**

Statement 2 is correct: NIP envisages improving project preparation and attracting domestic and foreign investment in infrastructure. The NIP includes infrastructure projects of more than Rs.100 crore **covering greenfield and brownfield investments.**

Statement 3 is incorrect: As estimated by the Report of Task Force for NIP (2019), **traditional sources of capital** like Banks, Financial Institutions, etc. **are expected to finance 83–85% of the capital expenditure** envisaged under NIP. **About 15- 17%** of the aggregate outlay is expected to be met through innovative mechanisms such as **Asset Recycling & Monetization** and new long-term initiatives such as **Development Finance Institution (DFI)**. **Hence the NIP is not wholly funded by the public sector banks only.**

Source: chapter 12: Physical and Digital Infrastructure: Lifting Potential Growth of Economic Survey 2022-23

<https://indiainvestmentgrid.gov.in/national-infrastructure-pipeline#:~:text=The%20national%20infrastructure%20pipeline%20aims,and%20make%20growth%20more%20inclusive.>

https://dea.gov.in/sites/default/files/Report%20of%20the%20Task%20Force%20National%20Infrastructure%20Pipeline%20%28NIP%29%20-%20volume-i_0.pdf

Q.23) Which of the following Items are **not** included in the calculation of GDP?

1. Milk used for producing sweets
2. Purchase of license of a computer software.
3. Sell of country-gun to mafia on darknet
4. Purchase of second-hand vehicle
5. Purchase of a new house

Select the correct option form the codes given below:

- a) 1, 2 and 3 only
- b) 1, 3 and 4 only
- c) 2, 3 and 5 only
- d) 1, 4 and 5 only

Ans) b

Exp) Option b is the correct answer.

Gross Domestic Product (GDP) is the market value of all the final goods and services produced within the domestic territory of a country during a specified period.

Statement 1 is correct: An intermediate good is a product used to produce a final good or finished product. It is not accounted while calculating GDP to prevent the calculation of same good twice. Hence, **milk used for producing sweets is an intermediate good and cannot be used.**

Statement 2 is incorrect: Purchase of license of a computer software is considered as an investment hence is considered for national income accounting by expenditure method.

Statement 3 is correct: **Sell of illegal goods or sells in the black market like darknet are often left out from the calculation of GDP.** These items are not included in the calculation of GDP because they involve issues related to ethics and quantification etc.

Statement 4 is correct: Sell/ purchase of second-hand goods is also not included, because income accounting is done for the new products and services of the current period.

Statement 5 is incorrect: Purchase of a new house is also considered as an investment under expenditure method for the calculation of national income.

Source: NCERT Class 12, Introductory Macroeconomics (Chapter 2).

Q.24) Which of the following statements best explains the Net Factor Income from Abroad?

- It is the net income earned by the Indians from various factors of production in abroad subtracted by the net taxes paid on the earned income in abroad.
- It is the net income earned by the Indians from various factors of production in abroad in addition to the net retained earnings from abroad.
- It is the net income earned by the Indians from various factors of production in abroad in addition to the transfer payments, gifts and donations from abroad.
- It is the net income earned by the Indians from various factors of production in abroad and deducting the net factor income earned by the foreigners in India.

Ans) d

Exp) Option d is the correct answer.

Net factor income from abroad is calculated by subtracting Factor income earned by the factors of production of the rest of the world (foreigners) employed in the domestic economy from the Factor income earned by the domestic factors of production (Indians) employed in the rest of the world.

Net Factor Income from Abroad (NFIA) = Factor income earned from abroad – Factor income paid abroad
NFIA is used in macroeconomics to calculate the Gross National Product (GNP).

GNP = GDP + NFIA

GNP refers to the total value of all the goods and services produced by the residents and businesses of a country, irrespective of the location of production. Whereas Gross domestic product (GDP) is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific period.

Source: NCERT Class 12, Introductory Macroeconomics (Chapter 2)

Q.25) Which of the following options correctly describes the term 'BioSentinel', recently seen in news?

- A mission to develop a biosensor instrument to measure the impact of space radiation on living organisms.
- A wearable device that measures size changes in cancerous tumors under the skin.
- A mobile app to test nutrients like nitrogen and phosphorus in the soil.
- A semiconductor device that processes images from an individual's physical characteristics using complex algorithms.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: The BioSentinel mission was selected as one of the secondary payloads, and the sole biological experiment, to fly on the first launch of the Space Launch System rocket for the Artemis I mission.

The primary objective of BioSentinel is to develop a biosensor instrument to detect and measure the impact of space radiation on living organisms over long durations beyond low-Earth Orbit (LEO).

Option b is incorrect: A research team from Stanford University has recently developed a wearable device that measures size changes in tumors under the skin in mice. **Known as FAST – “Flexible Autonomous Sensor measuring Tumors” – the wearable device consists of a stretchy skin-like polymer membrane**

embedded with a layer of gold circuitry. The sensor adheres to the skin above where a cancerous tumor is currently located. The sensor also has a small electronic “backpack” holding its battery.

Option c is incorrect: Recently, IIT Kanpur professor has developed a mobile app named Bhu Parikshak to test nutrients like nitrogen, phosphorus and more in the soil, alongside a low-cost and portable device that can do the job in just 90 seconds.

Option d is incorrect: A Biometric Sensor is a device (or a transducer, to be specific) that converts the biometric trait of an individual into electrical signals. Biometric Sensors are usually semiconductor devices that process images from an individual’s physical characteristics using complex algorithms. Many physical characteristics of a person like face, iris, fingerprints, etc. are scanned by a Biometric Sensor and are converted to a digital image using an Analog – to – Digital Converter.

Source: <https://www.nasa.gov/centers/ames/engineering/projects/biosentinel.html>

<https://www.medicalnewstoday.com/articles/scientists-develop-device-to-monitor-tumor-growth-under-the-skin#A-new-way-of-measuring-tumor-growth>

<https://www.thebetterindia.com/270262/iit-kanpur-innovation-soil-health-farmer-low-cost-portable-device/>

https://www.electronicshub.org/types-of-biometric-sensors/#Biometric_Sensors

Q.26) Consider the following statements about the Income method of National Income Accounting:

1. Income method includes goods meant for self-consumption by the producer.
2. Wages and salaries paid in kind are not included in the national income accounting by this method.
3. It includes income from a rented house but doesn’t count in the theoretical rent (imputed rent) to be paid by owner to himself.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

One of the methods of calculating National Income is Income method among others. It is based on the idea that the sum of final expenditures in the economy must be equal to the incomes received by all the factors of production taken together. It implies that the revenues earned by all the firms put together must be distributed among the factors of production as salaries, wages, profits, interest earnings and rents.

According to this,

$$\mathbf{GDP = W + P + In + R}$$

(Where, W is total wages, P is total profit, In is total income and R is total rent received by all the factors).

Statement 1 is correct: Goods meant for self-consumption are included by the income method in the National income accounting as these goods contribute to the current output and their imputed value will be included in the national income.

Statement 2 is incorrect: Wages and payment in kind are included by the income method in the national income accounting. It is done as the payment in kind is given in the place of equivalent payment in the form of cash/money.

Statement 3 is incorrect: Income method includes income from a rented house as well as the imputed rent from owner-occupied houses. It is done so, because people living in such houses enjoy similar housing facilities as those by the rented houses. It is as if the owner of the house is selling to himself housing service as a tenant.

Source: NCERT Class 12, Introductory Macroeconomics (Chapter 2)[investopedia.com](https://www.investopedia.com)

SFG 2023 | LEVEL 2 | Test #12 – Solutions |

Q.27) Consider the following statements about the economic concept ‘Green GDP’:

1. It adjusts nation’s Gross Domestic Product (GDP) for environmental deterioration and depleting natural resources.

2. Green GDP accounting in India is done by National Statistics Office (NSO).

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

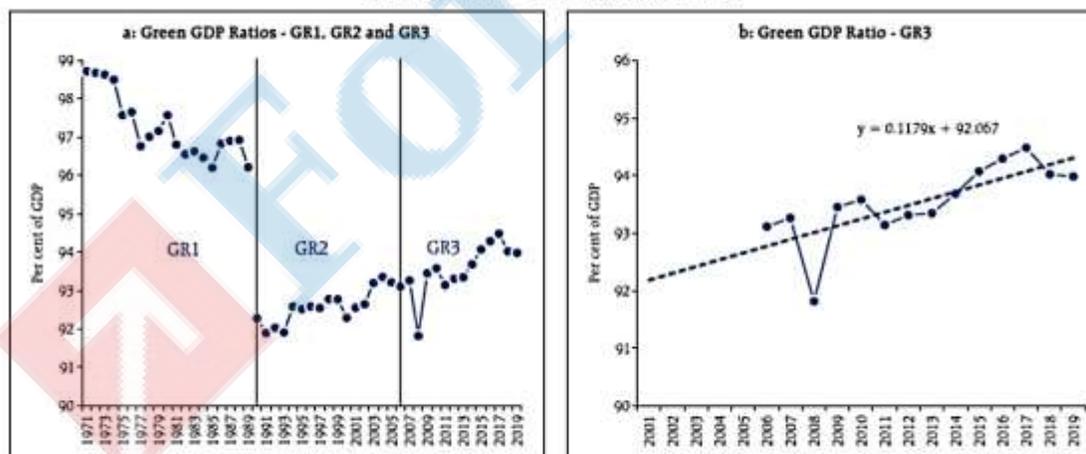
The traditional GDP based growth accounting fails to capture the impact of climate change and deteriorating environment on the economy. Hence, the concept of Green GDP began to develop in the late 1980s.

Statement 1 is correct: Green GDP is an environment-based growth accounting which adjusts nation’s Gross Domestic Product (GDP) for environmental deterioration and depleting natural resources. There are various methodologies used in the estimation of Green GDP. One of the used methodologies for its calculation is,

Green GDP = GDP – (Carbon dioxide damage + particulate emission damage) – (Opportunity cost of energy depletion + mineral depletion + net forest depletion) + Expenditure on environmental protection

Statement 2 is incorrect: Green GDP in India is not estimated by the National Statistics Office (NSO). However, the Green Indian States Trust (GIST), a not-for-profit trust started a project in 2003 - Green Accounting for Indian States & Union Territories Project (GAISP) to build a framework for environmentally adjusted national income accounts. It has recently presented an article in RBI bulletin about the India’s Green GDP growth trajectory. The trajectory of Green GDP for India displays an upward movement with overall Green GDP (as a per cent of GDP) lying above the range of 90% in the past decade.

Chart 5: Green GDP Ratios for India



Source: RBI staff estimates on the basis of World Bank database.

Where, GR1, GR2, GR3 are as follows:

- GR1 = GDP – (Carbon dioxide damage) – (Opportunity cost of energy depletion + mineral depletion + net forest depletion); Data availability: 1971–2019.
- GR2 = GR1 – particulate emission damage; Data availability: 1990–2019.
- GR3 = GR2 + Expenditure on environmental protection; Data availability: 2006–2019.

Source : https://www.rbi.org.in/Scripts/BS_ViewBulletin.aspx?Id=21333#S3

Q.28) Consider the following statements about Nominal and Real Exchange rates:

1. Nominal exchange rate (NER) is used to compare the actual prices of goods in the two countries, while Real exchange rate (RER) is used to compare the values of their currencies.
2. Real exchange rate is calculated by multiplying the ratio of prices of a basket of goods between the two countries to the Nominal Exchange rate.
3. An increase in Real exchange rate indicates a loss in trade competitiveness of an economy.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

An exchange rate is a relative price of one currency expressed in terms of another currency (or group of currencies). There are two comparative exchange rates often observed by economies: Nominal and Real exchange rates.

Statement 1 is incorrect: The nominal exchange rate is defined as the number of units of the domestic currency that can purchase a unit of a specific foreign currency. It is used to compare the value of the domestic currency with respect to any other currency. Whereas The Real Exchange rate measures and compares the value of a country's goods against goods of another country.

Statement 2 is correct: Real exchange rate is calculated by multiplying the ratio of prices (of the same goods) between the two countries to the Nominal Exchange rate. It tells how many times a good and service can be purchased abroad (after conversion into a foreign currency) than in the domestic market for a given amount. It is a unitless entity.

Statement 3 is correct: An increase in RER implies that exports become more expensive, and imports become cheaper, therefore an increase in RER indicates a loss in trade competitiveness.

Source: <https://www.imf.org/en/Publications/fandd/issues/Series/Back-to-Basics/Real-Exchange-Rates#:~:text=What%20is%20the%20real%20exchange,prices%20between%20the%20two%20countries>
<https://www.investopedia.com/terms/n/neer.asp>

Q.29) The Human Development Index (HDI) is a statistic developed and compiled by the United Nations to measure various countries' levels of social and economic development. Which of the following are the indicators of HDI?

1. Life expectancy at birth
 2. GDP per capita
 3. Income inequality
 4. Political representation
 5. Expected years of schooling
- Select the correct answer using the code given below.

- a) 1 and 5 only
- b) 2, 3, and 4 only
- c) 1, 2 and 5 only
- d) 1, 2, 4 and 5 only

Ans) a

Exp) Option a is the correct answer.

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As per UNDP, HDI is a summary measure of average achievement in key dimensions of human development. But Human Development Report (HDR) for 2022 is quite different because for the **first time in its history** (the HDR has been compiled since 1990), the global HDI value has declined **two years in a row**, erasing the gains of the preceding five years.

Options 1 and 5 are correct: HDI is a composite index of the following three parameters:

- 1) Standard of Living, measured by **Gross National Income (GNI) per capita**
- 2) Health, measured by **life expectancy at birth**.
- 3) Education is measured by
 - a. **expected years of schooling for a child**
 - b. mean of years of schooling for adults aged 25 years.

All the three parameters are separately calculated on a scale of **0 to 1** and then the HDI is derived from the **geometric mean of normalized indices** for each of the three dimensions.

Option 2 is incorrect: One of indicator of HDI is **GNI per capita rather than GDP per capita**. GDP and GNI are related in the following way.

GNI = GDP + (inward remittances by businesses and individuals – outward remittance by the foreigners residing in the country.)

Option 3 and 4 are incorrect: Income inequality and Political representation are not the indicators of HDI.

Source : <https://indianexpress.com/article/explained/explained-economics/human-development-index-india-china-world-explained-8145550/>

<https://blog.forumias.com/india-ranks-132-in-undps-human-development-index-amid-a-global-fall/>

<https://www.wallstreetmojo.com/gross-national-income/#:~:text=Or%20GDP%20%3D%20C%20%2B%20I%20%2B%20G%20%2B%20NX&text=Moreover%2C%20GNI%20Formula%20%3D%20GDP%20%2B,foreigners%20residing%20in%20the%20country>

Q.30) Consider the following pairs:

Places in news	Country
1. Bohai Sea	Thailand
2. Katchal Island	India
3. Malvinas Island	Greece

How many of the pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) None of the pairs

Ans) a

Exp) Option a is the correct answer.

Pair 1 is incorrectly matched: The Bohai Sea is a semi-enclosed continental shelf sea in northern China (not Thailand), off the NW Pacific Ocean. China's one of the major oil companies CNOOC has recently discovered oil in the Bohai Sea with the deposit estimated to contain more than 100 million tons of oil equivalent. Also, Military operations took place recently in Bohai Strait and northern Yellow Sea.

Pair 2 is correctly matched: Katchal Island is a part of the Nicobar group of Islands in India. It is located around 305 kilometers from the capital city of Port Blair. The Katchal Island is spread across an area of about 174.4 square kilometers. The United States National Aeronautics and Space Administration (NASA) recently highlighted the loss of mangrove cover on Katchal island.

Pair 3 is incorrectly matched: Falkland Islands, also called Malvinas Islands or Spanish Islas Malvina is an internally self-governing overseas territory of the United Kingdom in the South Atlantic Ocean. It

lies about 300 miles (480 km) northeast of the southern tip of South America and a similar distance east of the Strait of Magellan. These islands remain the subject of a sovereignty dispute between Britain and Argentina, who waged a brief but bitter war over the territory in 1982.

Source: <https://www.downtoearth.org.in/news/environment/nasa-highlights-loss-of-mangrove-cover-on-katchal-island-in-the-nicobars-84236>

<https://www.britannica.com/place/Falkland-Islands>

<https://www.bbc.com/news/world-latin-america-18425572>

<https://oilprice.com/Latest-Energy-News/World-News/Chinese-Major-Strikes-Oil-In-Bohai-Sea.html>

<https://www.sciencedirect.com/science/article/pii/B9780081008539000245>

Q.31) With reference to Multi-Dimensional Poverty Index (MPI), consider the following statements:

1. The global MPI was jointly developed by Oxford Poverty & Human Development Initiative (OPHI) and UN Development Programme (UNDP).
 2. MPI is divided in three dimensions having equal weightage.
 3. One of its flaws is that it does not assess data at the individual level.
- Which of the statements given above are correct?

- a) 1 and 3 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

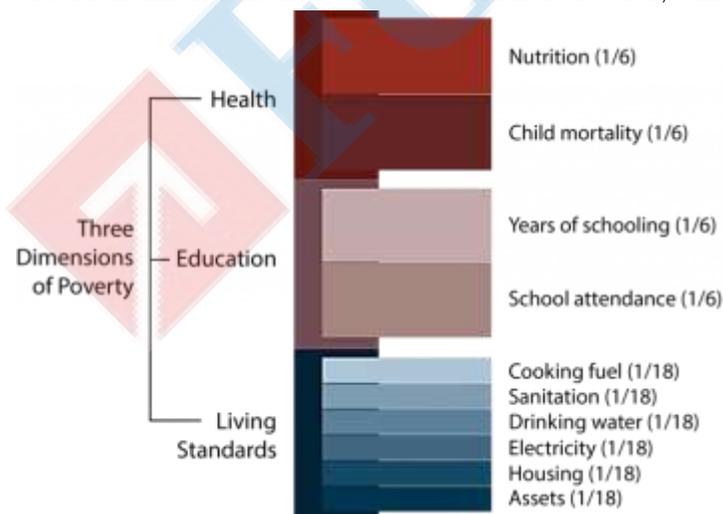
Ans) b

Exp) Option b is the correct answer.

The Multidimensional Poverty Index captures the multiple deprivations that people in developing countries face in their health, education and standard of living. It is jointly produced by **UNDP and the Oxford Poverty and Human Development Initiative (OPHI)**.

Statement 1 is correct: The global MPI was developed by Oxford Poverty & Human Development Initiative (OPHI) with the UN Development Programme (UNDP) for inclusion in UNDP's flagship Human Development Report in 2010. It has been published annually by OPHI and in the HDRs ever since.

Statement 2 is correct: Deprivations of Multi-Dimensional Poverty index has been divided across 10 indicators in **three equally weighted dimensions: health, education and standard of living**. The health and education dimensions are based on two indicators each, while standard of living is based on six indicators.



Statement 3 is incorrect: The MPI assesses poverty at the individual level. If a person is deprived in a third or more of ten (weighted) indicators, the global MPI identifies them as ‘MPI poor’. The extent – or intensity – of their poverty is also measured through the percentage of deprivations they are experiencing.

Source : <https://hdr.undp.org/sites/default/files/Country-Profiles/MPI/ARM.pdf>

<https://blog.forumias.com/multidimensional-poverty-indexmpi-41-5-crore-indians-exited-multidimensional-poverty-since-2005-06/>

<https://indianexpress.com/article/explained/explained-economics/human-development-index-india-china-world-explained-8145550/>

<https://vikaspedia.in/social-welfare/rural-poverty-alleviation-1/national-multidimensional-poverty-index#:~:text=According%20to%20Global%20MPI%202021,66%20out%20of%20109%20countries.>

<https://ophi.org.uk/multidimensional-poverty-index/>

Q.32) With reference to Genuine Progress Indicator (GPI), which of the following statements is/are **incorrect**?

1. It takes into account the negative impacts of the economic activities on environment and society.
2. GPI per capita is always less than GDP per capita.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The Genuine Progress Indicator (GPI) is a metric that has been suggested to replace, or supplement, gross domestic product as a measure of economic welfare.

Statement 1 is correct: A Genuine Progress Indicator (GPI) is a metric used to measure the economic growth of a country. Whereas the **World Happiness Report** presents the people’s qualitative assessment of their lives through quantitative indicators.

GPI is often considered an alternative metric to the more well-known gross domestic product (GDP) economic indicator. **The GPI indicator takes everything the GDP uses into account but adds other figures that represent the cost of the negative effects related to economic activity, such as the cost of crime, cost of ozone depletion, and cost of resource depletion, among others.**

Statement 2 is incorrect: The GPI per capita can be greater than the GDP per capita. The GPI measures economic welfare, environmental sustainability, and social equity, while the GDP only measures the economic output of a country. Therefore, **the GPI could be greater than the GDP if a country is making progress in areas such as environmental protection and social equity while its economic output is not necessarily increasing. However, usually (not always) GPI is lesser than GDP due to negative externalities. Hence the statement 2 is incorrect.**

Source: <https://www.investopedia.com/terms/g/gpi.asp>

https://www.greengrowthknowledge.org/sites/default/files/downloads/best-practices/GGBP%20Case%20Study%20Series_United%20States_Genuine%20Progress%20Indicator.pdf

Q.33) With reference to concept of ‘base year’ used in National Income Accounting in India, consider the following statements:

1. The base year is revised in every 10 years.
2. Present base year for national income accounting is 2011-12.

3. The Ministry of Statistics and Programme Implementation (MOSPI) is the ministry responsible for deciding the new base year.

4. Periodical revision of base year is needed to better capture the structural changes in the economy.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 4 only
- c) 2, 3 and 4 only
- d) 1, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

National Income Accounting refers to a set of rules and techniques that are used to **measure the output of a country**. Various macroeconomic identities like GDP, GVA, NNP are used for calculation of national income.

Statement 1 is incorrect: The base year plays an essential role in National Accounting Standards, as it provides a way to compare the current and past economic conditions. It is therefore crucial to ensure regular updating of the base year to gain a better understanding of the changes occurring in the economic system. **However, there is no such provision to revise the Base Year in every 10 years.**

Statement 2 is correct: The base year for the most recent National Accounts series was altered from 2004-05 to **2011-12**. The base year prices are also known as **constant prices** since they reduce all the data to a similar baseline, the base year price.

Statement 3 is correct: The change in the base year captures the actual change in structures of the economy. **The Ministry of Statistics and Programme Implementation (MOSPI) decides on a new base year for the GDP series.** The ministry is striving to bring in a new set of national accounts which would result in a revising of the existing base year of 2011-12. Though the MOSPI is considering 2020-21 as the new base year. However, no decision has been taken, and the expert committees are awaiting some more data before finalizing their opinion.

Statement 4 is correct: According to the United Nations System of National Accounts (UNSNA), the member countries are required to revise the **base year of their macro-economic indicators** like Gross Domestic Product (GDP), Gross Value Added (GVA), etc. periodically, **to better capture the structural changes in the economy.**

Source: <https://www.businesstoday.in/latest/economy/story/no-plans-to-change-base-year-for-gdp-calculations-amid-covid-outbreak-govt-328518-2022-04-04>

[https://cleartax.in/g/terms/base-](https://cleartax.in/g/terms/base-year#:~:text=The%20change%20in%20the%20base,series%20in%20a%20few%20months.)

[year#:~:text=The%20change%20in%20the%20base,series%20in%20a%20few%20months.](https://blog.forumias.com/economy/2022/04/04/the-change-in-the-base-year-of-national-accounts-series-in-a-few-months/)

<https://blog.forumias.com/economy/2022/04/04/the-change-in-the-base-year-of-national-accounts-series-in-a-few-months/>

Q.34) With reference to Gender Inequality Index (GII), which of the following statements is/are correct?

- 1. Low GII value indicates low level of inequality between women and men in a country.
- 2. It reflects inequality in three dimensions- reproductive health, empowerment and the labour market.
- 3. It is released by the World Economic Forum.

Select the correct answer using the code given below.

- a) 3 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The **Gender Inequality Index (GII)** is an index for measurement of gender disparity that was introduced in the 2010 Human Development Report 20th anniversary edition by the United Nations Development Programme (UNDP).

Statement 1 is correct: The GII varies between 0 (when women and men fare equally) and 1 (when men or women fare poorly compared to the other in all dimensions). It indicates that **low GII value indicates low level of inequality between women and men, and vice-versa.**

Statement 2 is correct: The GII looks at the issue of gender inequality by preparing a composite measure using **three dimensions: reproductive health, empowerment and the labour market.** The **reproductive health indicators** are maternal mortality ratio and adolescent birth rate. The **empowerment indicators** are the percentage of parliamentary seats held by women and the percentage of the population with at least some secondary education by gender. The **labour market indicator** is participation in the labour force by gender.

Statement 3 is incorrect: It is released by the **United Nations Development Programme (UNDP).** The other similar kind of report “Global Gender Gap Report” is released by World Economic Forum.

Source: <https://indianexpress.com/article/explained/explained-economics/human-development-index-india-china-world-explained-8145550/>

[https://www.who.int/data/nutrition/nlis/info/gender-inequality-index-](https://www.who.int/data/nutrition/nlis/info/gender-inequality-index-(gii)#:~:text=The%20Gender%20Inequality%20Index%20is,empowerment%20and%20the%20labour%20market.)

[\(gii\)#:~:text=The%20Gender%20Inequality%20Index%20is,empowerment%20and%20the%20labour%20market.](https://www.who.int/data/nutrition/nlis/info/gender-inequality-index-(gii)#:~:text=The%20Gender%20Inequality%20Index%20is,empowerment%20and%20the%20labour%20market.)

Q.35) The Recife Political Declaration, recently seen in news, is related to which of the following?

- Universal Health Coverage
- Global Road Safety
- Ending the AIDS epidemic
- Disaster risk reduction

Ans) a

Exp) Option a is correct answer.

Option a is correct: The **Recife Political Declaration on Human Resources for Health: It reiterated commitment in attaining universal health coverage and recognized that global community needs an improved health workforce to achieve it. Its vision is that “all people, everywhere have access to a skilled, motivated health worker, within a robust health system.”**

Option b is incorrect: The World Health Organization (WHO) recently lauded the political declaration to be adopted by Member States during the High-level Meeting of the UN General Assembly on Global Road Safety. It commits to cut road traffic deaths and injuries by 50% by 2030, a milestone for road safety and sustainable mobility.

Option c is incorrect: UNAIDS adopted the new goals, targets and commitments in the 2016 United Nations General Assembly Political Declaration on Ending AIDS. Countries have agreed to a historic and urgent agenda to accelerate efforts towards ending the AIDS epidemic by 2030.

Option d is incorrect: In January 2005, 168 Governments adopted a 10-year plan to make the world safer from natural hazards at the World Conference on Disaster Reduction, held in Kobe, Hyogo, Japan. The Hyogo Framework is a global blueprint for disaster risk reduction efforts during the next decade.

Source: [https://www.eird.org/regional/hyogo-](https://www.eird.org/regional/hyogo-framework.html#:~:text=What%20is%20the%20Hyogo%20Framework,efforts%20during%20the%20next%20decade.)

[framework.html#:~:text=What%20is%20the%20Hyogo%20Framework,efforts%20during%20the%20next%20decade.](https://www.eird.org/regional/hyogo-framework.html#:~:text=What%20is%20the%20Hyogo%20Framework,efforts%20during%20the%20next%20decade.)

<https://www.who.int/news/item/30-06-2022-new-political-declaration-to-halve-road-traffic-deaths-and-injuries-by-2030-is-a-milestone-achievement>

<https://www.un.org/pga/76/wp-content/uploads/sites/101/2022/06/23-June-Political-Declaration-on-Road-Safety.pdf>

https://www.observatoriorh.org/sites/default/files/webfiles/fulltext/2013/3er_fm_rh/recife_declaracion_13nov.pdf

Q.36) Consider the following statements with reference to the concept of Market price and Factor cost used in relation to the estimation of Gross Domestic Product (GDP):

1. GDP at Market price is always greater than GDP at Factor cost.
2. At present, GDP of India is calculated at factor cost only.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Factor cost is the cost of factors of production or the total value of inputs, whereas the market price is the final value of the product being sold, which includes indirect taxes and subsidies.

Statement 1 is incorrect: 'GDP at Market price is always greater than GDP at Factor cost' **is not true always. Theoretically, GDP at market price can be more, equal or lesser than GDP at Factor cost.** Actually, to find out Market Prices (MP), indirect taxes are added, and subsidies are subtracted from Factor Cost (FC). In short, **MP includes net indirect tax whereas FC does not.** Thus, FC becomes MP when net indirect taxes are added to FC. **In the absence of indirect taxes and subsidies, MP and FC are the same.**

Market Cost = Factor Cost + Indirect Taxes – Subsidies

Statement 2 is incorrect: At present, GDP in India is calculated at market prices (not factor cost) while GVA is calculated at **basic prices (not market price)**. In its revision in January 2015, the Central Statistics Office (CSO) replaced GDP at factor cost with the **GVA at basic prices, and the GDP at market prices** (which is now called only GDP).

GVA at basic prices = GVA at factor cost + (Production taxes less Production subsidies)

GDP at market prices = GVA at basic prices + Product taxes - Product subsidies

Knowledge Base:

Production tax and subsidies: Production taxes or production subsidies are paid or received with relation to production and are independent of the volume of actual production. Some examples of production taxes are land revenues, stamps and registration fees and tax on profession. Some production subsidies include subsidies to Railways, input subsidies to farmers, subsidies to village and small industries, administrative subsidies to corporations or cooperatives, etc.

Product taxes or subsidies: Product taxes or subsidies are paid or received on per unit of product. Some examples of product taxes are excise tax, sales tax, service tax and import and export duties. Product subsidies include food, petroleum and fertilizer subsidies, interest subsidies given to farmers, households, etc. through banks.

Source:

[http://www.arthapedia.in/index.php/Gross_Value_Added_\(GVA\)_at_basic_prices_and_GVA_at_Factor_Costs](http://www.arthapedia.in/index.php/Gross_Value_Added_(GVA)_at_basic_prices_and_GVA_at_Factor_Costs)

Indian Economy Book by Vivek Singh

Q.37) What is Gross Investment in an economy?

- The total investment made to the fixed assets of economy for a given year.
- The total investment by the government in infrastructure for a given year.
- The total investment made to the capital stock of economy for a given year.
- The total investment made in the stock market of the economy for a given year.

Ans) c

Exp) Option c is the correct answer.

Option a is incorrect and Option c is correct: Gross Investment is the total addition made to the capital stock of economy in a given period. Capital stock consists of *fixed assets* and *unsold stock*. So, investment in fixed assets is a component of Gross Investment. So, gross investment is the expenditure on purchase of fixed assets and unsold stock during the accounting year. However, gross investment does not indicate the actual change in economy's stock of productive assets for a given year. During the production process, some amount of fixed capital is used up. This loss of fixed capital is known as depreciation. By subtracting depreciation from gross investment, we get Net Investment.

Net Investment = Gross Investment – Depreciation

Source: <https://www.yourarticlelibrary.com/macro-economics/gross-investment-net-investment-and-depreciation/30271>

Q.38) Who is responsible for calculating GDP in India?

- Reserve Bank of India
- Department of Economic Affairs
- National Statistical Office
- Chief Economic Advisor

Ans) c

Exp) Option c is the correct answer.

Option a is incorrect: RBI is not responsible for GDP calculation for a year. However, it used to predict GDP growth rate through its various reports and indices.

Option b is incorrect: Department of Economic Affairs works under Ministry of Finance. It is responsible for preparation of **Union Budget**.

Option c is correct: The **National Statistical Office** under the Ministry of Statistics and Program Implementation is responsible for macroeconomic data gathering and statistical record keeping. It releases India's GDP data.

Option d is incorrect: The Chief Economic Adviser to the Government of India (CEA) advises the government on economic matters and is responsible for **the preparation of the Economic survey of India** tabled in Parliament before the Union budget of India is presented.

Source: <https://www.investopedia.com/articles/investing/050515/how-gdp-india-calculated.asp>

Q.39) Which of the following statements are correct regarding the SWAYATT initiative?

- It is an initiative to promote Start-ups.
- It was launched by the Ministry of Micro, Small and Medium Enterprises.
- It seeks to increase the benefits of e-Transactions on Government e-Marketplaces (GeM).

Select the correct answer using the code given below:

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The “Startups, Women and Youth Advantage Through e-Transactions” (SWAYATT) on GeM campaign was initially unveiled in February 2019.

Statement 1 is correct: SWAYATT Initiative sought to promote inclusivity of various categories of sellers and service providers on the portal, **foster women’s entrepreneurship**, and encourage participation of MSME sector and **start-ups in public procurement** by taking proactive measures to make their training and registration easier.

Statement 2 is incorrect: The initiative was launched under **the Ministry of Commerce and Industry (not the Ministry of MSMEs)**. It brings together the key stakeholders within the Indian entrepreneurial ecosystem to Government e-Marketplace, the national procurement portal.

Statement 3 is correct: SWAYATT aims to **boost the advantages of electronic transactions on government e-Marketplaces (GeM) for new businesses, women, and minorities.**

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1903442>

<https://newsonair.com/2023/03/02/swayatt-proving-a-huge-success-promoting-start-ups-on-gem/>

<https://credenttv.com/swayatt-promoting-start-ups-on-gem-turning/amp/>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1565237>

Q.40) Consider the following statements regarding Space Liability Convention 1972:

1. It provides that the launching State shall be absolutely liable to pay compensation for damage caused by its space objects on the surface of the Earth.
2. The term ‘damage’ is clearly defined in the convention.
3. India is not a signatory to this convention as it reflects the cold war era bias against non-western countries.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

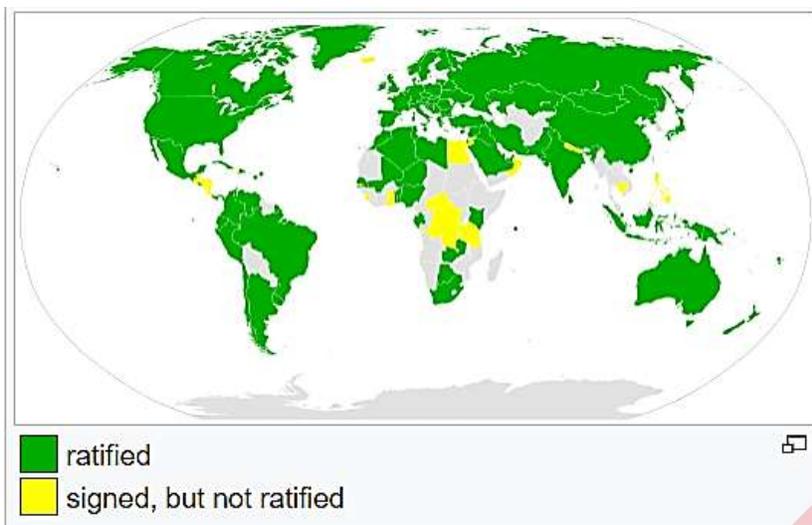
Exp) option c is the correct answer.

The Liability Convention (Convention on International Liability for Damage Caused by Space Objects) was considered and negotiated by the Legal subcommittee of United Nations Office for Outer Space Affairs from 1963 to 1972. Agreement was reached in the General Assembly in 1971 (resolution 2777 (XXVI)), and the Convention entered into force in September 1972.

Statement 1 is correct: Elaborating on Article 7 of the Outer Space Treaty, **the Liability Convention provides that a launching State shall be absolutely liable to pay compensation for damage caused by its space objects on the surface of the Earth or to aircraft, and liable for damage due to its faults in space.**

Statement 2 is correct: **The term damage is clearly defined in article 1 of the space liability convention, 1972.** It means loss of life, personal injury or other impairment of health, or loss of or damage to property of States or persons, natural or juridical, or property of international intergovernmental organization.

Statement 3 is incorrect: India has developed exponentially in its space capabilities, and it is one of the elite spacefaring nations of the world. India is a signatory to several treaties like the Outer Space Treaty (1967), **Liability Convention (1972)**, Registration Convention (1976), Rescue Agreement (1968), and the Moon Agreement (1984). Also, India is one of the 98 countries who have ratified the Liability Convention 1972 as of now.



Source: <https://www.ijlmh.com/wp-content/uploads/A-New-Space-Policy-Critical-for-the-development-of-the-Space-Sector-in-India.pdf>
<https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introliability-convention.html>
https://en.wikipedia.org/wiki/Space_Liability_Convention

Q.41) With reference to Net National Product (NNP) consider the following statements:

1. It takes into account the depreciation of capital goods.
2. It includes income earned by citizens from abroad.
3. It considers income generated in the informal sector of the economy.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Net national product (NNP) is the total value of finished goods and services produced by a country's citizens overseas and domestically, minus depreciation the depreciation of capital goods.

Statement 2 is correct: NNP includes income earned by citizens abroad and excludes income earned by foreigners domestically.

Gross Domestic Product (GDP) + NFIA = Gross National Product (GNP)

Gross National Product (GNP) - Depreciation = Net National Product (NNP).

Statement 3 is incorrect: As such no special mechanism is followed for considering the income generated from the informal sector in case of NNP. NNP basically relies on the GDP data. GDP ignores the value of informal or unrecorded economic activity. It relies on recorded transactions and official data, so it does not take into account the extent of informal economic activity.

Source : <https://www.investopedia.com/terms/n/net-national-product.asp>

<https://www.investopedia.com/terms/g/gdp.asp#:~:text=It%20ignores%20the%20value%20of,extent%20of%20informal%20economic%20activity.>

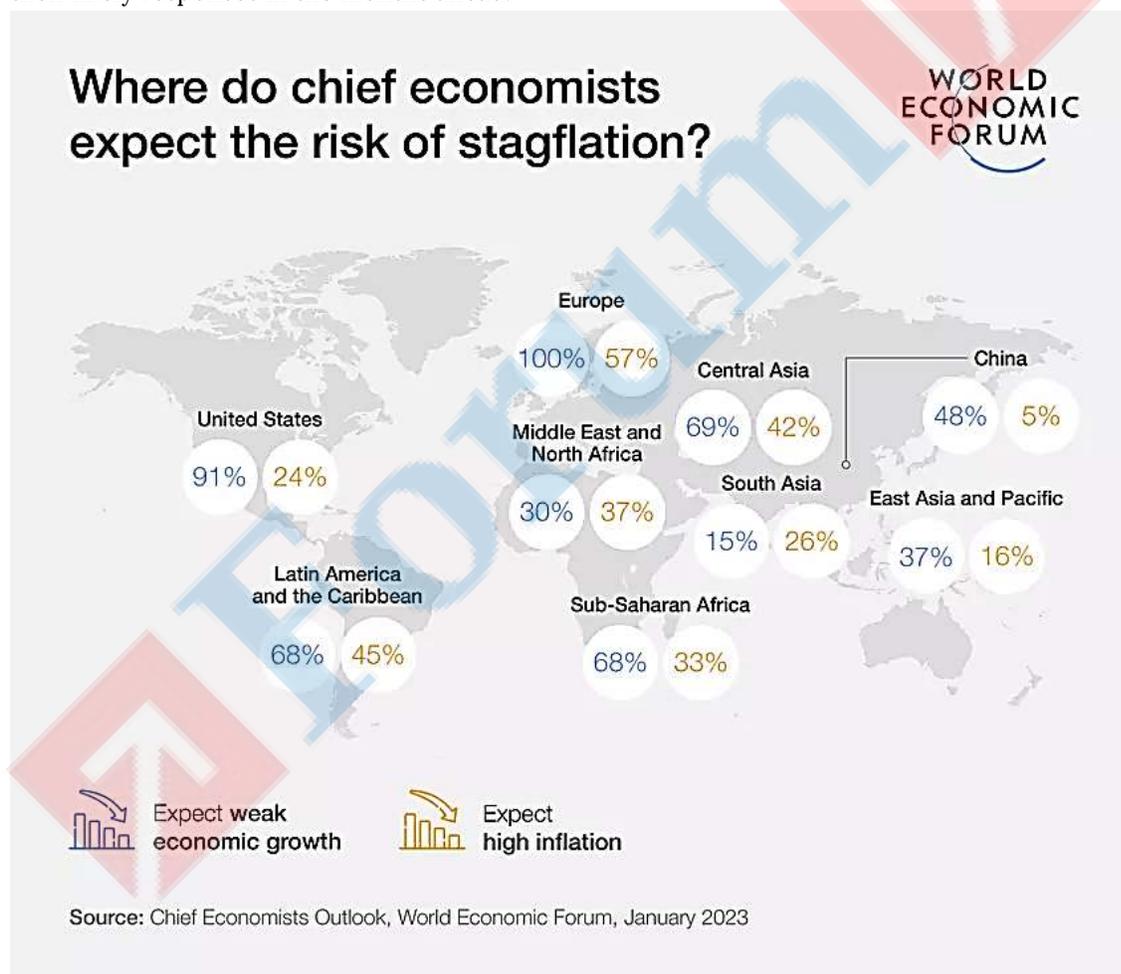
Q.42) The Economic survey 2022-23 mentions the report - Chief Economists Outlook 2023. In this context, which of the following Organization releases this report?

- United Nations Development Programme (UNDP)
- International Monetary Fund (IMF)
- World Bank (IMF)
- World Economic Forum (WEF)

Ans) d

Exp) Option d is the correct answer.

Option d is correct: The Economic survey 2022-23 mentions about the Chief Economists Outlook 2023, which highlights India's opportunity to gain from global trends of supply chain diversification. The report of **Chief Economists Outlook 2023** is **released by World Economic Forum (WEF)**. Whereas the report of **World Economic outlook** is released by **International Monetary Fund (IMF)**. The report of Chief Economist Outlook 2023 **explores the key trends** in the **economic environment**, including the prospects for **growth, inflation and monetary and fiscal policy**. It also looks at the particular **challenges** facing businesses and their likely responses in the months ahead.



Source : <https://www.weforum.org/reports/chief-economists-outlook-jan-2023/#:~:text=The%20January%202023%20Chief%20Economists,with%20persistent%20headwinds%20throughout%202023.>

Q.43) Consider the following pairs:

Portal	Launched by the Ministry
1. Udyam Portal	Ministry of Micro, Small & Medium Enterprises.
2. CHAMPIONS Portal	Ministry of Commerce & Industry
3. e-Shram Portal	Ministry of Labour and Employment
4. Yuktdhara Portal	Ministry of Rural Development & Panchayati Raj

Which of the pairs given above are correct?

- a) 1, and 3 only
- b) 2, 3, and 4 only
- c) 1, 3, and 4 only
- d) 1, 2, 3, and 4

Ans) c

Exp) Option c is the correct answer.

Pair 1 is correct: Ministry of **Micro, Small and Medium Enterprises (MSMEs)** has launched the **Udyam portal** on 1st July 2020. It is an **online system for registering MSMEs**. It is linked to the databases of the Central Board of Direct Taxes (CBDT) and Goods and Services Tax Network (GSTN). It is fully online, does not require any documentation, and is a step towards Ease of Doing Business for MSMEs.

Pair 2 is incorrect: The **Ministry of Micro, Small and Medium Enterprises (MSME)** has launched **CHAMPIONS** (Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength) **portal**. It was developed to assist Indian MSMEs march into the big league as National and Global CHAMPIONS by solving their grievances and encouraging, supporting, helping and hand holding them.

Pair 3 is correct: **Ministry of Labour & Employment** has developed **eShram portal** for creating a **National Database of Unorganized Workers (NDUW)**, which will be seeded with Aadhaar. It contains details of name, occupation, address, occupation type, educational qualification, skill types etc. for optimum realization of their employability and extend the benefits of the social security schemes to them. It is the first-ever national database of unorganized workers including migrant workers, construction workers, gig and platform workers, etc.

Pair 4 is correct: **Yuktdhara Portal** was launched by the **Ministry of Rural development**. It will help in facilitating the **Mahatma Gandhi National Rural Employment Guarantee Act assets with the use of remote sensing and Geographic Information System based information**. It will serve as a **repository of assets (Geotags)** created under various National Rural Development Programmes such as MGNREGA, Integrated Watershed Management Programme, Per Drop More Crop and Rashtriya Krishi Vikas Yojana etc., along with field photographs.

Source : <https://champions.gov.in/Government-India/Ministry-MSME-Portal-handholding/msme-problem-complaint-welcome.htm>

<https://udyamregistration.gov.in/Government-India/Ministry-MSME-registration.htm>

<https://eshram.gov.in/e-shram-portal>

https://www.business-standard.com/article/economy-policy/new-portal-launched-to-facilitate-geospatial-planning-of-mgnrega-assets-121082301242_1.html

Q.44) Which of the following might not be a possible impact of tax rationalization?

- a) It may reduce the incidence of tax evasion and improve revenue collection.
- b) It will increase the administrative burden on businesses and individuals in the long term.
- c) It may lead to redistribution of the tax burden among different sections of people.
- d) It may cause short-term disruptions to economic activities.

Ans) b

Exp) Option b is the correct answer.

Tax rationalization refers to the process of **simplifying and streamlining the tax system** by reducing the number of tax rates, exemptions, and deductions. The **impacts** of tax rationalization can be **both positive and negative**, and they can vary depending on the specific context and goals of the tax reform. GST implementation is an example of tax Rationalization in India.

The **possible impact of tax rationalization** are as follows:

Statement a is correct: Simplifying the tax system can make it easier for taxpayers to understand their tax obligations and comply with them. So, tax rationalization can **reduce** the incidence of **tax evasion** and **improve revenue collection**, which can ultimately benefit the economy.

Option b is incorrect: A simpler tax system can **reduce the administrative burden** on businesses and individuals, which can lead to increased economic efficiency.

Option c is correct: It can lead to **redistribution of the tax burden** among different sections of peoples.

Option d is correct: Tax rationalization can cause **short-term disruptions** to the economy as taxpayers and businesses adjust to the new tax system. This can lead to uncertainty and volatility in the short term, but **the long-term benefits may outweigh the short-term costs**.

Source : <https://indianculture.gov.in/reports-proceedings/final-report-rationalisation-and-simplification-tax-structure>

<https://economictimes.indiatimes.com/markets/expert-view/there-is-merit-in-rationalizing-the-taxes-but-should-it-be-done-this-year-madhu-kela-answers/articleshow/97483438.cms>

<https://www.newindianexpress.com/business/2022/aug/21/why-goods-and-services-tax-rate-rationalisation-is-need-of-the-hour-2489632.html>

Q.45) Consider the following statements regarding NIPAM, a recent initiative seen in news:

1. It aims to inculcate the spirit of creativity and innovation to students of higher education.
2. Atal Incubation Centres from all over India are the implementing agencies for the NIPAM.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Recently, the National Intellectual Property Awareness Mission (NIPAM) has achieved the target of imparting Intellectual Property (IP) awareness and basic training to 1 million students on 31st July 2022, ahead of the deadline which was 15 August 2022. NIPAM, a flagship program to impart IP awareness and basic training, was launched on 8 Dec 2021 as a part of “**Azadi Ka Amrit Mahotsav**’ celebrations. The program is being implemented by the Intellectual Property Office, the Office of the Controller General of Patents, Designs and Trademarks (CGPDTM), Ministry of Commerce and Industry.

Statement 1 is correct: The pan-India ambitious mission NIPAM aims to provide awareness on intellectual property and its rights to 1 million students. **It aims to inculcate the spirit of creativity and innovation to students of higher education (classes 8 to 12) and ignite and inspire the students at college/Universities to innovate and protect their creations.**

Statement 2 is incorrect: NIPAM is being implemented by Intellectual Property Office, the Office of Controller General of Patents, Designs and Trade Marks (CGPDTM), Ministry of Commerce and Industry. Atal Incubation Centres are not related to this Mission.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1850898>

<https://ipindia.gov.in/newsdetail.htm?774>

Q.46) The Economic Survey 2022-23 mentions the Baltic Dry Index. In this context, what does the Baltic Dry Index measure?

- It measures the change in cost of transporting raw materials by shipping vessels.
- It measures the variations in the rainfall patterns in a particular area.
- It measures the Demand and Supply for the Electronic goods.
- It measures the increasing surface temperatures of major Seas and Oceans around the globe.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: The Baltic dry index created by the London-based Baltic Exchange was started in 1985. **The Baltic dry index (BDI) measures the cost of shipping raw materials by shipping vessels.** The index accounts for multiple vessel classifications traveling to and from various destinations. The index covers the transport of raw materials across 20 different routes. The index's value is generated by the demand for the raw materials and the supply of ships available to transport them. Investors can use the index to forecast and predict future industrial economic activity changes globally.

Dry bulk commodities in the Index are usually divided into two categories.

- Major dry bulk commodities include iron ore, coal, and grain. These major bulks account for nearly two-thirds of global dry bulk trade.
- Minor bulks include steel products, sugars, cement, and cover the remaining one-third of global dry bulk trade.

Source: <https://www.indiabudget.gov.in/economicsurvey/doc/eschapter/echap01.pdf>

<https://indianexpress.com/article/explained/explainspeaking-takeaways-rbi-financial-stability-report-7702989/>

<https://www.thehindubusinessline.com/opinion/columns/slate/all-you-wanted-to-know-aboutbaltic-indices/article8268132.ece>

Q.47) Consider the following pairs with reference to components of expenditure method of national income calculation:

Component	Example
1. Consumption	Purchasing new car by an Indian resident
2. Investment	Purchase of land for business
3. Government Spending	Money spent on primary education by Government of India

Which of the pairs given above are correctly matched?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The expenditure method is a system for calculating gross domestic product (GDP) that combines consumption, investment, government spending, and net exports. It is the most common way to estimate GDP. It says everything that the private sector, including consumers and private firms, and government spending within the borders of a particular country, must add up to the total value of all finished goods and services produced over a certain period. This method produces nominal GDP, which must then be adjusted for inflation to result in the real GDP.

Pair 1 is correct: Purchasing new car, mobiles, computer etc. both India made & (Imported) foreign made are counted in expenditure method calculation of national income. We can ignore the purchase of second-hand goods, because we are only measuring 'new' things "Made in India" in present year.

Pair 2 is correct: Purchase of tangible capital assets like new House, **Land, Building**, Factory, Truck, Machinery and purchase of intangible capital assets like IPR / Patents, Computer Software etc. are part of investment under investor spending on business capital good. Further purchase of raw material & intermediate goods, wages to workers for production all are counted **under investor spending on business capital goods**.

Pair 3 is correct: The government spending component of national income calculation represents expenditures by state, local and central government authorities on defense and nondefense goods and services, such as weaponry, health care, and education.

Source: <https://corporatefinanceinstitute.com/resources/economics/national-income-accounting/>

<https://ncert.nic.in/ncerts/l/leec102.pdf>

<https://economictimes.indiatimes.com/definition/gross-domestic-product>

Q.48) Which among the following statements is/are correct regarding the Gross Value Added in the Economy?

1. It is a measure of the contribution to GDP made by an individual producer, industry or sector.
2. It gives the picture of the state of the economy from the consumers' side.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

In 2015, in the wake of a comprehensive review of its approach to GDP measurement, India opted to make major changes to its compilation of national accounts and bring the whole process into conformity with the United Nations System of National Accounts (SNA) of 2008.

Statement 1 is correct. Gross value added (GVA), is defined as the value of output minus the value of intermediate consumption and is a **measure of the contribution to GDP made by an individual producer, industry or sector**. The **GVA data is crucial to understand how the various sectors of the real economy are performing**.

Statement 2 is incorrect. GVA gives a picture of the state of economic activity **from the producers' side or supply side**, whereas the GDP gives the picture from the consumers' side or demand perspective. GVA is considered a better gauge of the economy. GDP fails to gauge the real economic scenario because a sharp increase in the output can be due to higher tax collections which could be on account of better compliance or coverage, rather than the real output situation.

Source: https://www.business-standard.com/article/economy-policy/union-budget-understanding-the-gdp-gva-and-the-difference-between-the-two-122120900529_1.html#:~:text=The%20difference%20between%20GDP%20and,order%20to%20enhance%20its%20worth.

<https://www.thehindu.com/business/Economy/the-hindu-explains-what-is-gross-value-added-and-how-is-it-relevant-when-growth-is-announced-in-gdp-terms/article31768578.ece>

Q.49) What are the possible impacts of monetary tightening of the US federal reserve in India?

1. It may make investing in India less attractive for foreign investors.
2. It may increase the cost of imports for India.
3. It may increase the current account deficit for India.

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Global economies are in a recession due to high inflationary pressure. To combat this, the US federal reserve, central bank of the US, is taking aggressive steps such as an increase in interest rates to reduce the money supply flow in the economy.

Statement 1 is correct: The Indian economy is highly vulnerable to the US Federal Reserve interest rate action. When interest rates are increased by the US Federal Reserve, investors in the government securities in the USA will benefit due to higher interest rates. So, a greater number of global investors will prefer to invest in the government securities of the US because they are considered as safest investment opportunity. For example, when interest rates in the US rise, the propensity of FIIs to invest in India goes down due to higher opportunity costs for them. For example, FIIs could earlier borrowed at 2% and invested in India and get a return of 8%, but if the Fed increases rates from 2% to 4%, then some of the investors in the US may not find investing in India attractive and may start pulling out funds from India and invest back in the US.

Statements 2 and 3 are correct: One of the primary channels through which the Federal Reserve's monetary policy affects India is through exchange rate fluctuations. A monetary tightening by the Fed could lead to an **appreciation of the US dollar**, which in turn could lead to a **depreciation of the Indian rupee**. This could make **Indian exports cheaper** and more competitive, but it could **also increase the cost of imports** and lead to higher inflation in India. FII Outflows along with intervention by RBI will cause depletion of India's Forex reserves. **This may lead to increase in current account Deficit for India.**

Source : <https://timesofindia.indiatimes.com/business/india-business/explained-how-the-us-fed-rate-hike-will-impact-the-indian-economy/articleshow/93184123.cms>

<https://www.livemint.com/economy/us-fed-aggressive-rate-hike-know-how-it-will-impact-indian-economy-11663890672815.html>

Q.50) Government of India recently launched “Project Arth Ganga” with the aim of linking people and Ganga through the bridge of economics. In this context, which of the following verticals are covered under the Project Arth Ganga?

1. Zero Budget Natural Farming
2. Monetization and Reuse of Sludge and Wastewater
3. Creation of Haats for livelihood generation opportunities
4. Reduction in the logistics cost for domestic cargo.

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

Arth Ganga is the recently launched model of the Indian Government for the river’s sustainable development. At its core, the Arth Ganga model seeks to use economics to bridge people with the river. The Arth Ganga project’s interventions are in accordance with India’s commitments towards the UN sustainable development goals.

Under Arth Ganga, the government is working on six verticals.

Statement 1 is correct: The first is Zero Budget Natural Farming, which involves chemical-free farming 10 km on either side of the river, and the promotion of cow dung as fertilizer through the GOBARDhan scheme.

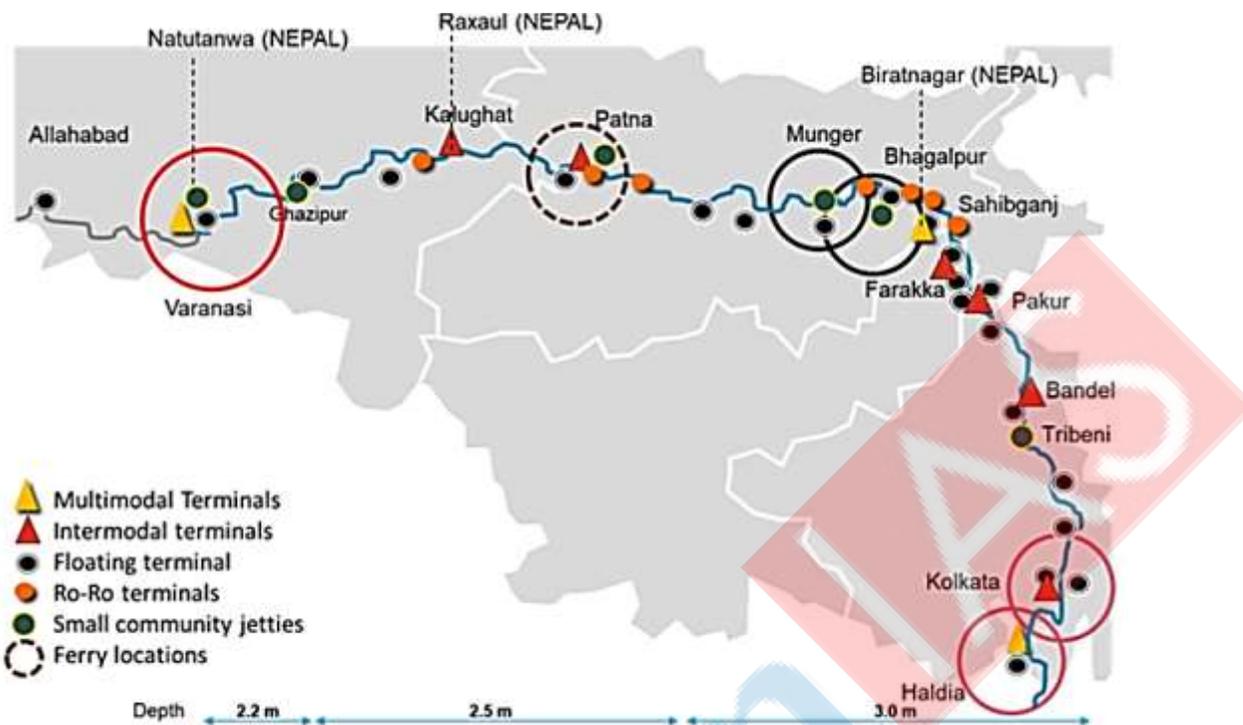
Statement 2 is correct: The second model is Monetization and Reuse of Sludge & Wastewater, which seeks to reuse treated water for irrigation, industries and revenue generation for Urban Local Bodies (ULBs).

Statement 3 is correct: Arth Ganga will also involve Livelihood Generation Opportunities, by creating haats where people can sell local products, medicinal plants and ayurveda.

Statement 4 is incorrect: Reduction in the logistics cost for domestic cargo with optimized infrastructure investment does not constitute any vertical of the Arth Ganga model but forms a vision of Sagarmala Program.

(Sagarmala is an ambitious national initiative aimed at bringing about a step change in India’s logistics sector performance, by unlocking the full potential of India’s coastline and waterways. The vision of Sagarmala is to reduce logistics cost for both domestic and EXIM cargo with optimized infrastructure investment.)

Master Plan of Arth Ganga Model:



Knowledge Base: The fourth vertical of Arth Ganga is to increase public participation by increasing synergies between the stakeholders involved with the river. The fifth vertical aims to promote the cultural heritage and tourism of Ganga and its surroundings, through boat tourism, adventure sports and by conducting yoga activities. Sixth vertical of the model seeks to promote institutional building by empowering local administration for improved water governance.

Source: <https://indianexpress.com/article/explained/arth-ganga-govts-new-model-rivers-sustainable-development-811967/>

<http://sagarmala.gov.in/about-sagarmala/vision>

Q.1) With regards to inflation targeting in India, which of the following statements is/are correct?

1. The RBI solely determines the inflation target, in terms of the Consumer Price Index, once in every five years.
2. RBI's flexible inflation targeting places price stability as the primary objective of the monetary policy.
3. If the RBI fails to meet the inflation target, then a new monetary policy committee will be formed to address the issue.
4. The monetary policy committee determines the policy interest rates required to achieve the inflation target.

Select the correct answer using the code given below:

- a) 1, 3 and 4 only
- b) 2 only
- c) 2 and 4 only
- d) 2, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect. The RBI Act provides for the **inflation target to be set by the Government of India, in consultation with the Reserve Bank**, once in every five years. Accordingly, the Central Government has notified 4 per cent Consumer Price Index (CPI) inflation as the target until the fiscal year 2025-26 with the upper tolerance limit of 6 per cent and the lower tolerance limit of 2 per cent.

Statement 2 is correct. India formally adopted flexible inflation targeting (FIT) in June 2016 to place **price stability, defined in terms of a target CPI inflation, as the primary objective of the monetary policy**. In May 2016, the Reserve Bank of India (RBI) Act, 1934 was amended to provide a statutory basis for the implementation of the flexible inflation targeting framework.

Statement 3 is incorrect. If RBI fails to meet the inflation target, then it will have **to explain the reason** for its failure to meet the target as well as **give a timeframe** within which it will achieve the inflation target.

Statement 4 is correct. The amended RBI Act, 1934 provides for an empowered six-member monetary policy committee (MPC) to be constituted by the Central Government by notification in the Official Gazette. **The MPC determines the policy interest rate required to achieve the inflation target.**

Source: http://www.arthapedia.in/index.php?title=Inflation_Targeting_In_India

<https://www.thehindu.com/opinion/op-ed/re-evaluating-inflation-targeting/article34094821.ece>

Q.2) Which among the following will most likely lead to an increase in the money multiplier in the economy?

1. Increase in the Cash Reserve Ratio
2. Increase in the banking habit of the people
3. Decrease in bank rate
4. Increase in the repo rate

Select the correct answer using the codes given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1 and 4 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

Money multiplier is a term in monetary economics that is a phenomenon of creating money in the economy in the form of credit creation, which is based on the fractional reserve banking system.

Statement 1 is incorrect: Cash Reserve Ratio (CRR) is the share of a bank's total deposit that is mandated by the Reserve Bank of India (RBI) to be maintained with the latter as reserves in the form of liquid cash. There are two main objectives of the Cash Reserve Ratio:

- 1) Cash Reserve Ratio ensures that a part of the bank's deposit is with the Central Bank and is hence, secure.
- 2) Another objective of CRR is to keep inflation under control. During high inflation in the economy, RBI raises the CRR to reduce the amount of money left with banks to sanction loans. **It squeezes the money flow in the economy, reducing investments and bringing down inflation. Thus, an increase in CRR will lead to a decrease in the multiplier effect.**

Statement 2 is correct: An increase in banking activity will lead to more money in the bank's hands in the form of Time Deposits, Demand Deposits etc, thus increase in banking habits of the people will increase the money multiplier.

Statement 3 is correct: Decreased repo rate and bank rate results in availability of cheaper loans to banks. This results in increased money multiplier.

Statement 4 is incorrect: The repo rate is the interest rate at which the Reserve Bank of India (RBI) loans money to commercial banks. An increased repo rate means that banks borrowing money from the central bank during this period will have to pay more interest. This inhibits banks from borrowing money, reducing the amount of money in the market and helping to negate inflation. **Increasing the Repo rate makes the cost of the funds high for commercial banks and leads to high interest rates on loans which leads to reduction in the money supply in market. Thus, a high repo rate reduces the money multiplier effect.**

Source : <https://cleartax.in/s/cash-reserve-ratio-crr>

<https://www.investopedia.com/terms/m/multipliereffect.asp>

<https://rbidocs.rbi.org.in/rdocs/Speeches/PDFs/IIMASP24122021400BA7CC03224A24AF01A7BBEB553EF4.PDF>

<https://www.worldbank.org/en/topic/financialinclusion/overview>

<https://groww.in/p/tax/repo-rate>

<https://www.investopedia.com/ask/answers/070615/what-correlation-between-money-supply-and-gdp.asp>

Q.3) "It is a derivative instrument used by foreign companies to raise money in India. They are issued by domestic depository in India and are denominated in Indian Rupees. Just like equity share, they provide ownership in the company."

The above paragraph best describes which of the following financial instruments?

- a) Global Depository Receipts
- b) Participatory Notes
- c) Indian Depository Receipts
- d) Convertible Debentures

Ans) c

Exp) Option c is the correct answer.

An **Indian Depository Receipt (IDR)** is issued by a **domestic depository in India** and **denominated in Rupees**. It represents an **ownership interest** in a fixed number of underlying equity shares of the Issuing Company. Since foreign companies are not allowed to list on Indian equity markets, IDR is a way to own shares of those companies.

A foreign company issues and deposits new shares with an Indian depository (say, National Securities Depository Ltd (NSDL) or Central Depository Service Ltd or CDSL), Such a depository then, in turn, issues equivalent shares in rupees to investors in India. Much like an equity share, it is an ownership pie of a

company. IDRs involve currency risk for the underlying shares in another country. Fluctuations in the exchange rate could impact the value of the dividend payment.

Source : https://www.sebi.gov.in/sebi_data/commondocs/foreigncos1_p.pdf

Q.4) The term “Co-location”, recently seen in news, is most closely related to:

- a multi modal logistics infrastructure which aims to reduce logistics cost.
- a Hybrid system which generates electricity using solar and wind energy at the same location.
- a data centre which connects the customers to a variety of telecommunications and network service providers.
- a cluster of government offices in a location to better reap the benefits of balloon Wi-Fi.

Ans) c

Exp) Option c is the correct answer.

Multiple agencies are investigating the National Stock Exchange (NSE) **co-location scam** related to the manipulation of the market at the stock exchange. There are allegations that some brokers who had leased space at the NSE co-location facility were able to log on to the NSE’s systems faster and gained an unfair access and advantage during the period from 2012 to 2014.

Option c is correct: Co location is a type of **data centre** which provides **infrastructure, storage, space, power, cooling, and physical security for the customers** and connects them to a variety of telecommunications and network service providers with a **minimum of cost and complexity**.



Source: <https://indianexpress.com/article/explained/everyday-explainers/everyday-economics-what-co-location-heart-scam-nse-7799595/>

Q.5) With reference to the Humanitarian Assistance and Disaster Relief Agreement (HADR) signed recently by QUAD countries, consider the following statements:

- Agreement called for zero tolerance for inaction on tackling Sexual Exploitation, Abuse and Harassment (SEAH).
- It requires member countries to provide housing for all by 2030 to mitigate risks associated with climate disasters.
- Under the agreement, no member country can participate in humanitarian assistance of another country without permission of the affected country.

Which of the statement/s given above is/are correct?

- 1 only
- 1 and 2 only
- 1 and 3 only
- 2 only

Ans) c

Exp) Option c is the correct answer.

The Quad is an informal strategic forum comprising four nations, namely- India, the United States of America, Japan and Australia. The Humanitarian Assistance and Disaster Relief Agreement (**HADR**) was **signed by QUAD countries in Tokyo in 2022** as part of a shared vision for a free and open Indo-Pacific that is inclusive and resilient.

Statement 1 is correct: The Humanitarian Assistance and Disaster Relief Agreement (**HADR**) called for **zero tolerance for inaction on tackling Sexual Exploitation, Abuse and Harassment (SEAH)**. HADR aims to promote gender inclusion and it also aims to ensure that benefits of humanitarian action will extend to persons with disabilities, indigenous communities and minorities.

Statement 2 is incorrect: **The HADR agreement does not require member countries to ensure housing for all by 2030.** The HADR agreement will serve as a dedicated framework for Quad partners to coordinate their disaster response operations in the region. QUAD countries strive to augment their capacity and capability, interoperability and operational synergy to undertake HADR operations in their countries.

Statement 3 is correct: Under HADR agreement **one country can involve in humanitarian assistance of another country only after the request of assistance** by the affected country. Thus, any humanitarian action will be carried out with respect for the **sovereignty, territorial integrity and national unity** of the affected nation.

Source: <https://www.state.gov/guidelines-for-quad-partnership-on-humanitarian-assistance-and-disaster-relief-hadr-in-the-indo-pacific/>
<https://www.thehindu.com/news/international/quad-countries-sign-humanitarian-assistance-and-disaster-relief-agreement/article65928032.ece>

Q.6) Which among the following are the initiatives of the National Payments Corporation of India (NPCI)?

1. RuPay
2. Aadhaar enabled Payment System (AePS)
3. National Electronic Funds Transfer (NEFT)
4. National Automated Clearing House (NACH)
5. National Financial Switch (NFS)
6. National Electronic Toll Collection (NETC) program

Select the correct answer using the codes given below:

- a) 1, 3, 5 and 6 only
- b) 2, 3, 4 and 5 only
- c) 1, 2, 4, 5 and 6 only
- d) 1, 2, 3, 4, 5 and 6

Ans) c

Exp) Option c is the correct answer.

National Payments Corporation of India (NPCI) is an umbrella organisation for operating retail payments and settlement systems in India. NPCI is an initiative of Reserve Bank of India (RBI) and Indian Banks' Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007, for creating a robust Payment & Settlement Infrastructure in India. Some of the initiatives undertaken by NPCI are-

RuPay (Option 1 is correct): It is an Indigenously developed Payment System which is designed to meet the expectation and needs of the Indian consumer, banks and merchant eco-system. RuPay supports the issuance of debit, credit and prepaid cards by banks in India and thereby supporting the growth of retail electronic payments in India.

AePS (Option 2 is correct): To access these funds at door step & drive the financial inclusion in India, Aadhaar enabled Payment System (AePS) has been introduced. Since inception it has become instrumental to increase accessibility of basic banking services in underserved areas.

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NACH (Option 4 is correct): National Automated Clearing House (NACH) is an offline web based system for bulk push and pull transactions. NACH provides electronic mandate platform to register mandates facilitating paper less collection process for the corporates and banks. It provides for both account based and Aadhaar based transactions.

NFS (Option 5 is correct): National Financial Switch (NFS) is the largest network of shared Automated Teller Machines (ATMs) in India facilitating interoperable cash withdrawal, card to card funds transfer and interoperable cash deposit transactions among other value added services in the country.

NETC (Option 6 is correct): National Payments Corporation of India (NPCI) has developed the National Electronic Toll Collection (NETC) program to meet the electronic tolling requirements of the Indian market. Whereas, **Option 3 is incorrect:** National Electronic Funds Transfer (NEFT) is a nation-wide centralised payment system owned and operated by the Reserve Bank of India (RBI). It does not come under the ambit of NPCI.

Source: <https://www.npci.org.in/who-we-are/about-us>

<https://www.rbi.org.in/commonman/English/Scripts/FAQs.aspx?Id=274>

Q.7) Consider the following statements regarding Priority Sector Lending (PSL):

1. The concept of PSL norms was first introduced in India in 2008 due to setbacks received as a result of global financial crisis.
2. Loans given to renewable energy projects can be included under PSL obligations.
3. PSL Norms are not applicable to Non-Banking Financial Companies.
4. Regional Rural Banks and Small Finance Banks are required to lend 75% of their Adjusted Net Bank Credit under Priority Sectors Lending.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) option b is the correct answer.

Statement 1 is incorrect: The description of the priority sectors was first formalised in 1972 on the basis of the report submitted by the Informal Study Group on Statistics relating to advances to the Priority Sectors constituted by the Reserve Bank in May 1971. First time in 1974, the banks were given a target of 33.3% as share of the priority sector in the total bank credit.

Statement 2 is correct: To provide adequate amount of investment, the Reserve Bank of India has included renewable energy in the PSL (priority sector lending) for scheduled commercial banks.

Statement 3 is correct: PSL norms are not applicable to Non-Banking Financial Companies. Institutions to which PSL obligations are applicable are given in the table below:

Commercial Banks including foreign banks	Regional Rural Banks	Small Finance Banks	Payment Banks	Urban (Primary) Cooperative Banks
40%	75%	75%	They do not give credit	40% <i>(will be increased to 75% by 2024 in a phased manner)</i>

Statement 4 is correct: According to the RBI guidelines, small finance banks and regional rural banks will be required to extend 75% of their Adjusted Net Bank Credit to the sectors eligible for classification as priority sector lending (PSL) by the RBI.

Source: Indian Economy- Ramesh Singh, Chapter 19
Indian Economy, Vivek Singh, chapter 2

Q.8) Neo Banks have recently been in the news. What are they?

- A type of differentiated bank providing only current and saving deposit accounts without any credit facility.
- Non-Banks which are offering a limited range of banking services on a smaller scale.
- An entity that purchases the bad loans of other banks and tries to auction these in the market.
- Entities providing banking services generally in a digital, online only mode.

Ans) d

Exp) Option d is the correct answer.

Option d is correct: Neo Banks are generally **fin-tech startups** that provide **banking services** in a **digital, online only** mode. It has **no physical branches**. All operations, like opening an account, transactions, withdrawal, deposits are done digitally using web platforms or mobile apps.

These financial institutions operate exclusively online, without any physical branches, and provide all banking services, and more, digitally.

Source: <https://www.thehindubusinessline.com/opinion/neo-bank-the-new-disruptor-on-the-block/article34093484.ece>

<https://cleartax.in/g/terms/payment-banks>

<https://indianexpress.com/article/explained/explained-whats-good-about-a-bad-bank-7513911/>

<https://vikaspedia.in/social-welfare/financial-inclusion/financial-literacy/small-finance-banks>

Q.9) Funds availed under Kisan Credit Card (KCC) scheme can be used by farmers for which of the following purposes?

- Post-harvest expenses
- Consumption requirements of household
- Short-term credit requirements for cultivation of crops
- Working capital for maintenance of farm assets

Select the correct answer using the codes given below:

- 1 and 3 only
- 1, 2, 3 and 4
- 1, 3 and 4 only
- 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

The Kisan Credit Card (KCC) scheme was introduced in 1998 for issue of Kisan Credit Cards to farmers on the basis of their holdings for uniform adoption by the banks so that farmers may use them to readily purchase agriculture inputs such as seeds, fertilizers, pesticides etc. and draw cash for their production needs. The scheme was further extended for the investment credit requirement of farmers viz. allied and non-farm activities in the year 2004. The funds under KCC can be used for the following purposes:

Option 1 is correct: The funds can be used for meeting **expenses related to post-harvest activities** such as storage, transportation, and marketing of agricultural produce.

Option 2 is correct: The funds can be used for meeting **consumption requirements of farmers** and their families such as food, education, healthcare, etc.

Option 3 is correct: Farmers require funds for various **crop-related expenses such as purchase of seeds, fertilizers, pesticides, labour costs**, etc. KCC funds **can be used to meet these short-term credit requirements for crop cultivation**.

Option 4 is correct: Farmers require **working capital to maintain their farm assets such as land, irrigation systems, farm machinery, etc.** KCC funds can be used to meet these working capital requirements for maintenance of farm assets.

Source:

[https://www.rbi.org.in/commonman/English/Scripts/Notification.aspx?Id=2311#:~:text=The%20Kisan%20Credit%20Card%20\(KCC\)%20scheme%20was%20introduced%20in%201998,cash%20for%20their%20production%20needs.](https://www.rbi.org.in/commonman/English/Scripts/Notification.aspx?Id=2311#:~:text=The%20Kisan%20Credit%20Card%20(KCC)%20scheme%20was%20introduced%20in%201998,cash%20for%20their%20production%20needs.)

<https://pib.gov.in/FactsheetDetails.aspx?Id=148600>

Q.10) With reference to Corporate Social responsibility (CSR) Amendment rules, 2022, consider the following statements:

1. It mandates companies having net worth of at least 10 crores to spend at least 2% of their average net profit.
2. Expenditure by companies on Social Impact Assessment shall not exceed 10% of total CSR expenditure in a year.
3. It allows companies to carry forward their unutilised funds, in a designated account, for a maximum of three years.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

Recently, the Ministry of Corporate Affairs, Government of India has revised the rules regarding utilisation of Corporate Social responsibility (CSR) funds by corporate companies by notifying Corporate Social responsibility (CSR) Amendment rules, 2022.

Statement 1 is incorrect: The Corporate Social responsibility (CSR) Amendment rules, 2022 did not make any change in the net worth of companies or their net profits to be brought under the ambit of CSR activity. Thus, as earlier, CSR rules apply to only those companies having a **net worth of at least 500 crores or a turnover of Rupees 1000 crore** or more or a **net profit of Rupees 5 crore** or more.

Statement 2 is incorrect: Social Impact Assessment (SIA) is carried to review the **social effects of companies'** activities on the society. The CSR rules 2022 stated that expenditure by **companies on SIA shall not exceed 2.5% of total CSR expenditure** in a year or **₹50 lakh whichever is higher**. The earlier rule had allowed up to 5% of the total CSR spending or **₹50 lakh whichever is less**.

Statement 3 is correct: **CSR rules 2022 allows companies to carry forward their unspent amount for maximum three years.** The new rules require companies to establish a **CSR committee** to monitor the utilisation of such unspent amounts by companies.

Source: <https://www.livemint.com/companies/news/centre-revises-csr-rules-11663842823272.html>

Q.11) With reference to 'Integrated Ombudsman Scheme', consider the following statements:

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1. The Scheme was launched under the provisions of the Payment and Settlement Systems Act, 2007.
2. It provides for redressal of customer complaints involving deficiency in services by RBI regulated entities.
3. The services rendered by scheduled Urban Cooperative Banks are not covered under the scheme.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Integrated Ombudsman Scheme was launched by RBI by integrating the existing three Ombudsman schemes of RBI namely, the Banking Ombudsman Scheme, 2006; the Ombudsman Scheme for Non-Banking Financial Companies, 2018; and the Ombudsman Scheme for Digital Transactions, 2019.

Statement 1 is incorrect: Integrated Ombudsman Scheme was launched by the Reserve Bank in exercising the powers conferred on it under Section 35A of the Banking Regulation Act, 1949.

Statement 2 is correct: The scheme will provide redress of customer complaints involving deficiency in services rendered by RBI regulated entities viz. banks, NBFCs (Non-banking Financial Companies) and pre-paid instrument players if the grievance is not resolved to the satisfaction of the customers or not replied within a period of 30 days by the regulated entity.

Statement 3 is incorrect: Integrated Ombudsman Scheme will not only cover the customers of all scheduled commercial banks, regional rural banks, scheduled urban cooperative banks (UCBs) and other UCBs with deposits of Rs50 crore and above, all deposit-taking NBFCs and NBFCs with assets of ₹100 crore and above, and non-bank system participants, it will also cover all complaints involving deficiency in service.

Source: <https://www.cnbctv18.com/finance/faqs-what-is-reserve-bank-integrated-ombudsman-scheme-how-to-file-complaint-under-rb-ios-11472232.htm>

<https://www.moneycontrol.com/news/business/rbi-integrated-ombudsman-scheme-faq-14-key-questions-answered-7722441.html>

Q.12) With reference to 'Commercial Paper', consider the following statements:

1. It is a short-term debt instrument issued to raise funds.
2. It is considered as an unsecured instrument as it is not backed by a collateral.
3. It can only be issued by scheduled commercial banks in India.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: Commercial paper, also called CP, is a short-term debt instrument issued by companies to raise funds generally for a time period up to one year. It is an unsecured money market instrument issued in the form of a promissory note.

Statement 2 is correct: Commercial paper is an unsecured, short-term debt instrument issued by corporations. **Commercial paper is not backed by any form of collateral, making it unsecured debt.** It's typically used to finance short-term liabilities such as payroll, accounts payable, and inventories. Commercial paper is usually issued at a discount from face value.

Statement 3 is incorrect: They are issued by companies at a discount to face value, and have a maturity period of up to one year. Corporates, primary dealers (PDs) and the all-India financial institutions (FIs) that have been permitted to raise short-term resources under the umbrella limit fixed by the Reserve Bank of India are eligible to issue CP.

Source: <https://economictimes.indiatimes.com/markets/stocks/news/what-is-commercial-paper/articleshow/72979332.cms>

<https://www.rbi.org.in/scripts/NotificationUser.aspx?Id=1751&Mode=0>

<https://www.investopedia.com/terms/c/commercialpaper.asp>

<https://economictimes.indiatimes.com/markets/stocks/news/what-is-commercial-paper/articleshow/72979332.cms>

Q.13) With reference to 'Standing Deposit Facility', consider the following statements:

1. It was first recommended by the Urjit Patel committee report in 2014.
2. The objective of the facility is to considerably increase the money supply in the banking sector.
3. Standing Deposit Facility is a collateral-free arrangement.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Standing Deposit Facility is a new liquidity tool introduced by RBI in 2022. In 2018, the amended Section 17 of the RBI Act empowered the Reserve Bank to introduce the SDF – an additional tool for absorbing liquidity without any collateral.



Statement 1 is correct: The concept of Standing Deposit Facility was **first recommended by the Urjit Patel committee report in 2014.**

Statement 2 is incorrect: The main purpose of SDF is to reduce the excess liquidity in the system, and control inflation. It allows the **RBI to absorb liquidity (deposit) from commercial banks** without giving government securities in return to the banks.

Statement 3 is correct: One of the key features of the SDF is that it **allows banks to park their funds without the need for any collateral**, which makes it an attractive option for banks to manage their short-term liquidity needs.

Source: <https://indianexpress.com/article/explained/everyday-explainers/what-is-standing-deposit-facility-7859803/>

<https://www.angelone.in/blog/what-is-standing-deposit-facility>

Q.14) Which one of the following will be the most likely implication of the increase in repo rate by 1% by Reserve Bank of India?

- Increase in credit offtake in the market by corporates and investors.
- Yield of the government bonds will definitely decrease in the long run.
- Borrowing costs for individuals and businesses may increase.
- Inflation will increase due to excessive money circulation in the market.

Ans) c

Exp) Option c is the correct answer.

The decision to increase the Repo rate is taken by the **Monetary Policy Committee (MPC)**, which takes into account various factors, including inflation, economic growth, and global economic conditions, before making its decision. In India, if the Repo rate is increased by 1%, the main implication is that it **would become more expensive for commercial banks to borrow money from the Reserve Bank of India (RBI)**, which is the central bank of India. This, in turn, would make it **more expensive for commercial banks to lend money to their customers**, such as individuals and businesses. As a result, **borrowing costs for individuals and businesses would increase**, which could lead to a slowdown in economic growth.

Option a is incorrect: An increase in the repo rate **actually leads to a decrease in credit offtake in the market**. When the repo rate is increased, commercial banks have to pay a higher interest rate to borrow money from the RBI, and this cost is passed on to their customers in the form of higher lending rates. This makes it more expensive for individuals and businesses to borrow money, which in turn, leads to a decrease in credit offtake in the market.

Option b is incorrect: An increase in the repo rate is **likely to increase the yield of government bonds in the long run**. This is because an increase in the repo rate may lead to a decrease in the demand for credit in the market, which may lead to a decrease in the demand for government bonds as well. However, in the long run, the increase in the repo rate is likely to reduce inflationary pressures, which may increase investor confidence in the economy and lead to an increase in the demand for government bonds, thereby increasing their yield.

Option d is incorrect: An increase in the repo rate is often **used by the RBI to control inflation by reducing the amount of money available for lending and spending**. This reduces the demand for goods and services, which may lead to a decrease in the prices of goods and services, thus breaking the inflationary cycle.

Source: Ramesh Singh

<https://economictimes.indiatimes.com/definition/Repo-rate>

Q.15) With reference to “Tokenisation of cards”, consider the following statements:

- Tokenised transactions provide extra protection to the credit card’s data.
- Tokenised transactions are usually faster as compared to traditional card transactions.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2

d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Tokenisation is the process of replacing a card's 16-digit number on the plastic card with a unique alternate card number or 'Token' which shall be unique for a combination of card, token requestor (an intermediary between customer and card company for tokenization of card) and a device used for the transaction.

Statement 1 is correct: In tokenized card transactions, the actual card data is not given to the merchant, but a unique code called token. Tokenization is the process of replacing original card details with an alternative code called a token which is unique and provides an **additional degree of protection for customer credit card details.**

Statement 2 is correct: Tokenised transactions are faster than traditional card transactions. Tokenisation will speed up the transaction process as under tokenised transaction, it will be no longer required to repeatedly enter one's card information since once a token has been issued, it may be used for multiple times on the online merchant app or website.

Source: <https://www.sbicard.com/en/tokenisation.page>

<https://www.livemint.com/industry/banking/how-rbi-s-card-tokenization-will-ensure-a-secure-digital-payment-ecosystem-11664556764413.html>

Q.16) With reference to 'Treasury Bills', consider the following statements:

1. In India, Treasury bills were first issued in 1991 by Reserve Bank of India.
2. They can be purchased by banking entities as well as by individuals.
3. They can be a part of Bank's Statutory Liquidity Ratio.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

T-Bills are short-term debt instruments issued by the government to raise funds for a period of up to one year. They are zero-coupon bonds, which means they do not pay any interest to the holder, but are issued at a discount to their face value. The difference between the face value and the discounted price is the interest earned by the holder of the T-Bill.

Statement 1 is incorrect: Treasury Bills (T-Bills) were **first issued in India in 1917 during the British Raj.** The T-Bills were initially issued to meet the war expenditure needs of the government during the First World War.

Statement 2 is correct: T-Bills are issued by the government and have no risks attached to them. They have high liquidity due to their short maturities of 14 days, 91 days, 182 days, and 364 days.

T-Bills can be **purchased by individuals, trusts, organizations, and banks.**

Statement 3 is correct: T-Bills have a relation with the Statutory Liquidity Ratio (SLR) in India. Banks in India are **required to maintain a certain percentage of their net demand and time liabilities (NDTL) as liquid assets such as government securities, including T-Bills,** to ensure liquidity and solvency.

Source: <https://cleartax.in/s/slr>

<https://www.business-standard.com/about/what-is-treasury-bills>

<https://www.rbi.org.in/Scripts/FAQView.aspx?Id=79>

Q.17) Which one of the following statements best describe 'Black Swan Event', often seen in news?

- It refers to a situation which is considered normal as per the social norms, but is illegal under laws.
- It is a condition in which the global economy is led by a single economic block or country.
- It is a rare and unpredictable event that has significant impact on the global society.
- It is an event that symbolizes expected growth cycle in the capital markets across the world.

Ans) c

Exp) Option c is the correct answer.

A black swan is a **rare and unpredictable event** that is beyond what is normally expected of a situation and has potentially severe consequences. It has significant impact on the global society. Black swan events are characterized by their **extreme rarity, severe impact**, and the widespread insistence they were obvious in hindsight.

The term was popularized by **Nassim Nicholas Taleb in his book "The Black Swan: The Impact of the Highly Improbable,"** which argues that such events are unpredictable and have a profound impact on our lives.

Examples of black swan events include the 9/11 terrorist attacks, the 2008 financial crisis, the Fukushima nuclear disaster, and the ongoing COVID-19 pandemic. These events were unexpected, had a significant impact on the world, and were difficult to predict.

Source: <https://indianexpress.com/article/explained/everyday-explainers/explained-black-swan-event-rbi-capital-outflow-risk-7980529/#:~:text=A%20study%20by%20the%20Reserve,a%20%E2%80%9Cblack%20swan%E2%80%9D%20event.>

Q.18) Arrange the following events regarding the development of Indian banking system in the correct chronological order.

- Enactment of the Banking Regulation Act
- Nationalization of fourteen major commercial banks
- Introduction of Electronic Funds Transfer (EFT) system
- Establishment of Regional Rural Banks

Select the correct answer using the codes given below:

- 2-1-3-4
- 1-2-4-3
- 1-3-2-4
- 2-3-1-4

Ans) b

Exp) Option b is the correct answer.

The correct chronological order of the given economic events in the development of Indian banking system is:

1-Enactment of the Banking Regulation Act (1949): The Banking Regulation Act was enacted in 1949 to regulate the banking sector in India and ensure the safety of depositors' money. The Act defines the legal framework for banking in India, including provisions for the establishment of new banks, the licensing and operation of banks, and the regulation of banking operations. The RBI is responsible for enforcing the provisions of the Act and ensuring the soundness and stability of the banking system.

2- Nationalization of fourteen major commercial banks (1969): The Banking Companies (Acquisition and Transfer of Undertakings) Act, 1969, was passed by the Indian parliament, which nationalized 14 major Indian banks, followed by an additional 6 banks in 1980. This move was aimed at increasing the reach of banking services and making them more accessible to the masses. The nationalized banks were also required to focus on priority sectors, such as agriculture, small-scale industries, and exports, in line with the government's developmental goals.

4- Establishment of Regional Rural Banks (1975): The Regional Rural Banks (RRBs) were established in 1975 as a key initiative to provide banking services to rural areas in India. The RRBs were set up with the objective of providing credit and other banking facilities to small and marginal farmers, agricultural laborers, artisans, and small entrepreneurs in rural areas. The RRBs have been instrumental in increasing the level of financial inclusion in rural areas and providing credit to the underserved sections of society.

3- Introduction of Electronic Funds Transfer (EFT) system (1994): The Electronic Funds Transfer (EFT) system was introduced in 1994 as a means of enabling electronic transfer of funds between banks. The EFT system enables customers to transfer funds electronically from one bank account to another, without the need for physical movement of cash or checks. This has resulted in a significant reduction in the time and cost of transactions and has made banking services more efficient and accessible to customers. EFT has also played a significant role in promoting e-commerce and online banking in India.

Source: Ramesh Singh

<https://jupiter.money/blog/finance/evolution-of-banking-in-india/>

Q.19) Consider the following statements:

1. The SARFAESI Act protects only secured creditors while Insolvency and Bankruptcy Code protects both secured and unsecured creditors.
2. Insolvency and Bankruptcy Code shall prevail over provisions of the SARFAESI, if there is any inconsistency between the two.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: The SARFAESI Act protects financial creditors (Secure creditors), who are mostly banks and other financial institutions, by allowing them to impose their security interests without the need for court interference. The Insolvency and Bankruptcy Code, on the other hand, guarantees the interests of all forms of creditors (including both secured and unsecured), which are further divided into Financial and Operational Creditors by the IBC.

Statement 2 is correct: According to National Company Law Appellate Tribunal (NCLT), Insolvency and Bankruptcy Code shall prevail over any provisions of the SARFAESI, if there was any inconsistency between IBC and SARFAESI.

Knowledge Base:

In large size cases where there is a high debt burden, SARFAESI Act is not much effective and taking physical possession in such instances kills the business and there is little scope of revival. On the other hand, resolution plans under IBC are focused towards securing the interest of all stakeholders and directed toward the revival of the business as well, hence in such large cases, IBC is highly effective.

Source: <https://www.thehindubusinessline.com/business-laws/ibc-prevails-over-sarfaesi/article34239316.ece>

https://www.business-standard.com/article/economy-policy/explained-why-lenders-prefer-ibc-over-sarfaesi-act-for-recovery-of-dues-120011900913_1.html

Q.20) With reference to Global Innovation Index, consider the following statements:

1. The index is released by the World Intellectual Property Organisation (WIPO).
2. India's rank in this index had steadily increased in the last five years.

Which of the statements given above is /are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

According to the **Global Innovation Index, 2022, Switzerland ranks top**, for the 12th year in a row, followed by the United States, Sweden, the United Kingdom and the Netherlands. China is nearing the top 10 while Turkey and **India enter the top 40 for the first time**.

Statement 1 is correct: Global Innovation Index is published by the World Intellectual Property Organization (WIPO). WIPO is a specialised agency of the United Nations, headquartered in Geneva, Switzerland. WIPO was established in 1967 and it has 193 member states.

Statement 2 is correct: It is true that **India's rank improved steadily in the Global Innovation Index since 2015, including the last five years** and according to the latest index published in 2022 **India is ranked at 40**, which is a huge leap for India as compared to its rank of 81 in 2015.



Source: <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1863536>

Q.21) With reference to Payment Banks and Small Finance Banks, consider the following statements:

1. Unlike Small Finance Banks, Payment Banks are allowed to lend money to their customers.
2. Unlike Small Finance Banks, Payment Banks can accept fixed deposits or recurring deposits.
3. Unlike Small Finance Banks, Payment Banks cannot invest their deposits in government securities.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) None of the above

Ans) d

Exp) Option d is the correct answer.

Payment banks and Small finance banks are two different types of banks operating in India with distinct features and objectives.

Statement 1 is incorrect: Payment banks are not permitted to lend money to their customers, while SFBs can lend money to their customers. **Small finance banks are set up to offer financial inclusions by providing credit facilities and loans to small businesses** operating from underprivileged areas, marginal and small farmers, small and micro industries, and other businesses operating specifically in the unorganized sectors.

Statement 2 is incorrect: Small Finance Banks can accept recurring and Fixed Deposits, while Payment Banks cannot accept time deposits i.e., fixed or recurring deposits.

Statement 3 is incorrect: Payment Banks are only allowed to invest the money received from customers' deposits into government securities.

Source: <https://www.fisdom.com/small-finance-banks/>

<https://bank.caknowledge.com/small-finance-bank-vs-payment-banks/>

Q.22) With reference to 'National Bank for Agriculture and Rural Development (NABARD)', consider the following statements:

1. It is a wholly owned financial institution of the Reserve Bank of India.
2. It provides refinance facilities to various institutions which helps in development of rural economy.
3. The Rural Infrastructure Development Fund (RIDF) is maintained by the NABARD.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

National Bank for Agriculture and Rural Development (NABARD) is an apex regulatory body for overall regulation of regional rural banks and apex cooperative banks in India. It is under the jurisdiction of Ministry of Finance, Government of India.

Statement 1 is incorrect: National Bank for Agriculture and Rural Development (NABARD) is a development financial institution in India that was established in 1982. It is **100% owned by the Government of India and is headquartered in Mumbai, Maharashtra**. In 2019, Reserve Bank of India sold its entire stakes to government for Rs 1,450 crore making it fully government-owned now.

Statement 2 is correct: NABARD provides direct and indirect refinance facilities to various financial institutions. The **indirect refinance facility provided by NABARD is given through the State Cooperative Agriculture and Rural Development Banks (SCARDBs) and Regional Rural Banks (RRBs)**. Under this facility, NABARD refinances loans extended by SCARDBs and RRBs to farmers, rural artisans, and small entrepreneurs.

Statement 3 is correct: NABARD operates and maintains the Rural Infrastructure Development Fund (RIDF), which was set up in 1995 to provide loans to state governments for financing rural infrastructure

projects such as irrigation, rural roads, bridges, health centers, and schools. The RIDF is a vital source of financing for rural infrastructure development in India and has played a significant role in improving rural infrastructure in the country.

Source: <https://www.nabard.org/content1.aspx?id=573&catid=8&mid=8>

<https://www.businesstoday.in/industry/banks/story/with-rbi-exist-government-owns-100pct-stake-in-nhb-nabard-190575-2019-04-24>

<https://blog.forumias.com/rural-infrastructure-development-fundridf/>

Q.23) Which among the following form a part of High-Powered Money?

1. Currency held by the public
2. Vault cash of commercial banks
3. Deposits held by the Government of India with the RBI

Select the correct answer using the codes given below:

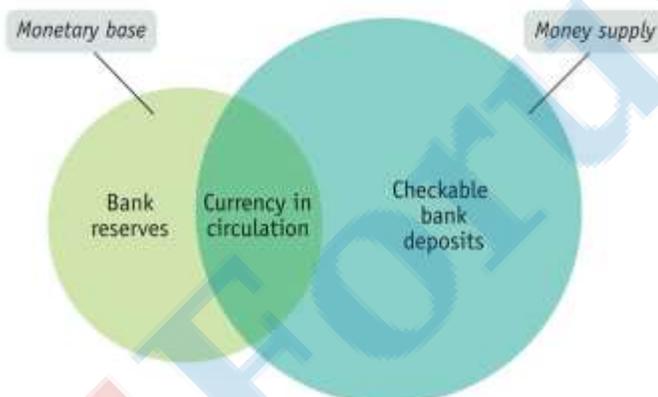
- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

All the statements are correct.

The total liability of the monetary authority of the country, RBI, is called the monetary base or high powered money.



Note: Checkable bank deposits are NOT part of Monetary base
Note: Bank Reserves are NOT part of Money Supply

It consists of:

Option 1 is correct: currency (notes and coins in circulation with the public),

Option 2 is correct: reserves of the commercial banks (which include vault cash and banks' deposits) with RBI.

Option 3 is correct: deposits held by the Government of India with RBI.

Knowledge Base: NCERT-Class 12- Introductory Macroeconomics, Chapter 3.

Q.24) With reference to 'Non-Banking Financial Companies (NBFCs)', consider the following statements:

1. They do not form part of the payment and settlement system managed by Reserve Bank of India.
2. The deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation is available to depositors of NBFCs.
3. Some NBFCs can accept deposits from the public.

4. They are not required to maintain a Cash Reserve Ratio (CRR).

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 1 and 4 only
- d) 1, 3 and 4 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Non-Banking Financial Companies (NBFCs) **do not form part of the payment and settlement system managed by the Reserve Bank of India (RBI)**. The payment and settlement system is primarily managed by the RBI through various payment and settlement systems like Real Time Gross Settlement (RTGS), National Electronic Funds Transfer (NEFT), Immediate Payment Service (IMPS), etc.

Statement 2 is incorrect: The deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation is **not available to depositors of NBFCs**. The deposit insurance facility provided by the DICGC is available only to depositors of banks. The DICGC provides insurance cover to each depositor in a bank up to a maximum of Rs. 5 lakh for both principal and interest amount held by the depositor in the same capacity and same right.

Statement 3 is correct: Some NBFCs to which the Reserve Bank had given a specific authorisation and have an investment grade rating are allowed to accept/ hold public deposits, but up to a limit.

Statement 4 is correct: Non-Banking Financial Companies (NBFCs) **are not required to maintain a Cash Reserve Ratio (CRR) unlike Scheduled Commercial Banks**. The Cash Reserve Ratio is a certain percentage of the total deposits that commercial banks are required to keep with the Reserve Bank of India (RBI) in the form of cash reserves. The objective of maintaining the CRR is to ensure that banks have enough cash reserves to meet any payment obligations and to maintain the stability of the banking system. However, NBFCs are not required to maintain a CRR as they do not accept demand deposits.

Source: <https://www.rbi.org.in/commonperson/English/Scripts/FAQs.aspx?Id=1167>

<https://blog.forumias.com/pca-framework-for-nbfc-explained-pointwise/>

<https://blog.forumias.com/question/consider-the-following-statements-regarding-nbfc-non-banking-financial-companies-1-nbfc-raise-funds-from-the-public-directly-or-indirectly-and-lend-them-to-ultimate/>

Q.25) Which of the following statements best describes the term ‘Climate Reparations’?

- a) It is a type of Cess levied by the UN Environment Programme, aimed at preventing climate change.
- b) It refers to payment of compensation by developed countries, for their historical emissions, to the developing countries.
- c) It is a type of fine imposed on developing countries for failing to adopt climate change mitigation measures.
- d) It is a type of technology that enables the capturing of carbon dioxide emissions from large sources.

Ans) b

Exp) Option b is the correct answer.

Recently, Pakistan witnessed the worst flooding disaster in its history, therefore it has begun demanding reparations, or compensation, from the rich countries that are mainly responsible for causing climate change.

Option b is correct: Climate reparations refer to compensation/call for money to be paid by the developed countries to the developing countries as a means of addressing the historical contributions that the Developed countries have made (and continue to make) toward climate change. The demand for

compensation for loss and damage from climate disasters is an extension of the universally acknowledged “Polluter Pays” principle that makes the polluter liable for paying not just for the cost of remedial action, but also for compensating the victims of environmental damage caused by their actions. In the climate change framework, the burden of responsibility falls on those rich countries that have contributed most of the greenhouse gas emissions.

Source: <https://indianexpress.com/article/explained/explained-climate/the-idea-of-climate-reparation-8135293/>

Q.26) With reference to the Employees' State Insurance Scheme (ESI), consider the following statements:

1. Casual workers such as those engaged in the construction activities can be covered by this scheme.
2. The scheme requires all employees to pay their contribution to avail benefits under this scheme.
3. The scheme provides cash benefits to male as well as female employee to promote acceptance of sterilisation method.

Which of the statements given above is/are correct?

- a) 1, 2 and 3
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1 only

Ans) c

Exp) Option c is the correct answer.

Employees' state Insurance Corporation of India (ESIC) provides socio-economic protection to the worker population and immediate dependent or family covered under the Employees' State Insurance (ESI) scheme.

Statement 1 is correct: The Supreme Court has held that the definition of employee provided by the ESI Act covers **casual employees employed for a few days** on a work of perennial nature and **they cannot be deprived of the beneficial provisions of the Act**. Further the ESIC has extended the benefits of the ESI Scheme to the workers deployed on the construction sites.

Statement 2 is incorrect: The ESI Scheme is **financed by contributions from employers and employees**. The rate of contribution under the ESI Act 4% (employers' contribution 3.25% and employees' contribution 0.75%). However, **employees, earning less than Rs. 137/- a day as daily wages, are exempted from payment of their share of contribution**. Thus, all employees must pay to avail benefits under ESI scheme is not true.

Statement 3 is correct: ESI scheme to promote acceptance of **sterilization method**, provides sickness **cash benefit equal to full wage for a period of 7 days for vasectomy** and 14 days for **tubectomy**. **Tubectomy and Vasectomy** is a permanent method of contraception for women and men respectively. Hence the scheme provides **cash benefit equal to 14 days for female employee and 7 days for male employee**.

Source: <https://www.esic.nic.in/CIRCULARS/standardnote010111230911.pdf>

<https://www.esic.gov.in/information-benefits#:~:text=to%2050%25%20of-,wage,-for%20a%20maximum>

<https://www.tclindia.in/casual-workers-are-covered-under-the-definition-of-employee-as-defined-in-esi-act-indianlaws/#:~:text=Act%20covers%20the%20E2%80%9C-,casual,-employees%E2%80%9D%20employed%20for>

<https://indianexpress.com/article/business/labour-secy-diverting-esic-money-using-it-to-pay-wages-not-advisable-6374709/>

Q.27) Consider the following statements regarding Cooperative Banks in India:

1. All cooperative banks are registered under Banking Regulation Act, 1949.

2. Non-banking aspects of the cooperative banks are regulated by the National Bank for Agriculture and Rural Development (NABARD).

3. Recently, RBI approval has been made mandatory for appointment of chairman of Cooperative Banks.

How many of the above given statements are correct?

- None of the statements
- Only one statement
- Only two statements
- All the three statements

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect: The Banking Regulation Act came in to force in 1949 and the banking laws were made applicable to cooperative societies in 1966 through an amendment to the Banking Regulation Act, 1949. However, it must be noted here that all cooperative banks do not come under Banking Regulation Act, 1949. **Primary Agricultural Credit Societies and long-term credit co-operatives are outside the purview of the Banking Regulation Act, 1949** and are hence **not regulated by the Reserve Bank**. The NABARD conducts voluntary inspection of State Cooperative Agricultural and Rural Development Bank, apex-level co-operative societies and federations.

Statement 2 is incorrect: In 1966, amendment was made to the Banking Regulation act, 1949. Since then, there is '**duality of control**' over cooperative banks (excluding urban cooperative banks) between the State Registrar of Cooperative Societies/Central Registrar of Cooperative Societies and the Reserve Bank of India. The Reserve Bank regulates and supervises the banking functions and amalgamation and liquidation through the Banking regulation Act, 1949 and the non-banking aspects like registration, management, administration and recruitment are regulated by the State/ Central Governments (not by NABARD).

In 2020, an amendment was introduced to bring Urban Cooperative Banks under the supervision of RBI.

Statement 3 is incorrect: RBI approval is not required for appointment of Chairman/Whole-time Director/Managing Director/CEO in case of Cooperative Banks (i.e. UCBs/StCB/DCCB). But in public interest and to protect the interest of the depositors, if required, RBI can supersede the Board of UCBs/StCB/DCCB.

Source: Indian Economy by Vivek Singh- 5th Edition, Chapter 2

https://www.rbi.org.in/scripts/FS_Overview.aspx?fn=2755

Q.28) With reference to 'Insolvency and Bankruptcy Board of India', consider the following statements:

- The board comes under the purview of Ministry of Personnel, Public Grievances and Pensions.
- The members of the board are appointed by Financial Services Institutions Bureau (FSIB).
- It enforces rules for processes of corporate insolvency resolution and individual bankruptcy under Insolvency and Bankruptcy Code.

Which of the statements given above is/are correct?

- 1 and 2 only
- 3 only
- 2 and 3 only
- 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

The Insolvency and Bankruptcy Board of India ('Board'), also known as IBBI, was established under the Insolvency and Bankruptcy Code, 2016 ('IBC') on 1st October 2016.

Statement 1 is incorrect: Insolvency and Bankruptcy Board of India comes under the **purview of the Ministry of Corporate Affairs, Government of India.**

Statement 2 is incorrect: The Board consists of the following members who are **appointed by the Central Government:**

- 1) A **Chairperson.**
- 2) **Three members from among the officers of the Central Government** equivalent or not below the rank of a Joint Secretary. Out of the three members, each will represent the Ministry of Finance, Ministry of Corporate Affairs and Ministry of Law, ex -officio.
- 3) **One member nominated by the RBI** (Reserve Bank of India), ex-officio.
- 4) **Five other members nominated by the Central Government**, out of which at least three should be whole-time members.

Statement 3 is correct: Insolvency and Bankruptcy Board of India **regulates professionals as well as processes.** It has regulatory oversight over the insolvency professional agencies, insolvency professional entities, insolvency professionals and information utilities. It **enforces rules for processes of corporate insolvency resolution, individual insolvency resolution, corporate liquidation and individual bankruptcy** under the IBC.

Source: <https://ibbi.gov.in/en/about>

<https://cleartax.in/s/insolvency-bankruptcy-board-india>

<https://blog.forumias.com/insolvency-and-bankruptcy-board-of-india-ibbi/>

Q.29) With reference to 'Prompt Corrective Action Framework (PCA)' for Scheduled Commercial Banks, consider the following statements:

1. The framework does not apply to Payment Banks and Small Finance Banks in India.
2. The profitability parameter of the banks is mainly considered by RBI for triggering the action framework.
3. A bank can be placed under PCA framework only on the recommendation of Department of Financial Services, Ministry of Finance.
4. Even when a Bank is placed under PCA, no restriction can be imposed on branch expansion.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1, 2 and 3 only
- d) 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The PCA Framework applies to all Scheduled Commercial Banks **excluding Small Finance Banks, Payment Banks and Regional Rural Banks.**

Statement 2 is incorrect: Capital, Asset Quality and Leverage are the key areas for monitoring in the revised framework. As per the revised guidelines, **profitability parameter has been excluded from its list of triggers.**

Statement 3 is incorrect: A bank is to be placed under the PCA framework **based on the Audited Annual Financial Results and the ongoing Supervisory Assessment made by RBI.** The RBI, and not the Department of Financial Services, Ministry of Finance, has the authority to place a bank under the PCA framework.

Statement 4 is incorrect: Banks placed under PCA are subject to **restrictions on opening new branches, among other things.** These restrictions are imposed by the RBI.

Source: <https://blog.forumias.com/rbi-unveils-revised-pca-framework/>

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<https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=12208&Mode=0#:~:text=The%20objective%20of%20the%20PCA,tool%20for%20effective%20market%20discipline.>

Q.30) The “Dharamshala Declaration”, recently seen in news, is related to:

- to make India a world leader in the tourism sector by 2047.
- to double the contribution of India’s electronic sector to its Gross Domestic Product (GDP) by 2047.
- to strengthen regional cooperation to promote disaster resilient infrastructure in the South Asian region.
- to realise the goal of “Net zero emissions” in India by 2070.

Ans) a

Exp) Option a is the correct answer.

The ‘Dharamshala Declaration’ was adopted at the National Conference on Tourism which sets out long-term and short-term goals for the country in the tourism sector. The National Conference aims to be a platform for sharing of best practices, successful projects, and tourism product opportunities

Option a is correct: The Dharamshala declaration aims to make India a World leader in the tourism sector by 2047. The declaration aims to recognize India’s role in contributing towards global tourism as well as focusing on recovery of domestic tourism.

Source:<https://blog.forumias.com/pitching-india-as-a-signature-destination-dharamshala-declaration/>

Q.31) With reference to the Indian economy, which of the following are correct with respect to Additional Tier 1 (AT1) Bonds?

- They are a type of secured bonds compulsorily backed by a collateral.
- They do not have a maturity period.
- Banks issuing AT1 bonds have no obligation to pay back Principal amount to investors.
- They cannot be traded in secondary markets.

Select the correct answer using the code given below:

- 1 and 2 only
- 1 and 3 only
- 2 and 3 only
- 2 and 4 only

Ans) c

Exp) Option c is the correct answer.

Additional Tier 1 (AT1) bonds appeared in the news as the Bombay High Court recently invalidated the write-off of additional Tier-1 (AT1) bonds issued by private lender Yes Bank. These bonds are a type of perpetual securities which offer higher risk and reward.

Option 1 is incorrect: Additional tier-1 bonds are a type of Unsecured bonds which means the bonds will not be backed up by any capitals of banks. In contrast **Secured bonds** is a debt instrument that is backed by collateral and if the issuer defaults on bond payments, then the title to the underlying assets will be passed to the bond holders.

Option 2 is correct: It is true that AT1 bonds are perpetual and carry no maturity date. Instead, they carry **call options** that allow banks to redeem them after five or 10 years. However, banks are not obliged to use this call option and can opt to pay only interest on these bonds for eternity.

Option 3 is correct: It is true that banks issuing AT1 bonds have no obligation to pay back Principal amount to investors. However, investors will receive interest rates on these bonds until the bonds will be

written off by the banks. If the RBI feels that a bank is on the brink of **collapse** and needs a rescue, it can simply ask the **bank to cancel its outstanding AT-1 bonds without consulting its investors**.

Option 4 is incorrect: AT1 bonds **can be traded in secondary markets** which means AT1 bond holders can sell these bonds to others in the stock market to raise money.

Source: <https://indianexpress.com/article/explained/explained-economics/yes-bank-at1-bonds-bombay-high-court-8395311/>

<https://timesofindia.indiatimes.com/business/india-business/all-you-want-to-know-about-at1-bonds/articleshow/74562287.cms>

Q.32) With reference to Participatory notes (P-notes), consider the following statements:

1. They can only be issued by the Securities and Exchange Board of India.
2. Investments flowing through P-notes are considered as offshore derivative investments (ODIs).
3. Holder of P-notes enjoys voting rights in relation to his/her investment in securities/shares.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect. P-notes are **issued by registered foreign portfolio investors (FPIs)** and not by SEBI, to overseas investors who wish to be part of the Indian stock market without registering themselves directly.

Statement 2 is correct. Investments flowing through P-notes are considered as **offshore derivative investments (ODIs)**. Indian securities market regulator, SEBI issued the new Regulations for Foreign Portfolio Investors, participatory notes where it got formally defined under the tag "Offshore Derivative Instrument" (ODIs) in Section 2(1)(j) of the said regulation.

Statement 3 is incorrect. The P-notes holder **does not enjoy any voting rights** in relation to security/shares referenced. Also, the investor in P-notes **does not own the underlying Indian security**, which is held by the FII who issues the Participatory Notes. Thus, the investors in Participatory Notes derive the economic benefits of investing in the security without actually holding it.

Source: <https://economictimes.indiatimes.com/markets/stocks/news/p-notes-investment-climbs-to-33-month-high-at-rs-91658-crore-in-feb/articleshow/81586273.cms?from=mdr>

[http://www.arthapedia.in/index.php?title=Participatory_Notes_\(PNs\)](http://www.arthapedia.in/index.php?title=Participatory_Notes_(PNs))

Q.33) With reference to Indian Insurance sector, consider the following statements:

1. At present, the Government of India permits 100% Foreign Direct Investment in insurance sector.
2. The Government mandates that all the members of the Board of Directors of all insurance companies must be resident Indians.

Which of the following statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Insurance Companies in India are recognised by the Insurance Regulatory and Development Authority of India, the statutory body under the jurisdiction of the Ministry of Finance. It is tasked with regulating and licensing the insurance and reinsurance industries in India.

Statement 1 is incorrect: Recently the Government of India increased the foreign direct investment (FDI) limit in the insurance sector to 74% from 49%, so 100% FDI so far is not allowed in India.

Statement 2 is incorrect: The increase in the foreign direct investment (FDI) limit in the insurance sector comes with safeguards such as **majority (at least 50%) directors on the Board in health and general insurance companies** would be **resident Indians**. Further at least 50% of directors will be independent directors.

Source: <https://blog.forumias.com/cabinet-clears-74-fdi-in-insurance-sector/>

Q.34) Which of the following statements is **incorrect** with respect to the differences between Old Pension Scheme (OPS) and New Pension Scheme (NPS)?

- Unlike OPS, employee's contribution is generally mandatory in NPS to avail pension benefits.
- Unlike NPS, a ten-year service requirement is necessary to avail benefits under OPS.
- Unlike OPS, Private employees can become beneficiaries of the NPS scheme.
- While the Provident fund facility is available under NPS, it is not available under OPS.

Ans) d

Exp) Option d is the correct answer.

The Central Government had introduced the **National Pension System (NPS)** replacing the Old Pension scheme with effect from January 1, 2004 (except for armed forces). Recently Punjab is considering moving back to Old Pension scheme and some States such as Rajasthan, Chhattisgarh and Jharkhand have already implemented the old pension scheme.

Option a is correct: Employees' contribution is not mandatory under Old Pension Scheme (OPS) (but mandatory under NPS) to avail pension benefits. Under the OPS, employees get a pension post-retirement which is equivalent to **50% of the last drawn salary**. In contrast **employee's contribution is mandatory under New Pension Scheme (NPS)**. In NPS employees contribute to their pension corpus from their salaries with matching contribution from the employer.

Old vs New

A look at the difference between the old and the new pension schemes

Old Pension Scheme	National Pension Scheme
<ul style="list-style-type: none"> The scheme guarantees a life-long income, post-retirement Government bears the expenditure incurred on the pension Under the scheme, a monthly payment is assured, where the amount is equivalent to 50% of the last drawn salary 	<ul style="list-style-type: none"> It is a participatory scheme, where employees contribute to their pension corpus from their salaries, with matching contribution from the government The funds are invested in earmarked investment schemes through Pension Fund Managers On retirement, 60% of the corpus, which is tax-free, is withdrawn while the remaining 40% is invested in annuities, which is taxed



Option b is correct: It is true that a **ten-year service requirement is necessary to avail benefits under OPS**, but it is **not necessary** to avail benefits under NPS. All citizens of India 18 – 60 years of age are eligible under NPS, and **10-year service requirement is not mandatory**.

Option c is correct: It is true that **Private employees cannot become beneficiaries** under the Old Pension Scheme (OPS). But **under NPS the employees of the private entity**, having Indian Citizenship between the age of **18-60 years** are eligible to be registered as subscribers.

Option d is incorrect: The provident fund facility is available both under NPS & OPS. Under the OPS, there was the provision of the **General Provident Fund (GPF)**. GPF is available for all the government employees in India, and it allows all the government employees to contribute a certain percentage of their salary to the GPF. The total amount that is accumulated throughout the employment term is paid to the employee at the time of retirement.

In NPS employees and employers contribute a certain percentage of employees' salary to the provident fund and beneficiaries after retirement can withdraw a part of the pension amount in a lump sum and use the rest to buy an annuity for a regular income.

Source:

<https://www.npstrust.org.in/content/eligibility#:~:text=The%20employees%20of%20the%20corporate,registered%20as%20subscribers%20under%20NPS.>

<https://www.livemint.com/news/india/new-pension-scheme-vs-old-pension-scheme-which-is-better-11664154597501.html>

<https://indianexpress.com/article/explained/old-pension-scheme-debate-economics-politics-explained-8272808/>

Q.35) In the context of techniques for protecting plant varieties, consider the following pairs:

Techniques	Description
1. Field Gene bank	Genetic variation of plants is maintained at ex-situ location.
2. In vitro gene bank	Eliminates all form of viruses and bacteria.
3. Cryo gene bank	Metabolic process and cell divisions of plants will be prevented.

How many pairs are correctly matched?

- Only one pair
- Only two pairs
- All the three pairs
- None of the pairs

Ans) b

Exp) Option b is the correct answer.

The Ninth Session of the Governing Body (GB9) of the **International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)** was concluded recently in New Delhi. The GB9 session of ITPGRFA was inaugurated by the **Union Minister of Agriculture & Farmers' Welfare**. Following are the conservation of genetic variation of plant resources.

Pair 1 is correct: Field gene bank is one of the techniques in the strategy for plant genetic conservation. It is an **ex-situ method where genetic variation is maintained away from its original location**. In this

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method samples of a species and genetic variations are transferred and conserved as living collections in gene banks. Field gene bank is the most common method of conserving genetic resources with recalcitrant seeds and vegetatively propagated plants.



Pair 2 is incorrect: In vitro (in glass) conservation involves conserving parts of plants in flasks or tubes in artificial medium, under controlled environments, normally in sterile conditions. One of the major advantages of in vitro conservation of genetic resources is that it can provide disease-free material. However, in vitro cultures are free of fungi and most bacteria while viruses can still be present.



Pair 3 is correct: Cryo gene bank involves saving genetic resources of plants under extremely low temperature (-196 degree celsius). In cryo gene banks all metabolic processes and cell divisions are arrested which made this method suitable for long-term storage of genetic resources of species.



Source:<https://ebi.gov.et/biodiversity/conservation/field-gene-banks/#:~:text=Field%20gene%20bank%20is%20one,and%20conserved%20as%20living%20collections.https://croptgenebank.sgrp.cgiar.org/index.php/procedures-mainmenu-242/conservation-mainmenu-198/cryo-bank-mainmenu-201#:~:text=metabolic%20processes%20and%20cell%20divisions%20are%20arrested.https://croptgenebank.sgrp.cgiar.org/index.php/procedures-mainmenu-242/conservation-mainmenu-198/in-vitro-bank-mainmenu-200>

Q.36) Consider the following statements regarding ‘Qualified Institutional Placement’:

1. It is a tool used by Listed Companies to raise capital domestically from institutional investors.
2. Foreign Institutional Investors are barred by SEBI to invest in public companies through Qualified Institutional Placement route.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

A qualified institutional placement (QIP) is a way for listed companies to raise capital without having to submit legal paperwork to market regulators. It is common in India and other Southeast Asian countries. The Securities and Exchange Board of India (SEBI) created the rule to avoid the dependence of companies on foreign capital resources.

Statement 1 is correct. Qualified Institutional Placement enables the listed companies to raise finance through the issue of securities to qualified institutional buyers (QIBs). It is a tool used by **publicly listed companies to raise capital (funds) domestically from institutional investors.**

Statement 2 is incorrect. Foreign institutional investor registered with SEBI are allowed to place investment under Qualified Institutional Placement. Only the group of investors, who follow certain regulations and rules formulated by SEBI are allowed to invest through Qualified Institutional Placement process. This group of investors is collectively known as a Qualified Institutional Buyer (QIB). According to SEBI, QIBs are defined as follows: Scheduled commercial banks; Mutual funds; **Foreign institutional investor** registered with SEBI; Multilateral and bilateral development financial institutions; **Venture capital funds** registered with SEBI. **Foreign Venture capital investors** registered with SEBI, State Industrial Development Corporations, Insurance Companies registered with the Insurance Regulatory and Development Authority (IRDA), Provident Funds with minimum corpus of Rs.25 crores, Pension Funds with minimum corpus of Rs. 25 crores, Public financial institution as defined in Companies Act, 2013;”

Source: All you need to know about Qualified Institutional Placement QIP and Qualified Institutional Buyer QIB -Atif Ahmed - BW legalworld (businessworld.in)

Qualified Institutional Placement (QIP) Definition (investopedia.com)

Q.37) With reference to ‘Pradhan Mantri Suraksha Bima Yojana (PMSBY)’, consider the following statements:

1. The Scheme provides accidental life cover to people in the age group of 18 to 70 years.
2. It provides benefits to family of the victim in case of his suicidal death.
3. The scheme is administered through the Public Sector General Insurance Companies.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

Pradhan Mantri Suraksha Bima Yojana (PMSBY) was launched in the year 2015. The nodal ministry is the Ministry of Finance.

Statement 1 is correct: The Pradhan Mantri Suraksha Bima Yojana offers a life cover of Rs. 2 lakhs all its account holders. This life cover is provided in case of accidental death or permanent disability. **Any individual aged between 18 years to 70 years** are eligible to apply for the scheme.

Statement 2 is incorrect: As per Pradhan Mantri Suraksha Bima Yojana, any accidental death, murder or disability due to natural calamities is covered under this scheme. **Whereas any suicidal death is not covered under Pradhan Mantri Suraksha Bima Yojana.** Also, the family members will not be provided with any benefits in case of suicidal deaths.

Statement 3 is correct: Pradhan Mantri Suraksha Bima Yojana is offered by **Public Sector General Insurance Companies or any other General Insurance Company** who are willing to offer the product on similar terms with necessary approvals and tie up with banks for this purpose.

Source: [https://financialservices.gov.in/insurance-divisions/Government-Sponsored-Socially-Oriented-Insurance-Schemes/Pradhan-Mantri-Suraksha-Bima-Yojana\(PMSBY\)](https://financialservices.gov.in/insurance-divisions/Government-Sponsored-Socially-Oriented-Insurance-Schemes/Pradhan-Mantri-Suraksha-Bima-Yojana(PMSBY))

<https://jansuraksha.gov.in/Files/PMSBY/ENGLISH/FAQ.pdf>

https://www.indiapost.gov.in/Financial/DOP_PDFFiles/FAQ%20PMSBY.pdf

Q.38) When there is a significant increase in the time deposits of the banks, which of the following standard measures of money supply in an economy would increase?

1. Reserve Money (M0)
2. Narrow Money (M1)
3. Broad Money (M3)

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 and 3 only
- c) 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

The money supply is the total amount of money used by the general public at a given point in time.

M0, M1, M2, M3, and M4 are **different measures of money supply** that are commonly used to track the amount of money in circulation in an economy.

- 1) **Reserve Money (M0):** Other names include High-Powered Money, Financial Base, Base Money, etc. M0 is calculated as follows: **Money in circulation + Bankers' deposits + Other deposits with RBI.** It is the economic foundation's currency.
- 2) **Narrow Money (M1):** M1 equals **money in circulation plus demand deposits in the banking system (current and savings accounts)** plus additional deposits with the Reserve Bank of India (RBI).
- 3) **Narrow Money (M2):** **Post Office Savings, Bank Savings Deposits** added to M1 equals M2.
- 4) **Broad Money (M3):** M3 equals **M1 plus time deposits made with banks.**
- 5) **Broad Money (M4):** M4 is equal to M3 plus any deposits made at post office savings banks.

Option 1 and 2 are incorrect: Reserve Money (M0) includes the currency in circulation and the reserves held by the central bank, while Narrow Money (M1) includes the most liquid forms of money such as currency in circulation and demand deposits. **Time deposits are not included in M0 or M1,** and hence an increase in time deposits will not have a significant effect on these measures of money supply.

Option 3 is correct: M3 includes **demand deposits and time deposits.** Hence, when there is an increase in time deposits, it will lead to an increase in M3.

Source: Ramesh Singh

Q.39) With reference to the liquidity management, Regional Rural banks (RRBs) are allowed to access which of the following instruments?

1. Liquidity Adjustment Facility
2. Marginal Standing Facility
3. Call Money Market
4. Notice Money market

Select the correct answer using the codes given below:

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Liquidity Adjustment Facility (LAF) has been **extended** to RRB. It is a tool used in monetary policy by the Reserve Bank of India (RBI). It enables banks to borrow money through repurchase agreements (repo) or banks to lend to the RBI using reverse repo contracts.

Statement 2 is correct: Marginal Standing Facility (MSF) has been **extended** to RRBs. It is a facility allowed to be used by banks. In this, planned commercial banks can lend extra amount of immediate cash from the RBI by dipping into their Statutory Liquidity Ratio (SLR) collection up till a limit at a penal rate of interest.

Statement 3 is correct: Call Money Market has been extended to RRB. Call money is also referred to as the money at call. It is a short-term loan which is due to be paid immediately in full as and when demanded by the lender. Under call money market, funds are transacted on overnight basis.

Statement 4 is correct: Notice money market has been extended to RRB. It allows the money at notice. It is a short-term loan which is due to be paid after serving the notice. Under notice money market, funds are transacted for the period between 2 days and 14 days.

Source: https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=50748

<https://cleartax.in/g/terms/liquidity-adjustment-facility> (Statement 1 explanation)

[https://cleartax.in/s/monetary-policy-of-india-](https://cleartax.in/s/monetary-policy-of-india-rbi#:~:text=Marginal%20Standing%20Facility%20(MSF)%3A,a%20penal%20rate%20of%20interest.)

[rbi#:~:text=Marginal%20Standing%20Facility%20\(MSF\)%3A,a%20penal%20rate%20of%20interest.](https://cleartax.in/s/monetary-policy-of-india-rbi#:~:text=Marginal%20Standing%20Facility%20(MSF)%3A,a%20penal%20rate%20of%20interest.)

(Statement 2 Explanation Part)

<https://cleartax.in/g/terms/call-money> (Statement 3 explanation)

Q.40) With reference to “Blue Transformation Roadmap 2022-30”, consider the following statements:

1. The roadmap was released by the Food and Agricultural Organisation (FAO).
2. The roadmap envisages awarding ‘Blue flag’ status to coastal locations satisfying the environmental standards provided by this roadmap.
3. The roadmap aims to maximise the contribution of aquatic food systems to the Sustainable Development Goals (SDGs).

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Blue transformation Roadmap 2022-30 outlines a roadmap for the transformation of aquatic food systems, The road map focuses on the elements that would maximise the contribution of aquatic food systems to the Sustainable Development Goals (SDGs).

Statement 1 is correct: The Food and Agriculture Organisation (FAO) released Blue transformation Roadmap 2022-30. The FAO is a United Nations organisation that leads international efforts to defeat hunger and improve nutrition and food security.

Statement 2 is incorrect: The roadmap does not give the “Blue flag” tag to coastal locations. Blue flag tag is given by Denmark based Non-governmental non-profit organisation called **Foundation for Environmental Education (FEE)** under its Blue Flag programme. In order to qualify for the Blue Flag, a series of stringent environmental, educational, safety, and accessibility criteria must be met and maintained.

Statement 3 is correct: It is true that **Blue transformation Roadmap 2022-30 aims to maximise the contribution of aquatic food systems** to the Sustainable Development Goals (SDGs). The roadmap recognises the importance of aquatic food systems as drivers of employment, economic growth, social development and environmental recovery, which all underpin the SDGs.

Source: <https://www.fao.org/documents/card/en/c/cc0459en/>

[https://indianexpress.com/article/explained/explained-climate/indian-beaches-blue-flag-coveted-eco-label-](https://indianexpress.com/article/explained/explained-climate/indian-beaches-blue-flag-coveted-eco-label-8233731/#:~:text=According%20to%20the%20FEE%2C%20%E2%80%9Cthe,must%20be%20met%20and%20maintained.%E2%80%9D)

[8233731/#:~:text=According%20to%20the%20FEE%2C%20%E2%80%9Cthe,must%20be%20met%20and%20maintained.%E2%80%9D](https://indianexpress.com/article/explained/explained-climate/indian-beaches-blue-flag-coveted-eco-label-8233731/#:~:text=According%20to%20the%20FEE%2C%20%E2%80%9Cthe,must%20be%20met%20and%20maintained.%E2%80%9D)

Q.41) Consider the following statements:

1. The lowering of bank rate by the Reserve bank of India may lead to more liquidity in the market.
2. An increase in Statutory Liquidity Ratio means that commercial banks will have less money for lending.
3. Loan-to-value is a ratio used in mortgage lending to determine the amount necessary to put in a down-payment.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Any reduction in the bank rate and the repo rate will lead to borrowers getting loans at lower interest rates. **The lowering of the Bank Rate makes** the domestic banks borrow money at a cheap rate which in **turn increases the liquidity in the market.**

Statement 2 is correct: The maintaining of liquid assets by the commercial banks at the rate fixed by RBI is called **Statutory Liquidity Ratio regulation**. SLR ensures the liquidity and solvency of banks, which is fundamental for the sound banking system. Every scheduled bank in India requires maintaining liquid assets in the form of cash, gold and unencumbered approved securities and value of which shall not be less than 25 percent of demand and time liabilities of the bank. The implication of change in SLR is same as the change in CRR in regulating the expansion of credit. SLR is a statutory provision under Section 24 of the Banking Regulation Act 1949 and it is in addition to the Cash Reserve Ratio to be maintained by the bank. The SLR regulation is binding on all the commercial banks in India. RBI is with the power to increase the SLR rate, as and when it desires to do so. **An increase in SLR rate means that commercial banks shall have to invest more money in Government and other approved securities** which deplete lendable sources of the banks.

Statement 3 is correct: Loan-to-value (LTV) is an often-used **ratio in mortgage lending** to determine the **amount necessary to put in a down-payment** and whether a lender will extend credit to a borrower.

Most lenders offer mortgage and home-equity applicants the lowest possible interest rate when the loan-to-value ratio is at or below 80%. Lenders assess the LTV ratio to determine the level of exposure to risk they take on when underwriting a mortgage. When borrowers request a loan for an amount that is at or near the appraised value (and therefore has a higher LTV ratio), lenders perceive that there is a greater chance of the loan going into default.

Source: <https://www.investopedia.com/terms/l/loantovalue.asp>

<https://bankingschool.co.in/legal-and-regulatory-aspects-of-banking/reserve-bank-functions-and-news/impact-of-changes-in-slr-and-crr/#:~:text=The%20change%20in%20SLR%20and,the%20economy%20of%20the%20country.>

<https://www.investopedia.com/articles/investing/112714/regulations-govern-banking-india.asp>

Q.42) Consider the following statements with reference to Government Securities (G-Secs):

1. Individuals cannot buy G-Secs in the primary market.
2. Non-scheduled Urban Cooperative Banks (UCBs) cannot buy G-Secs in the primary market.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Government Securities G-secs are debt instruments issued by the government to borrow money. The two key categories are treasury bills – short-term instruments which mature in 91 days, 182 days, or 364 days, and dated securities – long-term instruments, which mature anywhere between 5 years and 40 years.

Statement 1 is incorrect: Opening a **Retail Direct Gilt (RDG) account** will **allow individuals to buy Government securities directly in the primary market** (auctions) as well as buy/sell in the secondary market. For the retail investor, Government securities offer an option for long term investment.

Statement 2 is incorrect: All non-E-Kuber members including **non-scheduled UCBs can participate in the primary auction** through scheduled commercial banks or PDs (called as Primary Members-PMs) to buy Government Securities. For this purpose, the UCBs need to open a securities account with a bank / PD – such an account is called a **Gilt Account**. A Gilt Account is a dematerialized account maintained with a scheduled commercial bank or PD.

Source:

<https://www.rbi.org.in/Scripts/FAQView.aspx?Id=145>

https://m.rbi.org.in/scripts/FS_FAQs.aspx?Id=79&fn=2757

Q.43) Which of the following are the possible effects of *Operation Twist*, sometimes seen in the news?

1. Long term bond yields will fall.
2. Long term loans will become costlier
3. Short term interest rates will increase
4. Saving will be less desirable

Select the correct option using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Under Operation Twist, RBI will conduct simultaneous purchase and sale of government securities that is it will purchase the longer-term maturities from the market and simultaneously sell the shorter duration ones. Operation Twist involves using proceeds from selling short-term bonds to buy long-term bonds in the market simultaneously.

Option 1 is correct: Now as more long-term bonds are bought, their prices will go up, and subsequently their yield will fall. As Bond yield is inversely proportional to market price of bonds thus as prices go up the yield will fall.

Option 2 is incorrect: As long-term bond yields fall due to buying of long-term bonds by RBI, the long-term interest rates will fall as well. This will result in cheaper (not costlier) long-term loans like those for cars, houses, etc for retail consumers, as well as for the government.

Option 3 is correct: In Operation Twist, Short Term Bonds are sold, thus driving their prices down, and increasing the interest rate in the short term.

Option 4 is correct: Lower longer-term yields help boost the economy by making loans less expensive for those looking to buy homes, purchase cars, and finance projects, while saving becomes less desirable because it doesn't pay as much interest.

Source: <https://www.livemint.com/opinion/online-views/decoding-operation-twist-the-act-of-rbi-during-covid-19-11599977343770.html>

<https://indianexpress.com/article/explained/reserve-bank-of-india-operation-twist-omo-6178883/>

Q.44) Consider the following statements with reference to Exchange Traded Funds (ETFs):

1. It is a basket of securities that is traded on the stock exchange.
2. Like mutual funds, they are only traded once a day after the market closes.
3. There are no underlying assets involved in these operations.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: An ETF is a basket of securities, shares of which are sold on a stock exchange. An exchange traded fund (ETF) is a type of security that tracks an index, sector, commodity, or other asset, but which can be purchased or sold on a stock exchange the same way a regular stock. ETFs are a mix of open-ended and close-ended mutual funds.

Statement 2 is incorrect: ETF share prices fluctuate all day as the ETF is bought and sold; this is different from mutual funds that only trade once a day after the market closes. ETFs can be traded at any point during the trading day.

Statement 3 is incorrect: Commodities, like gold, are widely traded in ETFs. There isn't any physical delivery of commodity. The investor is just provided with an ETF certificate, similar to a stock certificate.

Knowledge Base:

Bharat 22 is an ETF that will track the performance of 22 stocks of Central Public Sector Enterprises (CPSE), Public Sector Banks and strategic holding of SUUTI (Specified Undertaking of Unit Trust of India). The 22 stocks are diversified across six sectors such as (a) basic materials (b) energy (c) finance (d) FMCG (e) industrials and (f) utilities.

Bharat-22 ETF is managed by the ICICI Prudential AMC while Asia Index is the index provider.

Source: <https://blog.forumias.com/all-about-exchange-traded-funds/>

<https://www.fool.com/knowledge-center/what-is-an-umbrella-fund.aspx>

Q.45) With reference to operation ‘Megh Chakra’, consider the following statements:

1. It was launched by the Indian Armed Forces in association with State Police forces.
2. It aims to provide free education to children of arrested/dead terrorists.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The operation code-named Megh Chakra was carried out by the Central Bureau of India (CBI) following the inputs received from Interpol’s Singapore special unit which in turn received information from the authorities in New Zealand.

Statement 1 is incorrect: Operation Megh Chakra was carried out **by the Central Bureau of Investigation (CBI)** (not by the Indian armed forces) in September 2022. Under this operation, CBI conducted searches at 59 locations across 20 States and one Union Territory, as part of a **pan-India drive against the circulation and sharing of Child Sexual Abuse Material (CSAM)**.

Statement 2 is incorrect: Operation Megh-Chakra was launched against **circulation and sharing of child sexual abuse material online**, not related to educating the children of arrested/dead terrorist. The operation sought to gather information from various law enforcement agencies in India and engaging with the global law enforcement agencies to arrest the circulation of child sexual abuse material online.

Source: <https://www.thehindu.com/news/national/sharing-of-child-sexual-abuse-material-cbi-raids-56-places-in-19-states-and-1-ut/article65930142.ece>

Q.46) Consider the following statements regarding Real-Time Gross Settlement (RTGS) and National Electronic Funds Transfer (NEFT):

1. RTGS is available round the clock throughout the year, whereas transactions under NEFT can be carried out only during the bank working hours.
2. Both the modes of payment are not bound by any upper or lower threshold of the transaction amount.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

- 1) National Electronic Funds Transfer (NEFT) is a nation-wide centralised payment system owned and operated by the Reserve Bank of India (RBI).
- 2) The acronym 'RTGS' stands for Real Time Gross Settlement, which can be explained as a system where there is continuous and real-time settlement of fund-transfers, individually on a transaction-by-transaction basis.

Statement 1 is incorrect: NEFT ensures round the clock availability throughout the year and same is the case with RTGS transactions. Before December 2019, RBI had fixed timings during which NEFT transactions can be processed. However, from 2020, NEFT transactions can be performed round the clock throughout the year. RTGS is available round the clock throughout the year with effect from December 14, 2020.

Statement 2 is incorrect: The RTGS system is primarily meant for large value transactions. The minimum amount to be remitted through RTGS is ₹ 2,00,000/- with no upper or maximum ceiling.

Whereas, there is no limit imposed by the RBI for funds transfer through NEFT system. However, a member bank may place amount limits based on its own risk perception with the approval of its Board.

Source: <https://www.businessinsider.in/finance/banks/news/what-is-difference-between-rtgs-and-neft-payment-system-timing-charges-and-limits/articleshow/79790250.cms>

<https://m.rbi.org.in/Scripts/faqview.aspx?Id=60#:~:text=Step%2D3%3A%20The%20pooling%20centre,for%20the%20next%20available%20batch.>

<https://m.rbi.org.in/scripts/FAQView.aspx?Id=65#:~:text=It%20is%20a%20safe%20and,amount%20cap%20set%20by%20RBI.>

Q.47) In context of Indian stock market, consider the following statements:

1. Scrip Issue is the process of creating new shares which are given free of charge to existing shareholders.
2. Badla is carrying forward of transactions from one settlement period to another without effective delivery.
3. Kerb dealings are the transactions of stocks which take place outside the stock exchanges.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

A financial instrument is defined as a document that indicates an asset to one individual (this person is owed) and a liability (this person owes) to another individual. Not all financial instruments are traded on the stock market. The financial instruments that are specifically traded on the stock market are shares/stocks, derivatives, bonds and mutual funds.

Statement 1 is correct: In corporate finance, a **scrip issue**, is the process of **creating new shares** which are given free of charge to existing shareholders. Bonus shares issue is also known as: Bonus issue/Scrip issue/Capitalisation issue. These are additional shares given to shareholders without any charges.

Statement 2 is correct: Badla is carrying forward of transactions from one settlement period to another without effective delivery. This is permitted only in specified securities and is done at the making up price which is usually the closing price of the last day of settlement. Badla Charge is the consideration or interest paid to the seller by the buyer for carrying over a transaction from one settlement period to another.

Undha Badla and Ulta Badla are called backwardation and they are the reverse of Badla.

Badla led to some unintended and undesirable consequences and, was finally banned in 2001 by the capital markets regulator, Securities and Exchange Board of India.

Statement 3 is correct: Kerb Dealings are the transactions of stocks which take place outside the stock exchanges—unofficially and take place after the normal trading hours.

It is also associated with the trading of shares outside the system of official stock markets or at hours when those stock markets are closed:

The reluctance of banks to lend to private companies forced the city's entrepreneurs to turn to the kerb market.

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Source: <https://www.indiaonline.com/knowledge-center/share-market/what-are-bonus-shares>
<https://www.livemint.com/Money/BvQaMQwN3jKefmJvuVVEPP/Dejargoned--Badla-trading.html>

Q.48) Consider the following statements:

1. Under Liquidity adjustment facility (LAF), only scheduled commercial banks are eligible to access funds from RBI.
2. Under Marginal standing facility (MSF), banks cannot borrow money by pledging Government Securities that are part of bank's SLR (Statutory Liquidity Ratio) quota.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: Under, liquidity adjustment facility (LAF) all clients of RBI are eligible to access funds. This includes All Scheduled Commercial Banks (excluding Regional Rural Banks) and Primary Dealers (PDs). Whereas under marginal standing facility only scheduled commercial banks can bid.

Statement 2 is incorrect: Under marginal standing facility, bank can sell the Government security from its SLR quota to RBI while this cannot be done for the LAF.

Source: <https://economictimes.indiatimes.com/definition/marginal-standing-facility>

Q.49) With reference to Call money Market, consider the following statements:

1. Call money is non-interest-earning financial loan with a set maturity date.
2. Call money is a short-term loan from one to 14 days made by a financial institution to another financial institution.
3. Call money is used by brokerage firms for short-term funding needs.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. Call money, also known as "money at call," is a short-term financial loan that is payable **immediately, and in full, when the lender demands it**. Unlike a term loan, which has a set maturity and payment schedule, call money does not have to follow a fixed schedule, nor does the lender have to provide any advanced notice of repayment. It is an interest paying loan but due to its short-term nature, it does not feature regular principal and interest payments which longer term loans might.

Statement 2 is correct. Call money is a short-term, interest-paying loan from **one to 14 days** made by a **financial institution to another financial institution**. Due to the short-term nature of the loan, it does not feature regular principal and interest payments, which longer-term loans might. The interest charged on a call loan between financial institutions is referred to as the call loan rate.

Statement 3 is correct. Call money is typically **used by brokerage firms** for short-term funding needs. Dealing in call money allows banks the opportunity to earn interest on surplus funds.

Source: <https://www.investopedia.com/terms/c/call-money.asp>

Q.50) Consider the following statements about Rural Electrification Corporation Limited:

1. It is a Navratna Company functioning under the administrative control of the Ministry of Rural Development.
2. It provides loans to the Central and State Sector Power Utilities and Rural Electric Cooperatives for building power generation projects.
3. It is the nodal agency for Pradhan Mantri Sahaj Bijli Har Ghar Yojana and Deen Dayal Upadhaya Gram Jyoti Yojana.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Union Cabinet has recently approved the sale of a majority stake in Rural Electrification Corporation (REC) to Power Finance Corporation (PFC). REC came into being in 1969 to articulate a response to the pressing exigencies of the nation.

Statement 1 is incorrect: Rural Electrification Corporation is a Navratna Company functioning under the purview of the Ministry of Power.

Statement 2 is correct: It takes the role of public Infrastructure Finance Company in India's power sector and promotes rural electrification projects across India. The company provides loans to Central/ State Sector Power Utilities, State Electricity Boards, Rural Electric Cooperatives, NGOs and Private Power Developers for power generation projects.

Statement 3 is correct:

REC is the Nodal Agency for Government of India's flagship schemes viz. Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGAYA), Deen Dayal Upadhaya Gram Jyoti Yojana (DDUGJY) and National Electricity Fund (NEF). Further, alongwith PFC, REC has also been designated as Nodal Agency for Revamped Distribution Sector Scheme (RDSS). Besides, REC assists Ministry of Power in monitoring of the Ujjwal Discom Assurance Yojana (UDAY) which seeks to operationally reform and financially turnaround the power distribution companies of the country.

Knowledge Base:

PFC is essentially a state-run non-banking financial company that focuses on power infrastructure, while REC is an implementation and finance company with a focus on generation.

SAUBHAGYA- Pradhan Mantri Sahaj Bijli Har Ghar Yojana was launched to achieve universal household electrification covering every village and every district in the country. All DISCOMs including Private Sector DISCOMs, State Power Departments and RE Cooperative Societies are eligible for financial assistance under this scheme.

Source: <https://recindia.nic.in/corporate-profile>

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Q.1) Consider the following statements regarding Value Added Tax (VAT):

1. It is a single point tax levied during the sale of a product.
2. After the introduction of the Goods and Services Tax, Vat is completely abolished in India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Value Added Tax (VAT) is a form of sales tax. It is collected in stages on transactions involving sales of goods. Tax paid on purchases (input tax) is rebated against tax payable on sales (output tax). VAT is levied on sales of all taxable goods. VAT is not levied if sales of goods are not made in the course of or in furtherance of business.

Statement 1 is incorrect: The value added tax (VAT) is a method of tax collection as well as the name of a state level tax (at present) in India. It is collected in many stages on transactions involving sales of goods (not levied on any single stage only). Basically, it is a type of indirect tax levied on goods and services for value added at every point of production or distribution cycle, starting from raw materials and going all the way to the final retail purchase. To remove the cascading effect of single point tax collection VAT was introduced.

Statement 2 is incorrect: Currently the **majority of the state's indirect taxes has been subsumed under GST**. After the implementation of the GST, **VAT on petroleum (petroleum crude, petrol, high speed diesel, natural gas and aviation turbine fuel) and alcohol** is still under the purview of states.

Source: Indian Economy by Ramesh Singh

Q.2) Consider the following statements regarding taxation in India:

1. Direct tax has incidence and impact both on the same individual.
2. In indirect tax burden of tax can be shifted to someone else.
3. Indirect taxes are progressive in nature.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The point where tax looks as being imposed is known as the incidence of tax—the event of tax imposition. The point where tax makes its effect felt is known as the impact of tax—the after effect of tax imposition.

Statement 1 is correct: The tax which has incidence and impact both at the same point is known as the direct tax. In the case of direct tax, **the burden can't be shifted by the taxpayer to someone else**. These are largely taxes on income or wealth. Income tax, corporation tax, property tax, inheritance tax and gift tax are examples of direct tax.

Statement 2 is correct: The tax which has incidence and impact at the different points is known as the indirect tax. So, in the case of indirect tax, the **burden of tax can be shifted by the taxpayer to someone else**. Indirect tax has the effect of raising the price of the products on which they are imposed. Customs duty, central excise, service tax and value added tax are examples of indirect tax.

Statement 3 is incorrect: Indirect tax is **regressive tax** as it impacts those on lower incomes more than high-income earners. Although everyone pays the same price for the same product, every income is different and, therefore, you may end up paying more as a percentage of your income than a higher income earner.

Source: <https://economictimes.indiatimes.com/definition/direct-tax>

Indian Economy by Ramesh Singh

Q.3) Consider the following statements regarding taxation system:

1. Horizontal equity means individuals having the same income should pay the same amount in taxes.
 2. The proportional taxation method refers to higher rates of tax for individuals with higher income levels.
- Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Taxation debate in developing economies revolves around whether progressive or regressive taxation, direct tax or indirect tax collections should be higher, whether revenue deficit is better, etc.

Statement 1 is correct: Horizontal equity is an economic theory that states that individuals with similar income and assets should pay the same amount in taxes. Horizontal equity should apply to individuals considered equal regardless of the tax system in place. The more neutral a tax system is the more horizontally equitable it is.

Statement 2 is incorrect: In proportional taxation method, there is neither progression nor regression from the point of view rate of taxes point of view. Such taxes have **fixed rates for every level of income or production**, they are neutral from the poor or rich point view or from the point of view of the levels of production. On the other hand, in progressive taxation there is higher rates of tax for higher income levels.

Source: Indian Economy by Ramesh Singh + Investopedia

Q.4) Consider the following statements regarding Goods and Services Tax (GST) in India:

1. There has been a consistent rise in GST collections since its introduction in 2017.
2. It is a destination-based tax on consumption of goods and services.
3. Harmonized System Nomenclature (HSN) for goods used under GST is developed by the World Trade Organization.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Goods and Services Tax Act came into force from 1st July 2017. It has rationalised indirect taxation and improved compliance significantly.

Statement 1 is incorrect: **GST collection has not increased consistently since its inception.** In the financial year prior to the onset of the pandemic i.e., 2019-20, the Gross GST collection was Rs.12.11 lakh crores. However, the overall GST collections for 2020-21 were lower than the previous year with only Rs.

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11.32 lakh crores. Since the launch of GST, revenues fell short of the Budget estimates, however, 2020-21 was the first instance when the revenue was lower than the previous year.

Year	GST Collection (Rs. In Crores)
FY 2017-18	7,19,078
FY 2018-19	11,77,370
FY 2019-20	12,22,117
FY 2020-21	11,36,803
FY 2021-22	14,76,000

Statement 2 is correct: Goods and Service Tax (GST) is levied on the supply of goods and services. Goods and Services Tax Law in India is a comprehensive, **destination-based consumption tax** that is levied on value addition in supply chain. GST is a single domestic indirect tax law for the entire country.

Statement 3 is incorrect: The World Customs Organization (and not the World Trade Organization) developed the HSN code, or Harmonized System Nomenclature code number, as an internationally accepted commodity description and coding system. More than 200 countries use the HSN code as the basis for their customs tariffs. Currently, over 98% of international trade merchandise is classified using the HSN code. **With the HSN code serving as a universal classification for goods, the Government has decided to use the HSN code for GST classification and levy.**

Knowledge Base: In the recent budget 2023-24 government has made the GST regime more liberal with decriminalisation of cases and easier compliance norms. GST has also been rationalised for some imported items, tobacco products etc.

Source : <https://indianexpress.com/article/business/economy/gst-collections-february-finance-ministry-8473529/>

<https://gstcouncil.gov.in/gst-rates>

Indian Economy by Ramesh singh

Q.5) Consider the following statements with reference to the Integrated Cryogenic Engine Manufacturing Facility:

1. India is the only country in Asia to conduct a successful test flight for Cryogenic Engine.
2. Cryogenics is the science that addresses the production and behavior of materials at very low temperatures.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: In January 2014 India successfully flew GSLV-D5 with a cryogenic engine and became the sixth country in developing cryogenic engines. Cryogenic engines are the most widely used engines world over in launch vehicles. **India is not the only country in Asia to conduct successful test flight for Cryogenic Engine.** Due to the complex nature of the cryogenic engine, till date only a few countries like the **USA, France, Japan, China and Russia have mastered the cryogenic technology.**

Statement 2 is correct: Cryogenics is the science that addresses the production and behaviour of materials at very low temperatures. It could be used to include all temperatures below the freezing point of water (0 C). In particular, efficient heat exchangers are required to reach very low temperatures. Over

the years the term cryogenics has generally been used to refer to temperatures below approximately -150 C.

Source: https://www.business-standard.com/article/companies/hal-sets-up-rs-208-crore-rocket-engine-manufacturing-facility-for-isro-122092600480_1.html#:~:text=On%20January%20five%2C%202014%20India,developing%20cryogenic%20engines%2C%20it%20said.

<https://indianexpress.com/article/cities/bangalore/hals-rocket-engine-manufacturing-facility-inaugurated-8175333/>

[https://trc.nist.gov/cryogenics/aboutCryogenics.html#:~:text=Cryogenics%20is%20the%20science%20that,of%20water%20\(0%20C\).](https://trc.nist.gov/cryogenics/aboutCryogenics.html#:~:text=Cryogenics%20is%20the%20science%20that,of%20water%20(0%20C).)

Q.6) Consider the following statements regarding commodities transaction tax (CTT) and securities transaction tax (STT) in India:

1. In India CTT is levied on all agricultural and non-agricultural commodities derivative contracts.
2. CTT primarily levied to discourage excessive speculation in commodities market.
3. STT is used to control the evasion of tax on capital gains.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Commodities transaction tax (CTT) and securities transaction tax (STT) are taxes which are charged on exchange-traded commodities and their derivatives in India. The purpose for levying CTT and STT is to increase tax revenue and reduce market volatility.

Statement 1 is incorrect: Commodities Transaction Tax (CTT) is a tax levied in India, on transactions done on the domestic commodity derivatives exchanges. The Union Budget 2013–14 has introduced the commodities transaction tax in India. It is **confined to Non-Agricultural Commodities such as Gold, Silver, commodity futures contracts.**

Statement 2 is correct: Like all financial transaction taxes, CTT also **aims at discouraging excessive speculation**, which is detrimental to the market and to bring parity between securities market and commodities market. Futures contracts are financial instruments and provide for price risk management and price discovery of the underlying asset commodity or currency.

Statement 3 is correct: The Securities Transaction Tax (STT) is a type of ‘financial transaction tax’ levied in India on transactions done on the domestic stock exchanges. Securities transaction tax is levied on gains from securities such as equities, options etc. in domestic stock exchange. **STT is used as a measure to control the evasion of tax on capital gains as it is a direct tax levied on source.**

Source: Indian Economy by Ramesh singh

Q.7) Consider the following statements regarding various types of taxes:

1. Minimum Alternate Tax is levied to bring into the tax net certain ‘zero tax companies.’
2. Alternate minimum tax is levied on both corporate as well as non-corporate entities.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: MAT is a tax levied under Income Tax Act of India, 1961. There are several **zero tax companies** that book high profit but pay almost nil taxes by rolling out substantial dividends to their shareholders. MAT is used to limit tax exemptions availed by companies, so that they pay at least a minimum amount of corporate tax to the government. The key reason for the introduction of MAT is to **ensure minimum levels of taxation for all domestic and foreign companies** in India.

Statement 2 is incorrect: Under the Income Tax Act of India, 1961, certain tax benefits can significantly reduce a taxpayer's regular tax amount. The **alternative minimum tax (AMT)** applies to taxpayers with high economic income by setting a limit on those benefits. It helps to ensure that those taxpayers **pay at least a minimum amount of tax. It is the tax levied on non-corporate (not on corporates) entities similarly as MAT is applied on corporate entities.**

Knowledge Base: Currently Minimum alternate tax rate is 15% for corporate companies operating in India. In case of non-corporate taxpayer, AMT is levied at 18.5%* of adjusted total income.

Source : <https://incometaxindia.gov.in/tutorials/10.mat-and-amt.pdf>

Indian Economy by Ramesh Singh

Q.8) Which among the following will fall under capital assets for the purpose of capital gains tax in India?

1. Mutual funds
2. Zero coupon bonds
3. Preference Shares
4. Sale of Paintings in the market

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 2, and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Profits or gains arising from transfer of a capital asset are called “Capital Gains” and are charged to tax under the head “Capital Gains”.

Options 1, 2, 3, and 4 are correct: Assets like **mutual funds, shares (including preference share), bonds (including zero coupon bonds), debentures, paintings sold in the market etc.** are considered **capital assets** for the purpose of levying capital gain tax.

They can be further classified between **long term and short term** for taxation purpose. Any capital asset held by the taxpayer for a period of not more than **36 months** immediately preceding the date of its transfer will be treated as short-term capital asset.

Source : <https://incometaxindia.gov.in/tutorials/14-%20stcg.pdf>

Indian Economy by Ramesh Singh

Q.9) Which one of the following statements is correct regarding “tax expenditure”?

- a) It is expenditure incurred during exercise of tax collection.
- b) It is an incentive given by the government by means of various tax exemptions and deductions etc.
- c) It depicts the loss in revenue due to tax evasion.
- d) It is expenditure incurred on acquisition of assets like roads, machinery, etc.

Ans) b

Exp) Option b is the correct answer.

There has been a divergence between the official tax rate and effective tax rate in India—defined as the ratio of total tax collected to the aggregate tax base. The divergence occurs mainly on account of tax exemptions. Tax expenditure also called revenue forgone refers to the opportunity cost of taxing at concessional rates. It includes providing exemptions, deductions, rebates, etc. to the taxpayers.

Statement a is incorrect: Tax Expenditure as the meaning of the word seems, is **not related to the expenditures incurred by the Government** in the tax collection exercise. It denotes concessions provided by the government to the taxpayers.

Statement b is correct: Tax expenditures lower the tax burden of individuals or businesses, through an exemption, deduction etc. But such forgone taxes do not necessarily mean that they have been waived off by the government. Better, it should be interpreted as incentives given by the government to promote certain sectors, in the absence of which they may not have come up.

Statement c is incorrect: Tax evasion means reduced liability by illegal means for the purpose of tax payment by an individual. It is not related to tax expenditure as the latter is provided by the government under taxation laws.

Statement d is incorrect: Expenditure on acquisition of assets like machines, roads, buildings etc. is called capital expenditure (not the tax expenditure). It is part of the annual budget statement of the government mainly focusing on infrastructure creation.

Source: Indian Economy by Ramesh Singh

Q.10) Consider the following statements with reference to the Kushiara River:

1. Kushiara River Treaty has been signed between India and Bangladesh.
2. Kushiara is a distributary of the Barak River.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: In September 2022, India and Bangladesh have signed a memorandum of understanding on sharing of waters of Kushiara river. A pact that will benefit people residing in southern Assam and the Sylhet division of Bangladesh. The text was finalized during the 38th meeting of the ministerial-level Joint Rivers Commission (JRC) of India and Bangladesh. The two sides were led by Jal Shakti Minister Gajendra Singh Shekhawat and his Bangladesh counterpart, Zaheed Farooque.

- 1) **Kushiara river treaty is not the first memorandum of understanding between India and Bangladesh.** The comprehensive bilateral **Ganga water treaty** was signed by the then Indian Prime Minister H. D. Deve Gowda and Bangladeshi Prime Minister Sheikh Hasina Wajed on 12 December 1996 in New Delhi. The treaty established a 30-year water-sharing arrangement and recognized Bangladesh's rights as a lower-level riparian.

Statement 2 is correct: Kushiara River is a distributary river in Bangladesh and Assam. It forms on the India-Bangladesh border as a branch of the Barak River when the Barak separates into the Kushiara and Surma. The waters of the Kushiara originate in the state of Nagaland and pick up tributaries from Manipur, Mizoram and Assam.



Source: <https://indianexpress.com/article/india/delhi-dhaka-discuss-sharing-river-water-8112141/>
<https://www.indiatimes.com/explainers/news/explained-india-bangladesh-kushiyara-river-pact-579214.html>

<https://blog.forumias.com/kushiyara-river-delhi-dhaka-sign-river-pact-first-in-25-years/>
<https://www.thehindu.com/news/international/explained-why-is-the-kushiyara-river-treaty-between-india-and-bangladesh-important/article65874597.ece>

Q.11) Consider the following statements about Surplus Budget, in the context of public finances in India:

1. Surplus budget is a situation in which incomes/receipts of Government are higher than its expenditures.
2. Surplus budget will always lead to a rise of interest rates in the economy, thus increasing costs of borrowings.

Which of the statement given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Budget is an annual financial statement of a government's income (revenue) and expenditure. It can be of two primary types based on the relationship between revenue and expenditures.

Statement 1 is correct: When a budget proposes lesser expenditure than the receipts, then it is called a surplus budget. On the contrary, when it proposes higher expenditure than the receipts, it is known as a deficit budget.

Statement 2 is incorrect: Running a surplus budget means that, the government has additional money to spend at the end of the fiscal year. Hence, it reduces the need for borrowing through corporate or government bond issues. **This will reduce interest rates in the country, thus ultimately reducing borrowing cost in the country.**

Source: Indian Economy by Ramesh Singh, 13th edition, Chapter 18 (pg. 18.10)

<https://www.investopedia.com/terms/b/budget-surplus.asp#:~:text=A%20budget%20surplus%20is%20when,used%20to%20pay%20off%20deb>

Q.12) Fiscal consolidation is one of the objectives of India's economic policy. In this context consider the following actions:

1. Improving tax revenue realization.
2. Getting more foreign loans

3. Better targeting of government subsidies through Direct Benefit transfer.

Which of the above given actions of government may help in fiscal consolidation?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2, and 3

Ans) a

Exp) Option a is the correct answer.

Fiscal consolidation is a reduction in the underlying fiscal deficit. So, by increasing revenues and decreasing expenditure, the Government can undertake fiscal consolidation.

Statement 1 is correct: Improved tax revenue realization by way of increasing efficiency of tax administration by reducing tax avoidance, eliminating tax evasion, enhancing tax compliance etc. will help in Fiscal consolidation.

Statement 2 is incorrect: While getting more loans may increase receipts, it will not help in fiscal consolidation as that loan has to be repaid back along with interest. It will increase the debt of the government. So, loans add more to the expenditure than they contribute to receipts.

Statement 3 is correct. Better targeting of government subsidies and extending Direct Benefit Transfer scheme for more subsidies may help in Fiscal consolidation.

Source: Ramesh Singh

Q.13) Consider the following statements with regards to Zero Based Budgeting:

1. It is a method of budgeting in which all expenses must be justified at the beginning of each financial year.
2. It allows the unspent money allocated to a particular ministry to be carried forward in the next financial year.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

As the name suggests, zero-based Budget refers to planning and preparing the Budget from scratch or 'zero base'. It is different from a traditional Budget that is based on previous Budgets. The process of zero-based budgeting involves review and justification of each and every ministry's expenditure in order to receive funding at the beginning of each financial year.

Statement 1 is correct: As the name suggests, zero-based Budget refers to planning and preparing the Budget from scratch or 'zero base'. It is different from a traditional Budget that is based on previous Budgets. The process of zero-based budgeting involves review **and justification of each and every ministry's expenditure in order to receive funding at the beginning of each financial year.**

Statement 2 is incorrect: Under the traditional budget system unspent money allocated to any ministry or department is allowed to be carried forward. **In a zero-based Budget, no balances are carried forward, or there are no pre-committed expenses.** Simply put, it is a procedure for preparing a Budget with zero prior bases. Much bigger gains will mount up when hundreds of crores will have to be justified across departments.

Source: Indian Economy by Nitin Singhania

Q.14) During the discussion on the Demands for Grants, cut motions can be moved to reduce the amount of demand. In this context, consider the following pairs:

Cut Motion	Description
1. Policy cut	It reduces the amount of the demand by Rs 100.
2. Economy cut	It states that the amount of the demand be reduced by a specified amount.
3. Token cut	It represents the disapproval of the policy underlying the demand.

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- All three pairs
- None of the above pairs

Ans) a

Exp) Option a is the correct answer.

During voting on demand for grants, the members of Parliament can discuss the details of the budget. They can also move motions to reduce any demand for a grant. Such motions are called as 'cut motion', which are of **three kinds**:

Pair 1 incorrectly matched: Policy Cut Motion represents the disapproval of the policy underlying the demand. It states that the amount of demand be reduced to Re 1 (not 100 Rupees). The members can also advocate an alternative policy.

Pair 2 correctly matched: Economy Cut Motion represents the economy that can be affected in the proposed expenditure. It states that the amount of the demand be reduced by a specified amount (which may be either a lumpsum reduction in the demand or omission or reduction of an item in the demand).

Pair 3 incorrectly matched: Token Cut Motion is used to voice a specific grievance that is within the sphere of responsibility of the Government of India. It reduces the amount of the demand by Rs 100.

Source: Lakshmikanth ch22

Q.15) Consider the following pairs:

Protected Area	Location
1. Coringa Wildlife Sanctuary	Andhra Pradesh
2. Madhav National Park	Chhattisgarh
3. Singalila National Park	West Bengal

Which of the pairs is/are correctly matched?

- 1 and 2 only
- 3 only
- 1 and 3 only
- 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Protected areas are regions or zones of land or sea which are given certain levels of protection for conservation of biodiversity and socio-environmental values. The four categories of protected areas are: Wildlife Sanctuaries; National Parks; Community Reserves and Conservation Reserves.

Pair 1 is correct. Coringa sanctuary is situated in **Andhra Pradesh** of which a part of **Godavari Mangroves was declared as a wildlife sanctuary** by the Government of Andhra Pradesh. Godavari Mangroves at the Coringa Wildlife Sanctuary (CWLS) are touted to be the **second largest mangroves in India**. About 40% of the sanctuary is only sea-backwaters and the rest of the area is intermingled with creeks and gets inundated with tidal waters. The sea coast of the Coringa Wildlife Sanctuary is a breeding ground for **Olive ridley turtles**.

Pair 2 is incorrect. **Madhav National Park** is situated in **Shivpuri district of Madhya Pradesh** on the northern fringe of the Central Highlands of India forming a part of the Upper Vindhyan Hills intermixed with plateaus, and valley sections. The Park represents the Northern Tropical dry deciduous mixed forest as well as dry thorn forest, typical of North-Western Madhya Pradesh. Kardhai is the dominant tree species. Recently the state forest department is planning to **expand the areas of national parks to relocate tigers** who often move out of the buffer zone of other national parks of state.

Pair 3 is correct. **Singalila National Park** is located on the Singalila Ridge at an altitude of more than 7000 feet above sea level, in the **Darjeeling district of West Bengal**. The **Padmaja Naidu Himalayan Zoological Park has started India's first re-wilding programme of red pandas** (*Ailurus fulgens*) to release 20 of these furry mammals in about five years to the forests of Singalila.

Source: <https://eastgodavari.ap.gov.in/tourist-place/coringa-sanctuary/>

<http://forests.ap.gov.in/sanctuaries.php>

<https://www.thehindu.com/news/cities/kolkata/20-red-pandas-darjeeling-zoo-attempt-first-augmentation-endangered-mammal-wild/article65620241.ece?homepage=true>

<https://www.downtoearth.org.in/news/wildlife-biodiversity/uttar-pradesh-plans-its-4th-tiger-reserve-in-bundelkhand-85182>

https://www.mpforest.gov.in/img/files/NP_Madhav.pdf

Q.16) Regarding the transfer payments, which of the following statements is **incorrect**?

- It is the one-way payment of money made by the government to the people.
- These payments are aimed at redistribution of income.
- Social security payment is a type of transfer payment.
- Subsidies paid to exporters are considered as transfer payments.

Ans) d

Exp) Option d is the correct answer.

Statement a is correct. Transfer payment is the payment by the government in grants, allowances, pensions etc to people such as pensioners, widows, sick etc.

Transfer payments are a one-way payment of money for which no good or service is received in exchange.

Statement b is correct. Transfer payment is aimed at redistribution of income. Government use such payments as means of income redistribution under social welfare programs. It includes payments such as social security, old age or disability pensions, student grants, unemployment compensation, and so on. There is a need to differentiate them from subsidies. Transfer payments are a part of personal income.

Statement c is correct. The most well-known form of transfer payment is likely Social Security payments, whether for retirement or disability. These are considered transfer payments even though most recipients have paid into the system during their working lives. Similarly, unemployment payments are also considered transfer payments.

Statement d is incorrect. **Subsidies paid to exporters, farmers, manufacturers are not** considered transfer payments because they are linked to a commodity transaction.

Source: <https://www.indianeconomy.net/glossary/transfer-payments/>

Q.17) Consider the following statements regarding Public Debt Management in India:

1. Public Debt in India includes both Internal and External Debt incurred by the Central Government.
2. In India, Public Debt Management Agency (PDMA) is solely responsible for managing internal public debt of Central Government currently.
3. Reserve Bank of India is solely responsible for managing External debt of Central Government.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Government/Public Debt is the money owed by the Union government. It comprises G-secs, Treasury bills, short term borrowings, external assistance. While non-government debt comprises of all the loans raised by private companies, corporate sector and individuals such as home loans, auto loans, personal loans.

Statement 1 is correct: Public Debt in India includes both Internal and External Debt incurred by the Central Government.

Statement 2 is incorrect: Public Debt Management Cell (PDMC) has been established as an interim arrangement before setting up an independent and statutory debt management agency, namely the Public Debt Management Agency (PDMA). PDMA is yet to be established. Currently RBI deals with Internal public debt management of Central Government. The Reserve Bank draws these necessary statutory powers for debt management from Section 21 of the Reserve Bank of India Act, 1934.

Statement 3 is incorrect: Department of Economic Affairs under Ministry of Finance is responsible for management of external debt for Central Government (not the Reserve Bank of India).

Source: Indian economy by Vivek Singh <https://dea.gov.in/divisionbranch/public-debt-management-cell>

[http://www.arthapedia.in/index.php/Public_Debt_Management_Agency_\(PDMA\)](http://www.arthapedia.in/index.php/Public_Debt_Management_Agency_(PDMA))

https://rbi.org.in/scripts/FS_Overview.aspx?fn=2757

Q.18) Consider the following statements regarding the trends in Capital expenditure of Union Government:

1. The capital expenditure to GDP ratio of the Union Government has increased steadily in the last five years.
2. The capital expenditure to GDP ratio of Union Government is more than 10% of the GDP for the year 2022.
3. The percentage share of Capital expenditure in the total Union Government expenditure has continuously decreased in the last five years.

Which of the statements given above are correct?

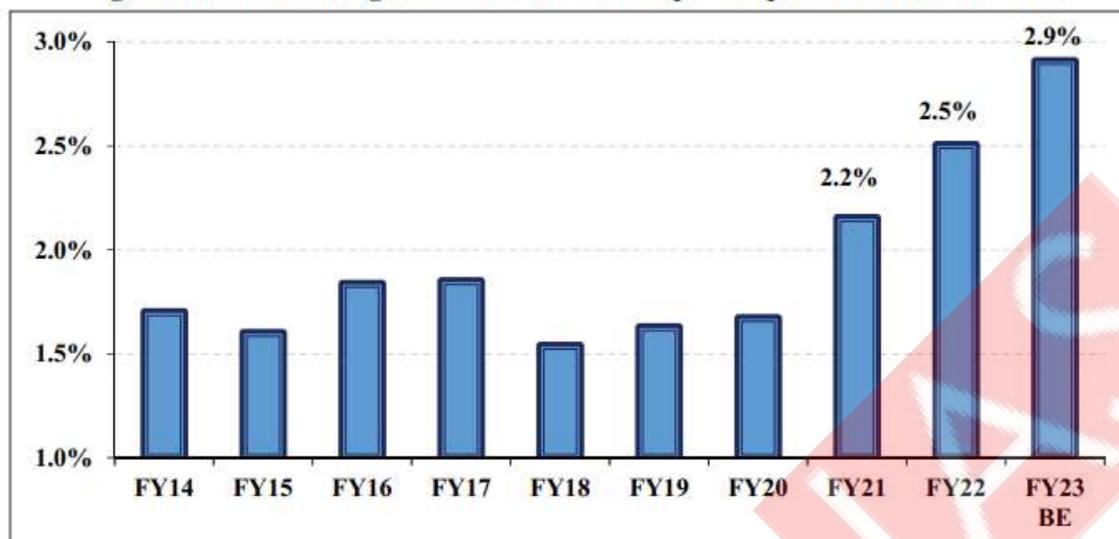
- a) 1 only
- b) 1 and 3 only
- c) 2 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: Since 2018, the capital expenditure to GDP ratio of the Union Government has increased steadily. In 2018, the Capital expenditure to GDP ratio of Union government was nearly about 1.5% whereas it has increased steadily to reach 2.5% for 2022.

Figure III.7: Increasing Union Government capital expenditure to GDP ratio

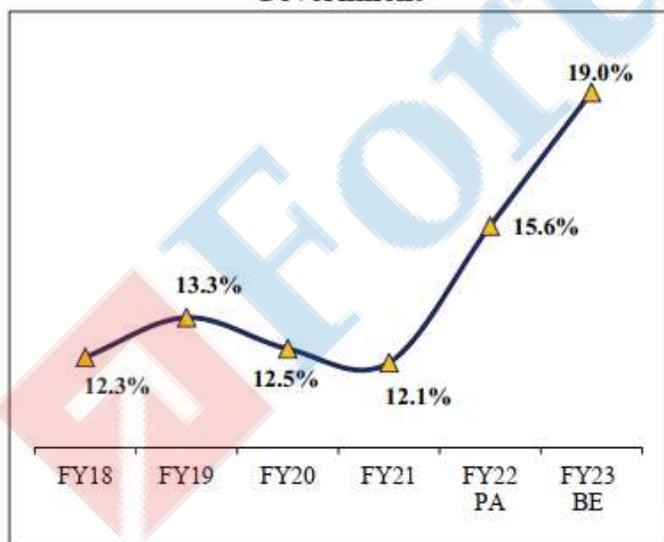


Source: Previous Economic Surveys, Union Budget documents, O/o CGA

Statement 2 is incorrect: The capital expenditure to GDP ratio of Union Government was 2.5 % of the GDP in the year 2022. It has increased from 2.2% in the year 2021.

Statement 3 is incorrect: The share of Capital expenditure of the total union government expenditure has not decreased in the last 5 years. It can be seen from the graph given below that there has been a pattern of increasing and decreasing capital expenditure in total expenditure of Union government.

Figure III.8: Rising share of Capital Expenditure in Total Expenditure of the Union Government



Source: Union Budget documents, O/o CGA

Source: Budget 2023-24

Q.19) Consider the following statements regarding the trends in Fiscal Deficit for India:

1. The fiscal deficit of the Union Government as a percentage of GDP has increased steadily in the last 5 years.
2. The fiscal deficit of the Union Government has never been more than 10 percent of GDP in the last five years.

Which of the statements given above are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

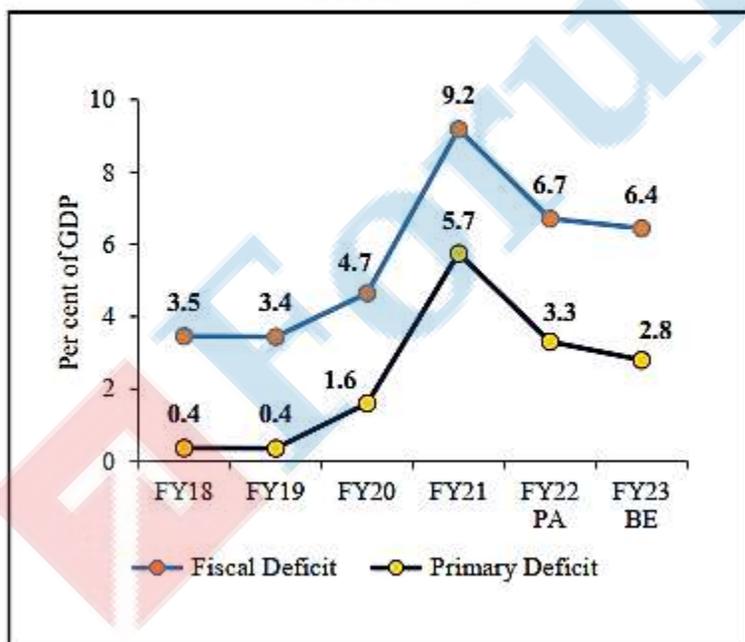
Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect and statement 2 is correct: As is evident from the chart given below the fiscal deficit of Union government as percentage of GDP decreased in FY 2019 and increased in FY 2020 and FY 2021 and then again decreased since FY 2022. So, the fiscal deficit has not been steadily increasing in the last five years.

Also, it is evident from the graph that the fiscal deficit of Union government as percentage of GDP reached 9.2 percent in FY 2021 but did not cross 10 percentage mark in last 5 years.

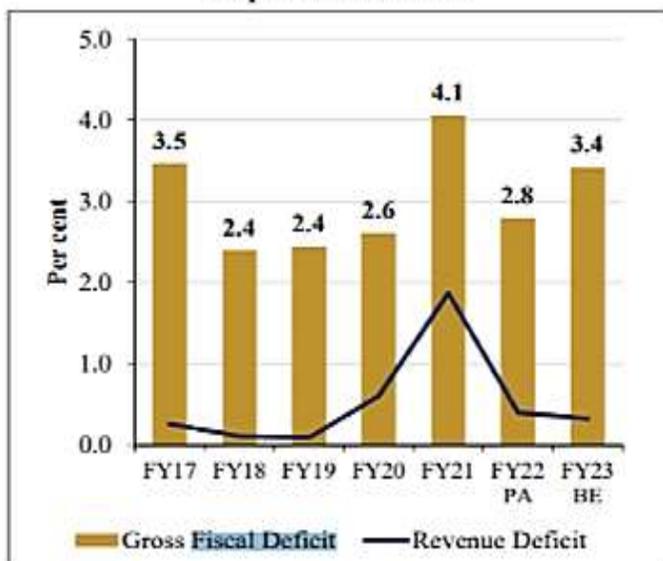
Figure III.1: Trends in Union government deficits over the years- On the way to fiscal consolidation



Source: Union Budget documents, O/o CGA

Statement 2 is incorrect: The combined Gross Fiscal Deficit (GFD) of the States, was 3.5 percent of GDP in FY17, which increased to 4.1 per cent of GDP in the pandemic-affected year FY21. It was brought down to 2.8 per cent in FY22 PA. Given the geopolitical uncertainties, the consolidated GFD-GDP ratio for States has been budgeted 3.4 per cent in FY23. Thus, it can be seen that combined GFD decreased from FY2017.

Figure III.11: Consolidation of States' Deficits as per cent of GDP



Source: Economic Survey

Q.20) Consider the following statements with reference to the National Council of Educational Research and Training (NCERT):

1. It is statutory organisation set up in 1961 to assist and advise the Central and State Governments on policies for qualitative improvement in school education.
2. NCERT is an implementation agency for bilateral cultural exchange programmes with other countries in the field of school education.
3. Its executive Committee meeting is chaired by the Union Education minister.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The National Council of Educational Research and Training (NCERT) is an **autonomous organization (But not a Statutory organization as it is not set up by an Act of Parliament)** set up in 1961 by the Government of India to assist and advise the Central and State Governments on **policies and programmes for qualitative improvement in school education**. The major objectives of NCERT and its constituent units are to undertake, promote and coordinate research in areas related to school education; prepare and publish model textbooks, supplementary material, newsletters, and journals and develops educational kits, multimedia digital materials, etc.

Statement 2 is correct: National Council of Educational Research and Training (NCERT) is an **implementation agency for bilateral cultural exchange programmes with other countries in the field of school education**. The NCERT also interacts and works in collaboration with the international organizations, visiting foreign delegations and offers various training facilities to educational personnel from developing countries.

Statement 3 is correct: The Council's Executive Committee's meeting is chaired by the Union Education minister. Recently the executive committee of the council has granted approval to the National Council of Educational Research and Training (NCERT) to get the 'Deemed-to-be-University' status. Deemed University is an institution which can apply to the UGC for setting up a new institution as deemed to be University which will undertake study and research in unique and emerging areas of knowledge that are not offered by any existing institution.

Source: <https://ncert.nic.in/about-us.php?ln=>

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiy27P3IN36AhXLcGwGHbZpDX4QFnoECBgQAQ&url=https%3A%2F%2Fwww.livemint.com%2Feducation%2Fnews%2Fncert-to-soon-get-deemed-to-be-university-status-details-here-11663026755926.html&usg=AOvVaw3aWZH8LGzKchu8yVBZpCV6>

Q.21) Consider the following statements regarding the non-Debt receipts of Government of India:

1. The Union government's non-debt receipts comprise taxes, non-tax revenue receipts and non-debt capital receipts.
2. The Non-tax revenue receipts have been the largest component of non-Debt receipts of Government of India for last 5 years.

Which of the statements given above are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

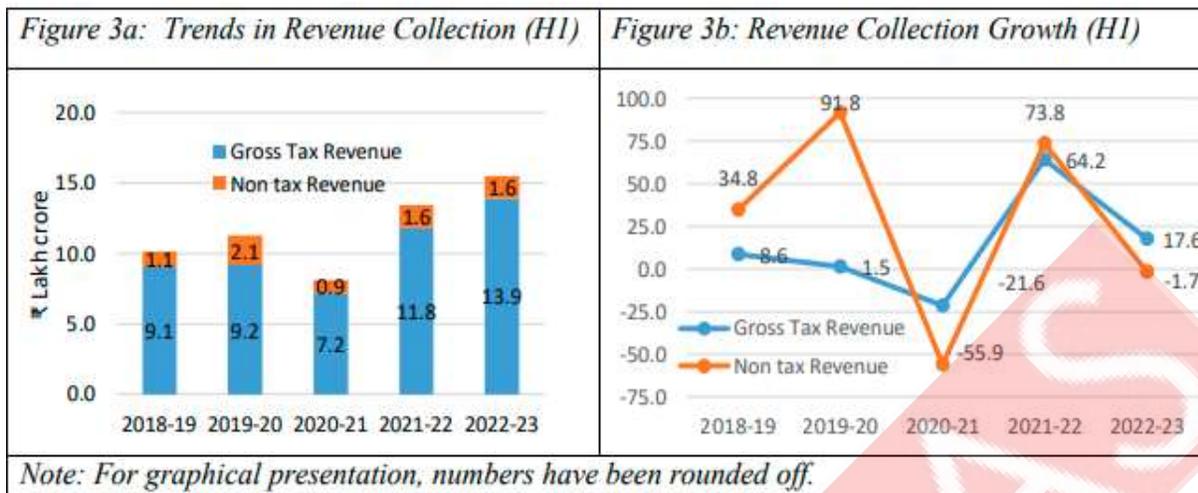
Exp) Option a is the correct answer.

Non-debt receipts refer to the revenue received by the government through sources other than borrowing, such as taxes, fees, fines, and other sources of income. In other words, non-debt receipts are the income earned by the government that does not add to the public debt burden. These receipts are also known as "revenue receipts" as they reflect the government's income from various sources.

Statement 1 is correct: non-debt receipts include:

- 1) Taxes: such as income tax, corporate tax, excise duty, customs duty, and service tax.
- 2) Non-Tax Revenue: such as dividends from public sector companies, profits from the sale of government assets, and revenue from public services.
- 3) Fees and Fines: such as fees charged for Government services, parking fees, and fines for traffic violations.
- 4) Grants: such as foreign aid and grants from international organizations like the World Bank and the International Monetary Fund.
- 5) non-debt capital receipts: such as Disinvestment proceeds, Recovery of loans, Sale of assets, Recovery of advances, etc.

Statement 2 is incorrect: It is evident from the charts given below that the Tax revenue is way larger component than the non-tax revenue receipts. Hence the Tax revenue receipts are the largest component of the non-Debt receipts of the Central Government rather than the non-tax revenue receipts. (Again, the non-debt capital receipts form a smaller part of total non-debt receipts even way smaller than the non-tax revenue receipts).



Source: <https://www.financialexpress.com/what-is/non-debt-capital-receipts-meaning/1762666/>
<https://www.thehindu.com/business/Economy/explained-the-status-and-proceeds-of-disinvestment/article66485958.ece>
<https://dea.gov.in/sites/default/files/H1%202022-23%20FRBM%20English.pdf>

Q.22) Which of the options given below correctly explains the term 'Fiscal marksmanship'?

- It is the difference between the Governments' budgetary expenditures and the revenue receipts.
- It refers to the accuracy of the government's forecast of fiscal parameters.
- It refers to the sharing of tax revenues by the Union government with the states as per the spirit of fiscal federalism.
- It is the deflationary effect of a progressive taxation system on a country's economy.

Ans) b

Exp) Option b is the correct answer.

Fiscal marksmanship essentially refers to the **accuracy of the government's forecast of fiscal parameters** such as revenues, expenditures and deficits etc. In other words, if the difference between what the government projected in the Budget and the actual figures a year later is large then it reflects poor fiscal marksmanship. It helps determine the credibility of the budget numbers of the government.

Source: <https://indianexpress.com/article/explained/explained-what-ails-with-the-credibility-of-indias-budget-numbers-6239577/>

Q.23) Consider the following statements regarding the Central Board of Indirect Taxes and Customs (CBIC):

- It comes under the Department of Economics Affairs, Ministry of Finance.
- It administers matters relating to Customs, Central Excise and Narcotics, etc.
- It is a statutory body established under the Central Boards of Revenue Act, 1963.

Which of the statements given above are correct?

- 1 only
- 2 and 3 only
- 1 and 2 only
- 1, 2, and 3

Ans) b

Exp) Option b is the correct answer.

Statements 1 is incorrect and 2 is correct: Central Board of Indirect Taxes and Customs (erstwhile Central Board of Excise & Customs) is a part of the **Department of Revenue under the Ministry of Finance**, Government of India. It deals with the tasks of formulation of policy concerning levy and collection of Customs, Central Excise duties, Central Goods & Services Tax and IGST, prevention of smuggling **and administration of matters relating to Customs, Central Excise, Central Goods & Services Tax, IGST and Narcotics** to the extent under CBIC's purview.

Statement 3 is correct: CBIC is a **statutory body** established **under the Central Boards of Revenue Act, 1963**. The Central Board of Excise and Customs (CBEC) was renamed as the Central Board of Indirect Taxes and Customs (CBIC) in 2018 after the roll out of Goods and Services Tax (GST).

Source: <https://old.cbic.gov.in/htdocs-cbec/howeare/howeare?pageID=1-1>

Q.24) Consider the following statements regarding the debt profile of the Union Government:

1. The total liabilities of the Union Government have consistently remained below 50 % of GDP in the last ten years.
2. More than 90 per cent of the Union Government's total net liabilities is denominated in domestic currency.

Which of the statements given above are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

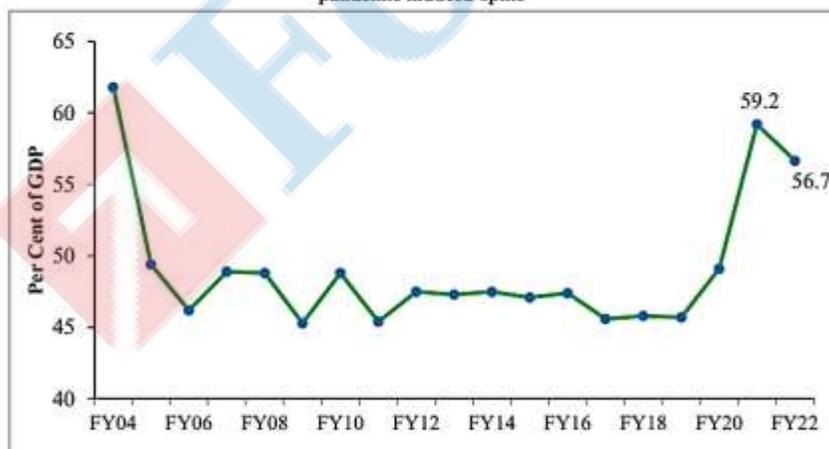
Ans) b

Exp) Option b is the correct answer.

Given the unprecedented fiscal expansion in 2020, rising government liabilities have emerged as a significant concern across the globe. IMF projects the global government debt at 91 per cent of GDP in 2022, about 7.5 percentage points above the pre-pandemic levels.

Statement 1 is incorrect: As seen in the figure in the past decade between 2011 to 2020, the total liabilities of the Union Government were relatively stable and below 50% of GDP but it has crossed the mark of 50% in FY21 and FY 2022. Hence the statement is incorrect.

Figure III.14: Moderating Union Government's Debt-GDP ratio after the pandemic induced-spike



Source: Various Issues of Status Paper on Government Debt
Note: The Figures for FY22 are Provisional

Statement 2 is correct: India's public debt profile is relatively stable and is characterized by low currency and interest rate risks. **Of the Union Government's total net liabilities, 95.1 per cent were denominated**

in domestic currency, while sovereign external debt constituted 4.9 per cent, implying low currency risk. Further, sovereign external debt is entirely from official sources, which insulates it from volatility in the international capital markets.

Source: Page 61, chapter 3: Fiscal Developments- Revenue Relish of Economic survey 2022-23.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1894921#:~:text=India's%20public%20debt%20profile%20is,%25%2C%20implying%20low%20currency%20risk.>

Q.25) With reference to Scheme for Economic Empowerment of DNTs (SEED) Scheme, consider the following statements:

1. It is an initiative for the economic development of De-notified Tribes.
2. It is implemented by the Ministry of Social Justice & Empowerment.
3. It will provide health insurance cover to eligible families.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Minister of Social Justice and Empowerment launched the Scheme for Economic Empowerment of DNTs (SEED) for the welfare of De-notified, Nomadic and Semi Nomadic Communities.

Statement 1 is correct. The **Scheme for Economic Empowerment of Denotified tribes (DNTs) (SEED)** aims to economically empower De-notified, Nomadic and Semi Nomadic Communities. There are four components of the SEED scheme:

- 1) Educational empowerment- Free coaching to students from these communities for Civil Services, entry to professional courses like medicine, engineering, MBA, etc.
- 2) Health Insurance through PMJAY of National Health Authority.
- 3) Livelihoods to support income generation, and
- 4) Housing through PMAY/IAY

Statement 2 is correct. The Scheme for Economic Empowerment of DNTs (SEED) is implemented by the **Ministry of Social Justice & Empowerment** for a period of 5 years starting Financial Year 2021-22 to 2025-26.

Statement 3 is correct. The Scheme for Economic Empowerment of DNTs (SEED) will provide financial assistance to **National Health Authority (NHA)** in association with **State Health Agencies (SHAs)** for providing a health insurance cover of Rs 5 lakhs per family per year to DNT, NT and SNT families as per norms of AB-PMJAY. The families having income from all sources of Rs.2.50 lakh or less per annum and not availing any such benefits from similar Scheme of Centre Government or the State Government are eligible for availing benefits of SEED Scheme.

Source: <https://trifed.tribal.gov.in/pmvdv>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1798792>

<https://www.businesstoday.in/latest/policy/story/govt-to-give-health-insurance-cover-to-marginalised-tribal-communities-322713-2022-02-15>

<https://blog.forumias.com/social-justice-and-empowerment-ministry-to-launch-a-scheme-for-economic-empowerment-of-dnts-seed/>

Q.26) Consider the following statements regarding the scheme ‘Special Assistance to States for Capital Investment for 2022-23’:

1. It will provide interest-free loans to the States.
2. Funds under the scheme can be used by the states for the new infrastructure projects only.
3. The loan under the scheme would be over and above the normal borrowing ceiling allowed to State for the year 2022-23

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) c

Exp) Option c is the correct answer.

Capital Expenditure has a high multiplier effect, enhances the future productive capacity of the economy, and results in a higher rate of economic growth.

Statement 1 is correct: The Government of India has launched a Scheme Special Assistance to States for Capital Investment for 2022-23. Under this Scheme, financial assistance is provided to the States Governments in the form of **50-year interest free loan for capital investment projects.**

Statement 2 is incorrect: Funds under the scheme will be used for the new and ongoing infrastructure projects of the state governments. Projects with capital outlay of less than 5 crore (2 crore for Northeast) and repair and maintenance projects irrespective of capital outlay are **not eligible for the scheme.** The funds will be utilized for capital works under Pradhan Mantri Gati Shakti Master Plan, PM Gram Sadak Yojana, Incentives for digitization, Optical Fiber Cable, Urban reforms, Disinvestment and monetization, etc.

Statement 3 is correct: For the 2022-23 Financial Year (FY) a total financial assistance of **Rs 1 lakh crore would be given to states.** The loan under the scheme would be over and above the normal borrowing ceiling allowed to States for the year 2022-23 and should be spent in the same year.

Source: https://finance.cg.gov.in/Special_Assistance.pdf

Q.27) With reference to the Extra-Budgetary borrowing, consider the following statements:

1. They are financial liabilities not raised directly by the Government but by another Public Institution with the direction of Government.
2. They are not included in the fiscal deficit of Government.
3. They are added to the total debt of the government.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: According to the budget document, Extra budgetary resources (EBRs) are those financial liabilities that are raised by Public Sector Undertakings for which repayment of entire principal and interest is done from Government budget. **They are financial liabilities not raised directly by the Government but by another Public Institution on the direction of Government.**

Statements 2 and 3 are correct: Extra budgetary resources (EBRs) are made by state-owned firms to fund government schemes but are not part of the official budget calculations. **Extra budget borrowing is excluded from the fiscal deficit calculations. Since, the liability of the loan is not formally on the Centre, the loan is not included in the national fiscal deficit.** This helps keep the country's fiscal deficit within acceptable limits. But at the same time, they are **added to the total debt of the government.**

Source: <https://indianexpress.com/article/explained/why-govt-borrows-off-budget-and-how-7162925/>

<https://www.indianeconomy.net/splclassroom/what-are-extra-budgetary-off-budget-borrowings/>

<https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf>

Q.28) Consider the following statements regarding the various funds which are transferred to the state governments by Central Government:

1. Total transfers to the States have been steadily declining since 2019.
2. Between the financial years 2019 and 2023, there has been a steady increase in transfers of Finance Commission grants from the Centre to states.
3. The funds transferred under the centrally sponsored schemes have been on the rise since the financial year 2019.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 3 only
- d) 1, 2, and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect: Transfer of funds to the States comprises the share of States in Union taxes devolved to the States, Finance Commission Grants, Centrally Sponsored Schemes (CSS), and other transfers. **Total transfers to the States have risen between FY 2019 and FY 2023 BE.** See fig III.6. As seen in the figure, the transfer under all the heads has been increasing in general.

Table III.6: Details of transfers from Centre to States (other than devolution to States)

	FY19	FY20	FY21	FY22 RE	FY23 BE
	(in ₹ lakh crore)				
Centrally Sponsored Schemes	3.0	3.1	3.8	4.2	4.4
Finance Commission Grants	0.9	1.2	1.8	2.1	1.9
Other Grants/Loans/Transfers	0.9	2.0	1.9	2.3	3.0

Source: Union budget documents

Statement 2 is incorrect: Between 2019 and 2022, there has been steady increase in transfer of Finance Commission grants to states. The Finance commission grants for the year 2019 was 0.9 lakh crore, which increased to 1.2 lakh crore in the year 2020. In 2021 the grants increased to 1.8 lakh crore and in 2022 to 2.1 lakh crore. But in financial year 23 the grants decreased to 1.9 lakh crore. So, it breaks the trend of steady increase. Hence the statement is incorrect.

Statement 3 is correct: The funds transferred under the centrally sponsored schemes are on the rise since 2019. The funds transferred under the centrally sponsored scheme were 3 lakh crores for FY2019, which further increased to 3.1 lakh crore in FY2020. In FY2021 it increased to 3.8 lakh crore and in FY2022 it increases to 4.2 lakh crore.

Source: Page 56, chapter 3- Fiscal Developments- Revenue Relish of Economic survey 2022-23.

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Q.29) Consider the following statements regarding the recent trends in the expenditure on Subsidies by Union Government:

1. The Union Budget 2023-24 has reduced the subsidy on food, fertilizer and fuel compared to 2022-23.
2. The Union Government spent nearly 10% of GDP on subsidies component in the year 2022.

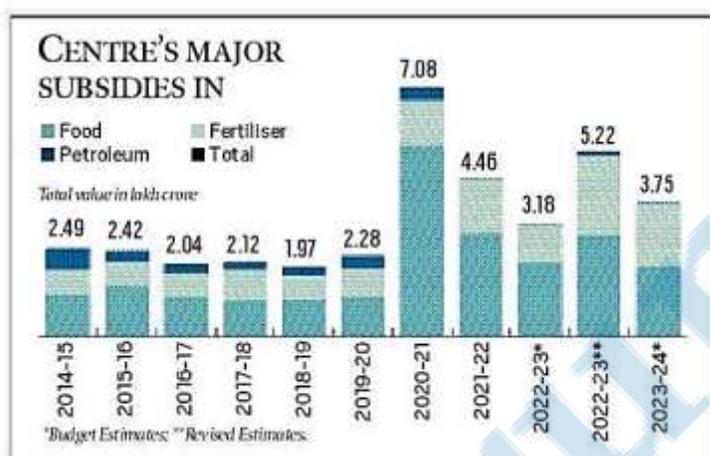
Which of the statements given above are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: Food, fertilizer and petroleum subsidies in 2023-24 have been reduced by almost 28.2% to Rs 3.74 lakh crore from the revised Rs 5.21 lakh crore in 2022-23. The reduction is in line with lower fiscal deficit as the government focuses on macroeconomic stability amid global turbulence.



Statement 2 is incorrect. The Union Government's expenditure on subsidies is way below 10% of GDP. For FY22 it was 1.9% of GDP and for the current financial year it is estimated to be 1.2% of GDP.

Table III.5: Major Items of Revenue Expenditure by Union Government

Items	FY18	FY19	FY20	FY21	FY22 PA*	FY23 BE
(in ₹ Lakh crore)						
Revenue Expenditure of which	18.79	20.07	23.51	30.84	32.01	31.95
a. Salaries (pay & allowances)	1.94	2.11	2.28	3.34	3.67	4.10
b. Pensions	1.46	1.6	1.84	2.08	1.99	2.07
c. Interest payment	5.29	5.83	6.12	6.80	8.05	9.41
d. Major subsidies	1.91	1.97	2.28	7.08	4.46	3.18
e. Defence Services	1.86	1.96	2.08	2.06	2.29	2.33

Note: Salaries for FY22 are Revised estimates

Source: Union Budget documents, O/o CGA

Source: Page 52, chapter 3- Fiscal Developments- Revenue Relish of Economic survey 2022-23.

<https://economictimes.indiatimes.com/news/economy/policy/budget-2023-taking-the-knife-to-food-fertiliser-subsidies/articleshow/97534842.cms>

Q.30) Which of the following statements correctly describes ‘Reverse Currency War’?

- It is a situation where countries make the exchange rate of their currency fall in relation to other currencies.
- It is a situation in which countries are trying to make their currency stronger.
- It is a situation in which a country's currency price is set by foreign exchange market relative to supply and demand of other currencies.
- It is a situation where two countries exchange principal or interest payment with one another to gain exposure to a desired currency.

Ans) b

Exp) Option b is the correct answer.

Recently, The US Central Bank has been increasing the interest rates after the US inflation soar upto to 9.1% in June 2022. It has led to a reverse currency war in central banks around the world struggling to keep pace with an aggressive federal reserve and a soaring dollar.

Option a is incorrect. **Currency war** is a situation where countries **devalue their currency** to improve a nation's foreign **trade competitiveness** at the expense of other nations. It is a deliberate move to reduce the purchasing power of a nation's own currency. For instance, in the past, the US has often accused other countries of manipulating their currency (and keeping it weaker against the dollar) just to enjoy a trade surplus against the US. This used to be called the Currency War.

Option b is correct. **Reverse Currency War** is a situation in which countries are trying to make their **currency stronger**. Stronger currency means that imports are relatively cheaper. For instance, central banks are trying to figure out ways to counter the US Fed and raise interest rates themselves to ensure their currency doesn't lose too much value against the dollar.

Option c is incorrect. A **floating exchange rate** is an exchange rate system where a country's **currency price is determined by the foreign exchange market**, depending on the relative supply and demand of other currencies. A floating exchange rate is **not restrained by trade limits** or government controls, unlike a fixed exchange rate.

Statement d is incorrect. A **currency swap** is a situation where two parties exchange a notional principal or exchange of interest with one another to gain exposure to a desired currency. A **foreign currency swap** occurs between countries to swap interest payments on a loan made in one currency for interest payments on a loan made in another currency. A foreign currency swap can involve exchanging principal, as well. This would be exchanged back when the agreement ends.

Source: <https://www.investopedia.com/articles/investing/090215/3-reasons-why-countries-devalue-their-currency.asp>

<https://www.cfr.org/central-bank-currency-swapssince-financial-crisis/#!/>

<https://blog.forumias.com/yield-inversion-soft-landing-and-reverse-currency-wars-a-glossary-for-the-troubled-global-economy/>

Q.31) Consider the following statements about Monetised Deficit in the context of public finances in India:

- Monetised deficit is the process where the central bank helps government to cover its fiscal deficit.
- RBI is under legal compulsion to purchase the government issued securities to fulfil the fiscal deficit targets of the government.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Fiscal deficit is a financial situation when balance of the government's total receipts (i.e., revenue + capital receipts) and total expenditure (i.e., revenue + capital expenditures) turns out to be negative. This concept has been used in India since FY 1997-98.

Statement 1 is correct: A government deficit is said to be monetised when the central bank buys bonds or securities issued by the government to cover government's fiscal deficit. Generally, it is done by the purchase of the government issued bonds by the central bank i.e., the RBI. It was adopted in the FY 1997-98. It is shown in the quantitative as well as a per cent of GDP form in a financial year.

Statement 2 is incorrect: RBI finances the government expenditures by subscribing to G-secs (long term) and Treasury bills (short terms). Earlier RBI had to compulsorily subscribe to these government securities as an integral part of the ways and means advances. However, since 1997, RBI stopped being a primary subscriber for the Treasury bills (rather invests in them voluntarily). It was done through an agreement between the central government and the RBI. Similarly, the compulsion for RBI to subscribe the G-secs was dropped in 2007. Now RBI just manages the borrowing programmes of the government.

Source: Indian Economy by Ramesh Singh, 13th edition, Chapter 18 (pg. 18.10)

Q.32) With regard to the surplus income of RBI, which of the following statements is/are **incorrect**?

1. RBI is exempt from paying income tax on its surplus income but has to pay wealth tax.
2. The amount of transfer of surplus to the Centre is decided solely by the government.
3. Surplus income transfer by RBI to the Government forms part of capital receipts of the Government.
4. The Banking Regulations Act of 1949 provides for the transfer of surplus income by the RBI to the Centre.

Select the correct answer using the code given below:

- a) 1, 2 and 4 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

The Reserve Bank of India (RBI) transfers its surplus profits to the Government every year. Surplus profit is the profit left after making various contingency provisions for bad and doubtful debts, depreciation in assets, contributions to staff, and superannuation funds, etc.

Statement 1 is incorrect. RBI is exempted from paying income tax or any other tax, including wealth tax. Section 48 (Exemption of Bank from income-tax and super-tax) of the RBI Act, 1934 provides that the Bank shall not be liable to pay income-tax or super-tax on any of its income, profits or gains.

Statement 2 is incorrect. The amount of transfer of surplus to the Centre is decided by the central bank after consultations with the government. The decision to transfer the surplus is taken at the meeting of the Central Board of Directors of RBI.

Statement 3 is incorrect. Surplus transfer is put under the head 'non-tax revenue' in the revenue budget as it is dividend. It helps the government narrow its deficit or borrowings.

Statement 4 is incorrect. It is not the Banking regulations act 1949, but the section 47 of RBI Act 1935 which provides for the surplus transfer income of RBI to the Centre.

Knowledge Base:

Source of RBI's income –

- 1) Returns it earns on its foreign currency assets which could be in the form of bonds and treasury bills of other central banks or top-rated securities, and deposits with other central banks.

- 2) interest on its holdings of local rupee-denominated government bonds or securities, and while lending to banks for very short tenures, such as overnight.
- 3) management commission on handling the borrowings of state governments and the central government.

Expenditure of RBI-

- 1) expenses on the printing of currency notes
- 2) expenses on staff
- 3) the commission it gives to banks for undertaking transactions on behalf of the government across the country, and to primary dealers, including banks, for underwriting some of these borrowings.

Source: <https://indianexpress.com/article/explained/explained-why-and-how-does-the-rbi-transfer-surplus-to-government-5942031/>

https://www.business-standard.com/article/economy-policy/reserve-bank-of-india-transfer-tops-govt-s-non-tax-revenue-source-121060800036_1.html#:~:text=Dividend%2C%20or%20surplus%20transfer%2C%20from,of%20nearly%20Rs%2078%2C000%20crore.

Q.33) Consider the following statements about deficit financing, in the context of Budgeting in India:

1. Deficit financing may increase income inequalities in the economy.
2. Sustained deficit financing by the central government may lead to situation of inflation in the country.
3. State governments can finance their deficits by issuing the treasury bills.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

Fiscal deficit is a financial situation when balance of the government's total receipts (i.e., revenue + capital receipts) and total expenditure (i.e., revenue + capital expenditures) turns out to be negative. The act of financing/supporting a deficit budget by a government is known as deficit financing.

Statement 1 is correct: Deficit financing can widen income inequality. This is because of the fact that it creates excess purchasing power. But due to inelasticity in the supply of essential goods, excess purchasing power of the public acts as an incentive to price rise. During inflation, it is said that rich become richer, and the poor becomes poorer.

Statement 2 is correct: The need for deficit financing appears when the government needs to spend more money than it is expected to earn in a particular period, to go for a desired level of growth and development. This rise in aggregate expenditure may in turn increase aggregate demand and hence pose the risk of inflation in the country.

Statement 3 is incorrect: State governments finance their fiscal deficits mostly by the revenue generated from tax and non-tax revenue along with central government's devolution of funds. **Treasury Bills (T-Bills) can be issued in market only by the central government and not by the state governments.** However, state governments can issue Government securities (G-secs) to meet their fiscal deficit targets by borrowing from the market.

Source: Indian Economy by Ramesh Singh, 13th edition, Chapter 18 (pg. 18.11)

<https://www.economicdiscussion.net/public-finance/deficit-financing/deficit-financing-meaning-effects-and-advantages/17460>

Q.34) In context of economy, what do you understand by the phrase ‘Golden Rule of Public Finance’?

- It states that over the economic cycle, the government should borrow only to invest and not to fund regular expenses.
- It states that there would be neither profit nor loss and all companies would earn the same rate of interest in an evenly rotating economy.
- It states that the nation as a whole cannot increase its wealth by increasing its stock of money.
- It means that behind every welfare check and each research grant lies the tax money of real people.

Ans) a

Exp) Option a is the correct answer.

Golden Rule of Public Finance states that over the economic cycle, the government should **borrow only to invest and not to fund current spending** (current expenditure means day to day running expenses). In layman’s term this means that the government borrows to finance investment so that it can benefit future generations.

Under the Rule, existing obligations and expenditures are to be financed through taxation, and not issuing new sovereign debt.

Source: <https://www.investopedia.com/terms/g/golden-rule.asp#:~:text=The%20golden%20rule%20of%20government%20spending%20is%20a%20fiscal%20policy,be%20funded%20by%20tax%20revenues.>

Q.35) With respect to Sulphur Dioxide (SO₂) emissions, consider the following statements:

- Sulphur Dioxide is a constituent that can lead to the formation of acid rain.
- India is the largest emitter of Sulphur Dioxide in the world.
- Volcanoes can be a source of Sulphur Dioxide emissions.

Which of the statements given above is/are correct?

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The primary reason for India’s high Sulphur Dioxide (SO₂) emissions is the expansion of coal-based electricity generation over the past decade. India accounted for 21% of global SO₂ emission, mostly from coal-fired power plants that lack pollution-curbing equipment.

Statement 1 is correct: SO₂ can affect both health and the environment. Short-term exposures to SO₂ can harm the human respiratory system and make breathing difficult. **SO₂ and other sulphur oxides can contribute to acid rain which can harm sensitive ecosystems.**

Statement 2 is correct: According to a report by Greenpeace (an environmental Non-Governmental Organization), **India is the largest emitter of Sulphur Dioxide (SO₂) in the world**, contributing more than 15% of global anthropogenic emissions. Sulphur dioxide is a poisonous air pollutant that increases the risk of stroke, heart disease, lung cancer, and premature death. India emitted 21 per cent of global anthropogenic (human-made) SO₂ emissions, nearly double that of second-ranked global emitter, Russia. China occupies the third position.

Statement 3 is correct: The largest source of SO₂ in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities. Smaller sources of SO₂ emissions include: industrial processes such as extracting metal from ore; **natural sources such as volcanoes**; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content.

SFG 2023 | LEVEL 2 | Test #14 – Solutions |

Source: <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics>
<https://economictimes.indiatimes.com/news/politics-and-nation/india-worlds-largest-emitter-of-sulphur-dioxide-emissions-see-drop-in-2019-report/articleshow/78548955.cms>
<https://www.downtoearth.org.in/news/air/india-emits-the-most-sulphur-dioxide-in-the-world-66230>

Q.36) Which of the following can be considered as a part of the revenue expenditure by the government?

1. Interest payment by the government on the internal and external loans.
2. Loan repayment by the government.
3. Subsidies forwarded to all sectors by the government.
4. Grants given by the government to Sri Lanka to get out of its economic crisis.
5. Centre's loan to a state to increase the coverage of Digital India Mission initiative.

Select the correct option from the codes given below:

- a) 1, 2 and 5 only
- b) 3 and 4 only
- c) 2, 4 and 5 only
- d) 1, 3 and 4 only

Ans) d

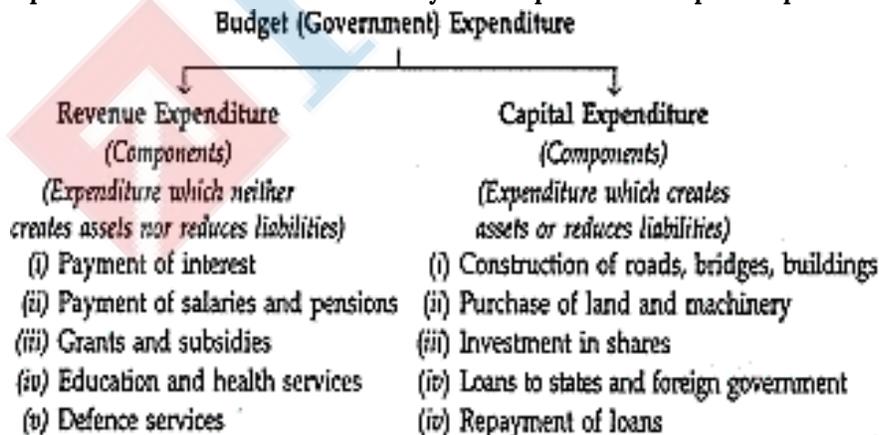
Exp) Option d is the correct answer.

The expenditures which are essential for the normal running of the government are called as the revenue expenditure. The basic identity of the revenue expenditure is that they are of consumptive kind and do not involve the creation of productive assets. Following expenditures generally fall under the category of revenue expenditures in India:

- 1) **Interest payment by the government on the internal and external loans.**
- 2) Salaries, pensions, and provident fund paid by the government to its employees.
- 3) **Subsidies forwarded to all sectors by the government.**
- 4) Defence expenditures by the government.
- 5) Postal deficits of the government.
- 6) Law and order expenditure.
- 7) Expenditure on social services.
- 8) **Grants given by the government to Indian states and foreign countries**

Hence, options 1, 3 and 4 are correct.

Option 2 and 5 are incorrect as they form a part of the capital expenditure of a state/government.



Source: Indian Economy by Ramesh Singh, 13th edition, Chapter 18 (pg. 18.5–18.6)

Q.37) A Company named ‘Y’ is registered in Australia and is providing digital services like advertisements, and e-commerce platform in India without any physical presence. Which of the taxes given below would apply to the revenues of this company in India?

1. Corporate Tax
2. Income Tax
3. Equalization Levy
4. Excise Duty

Select the correct answer using the code given below.

- a) 1 and 4 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

Equalization Levy was introduced in India in 2016, with the intention of taxing the digital transactions i.e., the income accruing to foreign e-commerce companies from India. It is aimed at taxing business to business transactions.

Statement 1 is incorrect. Corporate tax is charged on the companies registered in India under Companies Act 1956. As the aforementioned company has not registered itself in India, it will not have to pay corporate tax.

Statement 2 is incorrect. Income tax is imposed under the Income Tax Act of 1961. However, it would be applicable only on companies registered in India.

Statement 3 is correct. An Equalization Levy is levied on company involved in sales of digital services without any physical presence in India. In 2020, the Indian Income-tax Act expanded the scope of Equalization Levy (commonly referred to as ‘Equalization Levy 2.0 or EL 2.0’) as part of the Finance Act 2020. EL 2.0 was made effective on April 1, 2020. The new levy now includes a 2 per cent tax on gross revenues received by a non-resident “e-commerce operator” from the provision of ‘e-commerce supply or service’ to Indian residents or non-resident companies having a permanent establishment in India. The expression ‘e-commerce supply or service’, inter alia, includes the online sale of goods or the online provision of services or facilitation of the online sale of goods or provision of services.

Statement 4 incorrect. An excise or excise tax (sometimes called an excise duty) is a type of tax charged on goods produced within the country (as opposed to customs duties, charged on goods from outside the country). It is a tax on the production or sale of a good.

Source: <https://www.thehindubusinessline.com/business-laws/wider-ramifications-of-equalisation-levy-20/article36813363.ece>

Q.38) With reference to the Medium-Term Fiscal Policy Statement, consider the following statements:

1. It sets three-year rolling target for specific fiscal indicators in relation to GDP.
2. It is presented as part of General Budget by the Union government.
3. It is mandated by the Fiscal Responsibility and Budget Management Act, 2003.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct. The Medium-term Fiscal Policy Statement sets out three-year rolling targets for specific fiscal indicators. These indicators include the following:

- (1) fiscal deficit as a percentage of GDP;
- (2) revenue deficit as a percentage of GDP;
- (3) primary deficit as a percentage of GDP;
- (4) tax revenue as a percentage of GDP;
- (5) non-tax revenue as a percentage of GDP; and
- (6) Central Government debt as a percentage of GDP.

Statement 2 is correct. The Medium-term Fiscal Policy Statement is presented as part of the General Budget. It is presented to Parliament under Section 3(2) of the **Fiscal Responsibility and Budget Management (FRBM) Act, 2003.**

Statement 3 is correct. The **Macro-Economic Framework Statement** is presented to Parliament as mandated by the Fiscal Responsibility and Budget Management Act, 2003. It **makes an assessment of the growth prospects of the economy** with specific underlying assumptions. On the contrary, Medium-term Fiscal Policy Statement examines whether revenue expenditure can be financed through revenue receipts on a sustainable basis and how productively capital receipts including market borrowings are being utilised.

Knowledge Base:

Apart from Medium-term Fiscal Policy Statement, two other statements are presented as part of FRBM Act, 2003:

- 1) The **Fiscal Policy Strategy Statement** sets the priorities of the government in the fiscal area, examining current policies and justifying any deviation in important fiscal measures.
- 2) The **Macroeconomic Framework Statement** assesses the prospects of the economy with respect to the GDP growth rate, fiscal balance of the central government and external balance.

Source: Macroeconomics, NCERT XII, Chapter-5, Pg. 64

<https://economictimes.indiatimes.com/markets/stocks/news/what-is-medium-term-fiscal-policy-statement/articleshow/56737837.cms?from=mdr>

<https://www.business-standard.com/about/what-is-macro-economic-framework-statement>

https://www.indiabudget.gov.in/doc/Key_to_Budget_Document_2021.pdf

Q.39) Which of the following statements are correct regarding of outcome-based budgeting?

1. It is very simple method of budgeting and does not require much technical skills.
2. It was first introduced in India in 1969.
3. Compared to traditional methods, it will reduce the cost of budgeting.

Select the correct answer using the code given below:

- a) 2 only
- b) 1 and 3 only
- c) 3 only
- d) None of the above

Ans) d

Exp) Option d is the correct answer.

The outcome budget is a progress card on what various departments have done with the amount assigned in the previous annual Budget. It measures the outcomes of all government programmes and whether the money has been spent for the purpose it was sanctioned. To enhance the cooperation of line ministries and implementing actors, a robust monitoring mechanism based on Output-Outcome framework has been developed recently in India.

Statement 1 is incorrect: Getting accurate and relevant outcome-based data involves complicated methods and involves a lot of technicalities so this budgeting method is generally complicated and requires much technical skills. Hence the statement is incorrect.

Statement 2 is incorrect: The Outcome budgeting in India was first introduced in 2005-06 budget (not 1969).

Statement 3 is incorrect: Outcome based budgeting will result in additional costs as it requires a higher amount of manpower, technical skills and real time data monitoring and analysis. So, when compared to traditional budgeting, outcome-based budgeting will result in increased costs.

Source: Indian Economy by Ramesh Singh, 13th edition, Chapter 18

Q.40) Consider the following statements about Small Savings Scheme being implemented by the Central Government of India:

1. The collections from all small savings instruments are credited to the National Small Savings Fund (NSSF).
2. Both National Small Savings Certificate (NSC) and Kisan Vikas Patra (KVP) are types of Small Savings Schemes.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Small Saving Schemes/Instruments are the major source of household savings in India and comprise 12 instruments. The depositors get an assured interest on their money. **Collections from all small savings instruments are credited to the National Small Savings Fund (NSSF).**

Statement 2 is correct: Small savings instruments can be classified under three heads:

- 1) Postal Deposits (comprising savings account, recurring deposits, time deposits of varying maturities and monthly income scheme).
- 2) **Savings Certificates: National Small Savings Certificate (NSC) and Kisan Vikas Patra (KVP).**
- 3) Social Security Schemes: Sukanya Samridhi Scheme, Public Provident Fund (PPF) and Senior Citizens' Savings Scheme (SCSS).

Source: [https://indianexpress.com/article/business/banking-and-finance/interest-rates-on-small-savings-schemes-unchanged-for-first-quarter-of-fy23-](https://indianexpress.com/article/business/banking-and-finance/interest-rates-on-small-savings-schemes-unchanged-for-first-quarter-of-fy23-7846434/#:~:text=The%20interest%20rate%20on%20savings,interest%20of%205.8%20per%20cent.)

[7846434/#:~:text=The%20interest%20rate%20on%20savings,interest%20of%205.8%20per%20cent.](https://www.nsiindia.gov.in/InternalPage.aspx?Id_Pk=157)

https://www.nsiindia.gov.in/InternalPage.aspx?Id_Pk=157

Q.41) Consider the following statements about the Capital receipts in the context of public finances in India:

1. The Capital receipts do not increase the financial liabilities on the government.
2. External grants are considered as Capital receipts.

Which of the statements given above is/are **incorrect**?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

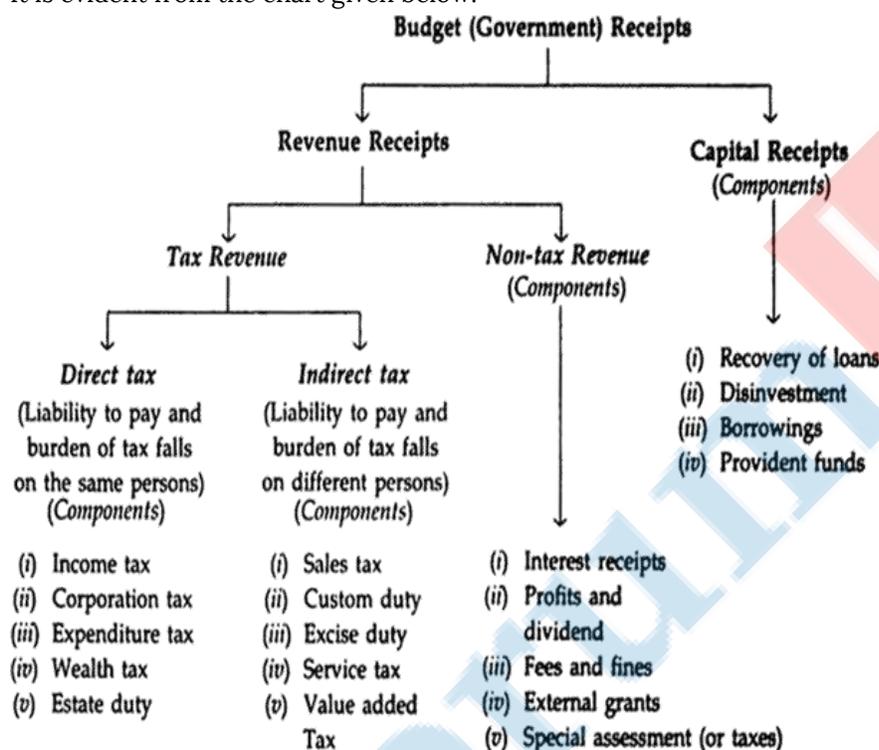
Exp) Option c is the correct answer.

Public Financing in India can be categorised into two heads Revenue and Capital based on the income generation:

Statement 1 is incorrect: Capital receipts are receipts that create liabilities or reduce financial assets. They also refer to incoming cash flows. Capital receipts can be both non-debt and debt receipts. Loans from the general public, foreign governments and the Reserve Bank of India (RBI) form a crucial part of capital receipts. Other examples of capital receipts are disinvestment, recovery of loans etc.

Statement 2 is incorrect: External grants are considered as a revenue receipt (non-tax revenue of the government) and not as capital receipt, as they do not create liabilities for the government.

It is evident from the chart given below:



Source: Indian Economy by Ramesh Singh, 13th edition, Chapter 18 (pg. 18.4)

Q.42) Consider the following statements about Effective Revenue deficit.

1. Effective revenue deficit is the difference between fiscal deficit and the interest liabilities for that year of the government.
2. The Effective Revenue Deficit was introduced in the Union budget on the recommendation of the Rangarajan committee on public expenditure.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Budget is an annual financial statement of a government's income (revenue) and expenditure. Revenue deficit and Effective Revenue deficit form major part of the Union Budget which reflect the pattern of government expenditure.

Statement 1 is incorrect: Effective Revenue Deficit is a deficit obtained by excluding those revenue expenditure of the Government which were done in the form of GoCA (grants for creation of capital assets) from the Revenue Deficit. Whereas the difference between fiscal deficit and the interest liabilities of the government is known as **Primary Deficit**.

Statement 2 is correct: Effective Revenue Deficit (ERD) was introduced in the Union Budget 2011-12, on the recommendation of the Rangarajan committee on the public expenditure. It came as an additional fiscal indicator prescribed by an amendment to the FRBM Act by the Finance Act, 2012 that grants statutory status on the concept of effective revenue deficit.

Source: Indian Economy by Ramesh Singh, 13th edition, Chapter 18 (pg. 18.6)

Q.43) With reference to the different types of taxes, which of the following statements are **correct**?

1. Ad valorem tax is a flexible tax levied on the assessed value of an asset, product or service.
2. Tobin tax is a duty proposed on spot currency trades to penalize short-term currency trading.
3. A Pigouvian tax is a tax imposed for engaging in activities that create adverse side effects for society.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: The term “ad valorem” is Latin for “according to value,” which means that it is flexible and depends on the assessed value of an asset, product or service. An ad valorem tax is charged by state and municipal governments and is based on the assessed value of a product or property. The most common ad valorem tax is the property tax, which is charged on real estate and personal property.

Statement 2 is correct: The Tobin tax is a duty proposed on spot currency trades to penalize short-term currency trading to stabilize markets and disincentive speculation. The Tobin tax can be used to generate revenue streams for countries that see a great deal of short-term currency movement.

The Tobin tax is sometimes referred to as the Robin Hood tax, as many see it as a way for governments to take small amounts of money from the people making large, short-term currency exchanges.

Statement 3 is correct: A Pigovian (or Pigouvian) tax is a tax assessed against private individuals or businesses for engaging in activities that create adverse side effects for society. Adverse side effects are those costs that are not included as a part of the product’s market price. These include environmental pollution, strains on public healthcare from the sale of tobacco products, and any other side effects that have an external, negative impact.

Source: <https://www.investopedia.com/terms/p/pigoviantax.asp>

[https://www.investopedia.com/terms/t/tobin-](https://www.investopedia.com/terms/t/tobin-tax.asp#:~:text=The%20Tobin%20tax%20is%20a%20duty%20proposed%20on%20spot%20currency,of%20short%2Dterm%20currency%20movement.)

[tax.asp#:~:text=The%20Tobin%20tax%20is%20a%20duty%20proposed%20on%20spot%20currency,of%20short%2Dterm%20currency%20movement.](https://www.investopedia.com/terms/a/advalorematax.asp)

<https://www.investopedia.com/terms/a/advalorematax.asp>

<https://corporatefinanceinstitute.com/resources/accounting/ad-valorem-tax/>

Indian economy key concepts by M karupiah. Chapter name- public finance.

Q.44) In the context of budgetary deficits, which of the following statements is correct with reference to Primary Deficit?

- It is the total government borrowings available to utilize after interest payments.
- It is excess of total government expenditure over total its receipts excluding borrowings during a fiscal year.
- It is the difference between total expenditure and revenue receipts including non-debt creating capital receipts.
- It is the difference between Fiscal deficit and external grants received.

Ans) a

Exp) Option a is the correct answer.

When a government spends more than it collects by way of revenue, it incurs a budget deficit.

Primary deficit is simply the fiscal deficit minus the interest payments. The significance of Primary Deficit is it excludes the burden of the past debt and shows the net increase in the government's indebtedness due to the current year's fiscal operations. A reduction in primary deficit is reflective of government's efforts at bridging the fiscal gap during a financial year.

Option a is correct: Primary deficit is measured to know the amount of borrowing that the government can utilize, excluding the interest payments.

Option b is incorrect: Fiscal deficit is defined as excess of total expenditure over total receipts excluding borrowings during a fiscal year. Fiscal deficit reflects the borrowing requirements of the government for financing the expenditure including interest payments.

Option c is incorrect: Gross fiscal deficit = Total expenditure – (Revenue receipts + non-debt creating capital receipts)

Option d is incorrect: There is no such deficit which accounts for the difference between Fiscal deficit and External grants.

Source: [https://sgp1.digitaloceanspaces.com/forumias/noticeboard/wp-](https://sgp1.digitaloceanspaces.com/forumias/noticeboard/wp-content/uploads/2019/12/26121700/Indian-Economy-3-Indias-fiscal-policy-and-external-sector.pdf)

[content/uploads/2019/12/26121700/Indian-Economy-3-Indias-fiscal-policy-and-external-sector.pdf](https://sgp1.digitaloceanspaces.com/forumias/noticeboard/wp-content/uploads/2019/12/26121700/Indian-Economy-3-Indias-fiscal-policy-and-external-sector.pdf)

Q.45) Consider the following statements with reference to the Ranipur Tiger Reserve:

- It is tiger reserve situated in Madhya Pradesh
- It has the largest number of tigers in India, among all tiger reserves.
- It is characterized by the presence of tropical dry deciduous forests.

Which of the statements given above is/are correct?

- 1 and 3 only
- 2 only
- 3 only
- 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

The National Tiger Conservation Authority (NTCA) has approved the Ranipur tiger reserve in Chitrakoot as the fourth tiger reserve of Uttar Pradesh - after Dudhwa, Pilibhit and Amangarh.

Statement 1 is incorrect: Ranipur Tiger Reserve is the fourth tiger reserve of Uttar Pradesh. It is in the Ranipur Wildlife Sanctuary (RWS) in Chitrakoot district. The Uttar Pradesh cabinet approved the notification of Ranipur Tiger Reserve under Section 38(v) of the Wild life (Protection) Act of 1972.

Statement 2 is incorrect: The Corbett Tiger Reserve in Uttarakhand has the highest number of tigers in the country. Ranipur Wildlife Sanctuary (Ranipur tiger reserve) has few or no tigers of its own.

Statement 3 is correct: Ranipur Tiger Reserve is the first tiger reserve in the state's portion of the Bundelkhand region, which it shares with neighboring Madhya Pradesh. **The Ranipur Tiger Reserve has tropical dry deciduous forests and is home to fauna such as tigers, leopards, sloth bears, spotted deer, sambhar, chinkara and a number of birds and reptiles.**

Source: <https://www.downtoearth.org.in/news/wildlife-biodiversity/uttar-pradesh-plans-its-4th-tiger-reserve-in-bundelkhand-85182>

Q.46) With reference to fiscal deficit in India, Consider the following statements:

1. There can be a Fiscal Deficit without Revenue deficit in the economy.
 2. Fiscal deficit reflects the borrowing requirements of the government for financing the expenditure.
- Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: There can be a fiscal deficit without a Revenue deficit under following conditions:

- (a) when revenue budget is balanced but capital budget shows a deficit or
- (b) when revenue budget is in surplus but deficit in capital budget is greater than the surplus of revenue budget.

Statement 2 is correct: Fiscal deficit refers to the excess of government expenditures over its receipts exclusive of borrowing. Thus, fiscal deficit points to borrowing requirements of the government to cope with its expenditure of the year.

Source: ECONOMIC SURVEY 2022

Q.47) With reference to taxes and their impact on economy, consider the following statements:

1. Presence of parallel economy is one of the main reasons for the low levels of tax collection in India.
2. A progressive tax has the potential to reduce income inequality.
3. Laffer curve demonstrates that increasing tax rate beyond optimum tax rate results in decreasing of tax revenues.

Which of the following statements is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 Only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Parallel economy, based on the black money or unaccounted money, is a big menace to the Indian economy. It is also a cause of big loss in the tax revenues for the government.

Statement 2 is correct: Progressive taxation system tends to reduce income inequality since the burden of such taxes falls heavily on the richer persons.

Statement 3 is correct: As per Laffer curve increasing tax rate beyond optimum tax rate **results in decreasing of tax revenues** to the government as many people start evading tax payments.

Source: [https://sgp1.digitaloceanspaces.com/forumias/noticeboard/wp-](https://sgp1.digitaloceanspaces.com/forumias/noticeboard/wp-content/uploads/2019/12/26121700/Indian-Economy-3-Indias-fiscal-policy-and-external-sector.pdf)

[content/uploads/2019/12/26121700/Indian-Economy-3-Indias-fiscal-policy-and-external-sector.pdf](https://sgp1.digitaloceanspaces.com/forumias/noticeboard/wp-content/uploads/2019/12/26121700/Indian-Economy-3-Indias-fiscal-policy-and-external-sector.pdf)

<http://ppup.ac.in/download/econtent/pdf/effects%20of%20tax.pdf>

Q.48) With reference to Fiscal Responsibility and Budget Management (FRBM) Act Review Committee, consider the following recommendations:

1. The FRBM act mandates to form a Review Committee every five years from the enactment of the act.
2. The committee recommended the combined debt-to-GDP ratio of the Centre and states should be brought down to around 60 per cent.
3. The committee recommended setting up an independent Fiscal Council.

Which of the statements given above is/are correct?

- a) 3 only
- b) 2 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The FRBM Act was enacted in 2003 and in 2016, the government felt that a lot of time had elapsed since the act had come into force and there was a need to review it. **The FRBM Review Committee was formed in 2016 under the chairmanship of a former Revenue and Expenditure Secretary Nand Kishore Singh.** The committee submitted its report in 2017. But there is not any such provision in the FRBM Act to form such Review Committee every five years from the enactment of Act.

Statement 2 is correct: Public debt to GDP ratio should be considered as a medium-term anchor for fiscal policy in India. **The committee recommended that the combined debt-to-GDP ratio of the Centre and states should be brought down to around 60 per cent** (comprising 40 per cent for the Centre and 20% for states).

Statement 3 is correct: Formation of Fiscal Council to advise the government: The Committee advocated formation of institutions to ensure fiscal prudence in accordance with the FRBM spirit. It recommended setting up an **independent Fiscal Council**. The Council will provide several advisory functions, one of which would be to advise the Central Government on whether conditions exist to permit a deviation for invocation in the escape or buoyancy clause.

Source:

<https://dea.gov.in/sites/default/files/Volume%201%20FRBM%20Review%20Committee%20Report.pdf>

Q.49) Consider the following statements regarding fiscal policy of government of India:

1. One of the objectives of the fiscal policy is to control inflation.
2. During expansionary fiscal policy, government decreases spending and increases taxes.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Fiscal policy is defined as changes in government expenditures and taxes that are designed to achieve macroeconomic policy goals such as growth, employment, investment, etc. There are three components of the Fiscal Policy of India: **Government Receipts, Government Expenditure and Public Debt**. Thus, it **involves both income and expenditure by the government**.

Statement 1 is correct: The main objectives of government's fiscal policy are:

- 1) Economic Growth (Stabilisation of business cycles)
- 2) maintain high level of employment.
- 3) **Control inflation (thus statement 1 is correct)**

Statement 2 is incorrect: In case of expansionary fiscal policy, **government increases spending and reduces tax levels to increase the aggregate demand in the economy.** It is in I case of contractionary fiscal policy; government reduces the spending and increases tax levels to suck the money out of economy and hence reduces the aggregate demand.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1895287>

<https://www.business-standard.com/about/what-is-frbm-act>

Indian Economy by Ramesh singh

Q.50) With reference to the Financial Intermediary Fund for Pandemic Prevention, Preparedness and Response (PPR FIF), consider the following statements:

1. The fund is hosted by G20 with technical support from the World Health Organisation (WHO).
2. India is one of the financial contributors to this fund.
3. The fund provides long term financing to developing countries to strengthen their capacities to better manage pandemics.

Which of the statement/s given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Financial Intermediary Fund for Pandemic Prevention, Preparedness and Response (PPR FIF) finances critical investments to strengthen pandemic prevention, preparedness, and response capacities at **national, regional, and global levels, with a focus on low- and middle-income countries.**

Statement 1 is incorrect: The Financial Intermediary Fund for Pandemic Prevention, Preparedness and Response (PPR FIF) **is hosted by the World Bank** with **technical assistance** from the World Health Organisation (WHO). The G20 Presidency of Indonesia hosted the official launch of the Pandemic Fund (but the fund is not hosted by G20 but by the World bank).

Statement 2 is correct: It is true that **India is one of the financial contributors to this fund.** The financial volume of this fund depends upon contributions from donors and receives funding from non-governmental entities such as **philanthropies and foundations, subject to approval from the World Bank** as Trustee and the Governing Board.

Statement 3 is correct: The fund provides **long term financing to middle- and low-income countries** to strengthen their capacities to **prevent and to better manage pandemics** at national, regional, and global levels. The fund aims to address the critical gaps in low- and middle-income countries by providing investments and technical support to developing countries.

Source: <https://www.worldbank.org/en/programs/financial-intermediary-fund-for-pandemic-prevention-preparedness-and-response-ppr-fif/partners>

<https://www.worldbank.org/en/events/2022/11/10/official-launch-of-the-pandemic-fund-at-g20>

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Q.1) Consider the Question and two statements given below:

Question: What is the number of employees in the company?

Statement 1: The standard error mean (SEM) of the employee's salary in a company is Rs 500 per year.

Statement 2: The standard deviation of the salaries of the employees in the company is Rs 10,000.

Which one of the following is correct in respect of the Question and the Statements?

- Statement-1 alone is sufficient to answer the question.
- Statement-2 alone is sufficient to answer the question.
- Both Statement-1 and Statement-2 are sufficient to answer the question.
- Both Statement-1 and Statement-2 are not sufficient to answer the question.

Ans) c

Exp) Option c is the correct answer.

Statement-1 gives us the Standard Error Mean (SEM) of the employee's salary. The standard error Mean (SEM) is the measure of the extent to which the sample mean deviates from the true/actual mean.

Statement-2 gives us the standard deviation of the salaries of the employees in the company. This tells us about the variability or spread of the salaries but doesn't give us any information about the average salary or the number of employees.

By combining the information from both statements, we can use the formula for the SEM of a sample to estimate the number of employees in the company.

The relationship of SEM and standard deviation (SD) to sample size is:

$$\text{SEM} = \text{SD}/\sqrt{n}$$

Here n is the sample size (For the above question, it will be the number of employees)

SEM is given as 500, SD is 10,000

So by formula $\sqrt{n} = \text{SD}/\text{SEM} = 10,000/500 = 20$

Hence, $n = 400$

Therefore, both statements together are sufficient to answer the question, but neither statement alone is sufficient.

Q.2) Study the following series carefully and answer the question given below it:

1 5 8 4 3 1 5 6 8 9 7 3 5 7 5 9 6 2 6 7 6 8 4 3 2 3

Which of the following digit is ninth to the left of twenty-first from the left end of the above series?

- 3
- 5
- 7
- 8

Ans) a

Exp) Option a is the correct answer.

Given series:

1 5 8 4 3 1 5 6 8 9 7 3 5 7 5 9 6 2 6 7 6 8 4 3 2 3

21st from the left end = 6

9th to the left of 6 = 3

Q.3) In the series CHLOQRSUXBGLP_ _ , _ _ what are the next three letters?

- SUV
- TVW
- UVW
- WXY

Ans) a

Exp) Option a is the correct answer.

The difference between the adjacent letters follows the pattern 4,3,2,1,0, 0,1,2,3,4, Then again 4,3,2,1,0 i.e. There are 4 letters between C and H, 3 letters between H and L, 2 letters between L and O, 1 letter between O and Q, 0 letter between Q and R, 0 letter between R and S, 1 letter between S and U, 2 letter between U and X, 3 letter between X and B, 4 letters between B and G, 4 letters between G and L, 3 letters between L and P.

So, the sequence will continue with the difference of 2,1,0 letters.

Q.4) Which digit should come next in the series: 1, 8, 3, 64, 5, 216, 7, 512_?

- a) 1
- b) 0
- c) 9
- d) 7

Ans) c

Exp) Option c is the correct answer.

This series is $1, 2^3, 3, 4^3, 5, 6^3, 7, 8^3, 9$ and so on. After 512, it should be 9.

Q.5) Ram is the son of Urmila. Urmila has a granddaughter named Shwet. Ram is the only child of Urmila. Shwet is married to one of Anil's son. Urmila's father has two daughters only. Abhishek is the son of Shakuntala's daughter. Abhishek has one brother Abhilekh and one sister Arunima. Abhilekh's mother is Meena. Arun's mother-in-law is sibling of Ram's mother. Arun has a brother named Anil. Anil has two sons. Ranjit is the son of Anil. Arun is married to Meena.

Which one of the following is correct?

- a) Shakuntala and Urmila are sisters.
- b) Ranjit and Arnumia's are siblings.
- c) Ram is brother of Meena.
- d) Ranjit is grandson of Urmila.

Ans) a

Exp) Option a is the correct answer.

Let's draw a stepwise family tree based on the given information:

Code used in the figure given below:

-  : Sibling
-  : Children
-  : Marriage

Step 1: Draw a sub-tree based on the following statements:

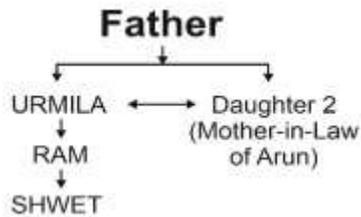
Ram is the son of Urmila.

Urmila has a granddaughter named Shwet.

Ram is the only child of Urmila.

Urmila's father has two daughters only.

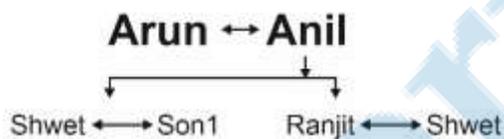
Arun's mother-in-law is the sibling of Ram's mother



Step 2: Draw a sub-tree based on the following statements:
 Abhishek is the son of Shakuntala's daughter.
 Abhishek has one brother Abhilekh and one sister Arunima.
 Abhilkeh's mother is Meena.
 Arun is married to Meena.



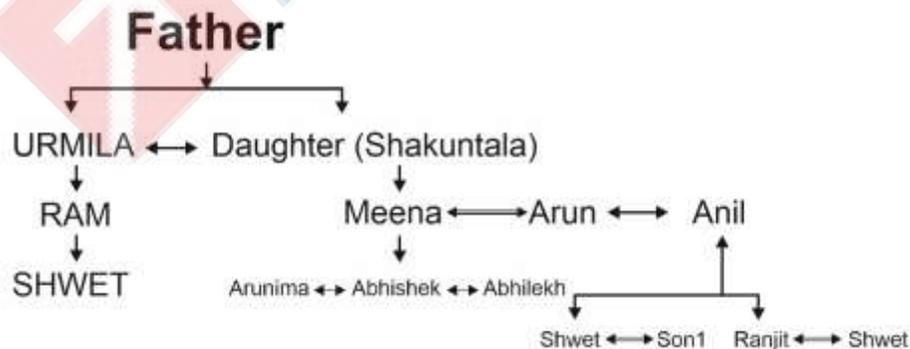
Step 3: Draw a sub-tree based on the following statements:
 Arun has a brother named Anil.
 Anil has two sons.
 Ranjit is the son of Anil.
 Shwet is married to one of Anil's son.



Shwet is married to which son is not known.
 Hence it can be either of Son1/Ranjit

Conclusion step: Combine all three steps. The common person in step 1 and step 2 is Arun. From step 2 it's clear that Arun's mother in law is Shakuntla.

From step 2 and 3, Arun is the common factor (Brother of Anil), So let's combine all three steps and draw a full family tree:



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From the above family tree it's clear that option a i.e. Shakuntla and Urmila are sisters. Rest all other options (listed below are incorrect)

Ranjit and Arnumia's are not siblings, they are cousins.

Ram is not brother of Meena. He is her cousin.

Ranjit is not grandson of Urmila.

Q.6) Three statements followed by three conclusions are given below. You have to take the statements to be true even if they seem to be at variance from the commonly known facts. Read all the Conclusions and then decide which of the given Conclusions logically follows/ follows from the statements, disregarding, the commonly known facts:

Statement 1: All crocodiles are octopus.

Statement 2: Some turtles are crocodiles.

Statement 3: Some octopus are swan.

Conclusion I: All turtles are octopus.

Conclusion II: Some octopus are turtle.

Conclusion III: All swans are crocodile.

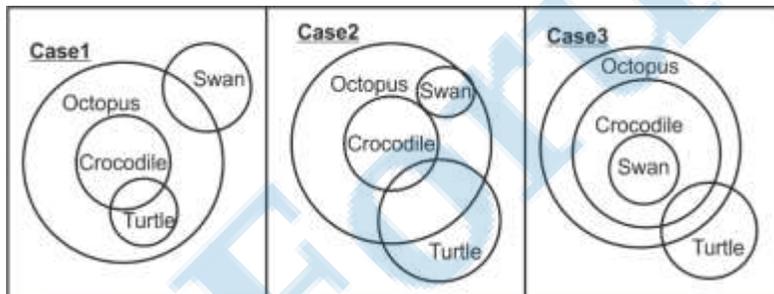
Which one of the following is correct?

- a) Only Conclusion-I
- b) Only Conclusion-II
- c) Both Conclusion-I and Conclusion III
- d) Both Conclusion-I and Conclusion II

Ans) b

Exp) Option b is the correct answer.

There can be three cases:



It's clear from the above image that all turtles can't be octopus (case 2 and case 3) and all swans can't be crocodile in case 1 and 2 (case 1 and 2). So only Conclusion II i.e. Some octopus are turtle is correct.

Q.7) Three Statements followed by four Conclusions are given below. You have to take the Statements to be true even if they seem to be at variance from the commonly known facts. Read all the Conclusions and then decide which of the given Conclusions logically follows/ follow from the Statements, disregarding the commonly known facts:

Statement-1: Some Trees are Mountains.

Statement-2: Some Mountains are Rivers.

Statement-3: Some Rivers are Clouds.

Conclusion-I: Some Clouds are Mountains.

Conclusion-II: No Tree is River.

Conclusion-III: All Trees are Clouds.

Conclusion-IV: Some Clouds are Trees.

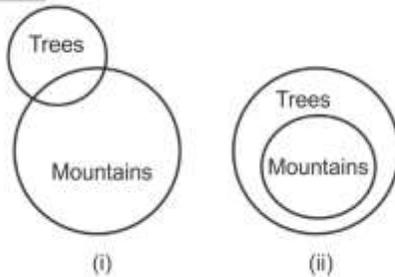
- a) Conclusion I and Conclusion IV only.
 b) Conclusion II and Conclusion III only.
 c) Conclusion II and Conclusion IV only.
 d) None of the Conclusions follows

Ans) d

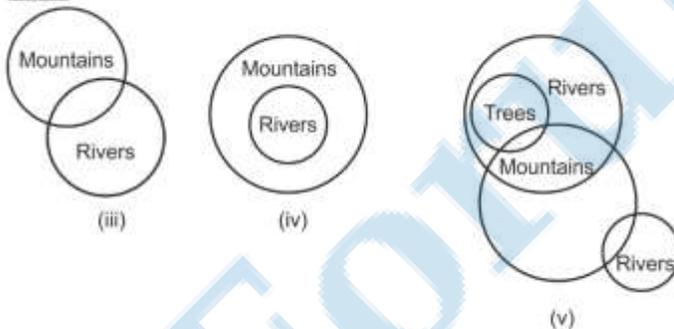
Exp) Option d is the correct answer.

For the given statements there will be nine different scenarios:

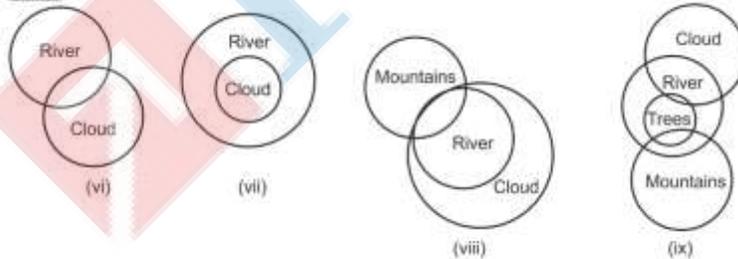
Case1



Case2



Case3



Q.8) What is the value of X in the sequence

60, 60, 35, 14, X?

- a) 21
- b) 5
- c) $8/3$
- d) $21/5$

Ans) d

Exp) Option d is the correct answer.

The sequence is based on factorial relations.

$n! = n \times (n-1) \times (n-2) \times (n-3) \times \dots \times 1$

The formula on which the sequence is based is $n! / (n-4)! \times (n-3)!$ And n starts with 5 and increases by 1.

i.e., $5! / (5-4)! \times (5-3)!$

$6! / (6-4)! \times (6-3)!$

$7! / (7-4)! \times (7-3)!$

$8! / (8-4)! \times (8-3)!$

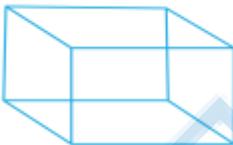
The next term will be $9! / (9-4)! \times (9-3)!$

Q.9) Each face of a cube can be painted in black or white colour. In how many different ways can the cube be painted?

- a) 9
- b) 10
- c) 11
- d) 12

Ans) b

Exp) Option b is the correct answer



Required possibilities are:

Case I: All faces of same colour

Two possibilities are there,

- 1 – All Black
- 2 – All white

Case II: Any two faces are of the same colour and the remaining 4 faces are of the other colour.

1 – 2 adjacent faces black or white, and the remaining 4 faces are white or black (2 cases).

2 – 2 opposite faces are black or white, and the remaining 4 faces are white or black correspondingly (2 cases).

Case III: 3 sides are black and the other 3 sides are white.

1 – The 3 white-coloured faces are adjacent to one another (2 cases).

2 – Two of the three white-coloured faces are opposite to each other (2 cases).

Case IV: Exactly one face is painted black or red (2 cases).

Total number of cases: - 10 cases

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Directions for the following three items (Q.10- Q.12):

Read the information given below and answer the questions that follow:

A mini-Van has only 9 seats of three different kinds – a four-seater, a three-seater and a two-seater. There are nine people in the Van – P, Q, R, S, T, U, V, W and X. All seats should be occupied by these people with the following conditions:

- 1) R must have three more persons with him while S must have only two more persons with him.
- 2) R and X cannot be seated in the same kind of seats.
- 3) Q and W cannot be seated in the same kind of seats.
- 4) U and V must be seated in the same kind of seats.

Q.10) If R and W do not sit on the same kind of seats, and the two-seater is occupied by X and P, then R should sit with?

- a) Q, U and V
- b) Q but not V
- c) Q and T
- d) Q and V

Ans) a

Exp) Option a is the correct answer.

The arrangement is as follows

Four-Seater – R, U, V, Q

Three-Seater – S, W, T

Two-Seater – X, P

Therefore, four-seater is occupied by R, U, V and Q.

Q. 11) If S is seated with P in the three-seater, then who among the following should be seated with R? (It is known that X sits with the only person)

- a) Q and U
- b) U and V
- c) V and W
- d) T and W

Ans) b

Exp) Option b is the correct answer.

If S and P are in the three-seater, then to satisfy the given conditions, the following distribution of people should be followed.

Four-Seater – R, U, V, _

Three-Seater – S, P, _

Two-Seater – X, _

So, U and V should be in the four-seater with R.

Q.12) If S, T and W sit in a three-seater, then which of the following must be true?

- a) Q and U must be seated in the same kind of seats.
- b) X must be seated with either P or R
- c) X must be seated with either P or Q
- d) R must be seated with P, U and V.

Ans) c

Exp) Option c is the correct answer.

If S, T and W sit in the three-seater, then to satisfy the given conditions, the following should be the distribution of people in three different kinds of seats.

Four-Seater – R, U, V, P/Q

Three-Seater – S, T, W

Two-Seater – X, Q/P

So, X must be seated with either P or Q.

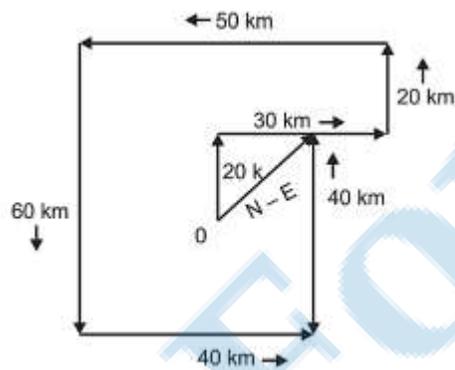
Q.13) A car travels 20 km towards North, then it takes a right turn and runs 30 km East wards. Then it travels 20 km in the North direction and then it travels more for 50 km towards his left. The car stops at the petrol pump for 20 minutes. Then it takes a left turn and moves with high speed for 60 km. After reaching at a junction, it takes left turn and runs slowly for another 40 km. There the car driver takes another break as the car tyre gets punctured. It again starts after 40 minutes and travels for 40 km towards his left.

In which direction is the car from its origin point?

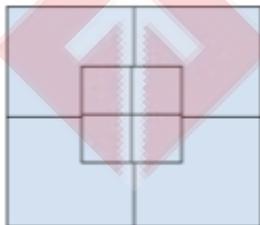
- North-East
- South-West
- East
- North

Ans) a

Exp) Option a is the correct answer.



Q.14) What is the number of squares in the given figure?

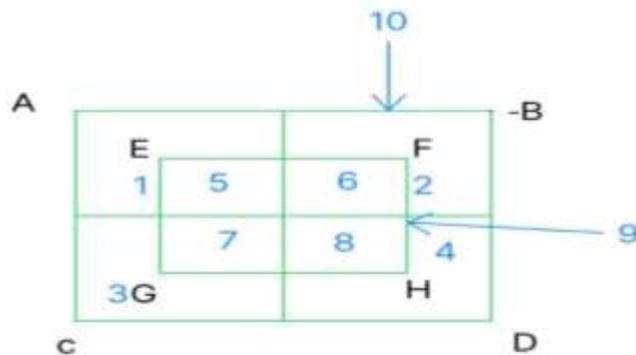


- 8
- 10
- 12
- 14

Ans) b

Exp) Option b is the correct answer.

Based on the question provided, we need to determine the total number of squares in the given figure:



Upon counting, we have identified 8 squares, and we have found 2 additional squares, namely ABCD and EFHG. So, the total number of squares in the given figures is 10.

Q.15) Images from numbers 0 to 99 are observed in a mirror. What is the number of images of these numbers which do not look like their original shapes?

- a) 94
- b) 95
- c) 97
- d) 98

Ans) c

Exp) Option c is the correct answer.

Let's consider the numbers that are symmetric around vertical axis. These numbers will look the same in the mirror as they do in real life, so we can exclude them from our count. These numbers are: 0, 8, and 88. They will have their mirror image similar to their original shapes. Rest all digits have sidewise face, implies if cut vertically they will look different. See the below mirror image of digits 1 to 9.

Numbers	Mirror Image	Numbers	Mirror Image	Numbers	Mirror Image
1	┆	4	4	7	7
2	5	5	2	8	8
3	ε	6	9	9	e

Q.16) If '<' means 'minus', '>' means 'plus', '=' means 'multiplied by' and '\$' means 'divided by', then what would be the value of $35 > 72 \$ 8 < 5$?

- a) 22
- b) 39
- c) 26
- d) 33

Ans) b

Exp) Option b is the correct answer.

The given expression is $35 > 72 \$ 8 < 5$.

Replacing the symbols with their respective operations,

we get $35 + 72 : 8 - 5$.

Following the order of operations,

we first solve the division,

which gives us $35 + 9 - 5$.

Solving this further, we get $44 - 5 = 39$.

So, the value of the given expression is 39.

Q.17) Seven persons namely X, Y, Z, A, B, C, D, are standing in a queue adjacent to each other in the same sequence. Z, B, and A have British passports. Y, C, X, and D have a French passports. C and Y are minors. Rest are septuagenarians. The person standing in the middle of the queue is an astronaut. The person standing at the beginning of the queue is a dancer. A person standing at the fifth position from the front end is a singer. There are two other singers in the group, and both of them are minors. There is one more astronaut in the group who is standing at one end of the queue. Which person is/are a septuagenarian Astronaut with a British passport?

- a) Z only
- b) A only
- c) Z and A only
- d) Z, A, and B

Ans) b

Exp) Option b is the correct answer.

Step 1: let's arrange the person and their passport issuing country. It's given that People are standing adjacent to each other.

P e r s o n	X	Y	Z	A	B	C	D
P a s s p o r t C o u n t r y	F r e n c h	F r e n c h	B r i t i s h	B r i t i s h	B r i t i s h	F r e n c h	F r e n c h

Step 2: Append age information in step 1 based on the given information: C and Y are minors.

Rest are septuagenarians:

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Person	X	Y	Z	A	B	C	D
Passport Country	French	French	British	British	British	French	French
Age group	Septuagenarian	minor	septuagenarian	septuagenarian	septuagenarian	minor	septuagenarian

Step 3: Append profession information in step 2 based on the given information:

The person standing in the middle of the queue is an astronaut (A is in middle).

The person standing at the beginning of the queue is a dancer. (X is that person)

A person standing at the fifth position from the front end is a singer. (B is that person)

There are two other singers in the group, and both of them are minors. (Y and C)

There is one more astronaut in the group who is standing at one end of the queue. (D will be that person as X is already filled)

Person	X	Y	Z	A	B	C	D
Passport Country	French	French	British	British	British	French	French
Age group	septuagenarian	minor	septuagenarian	septuagenarian	septuagenarian	minor	septuagenarian
Profession	Dancer	Singer		Astronaut	Singer	Singer	Astronaut

Conclusion: From the step 3, it's clear that "A" is the only person who is a septuagenarian Astronaut with a British passport. Z is a septuagenarian and has a British passport but his Profession is unknown. No other Astronaut has a British passport, hence correction option will be (b) i.e. A only.

Q.18) In a row of 50 students, when Rohit was shifted to his right by 5 places, his number from the right end of the row became 12. What was the number of Mohit from the left end of the row if Mohit was four places to the left of Rohit's original position?

- 19
- 20
- 21
- 30

Ans) d

Exp) option d is the correct answer.

After Rohit was shifted to his right by 5 places, his position from the right end of the row became 12.

This means that before being shifted, his position from the right end of the row was $12 + 5 = 17$. Mohit was four places to the left of Rohit's original position, so Mohit's position from the right end of the row was $17 + 4 = 21$. Since there are 50 students in the row, Mohit's position from the left end of the row is $50 - 21 + 1 = 30$. So, Mohit is 30th from the left end of the row.

Q.19) Following is a matrix of certain entries. The entries follow a certain trend row-wise. Choose the missing entry (?) accordingly.

2Y	60B	8E
3H	27K	6N
?	65T	9W

- a) 6Q
b) 8Q
c) 4Q
d) 2O

Ans) c

Exp) Option c is the correct answer.

The formula on which the three row of the matrix is based is : $b = c^2 - a^2$ Where a, b and c are values of 1st, 2nd and 3rd row

Alphabets are taking the jump of two places (Y, Y+2 = B, B+2= E and so on)

$$8^2 - 2^2 = 60$$

$$6^2 - 3^2 = 27$$

$$9^2 - 4^2 = 65$$

Hence missing value is 4Q

Q.20) If the order of the letters in the English alphabet is reversed and each letter represents the letter whose position it occupies for example: A becomes Z, B become Y and so on and thus DAD would be written as WZW then which one of the following represents the word PENCIL?

- a) KVXMRO
b) KVMXRO
c) KTMXRO
d) KLMXRO

Ans) b

Exp) Option b is the correct answer.

If we reverse the order of the English alphabet, then A becomes Z, B becomes Y, C becomes X, and so on.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Z	Y	X	W	V	U	T	S	R	Q	P	O	N	M	L	K	J	I	H	G	F	E	D	C	B	A

So, if we apply this rule to the word PENCIL:

P becomes K (16th letter from start becomes 16th from end),

E becomes V (5th from start becomes 5th from end),

N becomes M (14th from start becomes 14th from end),

C becomes X (3rd from start becomes 3rd from end),

I becomes R (9th from start becomes 9th from end) and

L becomes O (12th from start becomes 12th from end). Therefore, PENCIL would become **KVMXRO**

Putting these letters together, we get **KVMXRO**.

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Q.21) Consider the following arrangement that has some missing letters:

ab_c_aaac_baabbc_aab_cb_

The missing letters which complete the given arrangement are:

- a) b, a, a, b, b, a
- b) c, b, b, a, c, a
- c) b, c, a, b, b, c
- d) c, a, c, a, a, b

Ans) b

Exp) Option b is the correct answer.

The length of the sequence is of 24 letters. Lets Break the sequence into two halves:

First Part: ab_c_aaac_ba

2nd Part: abbc_aab_cb_

In the below table, the First row is the first part of the given sequence and the second row is the second part of the sequence in reverse order

Index of 1st half	1	2	3	4	5	6	7	8	9	10	11	12
value of 1st half	a	b	_	c	_	a	a	a	c	-	b	a
value of 2nd half	_	b	c	_	b	a	a	_	c	b	b	a
Index of 2nd half	24	23	22	21	20	19	18	17	16	15	14	13

Here you can see that the value of index 2,6,7,9,11 and 12th of first half is matching with the value of index 13,14,16,18, 19,23 in the above table, hence we can say that the sequence is in symmetry (In geometry, symmetry is defined as a balanced and proportionate similarity that is found in two halves of an object.) hence the missing values will be:

Index	Missing values
3	c
5	b
10	b
17	a
21	c
24	a

Hence answer is option b) c, b, b, a, c, a

Q.22) In a school, every student is assigned a unique identification number. A student is a swimmer if and only if the identification number is divisible by 6, whereas a student is a runner if and only if the identification number is divisible by 8. If every number from 1 to 200 is assigned to a student, then how many of them are swimmers but not runners?

- a) 25
- b) 30
- c) 35
- d) 40

Ans) a

Exp) option a is the correct answer.

A student is a swimmer but not a runner if and only if their identification number is divisible by 6 but not divisible by 8.

There are 33 numbers between 1 and 200 that are divisible by 6.

The least common multiple of 6 and 8 is 24, so a student is both a swimmer and a runner if and only if their identification number is divisible by 24.

There are 8 numbers between 1 and 200 that are divisible by 24.

So, the number of students who are swimmers but not runners is $33 - 8 = 25$.

Q.23) In a code language 'THIRUVANANTHAPURAM' is written as 'PMEWQAWSWSPMLZNF'. How is 'NAKHONLUANG' written in that code language?

- a) PDJKRUOXDQJ
- b) JFGMKSHZWSC
- c) KXIFLKISXKE
- d) JCDLRQPXDQK

Ans) b

Exp) Option b is the correct answer.

The 1st letter takes a jump of 4 places backward (T becomes P)

2nd letter moves ahead 5 places, (H becomes M)

then 3rd letter again goes 4 places backward (I becomes E),

4th letter moves ahead 5 places (R becomes W). This pattern repeats.

So, with the same logic (odd index's alphabet jumps 4 places backward and even indexes alphabet moves ahead 5 places)

N	A	K	H	O	N	L	U	A	N	G
J	F	G	M	K	S	H	Z	W	S	C
-4	+5	-4	+5	-4	+5	-4	+5	-4	+5	-4

Q.24) Consider two statements and a Question:

Statement-1: The last day of the month is a Friday.

Statement-2: The second Tuesday of the month was the twelfth day.

Question: What day of the week is the seventeenth day of the month?

Which one of the following is correct in respect of the Statements and the Question?

- Statement-1 alone is sufficient to answer the Question
- Statement-2 alone is sufficient to answer the Question
- Both Statement-1 and Statement-2 are required to answer the Question
- Neither Statement-1 nor Statement-2 is sufficient to answer the Question

Ans) b

Exp) Option b is the correct answer.

From Statement-1, if the last day is Friday we are not able to find a day on the 17th of that month because we don't know whether the month is of 28 days or 29 days or 30 days or 31 days. Therefore, we can see that Statement-1 alone is not sufficient to answer the Question.

From Statement-2, we know that the second Tuesday of the month was the twelfth day. This means that the first Tuesday of the month was on the 5th, and the third Tuesday of the month was on the 19th. Therefore, the seventeenth day of the month is a Sunday.

Therefore, Statement-2 alone is sufficient to answer the question, and the answer is Sunday.

Q.25) A delegation of 12 countries visit United Nations. Six countries are from African continent and six are from South America. At United Nations General Assembly a voting is scheduled on the agenda “Russian incursions in Ukraine”. All countries are not allowed to vote. All the twelve nations have to select only four among them, who will take part in voting. In how many ways the four countries can be selected to vote on the motion, if two particular countries refuse to be together and two other particular countries wish to be together only, in the voting compartments.

- 495
- 255
- 226
- 450

Ans) c

Exp) Option c is the correct answer

Let's assume that countries A and B wish to be selected together and countries C and D do not wish to be selected together.

There are 6 such cases: -

- A, B, C selected. D not selected. No. of ways of such selection = A, B, C is selected in 1 way, Since D is not to be selected, remaining 1 country has to be selected from rest 8 countries in 8C_1 way = 8
- A, B, D selected, C not selected. No. of ways of such selection = A, B, D is selected in 1 way, since C is not to be selected, remaining 1 country can be selected from rest 8 countries in 8C_1 way = 8
- A, B selected. C, D not selected. No. of ways of selection = A, B is selected in 1 way, C and D has not to be selected, so remaining 2 countries can be selected from rest 8 countries in 8C_2 ways = $\frac{8!}{(8-2)! \times 2!} = 28$
- C selected. A, B, D not selected. No. of ways of selection = C can be selected in 1 way. A, B and D are not to be selected, so remaining 3 countries can be selected from rest 8 countries in 8C_3 ways = $\frac{8!}{(8-3)! \times 3!} = 56$
- D selected. A, B, C not selected. No. of ways of selection = D can be selected in 1 way. A, B and C are not to be selected, so remaining 3 countries can be selected from rest 8 countries in 8C_3 ways = $\frac{8!}{(8-3)! \times 3!} = 56$
- A, B, C, D not selected. All the 4 countries has to be selected from the rest 8 countries in 8C_4 ways = $\frac{8!}{(8-4)! \times 4!} = 70$

Hence total number of ways of selecting four countries who will vote = $8+8+28+56+56+70= 226$

Q.26) In a certain village, one-third of the villagers have their own cows. One-fourth of the villagers grow vegetables. One-half of the villagers are skilled in weaving. Three-fourths of the villagers are under 30 years of age. Which one of the following statements is certainly correct?

- a) All the villagers who have their own cows grow vegetables.
- b) Some villagers under 30 years of age are skilled in weaving.
- c) Only half of the villagers who grow vegetables are skilled in weaving.
- d) No villager under 30 years of age has his own cow.

Ans) b

Exp) Option b is the correct answer.

Let the total number of villagers in the village be represented by 'x'. Then:

Number of villagers who have their own cows = $x/3$

Number of villagers who grow vegetables = $x/4$

Number of villagers who are skilled in weaving = $x/2$

Number of villagers who are under 30 years of age = $3x/4$

Option a is incorrect: All the villagers who have their own cows grow vegetables: This statement is not necessarily true because there is no information given about the relationship between owning cows and growing vegetables.

Option b is correct: Some villagers under 30 years of age are skilled in weaving: This statement is certainly correct since the number of villagers who are under 30 years of age is greater than the number of villagers who are skilled in weaving, so there must be some villagers under 30 years of age who are skilled in weaving.

Option c is incorrect: Only half of the villagers who grow vegetables are skilled in weaving. It is possible that more than half of the villagers who grow vegetables are skilled in weaving, or that less than half are skilled in weaving. The information given in the problem does not allow us to make any inference about the relationship between growing vegetables and being skilled in weaving.

Option d is incorrect: No villager under 30 years of age has his own cow. It is possible that some villagers under 30 years of age have their own cows, since one-third of the villagers have their own cows and three-fourths of the villagers are under 30 years of age. In fact, it is possible that all of the villagers who have cows are under 30.

Q.27) A lock has four-digit passcode. First digit is the sum of second and third digit. Second digit is twice the fourth digit, third digit is one less than second digit and fourth digit is one-fifth of the sum of first and second digit. How many possible set of passcodes can be there ?

- a) 2
- b) 3
- c) 1
- d) 4

Ans) c

Exp) Option c is the correct answer.

Let the four digits are A, B, C, D

$$A = B + C$$

$$B = 2D$$

$$C = B - 1$$

$$D = 1/5(A + B)$$

$$5D = A + B$$

$$5D = A + 2D$$

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$$3D = A, D = A/3$$

$$B = 2A/3, A/3 = C$$

Hence the four digits are A, 2A/3, A/3, A/3

The value of A has to be such that–

- 1) It is less than 10
- 2) It is divisible by 3

So, the value of A can be 3,6,9. Putting A =3, Value of B is 2, C is 1, D= 1, these value satisfies all the given conditions.

Putting A=6, Value of B is 4, C is 2, D is 2. These values do not satisfy the given conditions.

Putting A=9, Value of B is 6, C is 3, D =3. This again does not satisfy the given conditions.

So, the number of possible passcode is just one 3211.

Directions for the following three items (Q.28 - Q.30):

Read the given information and answer the questions that follow.

Seema, Cheenu, Lalita, Teena, and Somi help themselves to take some sweets. Four of them take a rasgulla. Cheenu and Teena do not take a burfy but all the others do take the burfy. Cheenu takes only one sweet, which is a kalakand. Kalakand is not taken by others apart from Cheenu. Everyone takes peda except Cheenu, Somi, and Seema.

Q.28) Who only had a peda and a rasgulla?

- a) Cheenu
- b) Somi
- c) Seema
- d) Teena

Ans) d

Exp) Option d is the correct answer.

Name	Rasgulla	Burfy	Kalakand	Peda
Seema	✓	✓	✗	✗
Cheenu	✗	✗	✓	✗
Lalita	✓	✓	✗	✓
Teena	✓	✗	✗	✓
Somi	✓	✓	✗	✗

Q.29) How many sweets were taken by all?

- a) 12
- b) 11
- c) 9
- d) 10

Ans) d

Exp) Option d is the correct answer.

Name	Rasgulla	Burfy	Kalakand	Peda
Seema	✓	✓	✗	✗
Cheenu	✗	✗	✓	✗
Lalita	✓	✓	✗	✓
Teena	✓	✗	✗	✓
Somi	✓	✓	✗	✗

Q.30) Who are the two people taking the same number and same type of sweets?

- Seema and Lalita
- Somi and Lalita
- Seema and Somi
- Teena and Somi

Ans) c

Exp) Option c is the correct answer.

Name	Rasgulla	Burfy	Kalakand	Peda
Seema	✓	✓	✗	✗
Cheenu	✗	✗	✓	✗
Lalita	✓	✓	✗	✓
Teena	✓	✗	✗	✓
Somi	✓	✓	✗	✗

Q.31) In a particular year, April 1st is on a Tuesday. If Christmas falls on a Thursday that year, what day of the week is September 10th of the same year?

- Monday
- Wednesday
- Tuesday
- Thursday

Ans) b

Exp) Option b is the correct answer.

To solve this problem, we need to use some basic principles of calendar arithmetic.

First, note that April has 30 days, May has 31 days, June has 30 days, July has 31 days, August has 31 days, and September has 30 days.

Next, we can count the number of days from April 1st to September 10th.

April: $30 - 1 = 29$ days

May: 31 days

June: 30 days

July: 31 days

August: 31 days

September 10th: 10 days

The total number of days is therefore $29 + 31 + 30 + 31 + 31 + 10 = 162$ days.

Since 162 is not divisible by 7 (the number of days in a week). The remainder is 1. So we know that September 10th is exactly 23 weeks ($161 : 7$) after April 1st +1 day.

Since April 1st is a Tuesday, September 10th will be on Wednesday.

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Q.32) The letters from A to Z are numbered from 1 to 26. If DCHB = 533, RMKF = 2814, then what is WYJH equal to?

- a) 3454
- b) 5744
- c) 4754
- d) 3274

Ans) b

Exp) Option b is the correct answer.

First, the letters in the words are raised to the power of their position in the word. Then sum of that is taken out which is on the R. H. S.

$$DCHB = 4^1 + 3^2 + 8^3 + 2^4 = 541$$

$$RMKF = 18^1 + 13^2 + 11^3 + 6^4 = 2814$$

$$WYJH = 23^1 + 25^2 + 10^3 + 8^4 = 5744$$

Q.33) Six friends Alice, Bob, Cirus, Dave, Ellen and Fig are standing in a line in the given sequence. Each drink a different beverage- black coffee, blue lagoon, green mojito, orange juice, red bull, and yellow daisy. Each of them owns different cars- Mercedes, BMW, Scorpio, Safari, Alto, Ciaz. Using the following clues, determine the car owned by each friend and the beverage they are drinking.

The person who owns Mercedes is drinking blue lagoon. The person sitting on Scorpio is drinking green mojito. Ellen is standing next to the person who owns Safari. Owner of Ciaz is standing at one end of the line. The person drinking black coffee is standing next to the person drinking orange juice. Alice does not own BMW or Alto. Fig is drinking Red bull. Cirus does not own Scorpio. The person in Alto is drinking Black Coffee.

- a) Alice- Mercedes- Blue Lagoon, Bob-BMW-Orange juice, Cirus- Alto- Black coffee, Dave-Safari- Yellow daisy, Ellen-Scorpio-Green mojito, Fig-Ciaz- Red Bull
- b) Alice- scorpio - Green mojito, Bob-BMW-Orange juice, Cirus- Mercedes- Blue Lagoon, Dave-Safari- Yellow daisy, Ellen-Alto- Black coffee, Fig-Ciaz- Red Bull
- c) Alice- Ciaz - Blue Lagoon, Bob-BMW- Yellow daisy, Cirus- Alto- Black coffee, Dave-Safari- Orange juice, Ellen-Scorpio-Green mojito, Fig- Mercedes- Red Bull
- d) Alice- Mercedes- Blue Lagoon, Bob- Scorpio-Green mojito, Cirus- Alto- Black coffee, Dave-Safari- Yellow daisy, Ellen- BMW-Orange juice, Fig-Ciaz- Red Bull

Ans) a

Exp) Option a is the correct answer.

From the above clues, Lets create a relationship table:

Step 1: The person who owns Mercedes is drinking blue lagoon. The person sitting on Scorpio is drinking green mojito. The person in Alto is drinking Black Coffee: Based on these two clues, we can draw this:

Car	Mercedes	Scorpio	Alto			
Beverage	Blue L	Green M	Black C			

Step 2: Ellen is standing next to the person who owns Safari. Fig is drinking Red bull. It is also given the sequence of friend's name. so, we can say:

Name	Alice	Bob	Cirus	Dave	Ellen	Fig
Car				Safari		
Beverage						Red B

Step 3: Alice does not own BMW or Alto. So, Alice can have Mercedes, Scorpio or Ciaz. **Owner of Ciaz is standing at one end of the line.** So Ciaz can be either owned by Alice or Fig. In step 1, it's mapped that

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both Scorpio and Mercedes have beverages as Blue Lagon and Green Mojito, Ciaz can only go at right corner. So now Alice is left with two vehicle option: Mercedes and Scorpio. It's also given **Cirus does not own Scorpio**. So Cirus can own Alto, BMW or Mercedes. Alto can be only given to Cirus, Bob or Ellen.

Name	Alice	Bob	Cirus	Dave	Ellen	Fig
Car	Merc/Scor	Alt	Alt/BMW/Mer c	Safari	Alt	Ciaz
Beverage	Blue/Green					Red B

Step 4: **The person drinking black coffee is standing next to the person drinking orange juice.** That means, Orange and Black will be in same sequence. And Black is paired with Alto, so Car and Beverage mapping will be

Car

Car	Mercedes	Scorpio		Alto		
Beverage	Blue L	Green M	Orange J	Black C		

If we combine step 3 and 4, Its clear that Bob can't own Alto, as Alice can't have orange. So now Only Cirus can have Alto. So, Bob will have Orange Juice. And BMW is the only car which is not mapped with any color so Bob will certainly own BMW. Yellow daisy is the only beverage, which is not mapped with any car so it will go with Safari.

Name	Alice	Bob	Cirus	Dave	Ellen	Fig
Car	Merc/Scor	BMW	Alto	Safari	Merc/Scor	Ciaz
Beverage	Blue/Green	Orange J	Black C	Yellow D	Blue/Green	Red B

Let's match the options with the table, the only correct combination is option a.

Q.34) The number of times the digit 5 will appear while writing the integers from 1 to 1000 is:

- 269
- 271
- 300
- 302

Ans) c

Exp) Option c is the correct answer.

From 1 to 100, 5 comes a total of 20 times on the unit place and the ten's place:

Number of 5 from 1 to 100 are 5, 15, 25, 35, 45, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 65, 75, 85, 95

Total number of 5 from 1 to 100 = 20 (55 has two 5's)

Same pattern will follow for every set of 100 numbers upto 1000 like 200 to 300, 300 to 400 ,..... 900 to 1000.

But we have to include number of 5 from 500 to 599 also which are 100 in number.

So,

Total number of 5 from 1 to 1000 = $20 \times 10 + 100$

$\Rightarrow 200 + 100$

$\Rightarrow 300$

So, from 1 to 1000, 5 comes on the unit and the ten places 200 times.

From 500 to 599, 5 comes in the hundredth place 100 times.

Total number of times 5 comes = $200 + 100 = 300$ times.

Q.35) There are 20 people standing in a queue at a bank. The first person takes 3 minutes to complete their transaction, and each subsequent person takes 30 seconds longer than the previous person to complete their transaction. The bank closes in three hours from now. How much time it will take for all the people standing in the queue to complete their transaction?

- a) 127 minutes
- b) 144 minutes
- c) 165 minutes
- d) 155 minutes

Ans) d

Exp) Option d is the correct answer.

The first person takes 3 minutes, and each subsequent person takes 30 seconds (or 0.5 minutes) longer than the previous person. So the time it takes for the all 20 person to complete their transaction can be calculated by simple formula of sum of an AP (Arithmetic Progression)

$S_n = n/2 [2a+(n-1)d]$, where S_n is the sum of n terms, 'a' is the first number and 'd' is the common difference.

Here $a= 3$, $d=0.5$, $n=20$

$S_n = 20/2[2 \times 3 + (20-1)0.5] = 155$, So the total time it will take all the people standing in the queue to complete their transaction is 155 minutes.

Q.36) A Statement followed by Conclusion-I and Conclusion-II is given below. You have to take the Statement to be true even if it seems to be at variance from the commonly known facts. Read all Conclusions and then decide which of the given Conclusion(s) logically follows/follow from the Statement, disregarding the commonly known facts:

Statements:

1. Some Mangoes are Fruits.
2. All Fruits are Papaya.
3. All Papayas are Lemons.

Conclusions:

- I. Some Mangoes are Papaya.
- II. All Lemons are Mangoes.

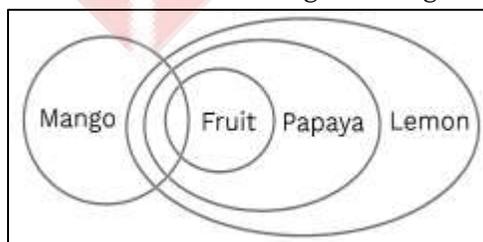
Which of the above conclusions is/are drawn from the statements?

- a) Only conclusion I follows.
- b) Only conclusion II follows.
- c) Both conclusions I and II follow.
- d) Neither conclusion I nor II follows.

Ans) a

Exp) Option a is the correct answer

We can draw the following venn diagram from the given information:



From the above diagram we can see:

That some Mangoes are Fruits, and all Fruits are Papaya. Therefore, some Mangoes are Papaya. So, conclusion I follows i.e. Some mangoes are Papayas

And

However, we cannot say that all Lemons are Mangoes, as there is no direct or indirect relationship between Lemons and Mangoes in the diagram. Therefore, conclusion II does not follow.

Q.37) In a seating arrangement for a dinner party, 8 people have to be seated at a circular table. However, there are certain restrictions and preferences among the guests that must be taken into account. The guests are Alice, Bob, Claire, Dave, Emily, Frank, George, and Holly. The restrictions are:

Alice and Bob cannot be seated next to each other.

Claire and Dave and George dislike each other, so they don't want to be in each others vicinity.

Emily and Frank are twin sisters wearing same colour dress, so the host asked them not to sit together as this would confuse everyone.

How many different seating arrangements are possible that satisfy all the restrictions?

- a) 1354
- b) 1396
- c) 1284
- d) 1440

Ans) d

Exp) Option d is the correct answer.

First, we can consider the seating arrangement without any restrictions, which would give us $7! = (5040)$ possible arrangements. However, we need to subtract the arrangements that violate the given restrictions.

To account for the first restriction, we can treat Alice and Bob as a pair and consider the number of ways to seat the pair and the remaining 6 people separately. We can seat the pair in $2!$ ways (AB or BA) among themselves. So, there are $2! \times (7-1)! = 1440$ arrangements that violate the first restriction.

For the second restriction, we can treat Claire, George and Dave as a pair and consider the number of ways to seat the pair and the remaining 5 people separately. We can seat the pair in $3!$ ways among themselves. Total no. of arrangements in which these three will be together = $(6-1)! \times 3! = 720$, So there are 720 arrangements that violate second restriction.

To account for the third restriction, we can treat Emily and Frank as a pair and use the same approach as for Alice and Bob. There are $2 \times 720 = 1440$ arrangements that violate the third restriction.

Therefore, the total no. of arrangements that violate one of the three restrictions are = $1440 + 720 + 1440 = 3600$

Therefore, the number of valid seating arrangements is $7! - 3600 = 1440$

Q.38) Six books A, B, C, D, E and F are placed side by side. A and B have green covers while the rest have yellow covers. Only C and D are new books while the rest are old. A and B are fiction books while the rest are non-fiction books.

Which book(s) is/are old non-fiction book(s) with a yellow cover?

- a) C only
- b) D only
- c) C and D
- d) E and F

Ans) d

Exp) Option d is the correct answer.

From the information given in the question, we know that A and B have green covers while the rest have yellow covers.

We also know that only C and D are new books while the rest are old.

Finally, we know that A and B are fiction books while the rest are non-fiction books.

This is because they both have yellow covers (as stated in the question), they are not fiction books (since they are not A or B), so they must be non-fiction books.

Additionally, since only C and D are new books (as stated in the question), all other books including E and F must be old.

From this information, we can deduce that E and F are old non-fiction books with yellow covers.

Q.39) Consider the Question and two Statements given below:

Question: If a right circular cone is cut by a plane parallel to its base, what is the ratio of the volumes of the smaller cone and the larger cone?

Statement 1: The ratio of the areas of the two bases of the cone is 9:16.

Statement 2: The distance of the plane from the apex of the cone is 15 cm.

Which one of the following is correct in respect of the Question and the Statements?

- Statement-1 alone is sufficient to answer the question.
- Statement-2 alone is sufficient to answer the question.
- Both Statement-1 and Statement-2 are sufficient to answer the question.
- Both Statement-1 and Statement-2 are not sufficient to answer the question.

Ans) a

Exp) Option a is the correct answer.

Statement 1 gives us the ratio of the areas of the two bases of the cone. Let r_1 , r_2 be the radius of the bases of the cone and h_1 and h_2 be the heights of the respective cones. **Rule of a similar cone says that if two cones are similar then the ratios of the dimensions of the cones are equal. Thus, the ratio of the heights of the cones is equal to the ratio of the radii of the cone.**

Since the cone is right circular cone, so for that the bigger cone and smaller cone is similar cone, hence the ratio of height and radii of the two similar cones is equal.

$$r_1/r_2 = h_1/h_2$$

Area of the base of a cone is $A = \pi r^2$ and the volume of the cone is $\pi r^2 h/3$

$$\text{Given, } \pi r_1^2 / \pi r_2^2 = 9/16$$

$$\text{so } r_1^2 / r_2^2 = 9/16$$

With the rule of similar cones, $h_1/h_2 = 3/4$

So the ratio of volume will be $(\pi r_1^2 h_1 / 3) / (\pi r_2^2 h_2 / 3) = (r_1^2 / r_2^2) \times (h_1 / h_2) = 9/16 \times 3/4$

Thus, statement 1 alone is sufficient to answer the question.

Statement 2 only gives us the distance of the plane from the apex of the cone, which is not sufficient to determine the ratio of the volumes of the two cones. Therefore, statement 2 alone is not sufficient.

Q.40) Consider two Statements and a Question:

Statement 1: X is taller than Y, but shorter than Z.

Statement 2: Z is shorter than W, who is the tallest among them.

Question: Who is the shortest among X, Y, Z, and W?

Which one of the following is correct in respect of the Statements and the Question?

- Statement-1 alone is sufficient to answer the Question.
- Statement-2 alone is sufficient to answer the Question.
- Both Statement-1 and Statement-2 are required to answer the Question.
- Neither Statement-1 alone nor Statement-2 is sufficient to answer the Question.

Ans) c

Exp) Option c is the correct answer.

From Statement-2, we know that W is the tallest among X, Y, Z, and W, and Y is the shortest among them. Therefore, we can conclude that the ordering of heights from shortest to tallest is: $Y < X < Z < W$.

From Statement-1, we know that X is taller than Y and shorter than Z.

However, it doesn't tell us where X, Y, and Z fit into the ordering we established from Statement-2.

Therefore, to answer the question of who is the shortest among X, Y, Z, and W,

we need both Statement-1 and Statement-2. We can conclude that Y is the shortest among them.

Q.1) Consider the following economic situation:

“Suppose a family with an annual household income of Rs. 5,00,000 spends 25% of their income on food. After some time, their income doubles to Rs. 10,00,000. Consequently, the percentage of income spend on food purchases decreases, while the percentage spent on other things (such as education and recreation) increases.”

Which of the following concepts most appropriately explain the above economic scenario?

- Laffer's Curve
- Varian Rule
- Engel's law
- Kuznets Curve

Ans) c

Exp) Option c is the correct answer.

Engel's Law is an economic theory put forth in 1857 by Ernst Engel, a German statistician. **It states that the percentage of income allocated for food purchases decreases as a household's income rises, while the percentage spent on other things (such as education and recreation) increases.**

Ernst Engel in his study, divided a test group of Belgian families into three groups: "on relief," "poor but independent," and "comfortable." He then broke down their expenditures for food, clothing, housing, education, recreation, and other spending categories.

Engel found that the poorer the group, the greater the percentage of their budget that went to food, while a lesser percentage went, for example, to clothing and education.

Option a is incorrect: Laffer's curve establishes a relationship between tax rates and total tax revenue. It states that tax revenue is not most likely to increase/maximise as tax rates increase.

Option b is incorrect: The Varian Rule holds that "A simple way to forecast the future is to look at what rich people have today; middle-income people will have something equivalent in 10 years, and poor people will have it in an additional decade."

Option d is incorrect: Kuznets curve is used to demonstrate the hypothesis that economic growth initially leads to a greater inequality, followed later by the reduction of inequality. It establishes relationship between income inequality and per capita income.

Source: <https://www.investopedia.com/terms/e/engels-law.asp>

Q.2) Consider the following statements regarding Balance of Payments (BoPs) Accounts in India:

- Export of goods and services forms the part of Current Account transactions.
- External assistance in the form of inter-governmental loans is a part of Capital Account transactions.
- Transactions which are made to cover deficits in BoPs are called as Autonomous transactions.

Which of the statements given above is/are correct?

- 1 and 2 only
- 2 only
- 1 and 3 only
- 1, 2 and 3

Ans) a

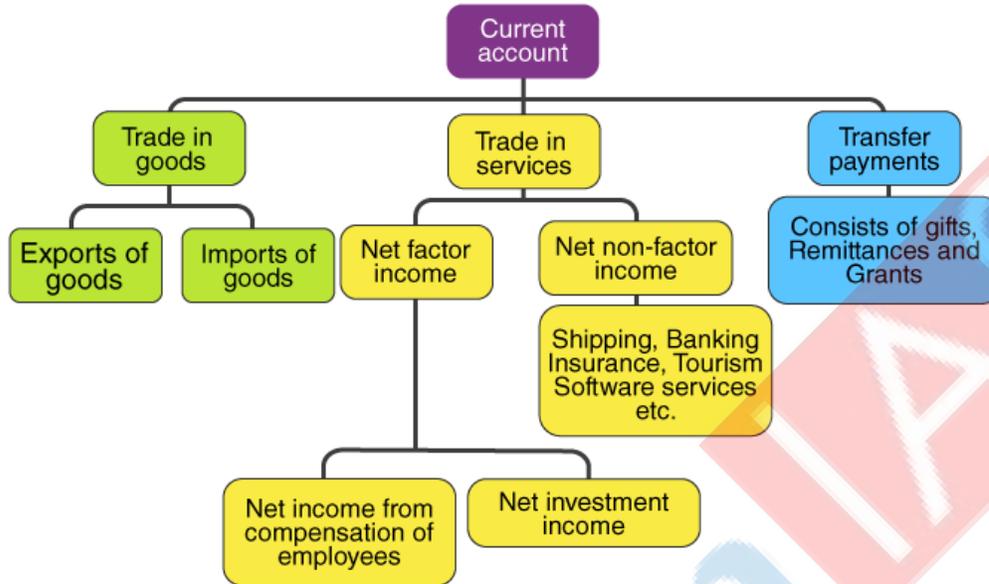
Exp) Option a is the correct answer.

The Balance of Payments (BoP) is a statement of transactions in goods, services and assets between residents of a country with rest of the world. There are three main accounts in the BoP- the current account, the financial account and the capital account.

Statement 1 is correct: Current account is the record of trade in goods and services and transfer payments.

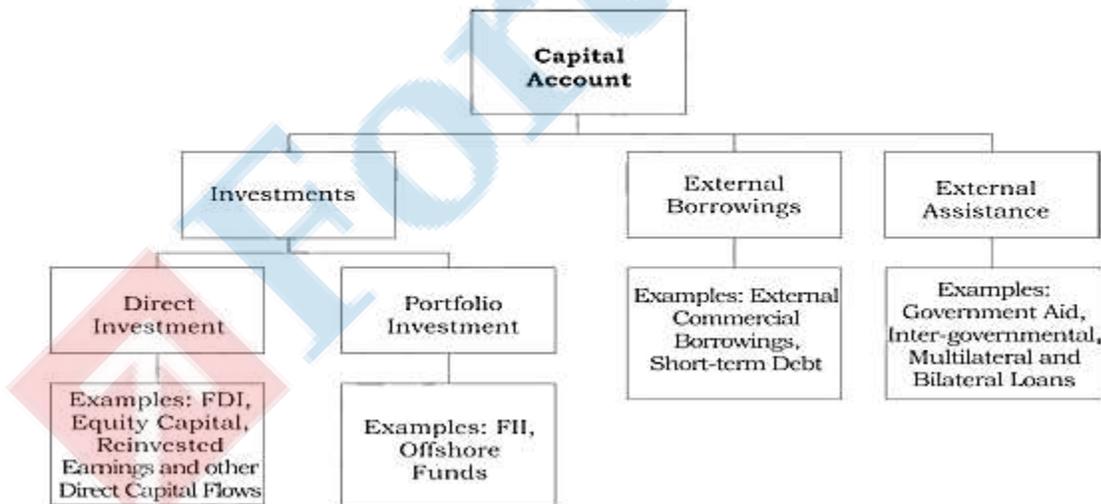
- Trade in goods includes exports and imports of goods.

- 2) Trade in services includes net factor income and net non-factor income transactions.
- 3) Transfer payments are the services which recipients of a country get for 'free'. These include gifts, remittances and grants.



Statement 2 is correct: External assistance in the form of Inter-governmental loans is classified under capital accounts of BoP. These also include multilateral and bilateral loans. Capital Account records all international transactions of assets and liabilities. For example, if an Indian borrows money from a foreign bank, it is a capital account transaction. Following are the components of capital account:

Fig. 6.2: Components of Capital Account



(Source: NCERT)

Statement 3 is incorrect: Autonomous transactions are independent of the BoP and they are not made intentionally to reduce the deficit in the BoP. Accommodating transactions are determined by the gap in balance of payments. In other words, they aim to bridge gap in balance of payments. The sale of foreign exchange by the RBI during deficit (official reserve sale) is an example of accommodating transaction.

Source: <https://ncert.nic.in/textbook/pdf/leec106.pdf>

Q.3) In the context of International Monetary Fund (IMF), which of the following statements is correct regarding the Reserve Tranche Position of a country?

It is a portion of a member country's quota which:

- can be withdrawn without service fees or economic reform conditions.
- cannot be withdrawn under any circumstances.
- can be withdrawn only on paying a penal rate of interest.
- can be withdrawn as a last resort on the conditionality of full-fledged economic reforms.

Ans) a

Exp) Option a is the correct answer.

A reserve tranche is a portion of the required quota of currency each member country must provide to the IMF. It can be utilized by a country for its own purpose- **without a service fee or economic reform conditions.** It represents a **member's unconditional drawing rights on IMF.** Initially, **member nations' reserve tranches are 25% of their quota, but this position can change** according to any lending that the IMF does with its holdings of the member's currency. These are considered as **facilities of first resort**, which means that member countries first utilize reserve tranches **before seeking a formal credit tranche that charges interest.**

Knowledge Base:

- Credit Tranche:** Theoretically, members can borrow 100% of their quota. However, if amount sought as credit exceeds reserve tranche, then it becomes credit tranche. Credit tranche must be repaid within three years with interest.
- Quota:** Quotas determine the maximum amount of financial resources a member is obliged to provide to IMF. It determines (a) Voting power in IMF, (b) Access to financing from IMF and (c) Member's share in general allocation of Special Drawing Rights (SDRs)

Source: <https://www.imf.org/external/pubs/ft/bop/2018/pdf/Clarification0218.pdf>

[https://www.imf.org/en/About/Factsheets/Sheets/2022/IMF-](https://www.imf.org/en/About/Factsheets/Sheets/2022/IMF-Quotas#:~:text=What%20are%20IMF%20quotas%3F,the%20IMF's%20unit%20of%20account.)

[Quotas#:~:text=What%20are%20IMF%20quotas%3F,the%20IMF's%20unit%20of%20account.](https://www.imf.org/en/About/Factsheets/Sheets/2022/IMF-Quotas#:~:text=What%20are%20IMF%20quotas%3F,the%20IMF's%20unit%20of%20account.)

Q.4) Consider the following statements about the recently released Human Development Report 2021-22:

- It is released by the United Nations Development Program.
- According to it, overall global life expectancy at birth has increased compared to 2019 level.
- Sri Lanka and Bangladesh have higher HDI score than India.
- The report, for the first-time takes into account the countries' per capita carbon dioxide emission to calculate Human development Index.

Which of the statements given above are correct?

- 1 and 2 only
- 1 and 3 only
- 3 and 4 only
- 1, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Human Development Report (HDR) 2021-22 was recently compiled and released amidst the covid 19 pandemic and Russia-Ukraine crisis with the title, **“Uncertain Times, Unsettled Lives: Shaping our Future in a Transforming World”.**

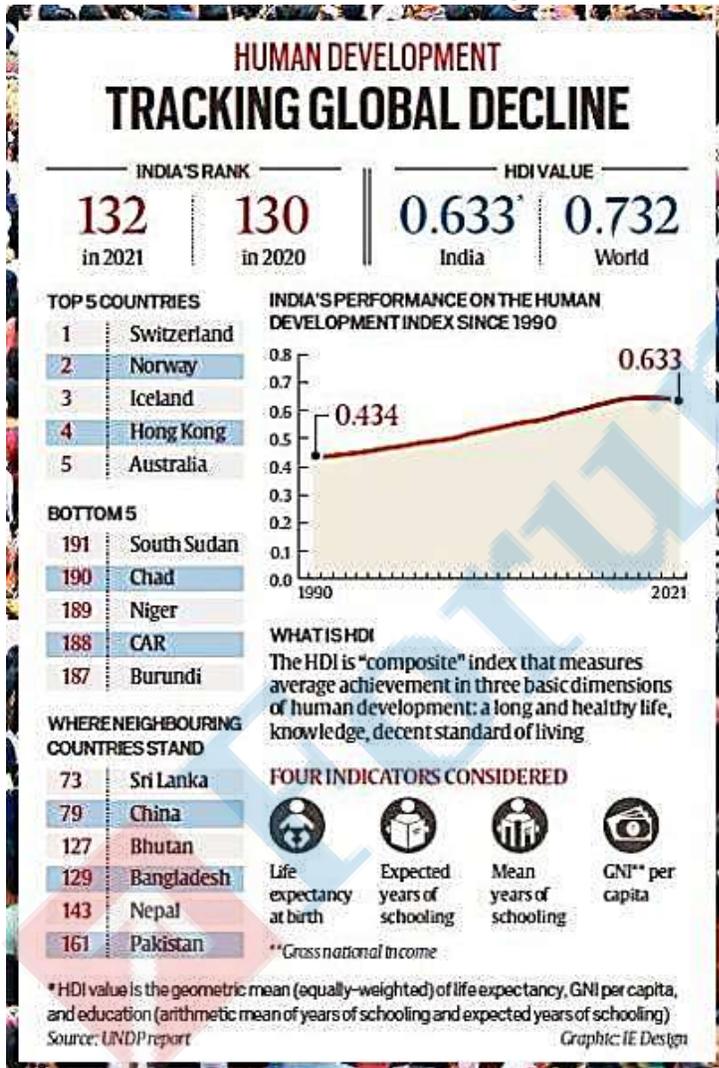
India's rank on the Human Development Index (HDI) has slipped from 130 in 2020 to 132 in 2022.

Statement 1 is correct: The report is published by the Human development Report Office of the United Nations Development Program.

Statement 2 is incorrect: The report releases Human Development Index (HDI) as a part of it. **In this, an overall global drop in the HDI scores had been observed.** The major reason behind this has been a fall in the Life expectancy at birth **from 72.8 years in 2019 to 71.4 years in 2021.**

Statement 3 is correct: Sri Lanka emerged as the best performer in the subcontinent region with HDI score of 0.782, placed at 73rd position globally. It was followed by China (79 and 0.768), Bhutan (127 and 0.666), Bangladesh (129 and 0.661), India (132 and 0.633), Nepal (143 and 0.602) and Pakistan (161 and 0.544).

Statement 4 is incorrect: The planetary pressure-adjusted HDI was introduced in the HDR 2020 and not in the latest report. It adjusts the standard Human Development Index (HDI) by a country's per capita carbon dioxide emissions and material footprint.



Source: <https://blog.forumias.com/india-ranks-132-in-undps-human-development-index-amid-a-global-fall/>

<https://hdr.undp.org/content/human-development-report-2021-22>

<https://hdr.undp.org/content/human-development-report-2020>

Q.5) Consider the following pairs:

Water Channel	Located between
1. Malacca Strait	Malaysia and the Indonesian island of Sumatra
2. Strait of Hormuz	Gulf of Aden and Red Sea
3. Bab-el-Mandeb Strait	Persian Gulf to Gulf of Oman
4. Mozambique Channel	Madagascar and Mozambique

Which of the pairs given above are correctly matched?

- a) 1 and 2 only
- b) 1 and 4 only
- c) 2 and 3 only
- d) 3 and 4 only

Ans) b

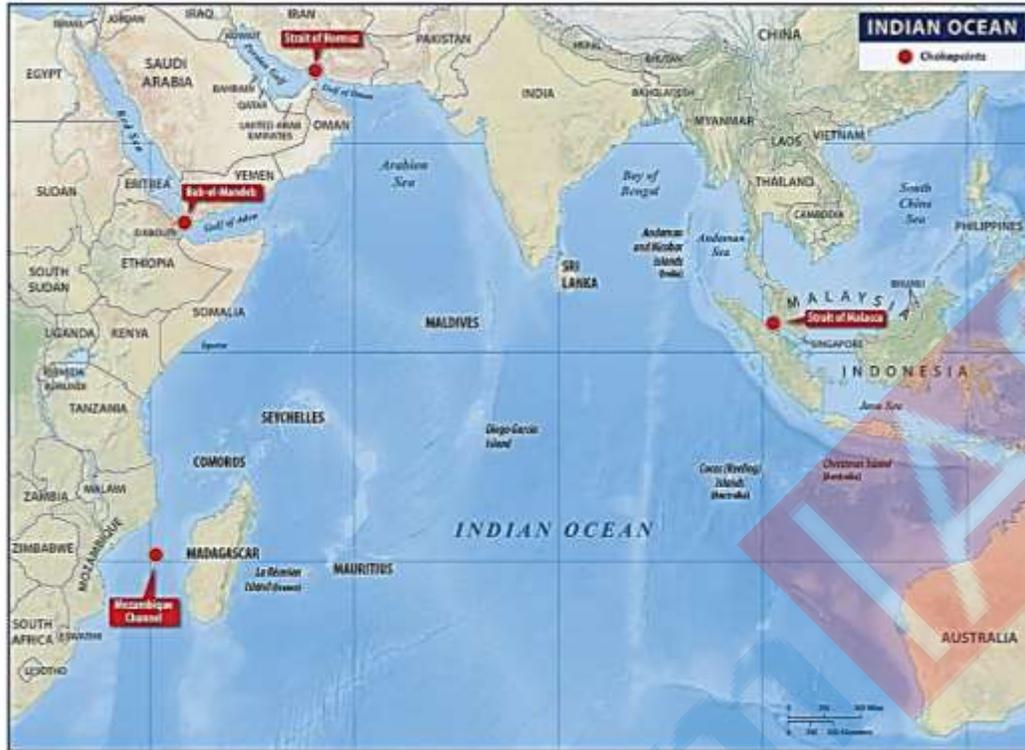
Exp) Option b is the correct answer.

Pair 1 is correctly matched: The **Straits of Malacca** is a narrow stretch of water in Southeast Asia that is 550 miles long and is located between the east coast of the Indonesian island of Sumatra and the west coast of the Malay Peninsula.

Pair 2 is incorrectly matched: The strait of Hormuz is located at the mouth of the Persian Gulf and is crucial to global energy supplies, with about a fifth of all oil traded at sea passing through it. The waterway separates Iran and Oman, **linking the Persian Gulf to the Gulf of Oman and the Arabian Sea**

Pair 3 is incorrectly matched: Bab-el-Mandeb is a strait located east of Africa and south of the Arabian Peninsula which **connects the Red Sea to the Gulf of Aden**. It is located in between Yemen on the Arabian Peninsula and Djibouti and Eritrea in the Horn of Africa.

Pair 4 is correctly matched: The Mozambique Channel is the part of the Indian Ocean **between Madagascar and Mozambique** (present in the African continent). Sometimes considered a choke point in the Indian Ocean, this channel is likely to regain its significance if the tensions in the Strait of Hormuz area soar.



Source: <https://carnegieendowment.org/2021/03/03/what-is-happening-in-indian-ocean-pub-83948>

Q.6) Which of the following statements best describes the phenomenon of ‘Churning Poor’?

- It is a situation when people are usually poor but they may sometimes have a little more money than usual.
- It is a situation in which people regularly move in and out of the poverty.
- It is a situation in which people are rich most of the times, but sometimes their income drops to poverty level.
- It is a situation in which a sudden calamity draws a group of people into poverty.

Ans) b

Exp) Option b is the correct answer.

Poverty is a state or situation in which a person or a group of people don't have enough money or the basic things they need to live. There are several ways of categorising poverty.

Churning poor is a category in which a group of people regularly move in and out of the poverty. For example, small farmers and seasonal workers.

Option a is incorrect. A situation when people are usually poor but they may sometimes have a little more money than usual is considered as of **Chronic poor**. For example, casual workers.

Option c is incorrect. **Transient poor** is a situation in which people are rich most of the times, but sometimes may have a patch of bad luck.

Option d is incorrect. A situation in which sudden calamity draws a group of people into poverty, can be considered as a disaster induced or **climate forced poverty**.

Source: NCERT Class 12th, Indian Economic Development, Unit 3, Poverty (pg. 64)

Q.7) With reference to government expenditure on social sector, consider the following statements:

1. The total expenditure of the General Government on social services has seen an increasing trend in the last five years.
2. The total health expenditure of the Central government has increased to 3 per cent of GDP in Fiscal year of 2021-22.
3. The total combined expenditure of Central and State governments on health sector is twice the expenditure allocated for education sector.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 3 only

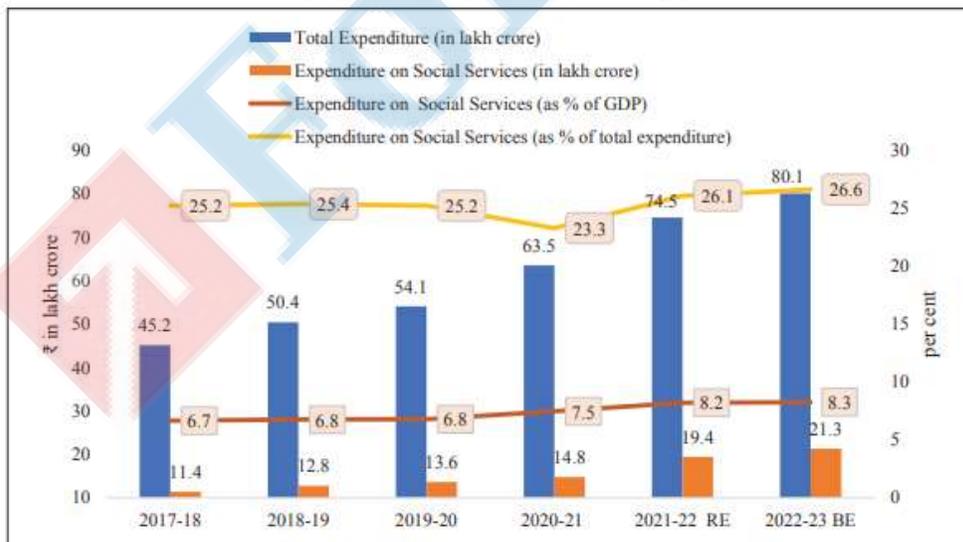
Ans) a

Exp) Option a is the correct answer.

Social expenditure refers to the public spending by the government on various social sectors such as health, education, social security, housing, and other welfare programs. In India, the government spends a significant amount of its budget on social expenditure to improve the well-being of its citizens and reduce poverty.

Statement 1 is correct: The Government's spending on social services has **shown a rising trend since FY18 with a focus on many aspects of the social well-being of citizens of the country.** The share of expenditure on social services in the total expenditure of the Government has been around 25 per cent from FY18 to FY20. It **increased to 26.6 per cent in FY23 (BE).** The social services expenditure witnessed an increase of 8.4 per cent in FY21 over FY20 and another 31.4 per cent increase in FY22 over FY21, being the pandemic years, which required enhanced outlay, especially in the health and education sectors. While the social sector expenditure outlay of the Centre and State governments was `12.8 lakh crore in FY19, it has increased steadily to stand at `21.3 lakh crore in FY23 (BE).

Figure VI.1: Trends in social service sector expenditure by General Government (Combined Centre and States)



Statement 2 is incorrect: The share of expenditure on health in the total expenditure on social services, has increased from 21 per cent in FY19 to 26 per cent in FY23 (BE). However, the total health expenditure

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of the Central government has **not increased to 3 per cent of GDP in** Fiscal year of 2021-22. Fifteenth Finance Commission, in its report, had recommended that public health expenditure of Union and States together should be increased in a progressive manner to reach 2.5 per cent of GDP by 2025.

Items	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 RE	2022-23 BE
Health	1.3	1.4	1.4	1.4	1.4	1.6	2.2	2.1

Statement 3 is incorrect: The total combined expenditure of Central and State governments for **health sector is not twice the expenditure allocated** for education sector. The **allocation for the education sector far exceeds (almost twice) the allocated expenditure of health sector.**

Items	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 RE	2022-23 BE
Total Expenditure	3760611	4265969	4515946	5040747	5410887	6353359	7453320	8008684
Expenditure on Social Services	915500	1040620	1139524	1278124	1364906	1479389	1944013	2132059
<i>of which:</i>								
Education	391881	434974	483481	526481	579575	575834	681396	757138
Health	175272	213119	243388	265813	272648	317687	516427	548855

Source: Economic Survey 2022-2023

Q.8) Consider the following statements regarding situation of workforce in an economy:

- Casualisation of a workforce is a situation in which employment shifts from full time and permanent position to contractual position.
- Informalisation of workforce is a situation in which the proportion of workforce in the formal sector of economy declines over a period.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Workforce is the total number of people in a country or region who are physically able to do a job and are available for work. The workforce in Indian economy has seen a substantial shift from farm-based employment to non-form employment over past few decades. Various studies have shown that the Indian workforce is facing the challenges of Casualisation and Informalisation.

Statement 1 is correct: Casualisation of work force is a process in which employment shifts from a full-time and permanent positions to casual or contract positions. Casual workers are often employed by others on any farm/non-farm enterprise and are paid wages that are daily or periodic in nature.

Statement 2 is correct: Informalisation of a workforce is a phenomenon in which the proportion of workforce in the informal sector to total workforce increases. It means, the total workforce in the formal sector (Government regulated sector employing 10 or more workers) reduces while that in informal sector (Unregulated sector employing less than 10 workers) rises.

Source:

NCERT Class 12th, Indian Economic Development, Unit 7, EMPLOYMENT: GROWTH, INFORMALISATION AND OTHER ISSUES.

Q.9) Consider the following statements with reference to the Foreign Exchange Reserves of India:

1. Higher investments by foreign portfolio investors in India necessarily leads to reduction in forex reserves.
2. Forex reserves help in managing the volatility in currency exchange rates.
3. Sometimes RBI may sell dollars in the market if the rupee weakens.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The foreign exchange reserve of India is consisting of Foreign Currency Assets, Gold Stock of RBI, SDR (Special Drawing Right) holdings of the government, Reserve Tranche position with international monetary fund. In India, Foreign Exchange Reserves are the foreign assets held or controlled by the country central bank. The reserves are made of gold or a specific currency. Currencies of various countries are held in foreign exchange reserve.

Statement 1 is incorrect: The major reason for the rise in forex reserves is the rise in investment in foreign portfolio investors in Indian stocks and foreign direct investments (FDIs).

Statement 2 is correct: Forex reserves are instruments to maintain or **manage the exchange rate**, while enabling orderly absorption of international money and capital flows. The foreign exchange reserves to GDP ratio is around 15 per cent. In brief, official reserves are held for precautionary and transaction motives keeping in view the aggregate of national interests, to achieve balance between demand for and supply of foreign currencies, for intervention, and to preserve confidence in the country's ability to carry out external transactions.

Statement 3 is correct: The Reserve Bank functions as the custodian and manager of forex reserves, and operates within the overall policy framework agreed upon with the government. The RBI allocates the dollars for specific purposes. The RBI uses its forex for the orderly movement of the rupee. **It sells the dollar when the rupee weakens and buys the dollar when the rupee strengthens.**

Source: <https://www.livemint.com/news/india/indias-forex-reserves-decline-to-601-billion-after-two-consecutive-weekly-rise-11654941077639.html>

<https://bfsi.economictimes.indiatimes.com/news/financial-services/forex-reserves-depleting-but-still-in-a-better-position-than-during-2008-crisis-taper-tantrum/94470003>

Indian economy by Shankar ganesh. Page no -291

Economic survey 2021-2022. Page no-109.

<https://www.outlookindia.com/business/rupee-at-record-low-rupee-vs-dollar-why-is-rupee-falling-and-how-will-it-impact-the-indian-economy-and-people-why-is-indian-rupee-falling-news-205888>

Q.10) With reference to UN Peacekeeping, consider the following statements:

1. Financing of UN Peacekeeping operations is the collective responsibility of all UN Member States.
2. UN can ban the peacekeepers from future participation if they are alleged in serious misconduct.
3. Peacekeepers are accountable to UN security council for their criminal conduct.

Which of the given above statements is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

UN Peacekeeping helps countries navigate the difficult path from conflict to peace. They have unique strengths, including legitimacy, burden sharing, and an ability to deploy troops and police from around the world, integrating them with civilian peacekeepers to address a range of mandates set by the UN Security Council and General Assembly.

Statement 1 is correct: While decisions about establishing, maintaining or expanding a peacekeeping operation are taken by the Security Council, **the financing of UN Peacekeeping operations is the collective responsibility of all UN Member States.** Every Member State is legally obligated to pay their respective share towards peacekeeping. This is in accordance with the provisions of Article 17 of the Charter of the United Nations.

Statement 2 is correct: When allegations of serious misconduct involving military and police personnel are substantiated, the UN may repatriate the individuals concerned on disciplinary grounds and ban them from future participation in peacekeeping operations.

Statement 3 is incorrect: UN Peacekeepers are accountable to **their respective countries** for their criminal conduct.

Source: <https://peacekeeping.un.org/en/mandates-and-legal-basis-peacekeeping>
<https://conduct.unmissions.org/enforcement-accountability>

Q.11) Which of the following statements best describe the situation of Unemployment Trap?

- It is a situation in which a casual labour finds it difficult to get out of indebtedness due to insufficient income.
- It is a situation in which cost of going to work is lower than the income received.
- It is a situation when unemployment benefits discourage the unemployed to go to work.
- It is a situation in which an employee is forced to work without wages by debtor to repay the previous debts.

Ans) c

Exp) Option c is the correct answer.

While the purpose of social security and welfare systems is to provide relief to the unemployed, they end up providing them with an incentive not to return to work. **An unemployment trap arises when opportunity cost of going to work is higher than the income received, discouraging people from returning to work and being productive.**

Therefore, we can summarise, Unemployment trap as a situation when unemployment benefits discourage the unemployed to go to work. People find the opportunity cost of going to work too high when one can simply enjoy the benefits by doing nothing.

Source: <https://economictimes.indiatimes.com/definition/unemployment-trap>

Q.12) With reference to 'Annual Survey of Industries (ASI) 2019-20', consider the following statements:

- In India, food products industry was the largest employer in the organized manufacturing sector.
- In 2019-2020, the value of the output from the manufacturing sector was lowest since independence.
- The state of Tamil Nadu had the largest number of persons engaged in factories in India.

Which of the statements given above is/are correct?

- 1 and 2 only
- 2 and 3 only
- 3 only
- 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

Annual Survey of Industries (ASI) 2019-20 is conducted by Ministry of Statistics and Programme Implementation. It is an important source of industrial statistics of the registered organized manufacturing sector of the economy.

Statement 1 is correct: As per the latest ASI FY20, **employment in the organised manufacturing sector** has maintained a steady upward trend over time, with the employment per factory increasing gradually. In terms of share of employment (total persons engaged), the **food products industry (11.1 per cent) remained the largest employer**, followed by wearing apparel (7.6 per cent), basic metals (7.3 per cent), and motor vehicles, trailers, and semi-trailers (6.5 per cent).

Statement 2 is incorrect: According to the report, the manufacturing sector in India saw a decline in both the number of factories and the number of workers employed during the year. However, the **value of output from the manufacturing sector increased by 0.5% compared to the previous year**, driven by the growth in the food products, tobacco products, and pharmaceuticals industries. Thus, the value was not the lowest as it increased compared to previous year.

Statement 3 is correct: State-wise, **Tamil Nadu had the largest number of persons engaged in factories (26.6 lakh)**, followed by Gujarat (20.7 lakh), Maharashtra (20.4 lakh), Uttar Pradesh (11.3 lakh), and Karnataka (10.8 lakh).

Source: Economic Survey 2022-23

Q.13) Which of the following statements best describe the economic situation of 'Glass Cliff'?

- It refers to a situation in which women are promoted to higher positions in companies during the times of crisis.
- It refers to an unspoken limit on how higher a women can rise in an organisation.
- It refers to a situation in which mass layoffs of the employees are done to balance out the ill effects of aggressive hiring previously done.
- It refers to a situation where men employed in inferior positions are promoted faster compared to women.

Ans) a

Exp) Option a is the correct answer.

The term "**Glass Cliff**" refers to a situation in which women are promoted to higher positions during times of crisis or duress, or during a recession when the chance of failure is more likely. In simple terms, women are basically set up for failure. It gives a company someone to blame, if she fails to pull the company out of its downward spiral.

It allows companies to look good as they are promoting women to leadership roles. Hence, even if the company fails it still earns a reputation of being progressive. If women fail, companies are free to reappoint males to their positions without reproach.

Option b is incorrect. On the other hand, '**Glass Ceiling**' refers to an unseen and unspoken limit on how high women can rise in an organisation.

Option c is incorrect. Glass cliff do not refer to a situation in which mass layoffs of the employees are done to balance out the ill effects of aggressive hiring during pandemic years.

Option d is incorrect. Similarly, a situation where men employed in female or minority dominated professions are promoted faster is known as '**Glass Escalator**'.

Source: <https://www.investopedia.com/terms/g/glass-cliff.asp>

<https://www.forbes.com/sites/jennagoudreau/2012/05/21/a-new-obstacle-for-professional-women-the-glass-escalator/?sh=66e24a33159d>

Q.14) With reference to India, consider the following statements:

1. The Gini coefficient has rapidly reduced in the last decade.
2. Reduction in tax progressivity is one of the reasons for the rise in income inequality.
3. Per capita income has decreased after the economic liberalization of 1991.

Which of the statements given above is/are correct?

- a) 2 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect: The Gini coefficient was 35.7 per cent in 2011 in India. The coefficient **increased to 47.9 per cent in 2018**. Due to the COVID-19 pandemic, the Gini coefficient increased further.

India is only second to Russia in the world in terms of inequality.

Gini index or coefficient measures distribution of income across population. Gini coefficient - **100 per cent indicates full inequality** and 0 per cent indicates full equality. Thus, higher Gini coefficient indicates greater inequality.

Statement 2 is correct: Reduction in tax progressivity is one of the reason for rise in income inequality. Top tax rates, which were very high in the 1970s (up to 98%), decreased to 30% in the 1980s and after.

A progressive tax is based on the taxpayer's ability to pay. It imposes a lower tax rate on low-income earners than on those with a higher income. This is usually achieved by creating tax brackets that group taxpayers by income ranges.

Statement 3 is incorrect: Between 1991 and 2016, **per capita income rose from Rs 6,270 to Rs 93,293. Thus, it witnessed a 1388 percent jump.**

Source: <https://www.thehindu.com/opinion/interview/income-inequality-in-india-at-its-highest-level-since-1922/article19645881.ece>

Q.15) With reference to Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 consider the following statements:

1. Intermediaries must provide information under its control to the government authorized agency within 72 hours.
2. It permits users to appeal the decisions of platforms to Grievance Appellate Committee.
3. It also mandates Intermediary to publish its rules and regulations, privacy policy and user agreement of the platform in any one of the chosen regional languages along with English.
4. Intermediary can terminate its user from access to its computer resource for non-compliance of its rules and regulations.

Which of the given above statements are correct?

- a) 1 and 4 only
- b) 2 and 3 only
- c) 1, 2 and 4 only
- d) 1, 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

The Ministry of Electronics and IT (MeitY) has notified amendments to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 (IT Rules, 2021). They aim at placing obligations on Social Media Intermediaries (SMIs) to ensure an open, safe and trusted internet.

Statement 1 is correct: Intermediaries must provide information under its control to the government authorized agency within 72 hours for investigative or protective or cyber security activities, for the purposes of verification of identity, or for the prevention, detection, investigation, or prosecution, of offences under any law for the time being in force, or for cyber security incidents.

Statement 2 is correct: IT Amendment Rules, 2022, seeks to subject content on social media platforms to the direct scrutiny of the Government by permitting **users to appeal decisions of the platforms to the Grievance Appellate Committee (GAC).**

Statement 3 is incorrect: The intermediary shall prominently publish on its website, mobile based application or both, as the case may be, the rules and regulations, privacy policy and user agreement **in English or any language specified in the Eighth Schedule** to the Constitution.

Statement 4 is correct: In case of non-compliance with rules and regulations, privacy policy or user agreement for access or usage of the computer resource of such intermediary, **it has the right to terminate the access or usage rights of the users to the computer resource immediately.**

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1871840>

<https://www.meity.gov.in/writereaddata/files/IT%20Rules%2C%202021%20with%20proposed%20amended%20texts%20in%20colour.pdf>

Q.16) The objective of the recently launched 'PM-SHRI' initiative is to-

- showcase the rich cultural heritage of the country
- reduce the financial burden of charitable religious institutions
- strengthen the existing government schools
- provide amenities of international standards around monuments

Ans) c

Exp) Option c is the correct answer.

The **Pradhan Mantri Schools for Rising India (PM-SHRI) Yojana** is a centrally sponsored scheme for upgradation and development of more than 14500 Schools across the country. It aims at **strengthening the selected existing schools from amongst schools** managed by Central Government/ State/ UT Government/ local bodies.

Features of the scheme:

- PM SHRI Schools will be developed as Green schools, incorporating environment friendly aspects.
- Pedagogy adopted in these schools will be more experiential, holistic, integrated, play/toy-based.
- PM SHRI Schools would be implemented through the existing administrative structure available for Samagra Shiksha, KVS & NVS.
- Selection of PM SHRI schools will be done through Challenge Mode wherein Schools compete for support to become exemplar schools.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1857409>

Q.17) Which of the following were the possible reasons for the rise in economic inequality after the 1991 economic reforms in India?

- Reduction in public investment in agriculture
- Decline in the availability of casual labour
- Poor growth of public expenditure in social sectors
- Rapid decline in foreign direct investments in India

Select the correct answer using the code given below:

- 1 and 2 only
- 2, 3 and 4 only
- 1 and 3 only
- 1, 3 and 4 only

Ans) c

Exp) Option c is correct.

Statement 1 is correct. The share of agriculture investment in the total investment declined from 11.4% in 1980s to 7.4% in 2000s. Evidence show that inequality increased in post-reform period India. Even with a doubling of per capita consumption growth in the post-reform decade, the decline in poverty was less by a quarter compared to the pre-reform decade.

There has been a **relative neglect of the agriculture sector** by policymakers. While economic development entails a move from the off-farm to industry and services, deficiencies of public investments in agriculture, and in the rural economy more generally, has been problematic precisely because the productivity of agriculture determines the standards of living of the majority of the people in India.

Statement 2 is incorrect. Post-reform period saw an **increase in casual labour and not a decline.** The growth of the labour-intensive manufacturing sector has been slow and has been lagging behind the service sector, which is less labour intensive. Also, a high growth in the post-liberalisation period has been accompanied by **increased informalisation and de-unionisation of workforce.** Economically and socially deprived sections of society were mostly employed as casual labour. These are some of the worrisome features of the labour market, as these workers have low bargaining power and earn meagre wages.

Statement 3 is correct. Public expenditure on social sectors has suffered after 1991. As a percentage of GDP, social sector expenditure after 1991 was generally less than what it was in the late 1980s. This has impacted the improvement in health and quality of education in India, which affects economic growth and its distribution.

Statement 4 is incorrect. India's foreign exchange reserves has **increased significantly since 1991.** In June 1991, India had less than \$1 billion foreign reserves. At present, India's foreign exchange reserves stood at more than USD 600 billion.

Source: <https://www.egyankosh.ac.in/bitstream/123456789/37979/1/Unit-11.pdf>

<https://www.thehindu.com/news/national/tehrangana/Economic-growth-post-reform-period-not-inclusive/article17006542.ece>

Q.18) With reference to various curves representing a relation between macroeconomic indicators, consider the pairs:

Curves	Description
1. Lorenz Curve	Represents a relationship between Tax rate and Tax revenue collected.
2. Kuznets Curve	Represents a relationship between economic growth and economic inequality.
3. Phillips Curve	Represents a relationship between Inflation and Purchasing Power of money.

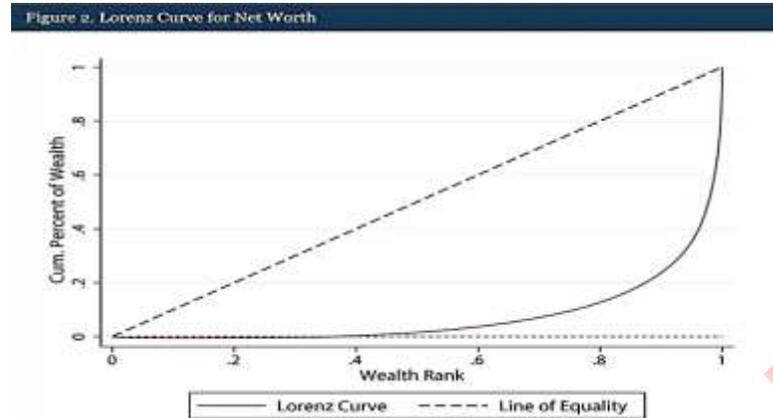
How many pairs above is/are correctly matched?

- Only one pair
- Only two pairs
- All the three pairs
- None of the pairs

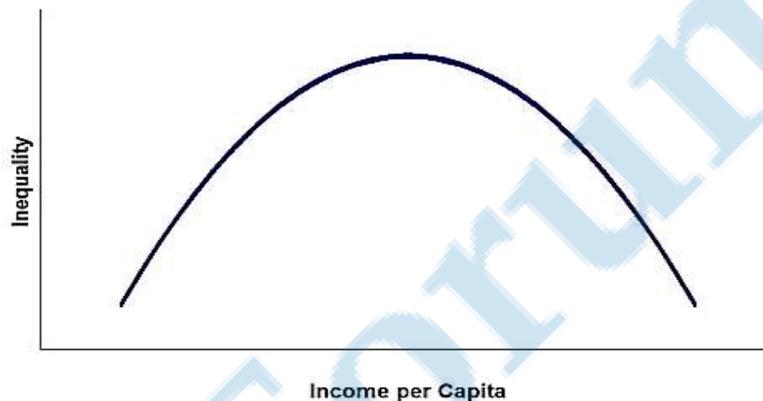
Ans) a

Exp) Option a is the correct answer.

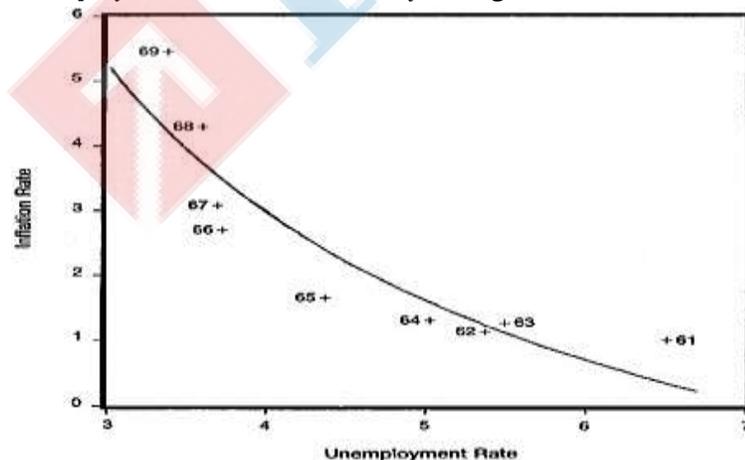
Pair 1 is incorrect: A Lorenz curve is a graphical representation of the **distribution of income or wealth within a population**. The farther the curve is from the baseline (represented by the straight diagonal line) the higher the level of inequality.



Pair 2 is correct: Kuznets curve represents a relation between economic growth and economic inequality. According to this curve, **inequality first rises with increase in economic growth, but inequality after a certain point starts to fall down** as economic growth rises.



Pair 3 is incorrect: The Phillips curve represents a relationship between **rate of inflation and Unemployment rate**. The Phillips curve demonstrates an inverse relation between inflation and unemployment rate in an economy i.e. **higher the inflation, lower the unemployment rate**.



Source: <https://www.investopedia.com/terms/l/lorenz-curve.asp>
<https://www.investopedia.com/terms/s/simon-kuznets.asp>
<https://economictimes.indiatimes.com/wealth/tax/here-is-everything-you-want-to-know-about-laffer-curve-and-tax/tomorrowmakersshow/51098997.cms#:~:text=What%20is%20Laffer%20Curve%3F,an%20economy%20tend%20to%20fall.>

Q.19) With reference to Account Aggregator (AA) Framework, consider the following statements:

1. Account Aggregator is a Reserve Bank of India-regulated Non-Banking Financial Company (NBFC).
2. Account Aggregator cannot retrieve or share the financial information of the customer without the explicit consent of the customer.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: An Account Aggregator (AA) is a type of Reserve Bank of India (RBI) regulated Non-Banking Financial Company (NBFC) that helps an individual securely and digitally access and share information from one financial institution they have an account with to any other regulated financial institution in the AA network.

Statement 2 is correct: Account Aggregator (AA) is engaged in the business of providing the service of retrieving or collecting financial information pertaining to the customer. No financial information of the customer is retrieved, shared or transferred by AA without the explicit consent of the customer.

Knowledge Base: **Registering with an AA is fully voluntary for consumers.** If the bank the consumer is using has joined the network, **an individual can choose to register on an AA**, choose which accounts they want to link, and share their data from one of their accounts for some specific purpose to a new lender or financial institution at the stage of giving consent via one of the Account Aggregators. **A customer can reject a consent to share request at any time.**

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1753713>

Q.20) With reference to various measures taken by the government to boost the digitalization of land records in India, consider the following statements:

1. National Generic Document Registration System (NGDRS) is a software application for the registration system designed for the exclusive use of sub registrars.
2. Unique Land Parcel Identification Number (ULPIN) System provides a unique ID for every plot of land in the country.
3. SVAMITVA scheme aims to provide Record of Rights to village house owners.
4. Digital India Land Records Modernization Programme (DILRMP) involves Computerization of land record and Registration.

Which of the given above statements are correct?

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

In India land titles are presumptive rather than conclusive. This has led to many legal issues. It has been estimated that nearly two-thirds of all pending cases in Indian courts are related to property disputes. NITI Aayog has said that such property cases take an average of 20 years to settle. To eradicate this problem the Union government launched several measures like the National Land Records Modernization Programme in August 2008 later (renamed as Digital India Land Records Modernization Programme), NGDRS, ULPIN etc.

Statement 1 is incorrect: National Generic Document Registration System (NGDRS) is an in-house advanced software application for the registration system developed by NIC. The **application is specifically designed for the use of sub registrars, citizens and apex users from registration departments.** NGDRS facilitates states to create state specific instances and configure the software as per requirements.

Statement 2 is correct: Unique Land Parcel Identification Number (ULPIN) System provides a unique ID of 14 digits for every plot of land in the country based on the Georeferenced coordinate of vertices of the parcel.

Statement 3 is correct: Survey of Villages Abadi and Mapping with Improvised Technology in Village Areas (SVAMITVA) scheme aims to demarcate inhabited (Abadi) land and provide Record of Rights/Property Cards in rural areas through the latest surveying drone technology.

Statement 4 is correct: Digital India Land Records Modernization Programme (DILRMP) is a central sector scheme launched by the Union Ministry of Rural Development in 2016. It has 3 major components:

- 1) Computerization of land record
- 2) Survey/re-survey
- 3) Computerization of Registration

Source: <https://dolr.gov.in/en/programme-schemes/dilrmp/digital-india-land-record-modernization-programme> <https://pib.gov.in/PressReleasePage.aspx?PRID=1696503>

Q.21) Consider the following statements regarding Aspirational Districts Program (ADP):

1. Development of 'basic infrastructure' assumes maximum weightage under the ADP.
2. According to Economic Survey 2022-23, many of the Aspirational Districts (ADs) have performed better than non-aspirational districts in terms of Financial Inclusion.
3. Several Aspirational Districts have reported saturation in the basic infrastructure indicators, as per the Economic Survey 2022-23.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Government of India launched the 'Transformation of Aspirational Districts' (Aspirational Districts Programme (ADP)) initiative in January 2018 with a vision of a New India by 2022 wherein the focus is to raise living standards of its citizens and ensuring inclusive growth of all in the burgeoning economy.

117 Aspirational Districts (ADs) across 28 States/UTs have been identified by NITI Aayog based upon composite indicators ranging from health and nutrition, education, agriculture, and water resources, financial inclusion and skill development, and basic infrastructure which have an impact on HDI.

Statement 1 is incorrect: The baseline ranking for the Aspirational Districts Programme is based on 49 indicators across five sectors that include **health and nutrition (30% weightage) through 13 indicators, education (30%) through 8 indicators, agriculture and water resources (20%) through 10 indicators, financial inclusion and skill development (10%) through 10 indicators, and basic infrastructure (10%) through 7 indicators.**

Statement 2 is correct: Economic Survey 2022-23 says that while monitoring the outcome of financial inclusion, it was seen that **Aspirational Districts (ADs) have performed better than non-aspirational districts.** This means more people have access to bank accounts, more have been covered under the fold of government insurance schemes and more can secure MUDRA loans in ADs.

Statement 3 is correct: Several Aspirational Districts have reported saturation in the basic infrastructure indicators like -

- 1) the **percentage of households with electricity connection;**
- 2) percentage of habitations with access to all-weather roads under Pradhan Mantri Gram Sadak Yojana (PMGSY);
- 3) cumulative number of kilometres of all-weather road work completed as a percentage of total sanctioned kilometres in the district under PMGSY; and
- 4) percentage of households with individual household washrooms, etc.

Source: <https://www.niti.gov.in/sites/default/files/2018-12/AspirationalDistricts-Book.pdf>
<https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf> chapter 6

Q.22) The Economic Survey 2022-23 talks about the Guidotti–Greenspan IMF rule. In this context, select the statement which best describes the rule?

- a) According to the rule, the adequacy of foreign exchange can be determined by Ratio of reserves to imports, to money aggregates and measure of external debt.
- b) It states that a country's foreign exchange reserves should be equal to short-term external debt.
- c) The rules state that the Gross Fixed capital formation increases with an increase in investment.
- d) The rule provides for the precautionary measures to be taken by the economy in economic crisis.

Ans) b

Exp) Option b is the correct answer.

Foreign exchange reserves are **required** for various purposes, such as to **maintain the exchange rate** within a certain range, or to maintain a certain level of exchange rate if the country follows a fixed exchange rate system; **maintain liquidity** and allow time to **absorb shocks**.

Option a is incorrect: The **optimal level** of reserves empowers the government to **maximise the welfare** of the representative consumer, given the constraint of sudden stops in terms of debt rollover crisis. Therefore, adequacy of reserves comes in picture. **Conventionally**, there are **three measures** of adequacy of reserves, viz. **ratios of reserves to imports, to monetary aggregates, and measures of external debt**

Option b is correct: **Guidotti–Greenspan IMF rule** states that a **country's reserves should be equal to short-term external debt** (one-year or less maturity), suggesting a ratio of reserves-to-short term debt of one. The **traditional approach** determines the adequacy of reserves by **three months of imports or full cover of short-term debt. This approach is based on Guidotti–Greenspan IMF rule.**

Option c and d are incorrect: Guidotti–Greenspan IMF rule does not talk about Gross Fixed capital formation nor it talks about the precautionary measures to be taken by the economy in economic crisis.

Source: Page 331, chapter 11: External Sector: Watchful and Hopeful of Economic survey 2022-23.

Q.23) Self Help Groups (SHGs) are expected to follow five cardinal principles called Panchsutras for better performance and greater access to bank credit. Which among the following are considered as part of the 'Panchsutras'?

1. Regular inter-lending
2. Up-to-date books of accounts
3. Regular savings
4. Faster digitisation of banking activities
5. Timely repayment

Select the correct answer using the codes given below:

- a) 2, 4 and 5 only
- b) 1, 3 and 4 only
- c) 1, 2, 3 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) c

Exp) Option c is the correct answer.

The Self-Help Groups (SHGs) movement, based on the principles of group solidarity and microfinance, has existed in India for 50 years in one form or another. Roots of the SHG movement trace back to the formation of the Self-Employed Women's Association in 1972.

The SHG movement has emerged as a powerful intervention to cover the small and marginalised sections. Currently, bank-linked SHGs are promoted through Central Government, State Governments, NGOs, etc. The SHGs follow 'Panchsutras' viz.

- 1) regular inter-lending, (**Statement 1 is correct**)
- 2) up-to-date books of accounts (**Statement 2 is correct**)
- 3) regular savings, (**Statement 3 is correct**)
- 4) regular meetings,
- 5) timely repayment (**Statement 5 is correct**)

are considered as trustworthy SHGs by the banks and availing loans from banks for their activities becomes easier for such SHGs.

statement 4 is incorrect. Faster digitisation of banking activities does not form a part of Panchsutras for SHGs.

Source: <https://www.nabard.org/contentsearch.aspx?AID=225&Key=shg+bank+linkage+programme>
<https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf>, chapter 6

Q.24) As per the existing classification of Balance of Payments (BoP) accounts, transactions in which of the following item(s) is/are categorized under the head 'capital account' of Balance of Payments (BoP)?

1. Sale of Trademarks
2. Sale of Mineral rights
3. Goods acquired under a financial lease
4. Sale of Non-customized packaged software

Choose the correct answer from the codes given below:

- a) 2 only
- b) 1, 3 and 4 only
- c) 1 and 2 only
- d) 1, 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

As per Reserve Bank of India (RBI), the capital account comprises capital transfers receivable and payable between residents and non-residents. These also include **acquisition and disposal of non-produced non-financial assets**. Non-produced non-financial assets include- **natural resources, contracts and licenses, and marketing assets**.

Option 1 is correct: A trademark is a sign capable of distinguishing goods and services of one entity from the other. It can be traded independently (i.e. without selling the entire business). Other marketing assets include items such as existing brand names, mastheads, franchises, logos and domain names and goodwill. **When these items are acquired/ sold separately (i.e. as a standalone item) from the entity that owns them, they are recorded under capital account of BoP.**

Option 2 is correct: Acquisition and disposal of natural resources are considered under the capital account transactions. **The natural resources include mineral rights, forestry rights, water, wishing rights, air space and electromagnetic spectrum.** Transactions in all these items are classified under capital account of the BoP.

Option 3 is incorrect: In a financial lease, the **lessor** has only legal title and not the economic ownership. In other words, **lessee** has the right to use (economic ownership) and he obtains legal title on making all the lease payments. **Goods acquired by lessee under a financial lease are included in general merchandise. Hence, they are part of 'balance of trade'** component of the current account. Goods acquired on operational lease (where title does not transfer at all) are included under the 'service' component.

Option 4 is incorrect: **Non-customized packaged software, video and audio recordings with license for perpetual use are considered as general merchandise.** These items are included in balance of trade component of the current account. It should be noted that **customized software is included under 'services' component.**

Source: <https://m.rbi.org.in/scripts/publicationsview.aspx?id=13013#A69>

Q.25) Consider the following statements about PM DevINE scheme:

1. It is a Centrally Sponsored Scheme.
2. It will be implemented through the North Eastern Council for development.
3. The NECTAR Livelihood Improvement Project will be funded under this scheme.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Prime Minister's Development Initiative for North-East (PM-DevINE) Scheme was announced by the Finance Minister during the Union Budget 2022-23 to enable livelihood activities for youth and women and fill the gap in various sectors in the North Eastern Region (NER).

Statement 1 is incorrect: It is a central sector scheme with 100 % central funding. The PM-DevINE Scheme will have an outlay of Rs.6,600 crore for the remaining four years of the 15th Finance Commission from 2022-23 to 2025-26. It will be implemented in addition to the quantum of resources available for the development of the NE region.

Statement 2 is correct: The scheme will be implemented by the Ministry of Development of North Eastern Region through North Eastern Council or Central Ministries/ agencies. To limit construction risks of time and cost overrun, the scheme would be implemented on Engineering-procurement-Construction (EPC) basis.

Statement 3 is correct: The scheme will fund infrastructure, in the spirit of PM GatiShakti, and social development projects based on felt needs of the North-East. The scheme will fund following list of projects initially.

- 1) Establishment of Dedicated Services for the Management of Paediatric and Adult Haemotolymphoid Cancers in North East India, Guwahati (Multi-State)
 - 2) **NECTAR Livelihood Improvement Project** (Multi-State)
 - 3) Promoting Scientific Organic Agriculture in North East Indian
 - 4) Construction of Aizawl By-pass on Western Side
 - 5) Gap funding for Passenger Ropeway system for Pelling to Sanga-Choeling in West Sikkim
- Pilot Project for Construction of Bamboo Link Road at Different Locations in Various Districts in the State of Mizoram

NECTAR (Northeast Center for Technology Application and Reach) Livelihood Improvement Project ensures applications of appropriate technologies for development in the areas of biodiversity concerns, watershed management, telemedicine, horticulture, infrastructure planning & development, planning and monitoring, and tele-schooling using cutting-edge MESHNET solutions, employment generation etc.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1867079>

<https://blog.forumias.com/a-new-scheme-prime-ministers-development-initiative-for-north-east-pm-devine-announced-rs-1500-crore-allocated/>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1794230>

Q.26) With reference to ‘Global Economy’, which one of the following statements correctly describe the term “International Investment Position” often seen in news?

- a) It includes the net investments of a country’s private sector into the foreign markets of the world.
- b) It measures the gap between a nation’s stock of foreign assets and a foreigner’s stock of that nation’s assets.
- c) It is the position at a point in time the value of the financial assets held by the Central Bank of a country into foreign land.
- d) It is the net reserve of a country’s position held in the International Monetary Fund.

Ans) b

Exp) Option b is the correct answer.

Net International investment position (NIIP) measures the gap between a nation’s stock of foreign assets and a foreigner’s stock of that nation’s assets. Essentially, **it can be viewed as a nation’s balance sheet with the rest of the world at a specific point in time.**

It includes **overseas assets and liabilities held by a nation’s government, the private sector, and its citizens.** The NIIP is analogous to net foreign assets (NFA), which determines whether a country is a creditor or debtor nation by measuring the difference in its external assets and liabilities.

Source: RBI: Amid rising imports, \$600 billion forex reserves may not be enough | Business News, The Indian Express

Net International Investment Position (NIIP) Definition (investopedia.com)

Q.27) Consider the following statements regarding trends in rural agricultural wages:

1. As per the latest RBI data, agricultural workers in the state of Gujarat get the highest daily wages in the country.
2. The rate of growth of real wages in the agricultural activities for females has steadily increased between the year 2016 to 2020.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

As rural India shows steady growth, trends in real wages depict a different scenario with stagnating agricultural and non-agricultural wages for both men and women.

Statement 1 is incorrect: Agricultural workers in the states of Gujarat and Madhya Pradesh get the lowest daily wages in the country. According to data compiled by the Reserve Bank of India (RBI), in Madhya Pradesh, male agricultural workers in rural areas got a daily wage of just Rs 217.8 while in Gujarat, it worked out to Rs 220.3 in the year ended March 2022. Significantly, daily wages in both the states are below the national average of Rs 323.2. Kerala leads in highly paid agricultural workers with an average wage of Rs 726.8 per worker.

Statement 2 is incorrect: The recent trend shows that the rate of growth in real rural wages in the agricultural activities for females has actually decreased in 2020 compared to 2016. The Table below shows the trends in the rural wages in case of both- males and females. It can be easily concluded that the female agriculture real wage growth was not steadily increasing.

Table 1: Agricultural and Non-Agricultural real wage growth

Year	Male		Female	
	Agricultural real wage growth (%)	Non-Agricultural real wage growth (%)	Agricultural real wage growth (%)	Non-Agricultural real wage growth (%)
2015	1.26	2.12	3.87	15.33
2016	0.45	-0.04	1.08	2.60
2017	3.15	1.56	3.14	-2.71
2018	0.60	0.46	1.25	1.86
2019	-0.83	-0.35	0.35	0.53
2020	-0.11	1.09	0.88	-2.34

Source: Labour Bureau (n.d.); Note: CPI (2012=100) used as a deflator.

Source : https://sprf.in/wp-content/uploads/2021/04/SPRF-2021_IB_Rural-Wage-Stagnation-in-India_Final-Draft.pdf

<https://indianexpress.com/article/business/economy/rbi-data-on-rural-daily-wages-gujarat-madhya-pradesh-farmers-lowest-paid-kerala-jk-at-the-top-8283875/>

Q.28) With reference to Indian economy, consider the following statements regarding Open Unemployment:

1. Open Unemployment Rate is defined as total unemployed people as a percentage of the working age population.
2. The fall in Open Unemployment Rate may not necessarily represent an increase in the employment rate.
3. Open Unemployment Rate in India has steadily decreased in the last five years.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 only
- d) 1, 2 and 3

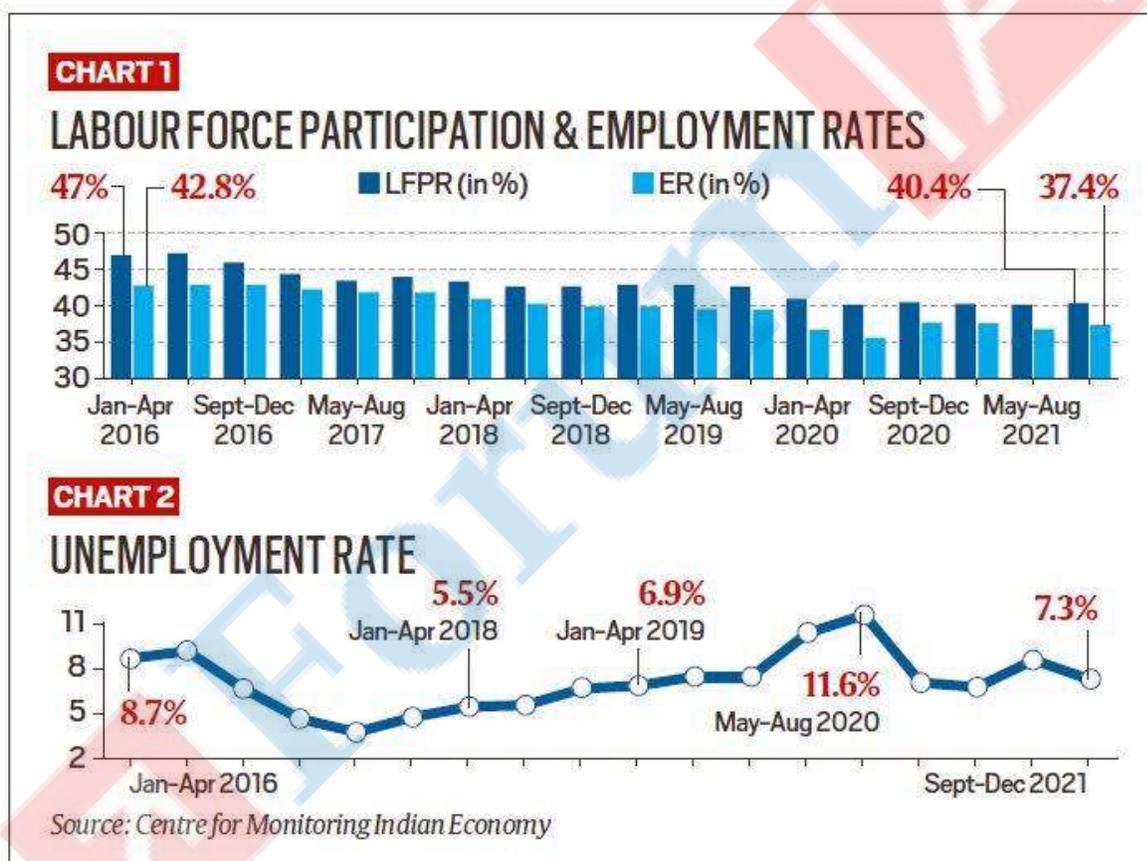
Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect: Open Unemployment rate is defined as total unemployed people as a percentage of the **total Labour Force (those who are willing to work)**. **Open unemployment rate represents those people who are willing to work but could not find a job** in the labour market.

Statement 2 is correct: It is true that a fall in the open unemployment rate may not necessarily represent an increase in the employment rate. As **Employment rate** is total number of employed people in the **working age population (15-64)** whereas open unemployment rate is total number of unemployed people among total labour force (i.e. those who are willing to work), thus **fall in unemployment rate could also result from decrease in labour force participation rate** which means those who are demanding job in the market will get reduced.

Statement 3 is incorrect: Open unemployment rate in India has not steadily decreased in the last five years in India. For instance, the open unemployment rate in India in 2016 was 8.7% and decreased to 5.5% in 2018 but increased to 7.3% in 2021.



Source: <https://indianexpress.com/article/explained/unemployment-labour-force-participation-rate-india-economy-explained-7890638/>

Q.29) Consider the following statements regarding the Export-Import (EXIM) Bank:

1. It has been set up under an act of Parliament.
2. Export Credit Guarantee Corporation of India Limited (ECGC) is a wholly owned subsidiary of the EXIM Bank.
3. It has established 'Ubharte Sitaare Fund' for equity investments in Export-Oriented Units (EOUs).

Which of the statements given above is/ are correct?

- a) 1 only
- b) 3 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

The EXIM Bank's mission is globalization of Indian business. It has leadership and expertise in export finance to actively assist Indian companies having global aspirations.

Statement 1 is correct: EXIM Bank has been set up under an 'Act' of Parliament. **The Export-Import Bank of India Act was passed in September, 1981** and the Bank commenced its operations in 1982. **It is wholly-owned by the Government of India.**

Statement 2 is incorrect: **The ECGC Ltd. has been set up in 1957** and is **wholly owned by the Government of India.** Its main objective is to promote exports from the country by providing **credit risk insurance and related services for exports.** The Corporation has introduced various export credit insurance schemes to meet the requirements of commercial banks extending export credit. The insurance covers enable the banks to extend timely and adequate export credit facilities to the exporters.

Statement 3 is correct: **EXIM Bank, along with Small Industries Development Bank of India (SIDBI),** has launched the 'Ubharte Sitaare Fund'. The Fund will make equity investments in export-oriented units, both in manufacturing and service sectors. The Fund will target small and mid-sized companies

Source: <https://www.eximbankindia.in/organisation>

<https://www.financialexpress.com/industry/sme/ubharte-sitaare-fund-rs-250-crore-export-oriented-fund-for-msmes-launched/2315113/>

<https://commerce.gov.in/about-us/public-sector-undertakings/export-credit-guarantee-corporation-of-india-limited/>

Q.30) Consider the following statements about Codex Alimentarius, a term recently seen in the news:

1. Codex Alimentarius is a collection of internationally adopted food standards.
2. The Codex Alimentarius Commission was set up jointly by the WHO and UN Food and Agriculture Organisation (FAO).
3. India is one of the members of Codex Alimentarius Commission.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Underlining the importance of safe and quality food in the wake of pandemic, the fifth session of the Codex Committee on Spices and Culinary Herbs (CCSCH) established under Codex Alimentarius Commission (CAC) was held in India in April 2021.

Statement 1 is correct: **The Codex Alimentarius is a collection of internationally adopted food standards and related texts presented in a uniform manner.** These food standards and related texts aim at protecting consumers' health and ensuring fair practices in the food trade. Hence, it is not a component of any banned cough syrup, rather it is an International code adopted for food and hygiene standards.

Statement 2 is correct: The Codex Alimentarius Commission (CAC) is an intergovernmental body established jointly by the UN's Food and Agriculture Organisation (FAO) and the World Health Organisation (WHO) in 1963, within the framework of the Joint Food Standards Programme to protect the health of consumers and ensure fair practices in the food trade. It meets in regular session once a year alternating between Geneva and Rome.

Statement 3 is correct: India became the member of Codex Alimentarius in 1964. Currently the Codex Alimentarius Commission has 189 Codex Members made up of 188 Member Countries and 1 Member Organization (The European Union).

Knowledge Base: To develop and expand worldwide standards for spices and culinary herbs, and to consult with other international organisations in the standards development process Codex Committee on Spices and Culinary Herbs (CCSCH) was formed in 2013 with support of more than a hundred countries with India as the host country and Spices Board as the Secretariat for organising the sessions of the committee. Since its inception, the Codex Committee on Spices and Culinary Herbs has been successful in developing harmonised global Codex standards for spices and herbs.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1713213>

<https://www.fao.org/fao-who-codexalimentarius/about-codex/en/>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1715125>

<https://www.fssai.gov.in/cms/codex.php>

Q.31) With reference to present situation of India's External debt, consider the following statements:

1. Of the total external debt of India, the share of short-term debt is larger than that of long-term debt.
2. The majority part of India's external debt is denominated in US dollar, followed by Indian rupees.
3. External debt owed by the Central as well as State Governments is less than the external debt owed by non-sovereign entities.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

India's external debt standing at **US\$ 610.5 billion** as of end-September 2022, grew by 1.3 per cent (US\$ 7.6 billion) over US\$ **602.9 billion** in end-September 2021. However, external debt as a **ratio to GDP fell to 19.2%** as of end-September 2022 from **20.3%** in end-September 2021.

Statement 1 is incorrect: Of the total external debt, the Share of **long-term debt is larger than the share of short-term debt**. The share of long-term debt to India's total external debt is 78.4% as of end-September 2022, (82.8% in 2021) and the share of short-term debt is 21.6% by end-September 2022 (17.2% in 2021).

Statement 2 is correct: It is true that the major part of India's external debt is **denominated in the US dollar (55.5%)**, the **Indian rupee-denominated component (30.2 per cent)** occupies the second largest position. This insulates the external debt from foreign currency risk, thereby strengthening the economic stability of a nation.

Statement 3 is correct: As of end-September 2022, **Sovereign External Debt (SED)** which includes debt owed by Central as well as State governments amounted to **US\$ 124.5 billion** whereas **Non-Sovereign Debt estimated at US\$ 486.0 billion** as of end-September 2022.

Table XI.3: External Debt Outstanding

(US\$ Billion unless indicated otherwise)

Sector/Instrument	Sept 2021	June 2022 PR	Sept 2022 P	Absolute Variation		Percentage Variation	
				Sept 2022 over Sept 2021	Sept 2022 over June 2022	Sept 2022 over Sept 2021	Sept 2022 over Jun 2022
1	2	3	4	5	6	7	8
I. General Government	132.0	127.7	124.5	-7.5	-3.2	-5.7	-2.5
II. Central Bank	0.1	0.1	0.1	0.0	0.0	-18.0	-0.5
III. Deposit-taking Corporations, except the Central Bank	160.1	155.3	152.2	-8.0	-3.1	-5.0	-2.0
IV. Other Sectors	284.7	301.9	305.6	20.9	3.7	7.3	1.2
IV.1. Other financial corporations	52.0	51.6	50.5	-1.5	-1.1	-2.8	-2.1
IV.2. Non-financial corporations	232.7	250.3	255.1	22.3	4.8	9.6	1.9
IV.3. Households and non-profit institutions serving households (NPISHs)	0.0	0.0	0.0	0.0	0.0	-18.5	-6.3
V. Direct Investment: Intercompany Lending	26.0	27.7	28.1	2.2	0.4	8.4	1.6
Gross External Debt (I to V) (As a percentage of GDP)	602.9 (20.3)	612.7 (19.3)	610.5 (19.2)	7.6	-2.3	1.3	-0.4
Memo Items:							
A. Total Long-term Debt	498.1	486.7	478.7	-19.4	-8.0	-3.9	-1.6
B. Short-term Debt#	104.8	126.1	131.7	27.0	5.7	25.8	4.5

Source: RBI, Ministry of Finance

PR: Partially Revised; P: Provisional

Source: Economic Survey 2022-23 (pg no 336-38)

Q.32) With reference to India's external trade in financial year 2021-22, consider the following countries:

1. United States of America (USA)
2. United Arab Emirates (UAE)
3. China
4. Saudi Arabia

Which of the following codes correctly describes India's top trading partners in an increasing order in terms of value of trade?

- a) 4-2-1-3
- b) 2-4-1-3
- c) 4-2-3-1
- d) 2-3-4-1

Ans) c

Exp) Option c is the correct answer.

Recently the United States of America (USA) surpassed China to become India's top trading partner in 2021-22, reflecting strengthening economic ties between the two countries.



Option 1: The bilateral trade between the **US and India stood at \$119.42 billion in 2021-22** as against \$80.51 billion in 2020-21. **Exports** to the US increased to \$76.11 billion in 2021-22 (\$51.62 billion in 2020-21), while **imports** rose to \$43.31 billion (\$29 billion in 2020-21).

Option 2: India's bilateral trade with the **United Arab Emirate (UAE) stood at \$72.9 billion in 2021-22** and UAE is the **third largest trading partner** of India.

Option 3: India's bilateral trade with China amounted to **\$115.42 billion in 2021-22** as compared to \$86.4 billion in 2020-21. **Exports** to China marginally increased to \$21.25 billion in 2021-22 (\$21.18 billion in 2020-21) while **imports** jumped to \$94.16 billion (\$65.21 billion in 2020-21)

Option 4: India's bilateral trade with **Saudi Arabia stood at \$42.85 billion** in 2021-22 and Saudi Arabia is the **fourth largest trading partner of India**. **Iraq** (\$34.33 billion) and **Singapore** (\$30 billion) are respectively the **fifth and sixth** largest trading partner of India.

Source: <https://indianexpress.com/article/india/us-surpasses-china-as-indias-biggest-trading-partner-in-fy22-at-119-42-bn-7942414/>

Q.33) With reference to Real Estate sector in India, consider the following statements:

1. It is mandatory for every real estate project in a state to register with the respective State Real Estate Regulatory Authority.
2. The Global Real Estate Transparency Index, 2022 placed India among a list of Opaque countries regarding real estate transactions.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The Real estate sector in India is expected to reach **US\$ 1 trillion in market size by 2030**, up from US\$ 200 billion in 2021. By 2025, it will contribute 13% to the country's GDP. Emergence of nuclear families, rapid

urbanisation and rising household income are likely to remain the key drivers for growth in all spheres of real estate.

Statement 1 is incorrect: Section 3 of the Real Estate Regulation and Development (RERA) Act, 2016 made it **mandatory for almost all the real estate projects to register with State RERA** to provide greater transparency in project marketing and execution.

However, section 3 (2) exempts some projects from the mandatory registration requirement. They are

(a) where the area of land proposed to be developed **does not exceed five hundred square meters** or the number of apartments proposed to be developed does not exceed eight inclusive of all phases

(b) where the promoter has received completion certificate for a real estate project prior to commencement of this Act;

(c) for the purpose of renovation or repair or re-development which does not involve marketing, advertising selling or new allotment of any apartment, plot or building, as the case may be, under the real estate project.

Statement 2 is incorrect: The **Global Real Estate Transparency Index** is published by **JLL and LaSalle's** extensive network of real estate market experts. The index classifies countries into Highly Transparent, Transparent, Semi-Transparent, Low Transparency and Opaque countries. **India is classified as a Semi-Transparent country (not opaque country) and ranked 36th as** per the Global Real Estate Transparency Index 2022.

Source: https://legislative.gov.in/sites/default/files/A2016-16_0.pdf (pg no 11 under grant of registration)

<https://www.jll.co.in/en/trends-and-insights/research/global-real-estate-transparency-index/greti-global-rankings-and-methodology>

Q.34) With reference to the Gender Inequality Index (GII), consider the following statements:

1. It is released by the World Economic Forum (WEF).
2. The index assesses male and female participation in parliamentary seats to measure gender inequality.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

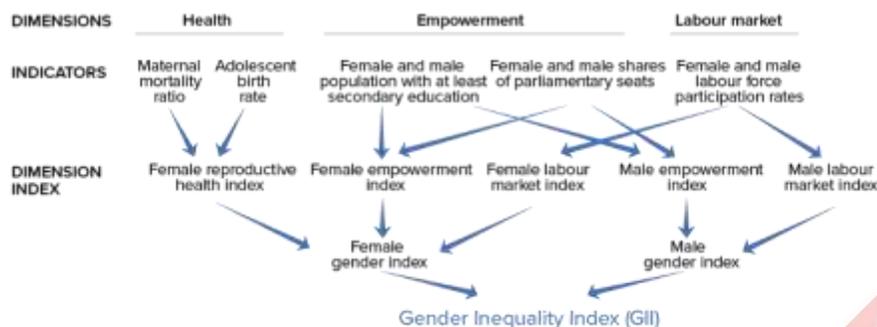
Ans) b

Exp) Option b is the correct answer.

Gender Inequality Index (GII) reflects inequality in achievements between **women and men in three dimensions: reproductive health, empowerment and the labour market.**

Statement 1 is incorrect: Gender Inequality Index (GII) **is released by the United Nations Development Programme (UNDP)** (World economic Forum publishes Global Gender Gap report). GII was introduced in the 2010 Human Development Report edition by the (UNDP) and this index measures the loss of achievement within a country due to gender inequality.

Statement 2 is correct: Gender Inequality Index measures unequal achievement between men and women in **the dimension of empowerment.** Under the dimension of empowerment, **female and male shares of parliamentary seats**, female and male population with **at least secondary education** were assessed to measure gender inequality between men and women in a nation.



Source: <https://hdr.undp.org/data-center/thematic-composite-indices/gender-inequality-index#/indicies/GII>

<https://www.thehindubusinessline.com/data-stories/data-focus/what-the-economic-survey-2022-23-says-about-gender-inclusion-in-india/article66454795.ece>

Q.35) Recently, India's first freight train with all-aluminium wagon rake was inaugurated. This was done as an advancement over existing steel wagons. Which of the following statements justify the benefits of using all-aluminium wagon for freight trains?

1. Aluminium trains consume less energy compared to steel wagons.
2. The new coaches can provide up to 80% resale value.
3. The cost of production of all-aluminium wagons is much cheaper than the steel wagons.
4. Aluminium coaches are lighter compared to steel coaches.
5. It will reduce the import burden.

Select the correct option from the codes given below:

- a) 1, 2, 3 and 4 only
- b) 2, 3, 4 and 5 only
- c) 1, 3, 4 and 5 only
- d) 1, 2, 4 and 5 only

Ans) d

Exp) Option d is the correct answer.

Union Minister for Railways, Communications and Electronics & Information Technology, Shri Ashwini Vaishnav inaugurated India's First Aluminium Freight Rake - 61 BOBRNALHSM1 at Bhubaneswar Railway Station recently.

This is a dedicated effort for Make in India program as it has been fully designed and developed indigenously in collaboration with RDSO, HINDALCO and Besco Wagon. These aluminium wagons provide several benefits over the traditional steel wagon freight trains.

Statement 1 is correct: The new aluminium rakes are lighter than the traditional steel rakes, hence the carrying capacity of the new design is reportedly 5-10% more than the steel wagons. **This allows for less consumption of energy by the all-aluminium rakes.**

Statement 2 is correct: As the aluminium metal is recyclable, it is estimated that the new coaches would have up to 80% resale value.

Statement 3 is incorrect: An all-aluminium passenger coach and wagon system would raise the cost of manufacturing rolling stocks by about 35% since the price of aluminium, globally, is far higher than that of steel. Hence, **the cost of production of all-aluminium wagons will be higher than the steel wagons.**

Statement 4 is correct: Aluminium wagons have been chosen over steel wagons to increase the speed of freight trains as former are considered to be lighter than the steel ones. **Aluminium coaches are lighter by**

up to 30% compared to the steel coaches. Hence, they offer low haulage cost, higher payload and better fuel efficiency.

Statement 5 is correct: Iron industry consumes a lot of Nickel and Cadmium which comes from import. So, proliferation of aluminium wagons will result in less import. At the same time, this is good for local aluminium industry.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1868260>

Mint (Delhi Edition- Thursday, October 20, 2022)

Q.36) With reference to Raising and Accelerating MSME Performance (RAMP) Scheme, consider the following statements:

1. The scheme aims at improving MSME's access to market and credit.
2. It is a Centrally Sponsored Scheme.
3. The overall monitoring and policy overview of RAMP would be done by an apex National MSME Council, headed by the Minister for MSME.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 3 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

The RAMP scheme aims at improving MSME's access to market and credit and addressing issues of delayed payments and greening of MSMEs. The scheme also aims at strengthening institutions and governance at the Centre and State level to improve the performance of MSMEs.

Statement 1 is correct: Raising and Accelerating MSME Performance (RAMP) scheme aims at strengthening institutions and governance at the Centre and State, improving Centre-State linkages and partnerships and **improving access of MSMEs to market and credit**, technology upgradation and addressing issues of delayed payments and greening of MSMEs.

Statement 2 is incorrect: The RAMP scheme is a Central Sector Scheme which means it is **funded by the Central government**. The total outlay for the scheme is Rs.6,062.45 crore out of which **Rs.3750 crore or USD 500 Million** would be a loan from the **World Bank** and the remaining **Rs.2312.45 crore or USD 308 Million would be funded by the Government of India (GoI)**.

Statement 3 is correct: The overall monitoring and policy overview of RAMP would be done by an apex National MSME Council, **headed by the Minister for MSME**, including representation from various Ministries and supported by a secretariat.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1811360>

<https://msme.gov.in/whatsnew/inviting-comments-stakeholders-draft-environmental-and-social-assessment-essa-under-world>

Q.37) With reference to the National Family Health Survey-5, which of the following statement is/are correct?

1. Total fertility rate (TFR) has fallen below the replacement level.
2. Overall Contraceptive Prevalence Rate (CPR) has decreased substantially to about 10% at the all-India level.
3. All the States/UTs achieved the replacement level of fertility.
4. Sex ratio has risen as compared to National Family Health Survey-4.

Select the correct answer using the codes given below:

- a) 1 and 3 only
- b) 1, 2 and 3 only
- c) 1 and 4 only
- d) 4 only

Ans) c

Exp) Option c is the correct answer.

The latest National Family Health Survey-5 showed encouraging outcomes of Government programmes in the health and other social sectors. Significant improvement is seen in the health infrastructure and services reaching the public.

Statement 1 is correct. Latest NFHS-5 shows that Total Fertility Rate (TFR), an average number of children per women, has further come down to **2 in 2019-21 from 2.2 in 2015-16**. Replacement level is at 2.1. Thus, the TFR at present as per NFHS-5 is below the replacement level.

Statement 2 is incorrect. Overall Contraceptive Prevalence Rate (CPR) has **increased** substantially from 54% to 67% at the all-India level.

Statement 3 is incorrect. In all the States/UTs **except for Rajasthan, Jharkhand, Manipur, Meghalaya, Bihar, Jharkhand and Uttar Pradesh** the replacement level of fertility has been achieved.

Statement 4 is correct. Sex ratio, number of females per 1000 males, in the total population has risen from **991 females in 2015-16 (NFHS-4) to 1020 in 2019-21 (NFHS-5)**.

Source: <https://www.indiabudget.gov.in/economicsurvey/doc/eschapter/echap10.pdf>

<https://economictimes.indiatimes.com/news/economy/indicators/significant-progress-made-in-health-outcomes-economic-survey/articleshow/89256720.cms?from=mdr>

<https://www.thehindu.com/news/national/family-health-survey-suggests-more-women-than-men-in-india/article37678156.ece>

Q.38) Consider the following statements regarding Currency Swaps:

1. It is an agreement between two cross-border entities under which they can exchange principal and interest amounts at a pre-agreed exchange rate.
2. In India, only Central Government and Central Bank are allowed to enter into Currency Swaps agreements.
3. Recently, India has extended financial assistance to Sri Lanka under a Currency Swap Facility.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

A currency swap contract is a **derivative contract between two parties** that involve **exchange of principal and interest amounts that are denominated in different currencies**. For example, Company A is a US based company that is planning to expand its operations in India. Company A requires Rupees 70 lakhs to finance this expansion in India. Another company, Company B is based in India and needs \$100,000 to finance its expansion program in US. Both Company A and Company B prefers to borrow in their own domestic currencies. So, they enter into a currency swap agreement and they must exchange the principal amount (\$100,000 for Rs 70,00,000) at the beginning of the transaction. Similarly, they also need to exchange interest amounts.

Statement 1 is correct: At the inception of the swap, the principal amounts are exchanged at the spot rate. **At the end of the swap the principal amounts are swapped back** either at the prevailing spot rate **or at a pre-agreed rate (i.e. a fixed rate) such as the original exchange rate of principals**, depending on the terms of the agreement. Payment of interest can also be done either at fixed or floating rate of exchange.

Statement 2 is incorrect: **Any person resident in India is allowed to enter into a currency swap agreement**, subject to the compliance with the provisions of Foreign Exchange Management (Borrowing and Lending in Foreign Exchange) Regulations, 2000. This is further subject to the guidelines issued by RBI from time to time. **Governments and Central Bank are also eligible** to enter into currency swap agreements. For example, the Reserve Bank of India has signed currency swap agreement with Maldives Monetary Authority under the SAARC Currency Swap Framework.

Statement 3 is correct: **Sri Lanka's economic crisis is caused in part by a lack of foreign currency**, which has meant that the country cannot afford to pay for imports of staple foods and fuel, leading to acute shortages and very high prices. **The Reserve Bank of India (RBI) signed the currency swap agreement with the Central Bank of Sri Lanka under the SAARC Currency Swap Framework 2019-22.** Under the agreement, the Central Bank of Sri Lanka can make drawals of US Dollar, Euro or Indian Rupee in multiple tranches up to a maximum of \$400 million or its equivalent.

Source: https://www.rbi.org.in/SCRIPTs/BS_FemaNotifications.aspx?Id=1742

<https://www.thehindu.com/news/international/india-extends-duration-of-400-million-currency-swap-facility-with-sri-lanka/article65344950.ece>

Q.39) Consider the following statements about the recently published 'Poverty and Shared Prosperity Report' 2022:

1. The report is published by World Economic Forum.
2. According to the report, the world is unlikely to meet the Sustainable Development Goal target of ending extreme poverty by 2030.
3. The report uses data from National Sample Survey Organization for poverty estimates.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Recently a report on global poverty estimates was released titled "Poverty and Shared Prosperity 2022: Correcting Course".

Statement 1 is incorrect: **The report is prepared and published by the World Bank** and not World Economic Forum. It provides the latest estimates and trends in global poverty and shared prosperity. The 2022 edition provides the first comprehensive look at the landscape of poverty in the aftermath of an extraordinary series of shocks to the global economy.

Statement 2 is correct: According to the report, the **world is unlikely to meet the SDG target of ending extreme poverty by 2030.** By 2015, the global extreme-poverty rate had been cut by more than half. Global poverty reduction has been slowing down since 2015 but the Covid pandemic and the war in Ukraine have completely reversed the outcomes. Current trends have shown that 574 million people, i.e., nearly 7% of the world's population will still be living on less than USD 2.15 a day in 2030, with most in Africa.

Statement 3 is incorrect: The report uses data from the **Centre for Monitoring Indian Economy (CMIE)** and not from National Sample Survey Organisation (NSSO), because there are no official estimates of

poverty available since 2011. The government decided not to release the 2017/18 National Sample Survey (NSS) round because of concerns about data quality.

Source: <https://blog.forumias.com/world-bank-says-70-million-plunged-into-poverty-in-2020-what-caused-setbacks-in-india-world/>

<https://www.worldbank.org/en/publication/poverty-and-shared-prosperity>

Q.40) Consider the following statements about Geological Heritage Sites, recently seen in news:

1. It is a place that is recognized as having distinctive cultural or physical importance which is considered of outstanding value to humanity.
2. The first 100 Geological Heritage Sites were published recently by IUGS (International Union of Geological Sciences).
3. The Mawmluh Cave of Meghalaya is recognised recently as the IUGS Geological Heritage site.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The International Union of Geological Sciences (IUGS) is one of the World's largest scientific organizations with 121 national members representing over a million geoscientists. It celebrated its 60th anniversary and the main IUGS 60th Anniversary Event took place in Zumaia, Basque Coast UNESCO Global Geopark (Spain). Geological Heritage sites, better known as IUGS geological heritage sites are recognised globally by the International Union of Geological Sciences (IUGS). It encourages international co-operation and participation in the Earth sciences in relation to human welfare and is a member of the International Science Council (ISC).

Statement 1 is incorrect: An IUGS Geological Heritage Site is a key place with geological elements and/or processes of scientific international relevance, used as a reference, and/or with a substantial contribution to the development of geological sciences through history. Whereas, a place that is recognized as having distinctive cultural or physical importance which is considered of outstanding value to humanity is known as **World Heritage site**, which is recognised by the UNESCO.

Statement 2 is correct: To celebrate the 60th anniversary, IUGS had announced the publication of the First 100 IUGS Geological Heritage sites in the month of October 2022. IUGS recognition of Geological Heritage Sites gives visibility to those sites. It identifies them as being of the highest scientific value. They are sites that served to develop the science of geology, particularly its early history. More than 200 experts and 10 international organizations from more than 40 countries have participated in the selection.

Statement 3 is correct: The Mawmluh Cave, located in the East Khasi Hills district of Meghalaya, has been the only site from India to be recognised as one of the first 100 IUGS geological heritage sites. The cave is a long maze with many openings and is decorated with stalactites, stalagmites, columns, drapes and moon milk. It is of the Meghalayan stage of Holocene era, which was first explored by the British official named Lieutenant Yule in 1844.

Source: [https://www.unesco.org/en/igpp/igcp-](https://www.unesco.org/en/igpp/igcp-projects/731#:~:text=In%20the%201990s%2C%20the%20Global,geological%20sites%20of%20international%20relevance.)

[projects/731#:~:text=In%20the%201990s%2C%20the%20Global,geological%20sites%20of%20international%20relevance.](https://www.unesco.org/en/igpp/igcp-projects/731#:~:text=In%20the%201990s%2C%20the%20Global,geological%20sites%20of%20international%20relevance.)

https://iugs-geoheritage.org/geoheritage_sites/gssp-of-the-meghalayan-stage-in-the-mawmluh-cave/

https://www.iugs.org/_files/ugd/flfc07_086ce65143d842cdb1cd2484a8b714c0.pdf?index=true

Q.41) In the wake of India's Balance of Payment (BoP) crisis of 1991, which among the following were the steps taken by government to overcome it?

1. Devaluation of Rupee
2. Liberalising the system of industrial licensing
3. Borrowing from international organizations.
4. Increase in Cash Reserve Ratio

Select the correct option using the code given below.

- a) 1, 2 and 3 only
- b) 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

BoP crisis is a situation in which a sovereign entity has developed an unsustainable balance of payments deficit. That is, a balance of payments crisis occurs when so much money is flowing outside a country that it has difficulty borrowing to make up the difference. A balance of payments crisis becomes acute in circumstances like an exceptionally large budget deficit that lasts for an extended period of time or a default on interest payments on publicly-held debt.

Statement 1 is correct. Devaluation of currency leads to **increase in export** and hence **increase in inflow of foreign currency**. Initially, the rupee was **devalued by about 20%**. There was a need to bridge the gap between the real and nominal exchange rates, which was emerged due to high inflation. The overhauled exchange rate was corrected by this devaluation.

Statement 2 is correct. The **system of quota and licensing** was dismantled and the economy was **opened for private markets, foreign investment and trade**. The road to economic liberalisation was paved by the government to balance the deficit.

Statement 3 is correct. As an immediate action taken against the crisis included taking **loan from IMF** and borrowing money from **banks of US and Switzerland** against the Gold reserves.

Statement 4 is incorrect. Various **tax reforms** were introduced to make tax structure more stable and transparent. Some of them include the reduction of tax brackets to 3 with rates of 20%, 30% and 40. The **role of monetary reform** in balancing the deficit was also significant. The **reduction in statutory liquidity ratio (SLR) and the cash reserve ratio (CRR)** and guidelines for opening new private sector banks were part of some monetary policies.

Source: <https://economictimes.indiatimes.com/news/economy/policy/4-reforms-that-pulled-india-back-after-it-ran-out-of-money-in-1991/articleshow/53308703.cms?from=mdr>

<https://www.livemint.com/news/india/1991-reforms-aimed-at-more-than-just-bop-crisis-11611247422369.html>

<https://medium.com/@megha0111/indias-1991-bop-crisis-a-quick-revision-to-the-past-68df10f81a0b>

Q.42) Consider the following statements regarding the financing mechanisms 'Rapid Credit Facility (RCF)' and 'Rapid Financing Instrument (RFI)' of the International Monetary Fund (IMF):

1. RCF is available only to the low-income countries, whereas RFI is available to all the member nations of IMF.
2. A full-fledged economic reforms program is not necessary for RCF, whereas it is pre-requisite for RFI.
3. Access to finance under both the methods is determined by considering the country's Balance of Payments position.

Which of the statements given above is/ are correct?

- a) 2 and 3 only
- b) 3 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

Important objectives of the International Monetary Fund (IMF) include macroeconomic stability and monetary cooperation, which are essential to increase productivity, job creation and economic well-being. To achieve this, IMF renders financial assistance through a variety of instruments.

Statement 1 is correct: Rapid Credit Facility (RCF) provides rapid concessional financial assistance to low-income countries facing an urgent balance of payments (BoP) need. It was created under the **Poverty Reduction and Growth Trust (PRGT)**. RCF is available only to PRGT-eligible member countries (Which include only low-income countries). On the other hand, the **Rapid Financing Instrument (RFI) is available to any member country of IMF who faces urgent balance of payment need.**

Statement 2 is incorrect: Both RCF and RFI are designed for the situations where full-fledged economic program is not necessary, because:

- 1) The need is transitory and limited in nature, or
- 2) Not feasible, because a country's policy design or implementation capacity is limited.

Hence, a full-fledged economic program is not a pre-requisite in both RCF and RFI. Limited conditionality (like some prior actions) may apply in certain cases.

Statement 3 is correct: Access to finance under both the methods is determined by the country's Balance of Payments (BoP) position. Other factors that are considered include the country's **macroeconomic policies, capacity to repay the Fund, the amount of outstanding fund credit, and the members' record of past use of Fund credit.**

Knowledge Base: The purposes for which funds can be provided under:

- 1) RCF: external shocks, natural disasters, and emergencies resulting from fragility. The RCF also provides policy support and may help catalyze foreign aid.
- 2) RFI: commodity price shocks, natural disasters, conflict and post-conflict situations, emergencies resulting from fragility, and food shocks, etc.

Source: [https://www.imf.org/en/About/Factsheets/Sheets/2016/08/02/21/08/Rapid-Credit-Facility#:~:text=The%20Rapid%20Credit%20Facility%20\(RCF,is%20neither%20necessary%20nor%20feasible](https://www.imf.org/en/About/Factsheets/Sheets/2016/08/02/21/08/Rapid-Credit-Facility#:~:text=The%20Rapid%20Credit%20Facility%20(RCF,is%20neither%20necessary%20nor%20feasible)

<https://www.imf.org/en/About/Factsheets/Sheets/2016/08/02/19/55/Rapid-Financing-Instrument>

Q.43) Consider the following statements regarding various approaches used to measure unemployment in India.

- 1. Under Usual Status Approach, unemployment is recorded for a person if he/she has no gainful work even for 1 month of the preceding year.
- 2. Weekly Status Approach records unemployment for those who did not have gainful work even for an hour or a day of the week.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The National Sample Survey Organization (NSSO), since its inception in 1950, does the measurement of employment / unemployment in India.

The National Sample Survey Organization (NSSO) provides three different estimates of employment and unemployment based on different approaches / reference periods used to classify an individual's activity status.

1) Usual Status Approach

2) Weekly Status Approach

3) Current daily status approach

Statement 1 is incorrect: Usual status approach considers those people as unemployed who had **no gainful work for a majority of time (not only one month) during the 365 days** preceding the date of survey.

Statement 2 is correct: Weekly status approach records unemployment for those who did not have gainful work even for an hour or a day of the week, preceding the date of survey.

The third approach used by NSSO is the Current daily status approach in which unemployment is recorded for a person if he/s has no gainful work even for 1 hour in a day. It uses each day of the seven days preceding date of survey as the reference period.

Source:

http://www.arthapedia.in/index.php/Unemployment_measurement_in_India#:~:text=The%20National%20Sample%20Survey%20Organization,of%20employment%20%2F%20unemployment%20in%20India.&text=Current%20daily%20status%20approach%20with,survey%20as%20the%20reference%20period.

Q.44) In the context of Balance of Payment (BoP) Accounts, which of the following transactions are considered as ‘transfers’?

1. Grants by international organizations which increases income and consumption in the recipient country.
2. Grants by international organization linked to the acquisition of fixed assets in the recipient country.
3. Remittances sent by workers residing abroad to their families in the native country.

Choose the correct answer from the codes given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

In the context of Balance of Payment, Unrequited transfers across national borders are one-sided transactions. Suppose, for example, that the Japanese government donates to the Kyrgyz Republic buses for public transportation. To deal with such transactions, which involve no financial compensation, the balance of payments methodology includes a category called “transfers.”

Option 1 is correct: There is a distinction between current and capital transfers. **Current transfers include grants in cash or in kind made by governments or international organisations to other institutional units, which results in an increase in income and consumption in the recipient economy.** These current transfers are further categorized into- a) general government, b) other sectors, which include private transfers.

Option 2 is correct: When a transfer of cash is linked to/ conditional upon the acquisition or disposal of fixed assets by one of the parties, it is considered as a capital transfer. For example, investment grants

are considered as capital transfers as they are meant to finance all or part of the costs of acquiring fixed assets. The capital transfers are shown under the Capital Account in BoP.

Option 3 is correct: Other examples of private transfers include- grants, gifts, and **migrants' transfers by way of remittances for family maintenance**, repatriation of savings. Transfers of financial and real resources linked to a change in the resident status of migrants are also considered as private transfers.

Source:

<https://www.elibrary.imf.org/display/book/9781557756282/C04.xml#:~:text=Unrequired%20transfers%20across,category%20called%20%E2%80%9Ctransfers.%E2%80%9D>

<https://m.rbi.org.in/scripts/publicationsview.aspx?id=13013#A67:~:text=linked%20to%20a%20change%20in%20the%20resident%20status%20of%20migrants>

Q.45) With reference to Mission Lifestyle for the Environment (LiFE), consider the following statements:

1. It is a mass movement rooted in circular economy concept.
2. It was first introduced in the COP27, Sharm El Sheikh, Egypt.
3. Under this mission, Niti Aayog invites ideas from public and private institutions globally.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Mission Lifestyle for the Environment (LiFE) is a behavioural changing campaign aims at creating global network of individuals, namely 'Pro-Planet People' (P3), with commitment to adopt and promote environmentally friendly lifestyle.

Statement 1 is correct: LiFE aims at changing the 'use-and-dispose' economy with a circular economy, which would be defined by mindful and deliberate utilization. The Mission intends to change behaviours of individuals in their daily lives that can contribute significantly to climate change by living eco-friendly sustainable life.

Statement 2 is incorrect: the concept of 'Lifestyle for the Environment (LiFE) was introduced by Prime Minister at COP26 in Glasgow on 1st November 2021, addressing the global community of individuals and institutions to drive LiFE as an international mass movement towards "mindful and deliberate utilisation, instead of mindless and destructive consumption" to protect and preserve the environment.

Statement 3 is correct: NITI Aayog and the Ministry of Environment, Forest and Climate Change (MOEFCC), in partnership with the United Nations, World Resources Institute, Centre for Social and Behaviour Change (CSBC) and Bill and Melinda Gates Foundation (BMGF), are inviting Behaviour-change solutions in areas like Water, Transport, Food, Electricity and Waste Management. Innovative solutions that create livelihood options for communities that may lose their jobs with a shift towards climate-friendly production.

Source: <https://www.livemint.com/news/india/pm-modi-launches-mission-life-lifestyle-for-environment-11666254588768.html>

Q.46) Consider the following statements regarding the Current Account Convertibility:

1. International Monetary Fund (IMF) specifically puts obligation on member countries to avoid restrictions on current account transactions.
2. Full current account convertibility has been implemented in India only after the recommendations of the Tarapore Committee.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Currency convertibility refers to the freedom to convert domestic currency into other internationally accepted currencies and vice versa for exports and imports of goods and services, factor income and unilateral transfers.

Statement 1 is correct: Article VIII of the Agreement of International Monetary Fund (IMF) specifically puts obligation on the member countries to avoid restrictions on making of payments and transfers for current international transactions. It states that approval of IMF is required for imposing such restrictions. Article VI also provides for members not to restrict payment for current transactions or unduly delay transfer of funds in settlement of commitments. Hence, IMF restricts members from putting restrictions on current account transactions.

Statement 2 is incorrect: Full current account convertibility has been effective in India since early 1990s.

On the other hand, **Tarapore Committee** was set up to recommend on the capital account convertibility. **It submitted its report in May, 1997.** The second Tarapore Committee was set up to recommend a framework for fuller capital account convertibility and its report was made public in 2006. In other words, **full current account convertibility was already in place even before the report of Tarapore Committee.**

Source: <https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/72250.pdf>

<https://www.imf.org/external/pubs/ft/aa/index.htm>

https://m.rbi.org.in/scripts/FS_FAQs.aspx?Id=115&fn=5#Q1

Q.47) Consider the following statements regarding the External Commercial Borrowings (ECB):

1. An ECB can be denominated in both foreign currency as well as Indian National Rupee (INR).
2. Raising ECBs for working capital purposes by an entity is completely prohibited in India.
3. Proceeds from ECB can be utilized for investment in capital markets.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 3 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

External Commercial Borrowings (ECBs) are commercial loans raised by eligible resident entities from recognized non-resident entities. ECBs are subjected to various regulations and must conform to parameters such as minimum maturity, permitted/ non-permitted end uses, maximum all-in cost ceiling etc.

Statement 1 is correct: An ECB can be denominated in both foreign currency as well as Indian National Rupee (INR). However, they are regulated differently. For example, registered societies/ trusts/ cooperatives/ Non-Government Organizations (NGOs) which are not eligible to raise Foreign Direct Investments (FDI) can only raise ECB denominated in Rupee (and not foreign currency denominated ECB)

Statement 2 is incorrect: Working capital means funds needed for day-to-day operations of an entity. In general, ECBs are not permitted for meeting working capital needs. However, RBI has prescribed certain

exceptions in this regard. For example, ECB can be raised from foreign equity holder for working capital purposes, subject to Minimum Average Maturity Period (MAMP) of 5 years. Hence, **there is no absolute or strict prohibition on raising ECB for working capital purposes.**

Statement 3 is incorrect: Raising ECB for investment in capital market is strictly prohibited. Other items for which proceeds of ECB cannot be utilized include:

- 1) **Real estate activities**
- 2) **Equity investments**
- 3) Working capital purposes (subject to exceptions)
- 4) General corporate purposes (subject to exceptions)
- 5) Repayment of Rupee loans (subject to exceptions)
- 6) On lending to an entity for above mentioned purposes (subject to exceptions)

Knowledge Base: **All eligible borrowers can raise ECB up to USD 750 million or equivalent per financial year under the automatic route. However, the automatic route limit has been increased from USD 750 million or equivalent to USD 1.5 billion or equivalent.** This relaxation is available for ECBs to be raised till December 31, 2022.

Source: https://rbi.org.in/Scripts/BS_ViewMasDirections.aspx?id=11510

Q.48) Which of the following factors may lead to the depreciation of rupee in the global currency market?

1. Reduction in market Interest rates
2. Rising inflation in India
3. Declining Economic growth in India
4. Negative Balance of Payment of India

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 2, 3 and 4
- d) 1, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Currency depreciation is a **fall** in the **value** of a **currency** in a **floating exchange rate** system. Rupee depreciation means that **the rupee** has become **less valuable** with respect to the dollar.

Option 1 is correct. Currency depreciation can occur due to factors such as -

Lower interest rates - In an Expansionary monetary policy, a central bank lowers the interest rates. The higher the interest rate, the higher will be the demand for that currency. Lower interest rates **usually decrease the demand for a currency.** The reason investors look to buy currencies with **higher interest rates** is it **creates an additional rate of return on their currency exchange.**

Option 2 is correct. Rising inflation: Inflation is the **rise in prices** of goods and services. Rising Inflation means **less purchasing power of money** in market. Hence the rupee is depreciated

Additionally, inflation can lead to higher input costs for exports, which then makes a nation's exports less competitive in the global markets. This will widen the trade deficit and cause the currency to depreciate.

Option 3 is correct. Declining Economic growth: The **strength of an economy** can go a long way to boosting the strength of the nation's currency. A strong growth rate in a country will see a growing demand for products and services with better job prospects for workers as well as **being an attractive destination** for capital and investments. Hence it appreciates the currency.

However, declining economic/GDP growth rate make it an unattractive destination for investors resulting in depreciation of currency.

Option 4 is correct. Negative Balance of Payment - Current account balance: it is the **total amount of goods, services, income and current transfers** of a country against all of its trading partners.

A positive current account balance signals that a country lends more to its trading partners than it borrows, and a deficit current account balance shows that the country borrows more from its trading partners than it lends.

This total amount of trade can influence the country's exchange rate positively if there is more demand for that country's goods (and currency) from other countries. **A deficit or borrower country will see less demand for its own local goods and currency overall.**

Source: <https://www.investopedia.com/terms/c/currency-depreciation.asp>

<https://mint.intuit.com/blog/personal-finance/value-of-your-money/>

Q.49) Demographic dividend in a country will occur in which of the following conditions?

1. A country having a barrel shaped population pyramid.
2. When working-age population has grown larger than the dependant population.
3. When decline in a country's birth rate and child death rate is being witnessed.

Select the correct answer from the code given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect. **Dome-shape** or **bell-shaped pyramid** is seen in countries like India, Bangladesh, Mexico and Brazil that are witnessing demographic dividend phase. The population growth rates decline and life expectancy increases and becomes about 70 years. Lower- middle portion slightly bulges out and the shape of the pyramid resembles dome or bell.

Statement 2 is correct. Demographic dividend is seen when **working-age population** (people between 15 and 64 years of age) **has grown larger than the dependant population** – children aged 14 or below as well as people above 65 years of age.

Statement 3 is correct. To achieve the economic benefits of the demographic dividend, developing countries must substantially **lower both birth and child death rates**. With fewer births each year, a country's young dependent population declines in relation to the working-age population. With fewer people to support, a country has a window of opportunity for rapid economic growth if the right social and economic policies are developed and investments made.

Source: <https://economictimes.indiatimes.com/news/economy/indicators/india-enters-37-year-period-of-demographic-dividend/articleshow/70324782.cms?from=mdr>

http://wwjmr.com/upload/types-and-significance-of-population-pyramids_1523552342.pdf

Q.50) Which of the following statements best explain the term Assisted Natural Regeneration, recently seen in news?

- a) It is a method of regeneration of failed body organs/tissues naturally with the assistance of stem cell therapy.
- b) It is a method of using organic catalysers to speed up the crop regeneration in the process of ratooning.
- c) It is method of growing trees and native vegetation naturally by the local community using traditional knowledge.
- d) It is the method of regeneration of missing/lost body parts naturally by lizards by growing blastema.

Ans) c

Exp) Option c is the correct answer.

Assisted natural regeneration is a blend of active planting and passive restoration, where local people intervene to help trees and native vegetation naturally recover by eliminating barriers and threats to their growth, leaning on their knowledge of the land and on ancestral traditions.

It has been practiced widely in different regions of the world to accelerate the restoration of millions of hectares of degraded and deforested landscapes. Some of the popular practices followed as a part of Assisted Natural Regeneration are as follows:

- 1) To prevent the spread of wildfires, people can build firebreaks and clear the forest floor of dry debris.
- 2) To stop cattle from munching on saplings, they can build fences to keep them out.
- 3) To give native trees enough room to grow, they can remove invasive grasses and shrubs.
- 4) To encourage new vegetation to sprout from underground root systems, farmers can channel water into the soil and prune branches.
- 5) And, if natural regeneration on its own does not increase tree cover quickly enough or the targeted species fail to pop up on their own, people can selectively plant trees to fill the gaps.

Hence, Assisted Natural Regeneration can play a critical role in achieving global targets on climate and biodiversity, including the Paris Climate Agreement, the Trillion Trees initiative, and ambitious targets set by the Bonn Challenge – which aims to restore 350 million hectares of degraded and deforested lands by 2030.

Source: <https://www.anralliance.org/>

<https://www.wri.org/insights/what-assisted-natural-regeneration-benefits-definition>

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Q.1) The CHAMPIONS portal was recently seen in news. Which of the following statements correctly describes this portal?

- A platform for all Indian Citizens to access pan India e-Governance services ranging from Central to Local Government bodies.
- A platform to provide loan facilities for higher education to meritorious students.
- A platform to facilitate the enrolment, registration and identification of the unorganised workers.
- A platform to help the MSMEs in terms of their finance and raw material requirements.

Ans) d

Exp) Option d is the correct answer.

CHAMPIONS (Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength) has been launched by the Ministry of Micro, Small and Medium Enterprises as a single window system for the MSMEs. It will aim at Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength. Accordingly, the name of the system is CHAMPIONS. This is basically for making the smaller units big by helping and handholding, in particular, by solving their problems and grievances.

The ministry has put down following objectives:

- To help the MSMEs in difficult situation in terms of finance, raw materials, labour, permissions, etc.
- To identify the sparks, i.e., the bright MSMEs who can withstand at present and become national and international champions.
- To help the MSMEs capture new opportunities in manufacturing and services sectors.

Hence, Option d is correct.

Source: <https://champions.gov.in/Government-India/Ministry-MSME-Portal-handholding/msme-problem-complaint-welcome.htm>

Economic Survey 2022-23 (pg. 273)

Q.2) With reference to Industrial Policy of 1991, consider the following statements:

- Decrease in the number of industries which were reserved for the Government.
- Individual foreign investment in the security market had been allowed.
- Polluting industries to be set up at least 25 kms away from the million cities.
- It encouraged foreign investments (FI) in India.

Which of the statements given above are correct?

- 1 and 2 only
- 1, 2 and 3 only
- 1, 3 and 4 only
- 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

With the Industrial Policy 1991, government kick started the very process of reform in the economy, that is why the policy is taken more as a process than a policy. The major highlights of the policy are as follows:

Statement 1 is correct: Industrial Policy 1991 started the De-reservation of the Industries. The industries which were reserved for the Central Government by the IPR, 1956, were **cut down to only eight**. In coming years many other industries were also opened for private sector investment. At present there are only two industries which are fully or partially reserved for the Central Government -1. Atomic energy and nuclear research and other related activities 2.Railways

Statement 2 is incorrect:

The government went to encourage foreign investment (FI) in both its forms - **direct and indirect**.

The **direct form** of FI was called as the foreign direct investment (FDI) under which the MNCs were allowed to set up their firms in India in the different sectors varying from 26 per cent to 100 per cent ownership. Whereas the **indirect form** of foreign investment was called the **portfolio investment scheme (PIS)** in the country, which formally commenced in 1994. Under the Portfolio Investment Scheme (PIS), the foreign institutional investors (FIIs) having good track record are allowed to invest in the Indian security/stock market. The FIIs need to register themselves as a stock broker with SEBI. However, **India has not allowed individual foreign investment** in the security market still. **Only institutional investment has been allowed till now.** Individual investors are individuals investing on their own behalf, and are also called retail investors. Whereas Institutional investors are large firms that invest money on behalf of others, and the group includes large organizations with professional analysts.

Statement 3 is correct: Now, the industries were classified into ‘polluting’ and ‘non-polluting’ categories and a highly simple provision deciding their location was announced:

- 1) Non-polluting industries might be set up anywhere.
- 2) **Polluting industries to be set up at least 25 kms away from the million cities.**

Statement 4 is correct: The new industrial policy showed good faith towards foreign capital. Not only the draconian FERA was committed to be diluted, but the government went to encourage **foreign investment (FI) in both its forms—direct and indirect.** The direct form of FI was called as the foreign direct investment (FDI) under which the MNCs were allowed to set up their firms in India in the different sectors varying from 26 per cent to 100 percent.

Source: Ramesh Singh 12th Edition Chapter 9: Industry And Infrastructure,

Q.3) Consider the following statements about National Social Assistance Program (NSAP):

1. It represents a step towards the fulfilment of some of the Directive Principles of State policy.
2. Annapurna Scheme is one of the five sub-schemes launched under this program.
3. An applicant must belong to a Below Poverty Line (BPL) family to avail the benefits of NSAP.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

National Social Assistance Programme (NSAP) was launched on 15th August, 1995, as a social security and welfare programme to provide support to aged persons, widows, disabled persons and bereaved families on death of primary bread winner.

Statement 1 is correct: **The National Social Assistance Programme (NSAP) represents a significant step towards the fulfilment of the Directive Principles in Article 41 and 42 of the Constitution** recognizing the concurrent responsibility of the Central and the State Governments in the matter. In particular, Article 41 of the Constitution of India directs the State to provide public assistance to its citizens in case of unemployment, old age, sickness and disablement and in other cases of undeserved want within the limit of its economic capacity and development.

Statement 2 is correct: On its inception in 1995 it had three components namely, National Old Age Pension Scheme (NOAPS), National Family Benefit Scheme (NFBS) and National Maternity Benefit Scheme (NMBS). Later on the schemes were revamped and few more schemes were added. Presently NSAP comprises of five schemes,

- 1) Indira Gandhi National Old Age Pension Scheme (IGNOAPS),

- 2) Indira Gandhi National Widow Pension Scheme (IGNWPS),
- 3) Indira Gandhi National Disability Pension Scheme (IGNDPS),
- 4) National Family Benefit Scheme (NFBS) and Annapurna Scheme

Statement 3 is correct: For getting benefits under NSAP the applicant must belong to a Below Poverty Line (BPL) family according to the criteria prescribed by the Govt. of India. The other eligibility criteria and the scale of central assistance are modified by the central and state governments under various sub-schemes of NSAP.

Besides the central assistance, states / UT contribute an equal amount as their share.

Source: <https://vikaspedia.in/social-welfare/rural-poverty-alleviation-1/schemes/national-social-assistance-programme>

Q.4) Which of the following are **not** the salient features of the National Investment and Manufacturing Zone (NIMZ)?

1. It is envisaged and formed under the New Industrial Policy of 1991.
2. It can be declared an Industrial Township by a State Government.
3. It should devote at least 75 per cent of the total land area to manufacturing units.
4. It enjoys 100% income tax exemption on export income for the first five years.

Select the correct answer using the code given below.

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

National Investment and Manufacturing Zone (NIMZ) needed 5,000 hectares (or 12355.26 acres) of contiguous land and has been identified as one of the key instruments of Centre's National Manufacturing Policy to step up share of manufacturing in GDP.

Statement 1 is incorrect: NIMZ is envisaged under the **National Manufacturing Policy 2011** (Not under the **New Industrial Policy of 1991**).

Statement 2 is correct: To enable the NIMZ to function as a self-governing and autonomous body, it will be **declared by the State Government as an Industrial Township under Article 243 Q (1)(c) of the Constitution**. These are managed by a special purpose vehicle headed by government officials. The Centre will provide financial support for trunk infrastructure while internal infrastructure will be developed on a PPP (public private partnership) mode for which access to viability gap funding would be provided.

Statement 3 is incorrect: NIMZs are conceptualised as integrated industrial townships of at least 50 sq km (5,000 hectares) with state-of-the-art infrastructure. And **at least 30 per cent (not 75%)** of the total land area would be devoted to manufacturing units.

Statement 4 is incorrect: Special Economic Zones (SEZ) and NIMZs enjoy tax related benefits. The **SEZs (not NIMZ) enjoy 100% income tax exemption on export income** for the first five years, 50% for the next five years thereafter and 50% of the ploughed back export profit for next five years. While, **NIMZ has provisions of tax incentives to small and medium enterprises (SMEs)**.

Source: https://www.business-standard.com/article/economy-policy/govt-to-extend-benefits-of-sez-nimz-to-industrial-parks-114070200650_1.html

<https://indianexpress.com/article/news-archive/web/manufacturing-woe-govt-eyes-nimz-land/>

<https://pib.gov.in/newsite/PrintRelease.aspx?relid=78807>

<https://pib.gov.in/newsite/PrintRelease.aspx?relid=111886>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1557424>

Q.5) With reference to the Quality Council of India (QCI), consider the following statements:

1. It is a non-profit organization registered under the Societies Registration Act of 1860.
2. The nodal ministry for QCI is the Ministry of Corporate Affairs
3. QCI started the workplace assessment standard called WASH.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Quality Council of India (QCI) was established as a National body for Accreditation in 1997.

Statement 1 is correct: QCI a **non-profit organization** registered under the Societies Registration Act XXI of 1860 was set up through a PPP model as an independent **autonomous organization**. It was established by Government of India and three industry associations,

- (1) Associated Chambers of Commerce and Industry of India (ASSOCHAM),
- (2) Confederation of Indian Industry (CII)
- (3) Federation of Indian Chambers of Commerce and Industry (FICCI).

Statement 2 is incorrect: This organisation comes under Department of Industrial Policy and Promotion, **Ministry of Commerce and Industry**. QCI has important role at the national level in propagating, adoption, and adherence to quality standards in all important areas like education, healthcare, environment protection, governance, social sectors etc.

Statement 3 is correct: QCI, along with industry stakeholders, has developed a standard “**Workplace Assessment for Safety and Hygiene**” (**WASH**) **for the benefit of citizens and industry**. It involves helping the organizations assess their post pandemic preparedness to restart and run their operations safely keeping workplace safety in mind.

This standard is applicable for assessment for all workplaces allowed to operate.

Source: <https://qcin.org/about-us>

[https://qcin.org/workplace-assessment-for-safety-and-hygiene-\(wash\)](https://qcin.org/workplace-assessment-for-safety-and-hygiene-(wash))

Q.6) Which of the following cannot be patented in India under the Patents Act of 1970?

1. A mere discovery of a scientific principle.
2. A method of agriculture or horticulture.
3. Inventions relating to atomic energy.
4. A computer programme
5. An invention based on traditional knowledge.

Select the correct answer using the code given below.

- a) 1, 3 and 5 only
- b) 2, 3 and 5 only
- c) 1, 2, 3 and 4 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

A patent is an exclusive right to prohibit others from using, making, or selling an innovation for a fixed period of time. The government grants a patent for any innovation that is novel, non-tangible, and valuable in terms of contemporary application.

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As per Sections 3 and 4 of the Indian Patent Act, the following innovations are not Patentable in India:

- 1) An invention that is frivolous or trivial
- 2) The mere discovery of a scientific principle (Hence, option 1 is correct.)
- 3) Moreover, an invention whose primary goal or intended use is contrary to law or morality or is injurious to public health
- 4) The formulation of an abstract theory
- 5) Similarly, the mere arrangement or rearrangement or duplication of known devices, each functioning independently of one another in a known way
- 6) A method of agriculture or horticulture (Hence, option 2 is correct.)
- 7) Inventions relating to atomic energy (Hence, option 3 is correct.)
- 8) Any process for the medicinal, surgical, curative, prophylactic, or any other type of treatment of people or animals or other creatures
- 9) A mathematical or business method or a computer programme per se or algorithms. (Hence, option 4 is correct.)
- 10) Likewise, a literary, dramatic, musical, or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions
- 11) Similarly, a mere scheme or rule or method of performing a mental act or method of playing a game
- 12) Presentation of information
- 13) Topography of integrated circuits

An invention which in effect is traditional knowledge or is based on the properties of traditional knowledge. (Hence, option 5 is correct.)

Source: <https://vakilsearch.com/blog/what-cannot-be-patented-in-india/>

<https://www.prh.fi/en/patentit/theabcofpatenting/whatcanbepatented.html#:~:text=Patentable%20inventions%20must%20be%20technological,theory%20alone%20cannot%20be%20patented.>

Q.7) With reference to “Trade Receivables Discounting System (TReDS) Platform”, consider the following statements:

1. Only Micro, Small & Medium Enterprises (MSMEs) can participate as sellers in TReDS.
2. Only Government Departments can participate as buyers in TReDS.
3. It is mandatory for every Central Public Sector Enterprises (CPSEs) to register on TReDS.
4. Authorisation from RBI is required to set up and operate a TReDS platform.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 4 only
- c) 2, 3 and 4 only
- d) 1, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

TReDS is an electronic platform for facilitating the financing / discounting of trade receivables of Micro, Small and Medium Enterprises (MSMEs) through multiple financiers.

Statement 1 is correct: Only MSMEs can participate as sellers in TReDS.

Statement 2 is incorrect: Corporates, Government Departments, PSUs and any other entity can participate as **buyers** in TReDS.

Statement 3 is incorrect: It is mandatory only for CPSEs and companies with a turnover of Rs 500 crore and above (not every CPSE) to register on TReDS.

Statement 4 is correct: Authorisation is required to be obtained from **RBI** under the Payment and Settlement Systems (PSS) Act, 2007 to set up and operate a TReDS platform.

Source: [https://vikaspedia.in/e-governance/digital-payment/payment-systems-in-india/trade-receivables-discounting-system-treds#:~:text=TReDS%20is%20an%20electronic%20platform,Public%20Sector%20Undertakings%20\(PSUs\).](https://vikaspedia.in/e-governance/digital-payment/payment-systems-in-india/trade-receivables-discounting-system-treds#:~:text=TReDS%20is%20an%20electronic%20platform,Public%20Sector%20Undertakings%20(PSUs).)

<https://www.financialexpress.com/industry/sme/msme-fin-finance-ministry-asks-92-cpses-to-register-on-the-treds-platform/2754436/>

Q.8) With reference to Bureau of Energy Efficiency (BEE), consider the following statements:

1. It is a non-statutory body functioning under the Ministry of New and Renewable Energy.
2. One of its primary objective is to reduce the energy intensity of the Indian economy.
3. BEE Star Labelling is mandatory for all kinds of Air Conditioners (ACs).

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 2 only

Ans) c

Exp) Option c is the correct answer.

Bureau of Energy Efficiency (BEE) is established under provisions of the Energy Conservation Act 2001, to promote efficient use of energy and its conservation.

Statement 1 is incorrect: Bureau of Energy Efficiency (BEE) is a statutory body under the **Ministry of Power** (not under the Ministry of New and Renewable Energy). It is established under provisions of the Energy Conservation Act 2001, to promote efficient use of energy and its conservation.

Statement 2 is correct: The mission of the BEE is to assist in developing policies and strategies with a thrust on self-regulation and market principles, within the overall framework of the Energy Conservation Act, 2001 with the **primary objective of reducing energy intensity of the Indian economy**. Energy intensity is a measure to assess the energy efficiency of a particular economy.

Statement 3 is correct: BEE Star Labelling is mandatory for frost-free refrigerators, colour TVs, **all kind of ACs**, distribution transformers, tubular florescent lamps, LED lamps, electric geysers and direct cool refrigerators.

Source: <https://beeindia.gov.in/en/about-us/about->

[bee#:~:text=The%20Government%20of%20India%20set,the%20Energy%20Conservation%20Act%2C%202001.](https://beeindia.gov.in/en/about-us/about-)

[https://www.bl-india.com/bee-registration-](https://www.bl-india.com/bee-registration-tutorial.php#:~:text=The%20products%20on%20which%20BEE,to%20apply%20for%20BEE%20Registration.)

[tutorial.php#:~:text=The%20products%20on%20which%20BEE,to%20apply%20for%20BEE%20Registration.](https://www.bl-india.com/bee-registration-tutorial.php#:~:text=The%20products%20on%20which%20BEE,to%20apply%20for%20BEE%20Registration.)

Q.9) With reference to different Public-Private Partnership (PPP) models in infrastructure sector, consider the following statements:

1. In the 'Build-Operate-Transfer-Toll' Model, the government is responsible for regulatory clearances of the project.
2. In the BOT Annuity model, the government is responsible for Toll collection.
3. In the Engineering- Procurement-Construction (EPC) Model, the project cost is completely borne by the government.
4. In Hybrid Annuity Model (HAM), the government and the private player are both responsible for funding project costs.

Which of the statements given above are correct?

- a) 1 and 4 only
- b) 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

A public-private partnership (PPP) is an arrangement between a government and private sector institutions. Typically, it involves private capital financing government projects and services up-front, and then drawing revenues from taxpayers and/or users over the course of the PPP contract.

Statement 1 is correct: In the 'Build-Operate-Transfer-Toll (BOT Toll) Model, the private party used to cover "all risks" related to - land acquisition, construction (damage), inflation, cost over-runs caused by delays and commercial. The government is responsible for regulatory clearances.

Statement 2 is correct: In the BOT Annuity model, the private players are offered a fixed amount of money annually (called 'annuity') as compensation - the party bidding for the minimum 'annuity' used to get the project. Toll collection is the responsibility of the Government.

Statement 3 is correct: Engineering-Procurement-Construction (EPC) is fully covered by the Government together with the majority of the risks-land acquisition, cost over-runs due to delay, inflation and commercial. This is a PPP model for the development of infrastructure projects, especially highways. Under this model, the cost is completely borne by the government.

Statement 4 is correct: Hybrid Annuity Model (HAM) is a mix of EPC and BOT-Annuity models. In this model the project cost is shared by the government and the private player in ratio of 40:60, respectively.

Source: Ramesh Singh, 12th edition, page no. 308

Q.10) With reference to the Emissions Gap Report 2022, consider the following statements:

1. This report was released by the United Nations Environment Programme.
2. As per the report, G20 members are responsible for less than 35 per cent of global GHG emissions.
3. India's per capita GHG emission is below the global average.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Emissions Gap Report 2022 is the 13th report in annual series. It provides an overview of the difference between where greenhouse emissions are predicted to be in 2030 and where they should be to avoid climate disaster.

Statement 1 is correct: UNEP releases the Emissions Gap Report 2022: The Closing Window – Climate crisis. It states that world is far off on track to achieve the Paris goal of limiting the global temperature to 1.5 degrees. Implementation of the current pledges will only reduce this to a 2.4-2.6°C temperature rise by the end of the century.

Statement 2 is incorrect: As per the report, the top seven emitters are China, the EU27, India, Indonesia, Brazil, Russia, and the United States of America. These countries international transport accounted for 55% of global GHG emissions in 2020. **G20 members are responsible for 75 per cent of global GHG emissions.**

Statement 3 is correct: The global average per capita GHG emissions was 6.3 tonnes of CO₂ equivalent (tCO₂e) in 2020. **India has far below the world average GHG emission at 2.4 tCO₂e.** The US has highest level at 14 tCO₂e, followed by Russia at 13 tCO₂e, China at 9.7 tCO₂e, Brazil and Indonesia at about 7.5 tCO₂e, and the European Union at 7.2 tCO₂e.

Source: <https://indianexpress.com/article/india/emissions-in-india-6-other-nations-top-pre-covid-levels-8234183/>

Q.11) With reference to the various types of ports, which of the following pairs are correctly matched?

Types of Port	Description
1. Entrepot Ports	It is a trading port or a place where a ship stops during a journey for refueling and purchasing food
2. Packet station	Ports which are used for transportation of passengers across water bodies.
3. Ports of call	Ports which are collection centres where the goods are brought from different countries to be exported again.
4. Out ports	Ports used to serve the parent ports by receiving large ships

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 4 only
- c) 1, 2 and 3 only
- d) 2, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Types of Port	Description
1) Entrepot Ports	Ports which are collection centres where the goods are brought from different countries for export. Here merchandise may be imported, stored, or traded before re-export, with no additional processing taking place and with no customs duties imposed. (Hence, pair 1 is incorrect.)
2) Packet station	These are also known as ferry ports. These packet stations are exclusively concerned with the transportation of passengers and mail across water bodies covering short distances. (Hence, pair 2 is correct.)
3) Ports of call	Ports used to anchor for refueling, watering and taking food items. It is a port where ships usually stop during journey (Hence, pair 3 is incorrect.)

4) Out ports	These are deep water ports built away from the actual ports. These serve the parent ports by receiving those ships which are unable to approach them due to their large size. For example, Athens and its out-port Piraeus in Greece. (Hence, pair 4 is correct.)
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Source: Class 12th Chapter 9 International Trade

Q.12) With reference to Sagarmala Programme, which of the following statements are correct?

1. It is a Central Sector Scheme.
2. It aims to reduce logistics costs for exports and imports.
3. The Coastal Berth Scheme is a key initiative under Sagarmala Programme.

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Sagarmala Programme was launched with the approval of the Union Cabinet on 25th March 2015, with a view to achieve the broad objective of promoting port-led development in India.

Statement 1 is correct: The Sagarmala Programme is a Central Sector Scheme to provide financial support to Major Ports by way of grant for construction /up-gradation of coastal regions.

Statement 2 is correct: The Sagarmala scheme expected to harness India's 7,500 km long coastline, 14,500 km of potentially navigable waterways and strategic location on key international maritime trade routes.

The main vision of the Sagarmala Programme is to reduce logistics cost for EXIM and domestic trade with minimal infrastructure investment.

Statement 3 is correct: The Coastal Berth Scheme is a key initiative under the Sagarmala Programme to promote the development of dedicated infrastructure for coastal shipping of goods and passengers **across India's Major and Non-Major Ports**. The scheme provides financial aid for projects which promote coastal shipping at Indian ports. So far, 21 projects worth Rs. 729.6 Cr have been provided financial assistance of Rs. 205 Cr. under this scheme.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1606138>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1781376#:~:text=The%20Government%20had%20formulated%20a,later%20merged%20with%20Sagarmala%20Programme.>

http://iwai.nic.in/node?lang=1&level=1&sublinkid=81=&lid=96&qt-home_content=3

<http://sagarmala.gov.in/have-your-say/faq>

Q.13) The NIDHI and SAATHI initiatives, which were highlighted in the recently released Economic Survey 2022-23, are related to which of the following?

- a) Promotion of the Tourism and Hospitality industry.
- b) Providing credit facility and digitized identities to the street vendors.
- c) Providing income support to farmers and their families.
- d) Imparting vocational training to non-literates and school dropouts in rural areas.

Ans) a

Exp) Option a is the correct answer.

The Ministry of Tourism has undertaken various measures to boost the tourism sectors and promote India as a 'major tourism destination'.

Option a is correct: Both NIDHI and SAATHI initiatives are related to tourism and Hospitality industry.

National Integrated Database of Hospitality Industry (NIDHI) is a digital portal on which the Ministry of Tourism, with the help of State Governments and Union Territory Administrations, is making efforts to register accommodation units in the country.

System for Assessment, Awareness, and Training for Hospitality Industry (SAATHI) was launched in association with the Quality Council of India to restrict any further transmission of the virus while providing accommodation and other services post-lockdown. The objective of the scheme is to sensitise the industry on the Covid-19 regulations of the government.

Option b is incorrect: PM SVANidhi (Pradhan Mantri Street Vendor's Aatmanirbhar Nidhi Scheme) was launched to provide credit facility and digitisation of identities on e-Shram portal of the street vendors.

Option c is incorrect: PM-KISAN (Pradhan Mantri Kisan Samman Nidhi) was launched to provide income support to farmers and their families.

Option d is incorrect: Jan Shikshan Sansthan aims to provide vocational training to non-literates, neo-literates as well as school dropouts in rural regions by identifying skills that have a relevant market in that region.

Source: Economic Survey 2022-23 (pg. 300)

Q.14) The World Tourism Barometer, mentioned in the Economic Survey 2022-23, is an initiative of which of the following organizations?

- a) Global Forum on Tourism Statistics
- b) World Bank
- c) United Nations World Tourism Organization (UNWTO)
- d) The Global Business Travel Association (GBTA)

Ans) c

Exp) Option c is the correct answer.

The World Tourism Barometer is an initiative of the United Nations World Tourism Organisation (UNWTO) which is a specialized agency of the United Nations that works in the domain of tourism. As the leading international organization in the field of tourism, UNWTO promotes tourism as a driver of economic growth, inclusive development and environmental sustainability and offers leadership and support to the sector in advancing knowledge and tourism policies worldwide.

The Economic Survey 2022-23 mentioned the findings of the World Tourism Barometer to highlight that international tourism showed robust performance in January-September 2022, with international tourist arrivals reaching 63 per cent of the pre-pandemic level in the first nine months of 2022, boosted by strong pent-up demand, improved confidence levels and the lifting of restrictions.

Hence, option c is the correct answer.

Knowledge Base:

It also observed that, Europe, the world's largest destination region, recorded 585 million arrivals in 2022 to reach nearly 80% of pre-pandemic levels (-21% over 2019). The Middle East enjoyed the strongest relative increase across regions in 2022 with arrivals climbing to 83% of pre-pandemic numbers (-17% versus 2019). Africa and the Americas both recovered about 65% of its pre-pandemic visitors, while Asia and the Pacific reached only 23%, due to stronger pandemic-related restrictions.

By subregions, Western Europe (87%) and the Caribbean (84%) came closest to their pre-pandemic levels. The year 2022 saw a strong rebound in tourism spending, resulting in the recovery of pre-pandemic levels in income across many destinations.

Source: Economic Survey 2022-23 (pg. 297)

<https://www.e-unwto.org/toc/wtobarometereng/21/1>

Q.15) With reference to ‘Launch Vehicle Mark-III’ (LVM-3), consider the following statements:

1. It can launch the satellites into geostationary orbit only.
2. It is the heaviest rocket of ISRO.
3. It is a four-stage vehicle with solid core stages.

Which of the statements given above is/are correct?

- a) 2 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1 only

Ans) a

Exp) Option a is the correct answer.

The Indian Space Research Organisation (ISRO) has renamed the Geosynchronous Satellite Launch Vehicle (GSLV) Mark -III as Launch Vehicle Mark-III. Its first operational flight was used to launch the Chandrayaan-2 mission to the moon in 2019.

Statement 1 is incorrect: Earlier, the launch vehicles were named for a specific purpose, such as PSLV for putting polar satellites in orbit or GSLV for geostationary satellites. Launch Vehicle Mark-III is no longer limited only to the geosynchronous orbit. This rocket can take satellites to any orbit GEO (Geosynchronous Earth Orbit), MEO (Medium Earth Orbit), LEO (Low Earth Orbit).

Statement 2 is correct: GSLV Mk-III (LVM3) is the new heavy lift launch vehicle. It is the **heaviest rocket of ISRO**. The vehicle has the capability to launch heavier communication satellites that weigh up to **4000 kg in Geosynchronous Transfer Orbit**. GSLV Mk-II launch vehicle can deploy payloads of up to **2,500 Kilograms** to a Geosynchronous Transfer Orbit.

Statement 3 is incorrect: GSLV Mk III is a **three-stage vehicle**. It has **two solid strap-on** motors, **one liquid core stage** and a **high thrust cryogenic upper stage**. The solid motor is among the largest solid boosters in the world. Cryogenic upper stage has fully indigenous high thrust cryogenic engine.

Knowledge Base: The Gaganyaan mission will be ISRO's first manned space mission and **GSLV MK III** will be the launch vehicle to the Earth's low earth orbit.

Source: Statement 1: <https://www.thehindu.com/sci-tech/isro-renames-gslv-mark-iii-as-lvm-3/article66049577.ece>

Statement 2: <https://spaceflight101.com/members/wp-content/uploads/sites/54/2017/02/GSLV-MkII.pdf>

Statement 3: https://www.isro.gov.in/GSLVmk3_CON.html

Q.16) Consider the following statements about the Foreign Direct Investments (FDI) in India:

1. In Financial Year 2021-22, the FDI inflows in India was higher than the previous year.
2. Gross FDI as percent of GDP has steadily decreased during the last decade.
3. FDI limit in insurance sector, through automatic route, has been raised from 49% to 74%.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

A Foreign Direct Investment (FDI) is an investment made by a firm or individual in one country into business interests located in another country. The World Investment Report 2022 of UNCTAD places India as the seventh largest recipient of FDI.

Statement 1 is correct: In Financial Year 2021-22, the FDI inflows in India was higher than the previous year.



Statement 2 is incorrect: India's gross FDI has increased from an average of 2.2 per cent of GDP during FY05-FY14 to 2.6 per cent in FY15-FY22. As can be seen from below figure the gross FDI as percent of GDP:

Figure II.10: Structural shift in the Gross FDI/GDP during 2014-15



Source: RBI Handbook of Statistics on the Indian Economy (FDI data); International Monetary Fund World Economic Outlook database (Oct.2020) for US dollar GDP at current prices

Statement 3 is correct: To facilitate investment, various measures have been undertaken by the Government. **The FDI ceiling in insurance companies was raised from 49 to 74 per cent, under Automatic Route.** Further, Government has allowed 20 per cent foreign investment in Life Insurance Corporation (LIC) under the automatic route to ensure the liberalisation of investments in insurance sector along with other

sectors of economy. Along with this, the government has launched the National Single-Window system, a one-stop solution for approvals and clearances needed by investors, entrepreneurs, and businesses.

Source: Economic Survey 2022-23 (pg. 296)

<https://pib.gov.in/PressReleasePage.aspx?PRID=1845719>

Q.17) Which of the following pairs are correctly matched?

Industrial Policy	Provision/Feature
1. Industrial Policy Resolution, 1948	It provided that India is going to have a Mixed Economic Model.
2. Industrial Policy Resolution, 1956	The provision of industrial licensing was introduced.
3. Industrial Policy Statement, 1973	This policy set up Central Public Sector Undertakings (CPSUs) for the first time.
4. Industrial Policy Resolution, 1985 & 1986	The equity holding of the MNCs in the Indian subsidiaries could be up to 49 per cent.

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 2 and 4 only
- d) 1 and 4 only

Ans) c

Exp) Option c is the correct answer.

For a better understanding of the Indian economy, it is advisable to investigate the various industrial policies.

Industrial Policy	Description
Industrial Policy Resolution, 1948	1) It was the first economic policy of the country. 2) Under this, it was provided that India will be a mixed economy . (Hence, pair 1 is correct.)
Industrial Policy Resolution, 1956	3) The provision of compulsory licensing for industries was introduced in this policy. (Hence, pair 2 is correct.) 4) The industries set up under Schedule A of this policy were known as the Central Public Sector Undertakings (CPSUs) later getting popularity as 'PSUs'. 5) There was emphasis on small industries as well as the khadi and village industries.

Industrial Policy Statement, 1973	<p>6) A new class i.e., <i>core industries</i> was created. In the future, these industries came to be known as basic industries, infrastructure industries in the country.</p> <p>7) A limited permission for foreign investment was given, with the multinational corporations (MNCs) being allowed to set up subsidiaries in the country.</p> <p>8) This policy didn't set up Central Public Sector Undertakings (CPSUs). They were set up by the Industrial Policy Resolution, 1956. (Hence, pair 3 is incorrect.)</p>
Industrial Policy Resolution, 1985 and 1986	<p>9) The equity holding of the MNCs in the Indian subsidiaries could be up to 49 per cent with the Indian partner holding the rest of the 51 per cent shares (Hence, pair 4 is correct.)</p>

Source: Ramesh Singh 12th Edition Chapter 9: Industry and Infrastructure, Page no 274

Q.18) Recently, Insurance Regulatory and Development Authority of India (IRDAI) has provided approval for Bima Sugam Portal. Consider the following statements regarding Bima Sugam Portal:

1. It will bring all companies selling life and non-life insurance on a single platform.
2. It will be facilitating the purchase of insurance policies and the settlement of claims.
3. The policyholder can access various portal services through an e-insurance account (E-IA).

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The government has said that it proposes to set up a Bima Sugam portal to address the existing protection gap across life, health and general insurance businesses in the country.

Statement 1 is correct: Insurance Regulatory and Development Authority of India (IRDAI), is set to launch the Bima Sugam Portal –an online marketplace that will house all companies selling life and non-life insurance on a single platform. The online platform will provide consumers with a one-stop destination for all insurance needs.

Statement 2 is correct: Bima Sugam portal will provide following services to the policyholders.

- 1) Buy insurance policy
- 2) Claim Settlement
- 3) Agent Portability
- 4) Policy Portability

Hence, it will be responsible for the sale, servicing and the claims management attached to the insurance policies.

Statement 3 is correct: The Bima Sugam platform will provide all these facilities to policyholders with an e-insurance account (E-IA) and E-BIMA account. It will give policyholders an option to maintain a single repository for their family, which will create ease for claim settlements due to linkages of information stored at one place.

Hence, it is envisaged to be a platform where a centralized technology infrastructure will help manage policyholders' entire policy.

Source: <https://www.livemint.com/money/personal-finance/here-is-what-you-should-know-about-the-bima-sugam-portal-11666200579440.html>

<https://www.financialexpress.com/money/insurance/what-is-bima-sugam-and-who-will-benefit-from-it/2701227/>

Q.19) India Investment Grid (IIG), recently seen in news, is an initiative of which of the following government ministry?

- a) Ministry of Finance
- b) Ministry of Commerce and Industry
- c) Ministry of Micro, Small & Medium Enterprises
- d) Ministry of Corporate Affairs

Ans) b

Exp) Option b is the correct answer.

India Investment Grid (IIG) is an initiative of Department for Promotion of Industry & Internal Trade (DPIIT) under Ministry of Commerce and Industry, Government of India and Invest India, the National Investment Promotion and Facilitation Agency. IIG is a comprehensive living repository that showcases a broad range of investment opportunities in India, across states and sectors. Aimed at enhancing the Ease of Doing Business in India, the IIG serves as a platform to connect potential investors to project promoters through a dynamic interactive platform.

Through IIG, promoters can access a global platform to showcase their projects to investors from around the globe, while investors can search preferred investment opportunities, and connect with the project promoters.

National Infrastructure Pipeline (NIP) is hosted on the Invest India Grid (IIG) platform and provides opportunities for States/UTs and Ministries to collate all major infrastructure projects at a single location. IIG thus acts as a centralised portal to track and review project progress across all economic and social infrastructure sub-sectors.

Hence, Option b is the correct answer.

Source: Economic survey 2022-23 (pg. 348)

<https://indiainvestmentgrid.gov.in/index.jsp>

Q.20) With reference to Swadesh Darshan scheme, consider the following statements:

1. The State Government may designate the Implementing Agency for the projects under the Scheme.
2. The Scheme is fully funded by Central government.
3. Ambedkar Circuit is one of the tourist circuits launched under this scheme.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer:

Swadesh Darshan Scheme was launched in **2014- 2015** with the aim of promoting as well as developing sustainable and responsible tourism in the country.

Statement 1 is correct: The State Government will have to designate the Implementing Agency for the projects under the Scheme and inform the Ministry of Tourism. The Ministry of Tourism, may on its own, select a Central agency for implementation of any project or initiative under the Scheme. The State or Central Implementation Agency shall ensure technical, financial and administrative compliance of the guidelines and other terms and conditions of the sanction of the project and instructions issued by the Ministry from time to time.

Statement 2 is correct: The Scheme is 100% centrally funded. The funds shall be sanctioned and released to the Implementing Agency as per the guidelines of the Scheme and in conformity with the General Financial Rules and the directions issued by the M/O Finance from time to time.

Statement 3 is correct: Few important tourist circuits launched under this scheme includes Buddhist circuit, North- East circuit and **Ambedkar circuit**. Ambedkar Circuit or Panchteerth launched to attract tourists beyond Dalit community. It would include Janma Bhoomi in Madhya Pradesh's Mhow; Shiksha Bhoomi, the place in London where he stayed while studying in the UK; Deeksha Bhoomi in Nagpur where he embraced Buddhism; Mahaparinirvan Bhoomi or the place of his demise in Delhi, and Chaitya Bhoomi, the place of his cremation, in Mumbai.

Source: statement 1 and 2 <https://www.thehindu.com/news/national/govt-to-launch-swadesh-darshan-2-with-chosen-destinations-from-15-states/article66031473.ece>

Statement 3 : <https://indianexpress.com/article/explained/explained-culture/how-ambedkar-circuit-is-good-tourism-and-good-politics-for-the-bjp-8165181/>

Q.21) With reference to the Semiconductors manufacturing in India, which of the following statements is/are correct?

1. India currently imports most of its semiconductor chips requirements.
2. Chip design and manufacturing is a highly capital-intensive business.
3. Product Linked Incentive scheme provides fiscal support to firms looking to set up semiconductor fabrication facilities in India.
4. Government has set up India Semiconductor Mission as specialized and independent division of National Informatics Centre.

Choose the correct answer using the codes given below:

- a) 1, 2 and 3 only
- b) 2 and 4 only
- c) 3 only
- d) 1, 2 and 4 only

Ans) a

Exp) Option a is the correct answer.

Government of India is taking steps to promote the manufacturing of semiconductor chips in India. Reasons for the same are as follows:

Statement 1 is correct - India imports almost all semiconductors to meet its demand, which is estimated to reach around \$100 billion by 2025 from about \$24 billion now. Further, these chips are made with embedded instructions, which may contain malware or backdoors and are impossible to diagnose. And as Semiconductor chips are used in various strategic areas like, defence and telecom, the domestic manufacturing of chips assumes strategic importance and would provide a measure of security. Further, it will cut the import bill too.

Statement 2 is correct - Chip design and manufacturing is a highly capital-intensive business. The ISRO and the DRDO have their respective fab foundries but they are primarily for their own requirements and also not as sophisticated as the latest in the world. A semiconductor fabrication facility (or fab) can **cost multiples of a billion dollars to set up even on a relatively small scale** and lagging by a generation or two behind the latest in technology. It calls for a developed ecosystem for the business to thrive. As per a government estimate, it would cost roughly \$5-\$7 billion to set up a chip fabrication unit in India.

Statement 3 is correct - To encourage semiconductor manufacturing in India, the Govt has decided to extend the PLI (Production-Linked Incentive) scheme with a budgeted incentive of Rs 76,000 crore over the next six years. The **scheme envisages providing fiscal support of up to 50% of project cost for firms looking to set up display and semiconductor fabrication facilities (FABS)** in India. The govt will work

closely with the states establish High-Tech Clusters with requisite infrastructure in terms of land, semiconductor grade water, high quality power, logistics and research.

Statement 4 is incorrect - India Semiconductor Mission is a specialised and independent business division of Digital India Corporation. The mission has been set up with the objective of building a vibrant semiconductor besides displaying ecosystem in order for India to emergence as a global hub in electronics manufacturing and design. It is authorised to negotiate with applicants under semiconductor fab scheme and display fab scheme. It has also been given autonomy to decide appropriate technology mix, node generation, applications, capacity etc. The scheme was launched with the aim of attracting large investments in manufacturing AMOLED-based display panels or TFT LCD.

Source: <https://blog.forumias.com/semiconductor-manufacturing-in-india-explained-pointwise/>

Q.22) Consider the following statements about performance of insurance sector in India:

1. Life Insurance Penetration in India has seen a consistent decrease in the last decade.
2. Insurance Density in India rose in the last decade in both life and non-life segments.

Which of the statements given above is/are correct?

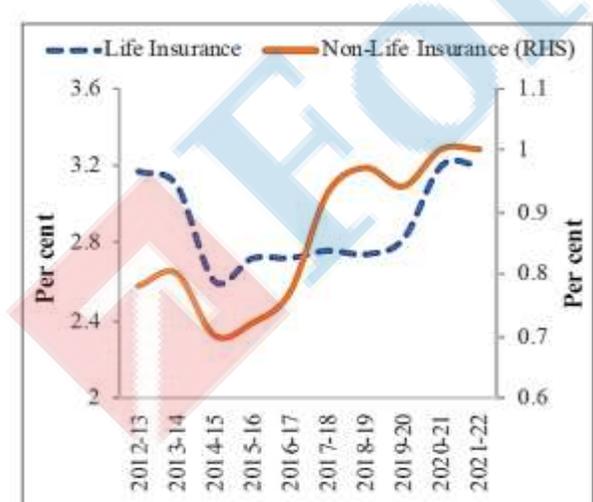
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Insurance, an integral part of the financial sector, plays a significant role in economic development. Apart from protecting against mortality, property, and casualty risks and providing a safety net, the insurance sector encourages savings and provides long-term funds for infrastructure development.

Statement 1 is incorrect: Insurance penetration is used as an indicator of insurance sector development within a country and is calculated as **the ratio of total insurance premiums to gross domestic product in a given year. The performance of Life insurance penetration in India in the period spanning FY2012-13 to FY2021-22 is shown:**

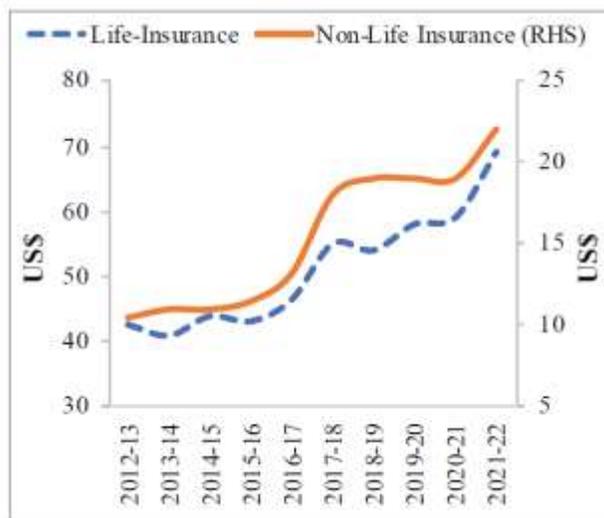


Source: Swiss Re, Sigma various issues

Statement 2 is correct: Insurance density is the ratio of premiums collected by insurance companies to the country's population. Expressed typically in dollar terms, it represents the per capita premium. The insurance density in India has increased from US\$ 11.1 in 2001 to US\$ 91 in 2021 (density for Life insurance

was US\$ 69 and Non-Life insurance was US\$ 22 in 2021) in keeping with the relatively faster expansion of the insurance market in the country.

Hence, in the period FY2012-13 to FY2021-22 the insurance density rose significantly as well as seen in the graph below.



Source: Economic survey 2022-23 (pg. 110)

Q.23) In line with the objectives of Digital India Mission, Digital Document Execution (DDE) platform was launched. In this context, consider the following statements:

1. It is a platform for paperless execution and storage of financial contracts.
2. Digital Document Execution platform was launched by National e-Governance Services Limited.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: DDE is a mode for paperless execution and storage of **financial contracts**, which will result in superior enforcement, thereby enhancing the 'Ease of Doing Business' especially in times where quick financing is the need of the hour for businesses.

Statement 2 is correct: **National e-Governance Services Limited (NeSL) had launched the Digital Document Execution (DDE) in 2020**, in line with the objective of Digital India Mission. NeSL is an Information Utility registered with and regulated by the Insolvency and Bankruptcy Board of India under the aegis of the IBC 2016.

It enables e-Stamping and e-Signing with superior enforcement. DDE platform makes the contract execution process seamless, online and real-time.

Source: Economic Survey 2022-23 (pg. 309)

https://nesl.co.in/wp-content/uploads/2022/03/brics_report2021-pages-3593.pdf

<https://nesl.co.in/dde/>

https://www.finahub.com/dde_digital_document_execution_nesl.html

Q.24) Consider the following statements regarding Micro, Small and Medium Enterprises (MSME) sector of India:

1. Government has set up a Credit Guarantee Trust Fund to facilitate credit flow to Micro and Small Enterprises (MSE).
2. As per the Economic survey, the share of MSMEs in India's overall exports has been steadily increasing in the last 5 years.
3. As per the Economic Survey, the share of MSMEs in India's overall annual GVA has remained above one-fourth during the last 5 years.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Micro, Small and Medium Enterprises (MSME) are the backbone of the Indian economy. As of March 2022, there were **7.9 million MSMEs** in India. Such enterprises employ about 110 million (11 crore) people across India. The efforts of MSMEs in India are expected to be the **key drivers of Aatmanirbhar Bharat** and strength of the sector is important for increasing India's exports and for India's products to reach new markets.

Statement 1 is correct: Availability of bank credit **without the hassle of collateral** will help entrepreneurs to realise needed finances. With this objective **Ministry of Micro, Small & Medium Enterprises (MSME) and SIDBI** has set up **Credit Guarantee Trust Fund for Micro and Small Enterprises (CGTMSE)**. It will **strengthen credit delivery system and facilitate flow of credit** to the MSE sector.

Statement 2 is incorrect: MSME contribution in India's overall exports has shown a **fluctuating trend**. It decreased (so **no continuous increase**) in FY21 after an increase in previous years. Share of MSME in India's exports stood at 48.60 percent, 48.10 percent, 49.75 percent, 49.35 percent and 45.03 percent for the year for FY18, FY19, FY20, FY21 and FY22 respectively.

Figure IX.9a: MSME share in exports

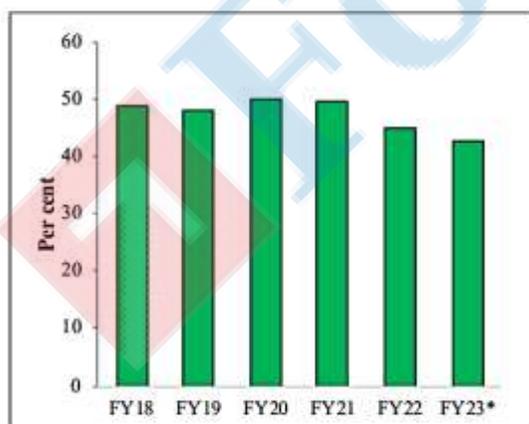
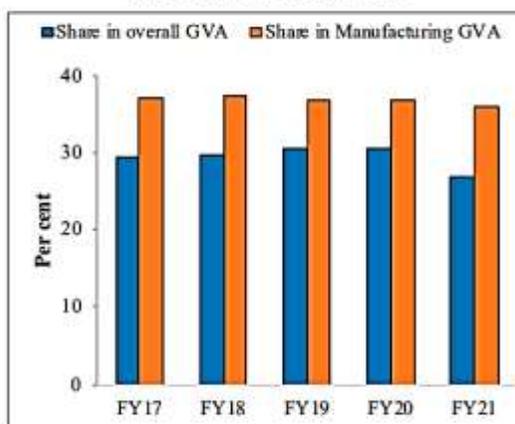


Figure IX.9b: MSME Share in overall GVA and Manufacturing GVA



Source: MoSPI, Directorate General of Commercial Intelligence and Statistics (DGCI&S)

Note: *Data for FY23 is until Aug 2022

Figure: MSME share in exports

Statement 3 is correct: Share of MSME Gross Value Added (GVA) in overall GVA was 29.3 percent, 30.5 percent, 30.5 percent and 26.8 percent for FY18, FY19, FY20 and FY21 respectively.

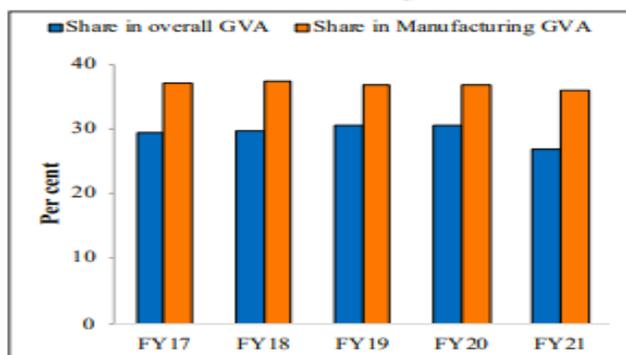


Figure: MSME Share in overall GVA and GVA MANUFACTURING

Knowledge Base: The contribution of MSMEs in exports stood at 42.6% (April 2022–August 2022). As the Indian economy is poised to reach the **US\$ 5 trillion target**, the Ministry of MSME has set a **goal of increasing its contribution to GDP to 50% by 2025**.

Source: <https://blog.forumias.com/msmes-significance-challenges-and-solutions-explained-pointwise/>

<https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf>

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1744032>

<https://www.financialexpress.com/industry/sme/msme-exim-share-of-msmes-in-indias-total-exports-declined-from-nearly-50-govt-data/2598711/>

Q.25) Consider the following places recently seen in news and the countries in which they are located:

Places in news	Country
1. Groningen	Netherlands
2. Galapagos	Ecuador
3. Zaporizhzhia	Iraq

Which of the pairs given above is/are correctly matched?

- 1 and 2 only
- 2 and 3 only
- 1 only
- 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Pair 1 is correct: Groningen is a city in the Netherlands.

Groningen is one of the world's largest gas fields in **the Netherlands** and has been described as “the only potential game-changer in Europe” to replace the increasingly disrupted gas supply from Russia.

The giant Dutch gas field once produced more than 40 billion cubic metres (bcm) of gas yearly – equivalent to 10% of the EU's consumption. But its production has now been capped due to earthquakes.

Pair 2 is correct: Galapagos are an archipelago of volcanic islands. They are distributed on each side of the equator in the Pacific Ocean, surrounding the centre of the Western Hemisphere, and are part of the Republic of Ecuador. Situated in the Pacific Ocean some 1,000 km from the South American continent, these 19 islands and the surrounding marine reserve have been called a unique ‘living museum and showcase of evolution’. Located at the confluence of three ocean currents, the Galápagos are a ‘melting pot’ of marine species. Ongoing seismic and volcanic activity reflects the processes that formed the islands.

Pair 3 is incorrect: Zaporizhzhia is in southern Ukraine. Recently Russian shelling and missile strikes have hit energy infrastructure across Ukraine and knocked out electricity supplies to Europe's largest nuclear plant in Zaporizhzhia.

Source) <https://www.thehindu.com/business/Economy/explained-how-is-the-energy-crisis-in-europe-shaping-up/article66037326.ece>

<https://www.thehindu.com/sci-tech/energy-and-environment/scientists-discover-hammerhead-shark-nursery-in-ecuadors-galapagos/article66273990.ece>

<https://www.thehindu.com/news/international/zaporizhzhia-the-nuclear-frontline/article65789164.ece>

Q.26) Consider the following statements regarding the concept “Privacy by Design”, sometimes seen in the news:

1. It is a framework of embedding privacy into the design and operation management of a given information technology system itself.

2. It suggests that a user's data protection should solely be assured by the compliance with regulatory frameworks designed by the government agencies.

Which of the statements given above is/are correct?

a) 1 only

b) 2 only

c) Both 1 and 2

d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Privacy by Design has been a frequently discussed topic **related to data protection**. The first thoughts of “Privacy by Design” were expressed in the 1970s and were incorporated in the 1990s into the data protection directive.

Statement 1 is correct: Privacy by Design is a framework based on **proactively embedding privacy into the design and operation management** of a given IT systems, networked infrastructure, and business practices or design specification. It specifies that technical **measures must be taken already at the time of planning** a processing system **to protect data safety**. The term Privacy by Design means nothing more than **data protection through technology design**. So, **statement** correctly depicts the definition of the term privacy by design.

Statement 2 is incorrect: Privacy by Design is a holistic approach to privacy that encompasses 7 foundational principles. These **seven fundamental principles are:** -

1) Proactive not Reactive; Preventative not Remedial

2) Privacy as the Default Setting

3) Privacy Embedded into Design

4) Full Functionality – Positive-Sum, not Zero-Sum

5) End-to-End Security – Lifecycle Protection

6) Visibility and Transparency – Keep it Open

7) Respect for User Privacy – Keep it User-Centric

The Privacy by Design advances the view that the privacy of a **user's data cannot be assured solely by compliance with regulatory frameworks designed by the governments; rather, privacy assurance must ideally become an organization's default mode of operation**. In this regard the ‘Privacy by Default setting’ principle suggests that ‘Privacy by Design’ seeks to deliver the maximum degree of privacy by ensuring that personal data are automatically protected in any given IT system or business practice. If an individual does

nothing, their privacy still remains intact. No action is required on the part of the individual to protect their privacy – it is built into the system, by default.

Source: <https://www.ipc.on.ca/wp-content/uploads/resources/7foundationalprinciples.pdf>

<https://www.ipc.on.ca/wp-content/uploads/resources/7foundationalprinciples.pdf>

https://iab.org/wp-content/IAB-uploads/2011/03/fred_carter.pdf

Q.27) Consider the following statements regarding the Index of Industrial Production (IIP):

1. It is released by the Office of the Economic Adviser.
2. The current base year for IIP is 2017-18.
3. The Eight Core Industries comprise more than half of the total weightage of items included in the IIP.

Which of the statements given above are **incorrect**?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Index of Industrial Production (IIP) is an index that **tracks manufacturing activity** in different sectors of an economy. The IIP number measures the industrial production for the period under review, **usually a month**, as against the reference period or base year.

Statement 1 is incorrect: Index of Industrial production (IIP) is released by the **National Statistical Organization (NSO)**, Ministry of Statistics and Programme Implementation (MOSPI). IIP is a vital indicator of the industrial production in the economy.

Statement 2 is incorrect: The **current base year of IIP is 2011-12 (not 2017-18). The base year was changed to 2011-12 from 2004-05 in the year 2017.** The Reserve Bank of India, the Ministry of Finance and the Office of Economic Adviser (Ministry of Commerce and Industry) use the IIP index for policy-making purposes.

Statement 3 is incorrect: In the IIP the whole industrial economy is divided into three sectors: **manufacturing (with a weight of 77.63 %), mining (14.37 %) and electricity (7.99 %).** The **Eight Core Industries (coal, crude oil, natural gas, natural gas, refinery products, fertilizers, steel, cement and electricity)** comprise **40.27 percent (less than half) of the weight of items** included in the Index of Industrial Production (IIP).

Knowledge Base: **Index of eight core industries is released by Office of the Economic Adviser (OEA)**, Department of Industrial, Policy & Promotion (DIPP), and Ministry of Commerce & Industry.

Annual Survey of Industries (ASI) is the prime source of **long-term industrial statistics**. The ASI is used to track the health of the industrial activity in the economy over a longer period. The index is compiled out of a **much larger sample of industries** compared to IIP.

Source: [https://blog.forumias.com/index-of-industrial-production-iip/#:~:text=The%20eight%20Core%20Industries%20in,Cement%20and%20\(h\)Fertilizers.](https://blog.forumias.com/index-of-industrial-production-iip/#:~:text=The%20eight%20Core%20Industries%20in,Cement%20and%20(h)Fertilizers.)

<https://www.financialexpress.com/what-is/index-of-industrial-production-iip-meaning/1616261/>

Q.28) Which of the following are the correct provisions of Mines and Minerals (Development and Regulation) Amendment Act, 2021?

1. It empowers the National Mineral Exploration Trust for the exploration and acquisition of mines outside India.
2. It provides that no mine can be reserved for particular end-use.
3. It provides that there will not be any involvement of state governments in auctioning of mines.

Choose the correct answer using the code given below:

- a) 1 and 3 only
- b) 2 only
- c) 3 only
- d) 1 and 2 only

Ans) b

Exp) Option b is the correct answer.

Mines and Minerals (Development and Regulation) Amendment Act, 2015 was enacted **to regulate the mining sector** in India. It replaced the Mines and Minerals (Development and Regulation) Act, 1957. This Act forms the basic framework of mining regulation in India. This act is **applicable to all minerals except minor minerals and atomic minerals**.

Statement 1 is incorrect: Under Mines and Minerals (Development and Regulation) Amendment Act (MMDR Act) 2015, **National Mineral Exploration Trust (NMET) was established for regional and detailed mineral exploration in the country (not outside the country and no provision related to acquisition of mines by NMET is there in the law)**. The amended act of 2021 does not make any such changes in the role and function of NMET which empowers it for the exploration and acquisition of mines outside India. **Hence the statement is incorrect.**

Statement 2 is correct: The MMDR Act 2015 empowered the central government to reserve any mine (other than coal, lignite, and atomic minerals) to be leased through an auction for a particular end-use (such as iron ore mine for a steel plant). Such mines are known as captive mines. **Now the MMDR Amendment Act 2021 provides that no mine will be reserved for particular end-use. Hence the statement is correct.**

Statement 3 is incorrect: The MMDR Amendment Act 2021 empowers the central government to specify a time period for completion of the auction process of mines in consultation with the state government. **If the state government is unable to complete the auction process within this period, the auctions may be conducted by the central government. Hence the statement is incorrect as the state governments still has the primary role in the auction process of mines and the central government can auction the mines in a particular situation only.**

Source: <https://pib.gov.in/FactsheetDetails.aspx?Id=148580>

https://prsindia.org/files/bills_acts/bills_parliament/2015/Mines_and_Minerals_Act,_2015.pdf

https://www.mines.gov.in/writereaddata/UploadFile/The_Mines-and-Minerals_Amendment_Act,2015.pdf

<https://mines.gov.in/writereaddata/UploadFile/MMDR%20Act,1957.pdf>

Q.29) Consider the following statements regarding the coal mining sector in India:

1. Currently, prior mining experience in coal mining is not mandatory for bidding for coal blocks in India.
2. Only the companies registered in India can bid in the auction of the coal mines.
3. The captive miners can sell their coal stocks in the open market.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

MMDR Act, 1957 has been amended through the Mineral Laws (Amendment) Act, 2020 to **maintain sustained mineral production in the country**. It facilitated seamless transfer of all valid rights, approvals, clearances, licenses, **for a period of two years to a new lessee** in case of minerals other than coal, lignite, and atomic minerals.

Statement 1 is correct: Under the Mines and Minerals (Development and Regulation) Amendment Act, 2015, the companies **which do not possess any prior coal mining experience in India but are financially strong and or have mining experience in other minerals or in other countries can now participate in auction of coal/lignite blocks**. This would also allow the implementation of the **100% FDI through automatic route for sale of coal**.

Statement 2 is correct: The **Coal Mines Nationalization Act of 1973** mandated that only companies registered in India can participate in auctions. Currently also **only companies registered in India can bid for commercial coal mines** despite the cabinet giving its nod to 100% foreign direct investment under automatic route for sale of coal and mining activities.

Statement 3 is correct: Mines and Minerals (Development and Regulation) Act, 1957 empowered central to reserve any mine for the particular end-use. These were the captive mines. Now, the **2021 Amendment to Mines and Minerals (Development and Regulation) Amendment Act removed the distinction between captive and merchant mines**. Now captive coal mines will also be **able to sell their stock in the open market**. Now states will get additional revenue from the sale of minerals by captive miners.

Source: <https://pib.gov.in/FactsheetDetails.aspx?Id=148580>

https://www.business-standard.com/article/economy-policy/india-s-captive-coal-mines-to-be-allowed-to-sell-50-output-121100501029_1.html

<https://pib.gov.in/FactsheetDetails.aspx?Id=148580>

<https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/private-companies-may-have-easy-criteria-for-commercial-coal-mining-auction/articleshow/71572890.cms?from=mdr>

<https://www.financialexpress.com/industry/non-fuel-captive-miners-can-now-sell-half-of-produce-in-open-market/2362998/>

Q.30) Consider the following statements about 'Agni Prime':

1. It is developed under Integrated Guided Missile Development Program.
2. It is a two-stage canisterised solid propellant missile.
3. It is a surface-to-surface missile.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 1 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct. Defence Research and Development Organisation (DRDO) successfully flight tested a New Generation Nuclear Capable Ballistic Missile Agni P from Dr APJ Abdul Kalam Island off the coast of Odisha, Balasore in 2021. It is the latest and sixth variant of the Agni series missiles (under IGMDP - Integrated Guided Missile Development Program).

Statement 2 and 3 are correct. Agni-P is a two-stage canisterised solid propellant missile with dual redundant navigation and guidance system. **It has a range of up to 2000 km. It is a canisterised surface-to-surface ballistic missile.**

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1730828>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1782960>

Q.31) Arrange the following renewable energy resources in ascending order as per their installed power capacity presently.

1. Hydro energy
2. Solar energy
3. Wind energy
4. Biomass energy

Select the correct answer using the code given below:

- a) 4-1-2-3
- b) 4-3-2-1
- c) 4-2-3-1
- d) 4-3-1-2

Ans) d

Exp) Option d is the correct answer.

Option d is correct: As of Feb 2023, Renewable energy sources, including large hydropower, have a combined installed capacity of 174.53 GW.

The following is the installed capacity for Renewables:

- 1) Wind power: 41.9 GW
- 2) Solar Power: 63.3 GW
- 3) Biomass/Co-generation: 10.2 GW
- 4) Small Hydro Power: 4.93 GW
- 5) Waste To Energy: 0.52 GW
- 6) Large Hydro: 46.85 GW

Hence the correct order is ascending order of installed capacities of different renewable sources is Biomass energy–Wind energy–Hydro energy (including small and large hydro) --Solar energy i.e.,4-3-1-2.

Source: <https://www.investindia.gov.in/sector/renewable-energy#:~:text=Renewable%20energy%20sources%20have%20a,Wind%20power%3A%2041.9%20GW>

Q.32) Consider the following statements regarding the power sector in India:

1. SAATHEE Portal is developed by the Bureau of Energy Efficiency to monitor the progress of energy efficiency in various states.
2. Under the scheme “Development of Solar Parks and Ultra-Mega Solar Power Projects”, solar parks with a capacity of 50 MW and below will be installed.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Power or electricity is a very essential constituent of infrastructure affecting economic growth and welfare of the country. India’s power sector is one of the key sectors which forms the foundation of the growth of the country.

Statement 1 is correct: SAATHEE stands for **State-wise Actions on Annual Targets and Headways on Energy Efficiency (SAATHEE)**. It is a **Management Information System (MIS) portal** which will facilitate **real-time monitoring of the progress of implementation of various Energy Conservation endeavours at**

State level. Real time data will provide efficiency and expediency in conservation measures. **The Bureau of Energy Efficiency (BEE) under the Ministry of Power has developed** this portal to monitor the progress of implementation of various energy conservation projects.

Statement 2 is incorrect: The scheme for “**Development of Solar Parks and Ultra-Mega Solar Power Projects**” was rolled out by **Ministry of New & Renewable Energy** on 12-12-2014. Under the scheme, it was proposed to set up **at least 25 solar parks, each with a capacity of 500 MW (and not 50 MW) and above** thereby targeting around targeting 20,000 MW of solar power installed capacity within a span of 5 years (later extended) starting from 2014-15. The capacity of the Scheme was enhanced from 20,000 MW to **40,000 MW** on 21-03-2017. **These parks are proposed to be set up by 2023-24.**

Knowledge Base: **BEE is a statutory body** under the Ministry of Power which is mandated to implement policy and programmes in energy efficiency and conservation. The objective of such initiatives is **to reduce energy intensity** in our country by optimizing energy demand and reducing emissions of greenhouse gasses (GHG) which are responsible for global warming and climate change.

Source: <https://blog.forumias.com/bee-launches-saathee-portal-to-track-state-energy-efficiency-targets/>

<https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1687682>

<https://indianexpress.com/article/explained/gujarat-kutch-hybrid-renewable-energy-park-7092444/>

<https://www.thehindu.com/news/national/other-states/pm-to-lay-foundation-for-worlds-largest-renewable-energy-park-on-tuesday/article33330646.ece>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1892805>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1680852>

Q.33) Consider the following statements with reference to the Renewable Purchase Obligation (RPO) in India:

1. Under this, all the goods manufacturing industries are obligated to obtain a minimum amount of their energy needs from Renewable Energy Sources.
2. India first adopted RPO mechanism in 2015, to realize India’s obligation under the Paris Climate Agreement.
3. In general, State Electricity Regulatory Commissions have a role in RPO mechanism within the concerned state.

Which of the above given statements is/are correct?

- a) 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Renewable Purchase Obligation (RPO) is a tool to fulfill our renewable energy goals.

Statement 1 is incorrect: Renewable Purchase Obligation (RPO) mandates that all **electricity distribution licensees i.e., distribution companies should purchase or produce a minimum specified quantity** of their requirements from **Renewable Energy Sources. Although RPO requirements may apply to large scale manufacturing companies, they are not applicable to all the manufacturing industries (like MSMEs).** RPO uses RECs in cases Discoms are not able to produce renewable electricity from own. Renewable Energy Certificates (RECs) is market-based instruments to promote renewable sources of energy and the development of the market in electricity.

Statement 2 is incorrect: RPO was instituted in 2011, it is a mandate that requires large power procurers to buy a predetermined fraction of their electricity from renewable sources.

Statement 3 is correct: Under the RPO framework obligations have been imposed on certain entities to purchase energy from renewable sources by various state electricity regulatory commissions (SERCs) based on each state's varying renewable energy potentials.

Source: <https://cercind.gov.in/regulations/REC-Regulations-2022.pdf>

<https://elplaw.in/leadership/what-are-renewable-purchase-obligations-and-how-to-effectively-meet-rpo-targets/#:~:text=To%20provide%20a,renewable%20energy%20sources.>

Q.34) Consider the following statements with reference to the India Infrastructure Project Development Fund Scheme:

1. It is a Central Sector Scheme.
2. Projects which are covered under the Viability Gap Funding scheme are exempted from any benefits under the IIPDF scheme.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The **Department of Economic Affairs (DEA), Ministry of Finance**, in 2022 notified Scheme for Financial Support for Project Development Expenses of PPP Projects – **India Infrastructure Project Development Fund (IIPDF) Scheme**.

Statement 1 is correct: IIPDF is a central sector scheme. As a Central Sector Scheme, the India Infrastructure Project Development Fund Scheme (IIPDF Scheme) will aid development of quality PPP projects by providing necessary funding support to the project sponsoring authorities, both in the Central and State Governments, for creating a shelf of bankable viable PPP projects for achieving the vision of modern infrastructure for the country.

Statement 2 is incorrect: Projects which are covered under the Viability Gap Funding scheme are also allowed for getting the funding support of the IIPDF scheme. Under the IIPDF scheme, a maximum amount of ₹5 crore for a single proposal, inclusive of any tax implications, can be funded, which can include the cost of consultants/transaction advisers of a PPP project. Any funding requirement over and above ₹5 crore may be borne by the project sponsoring authority itself, and funding under IIPDF shall not be recovered.

Source: <https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf>

https://mohua.gov.in/upload/uploadfiles/files/Guideline_Scheme_IIPDF.pdf

https://dea.gov.in/sites/default/files/Book_IIPDF%20Schemes%20%2805.11.2022%29.pdf

Q.35) Economy and Environment are related through Environmental Kuznets Curve in which of the following way?

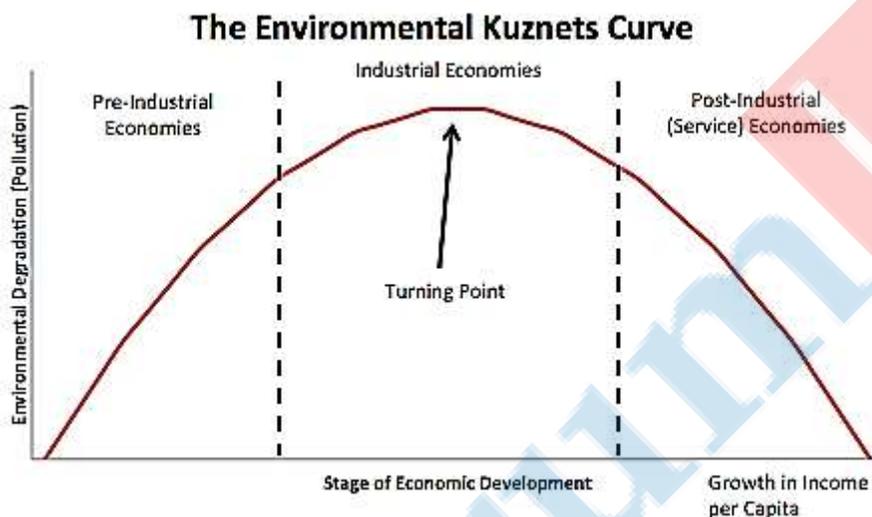
- a) An increase in Environmental pollution always decreases the National income of an economy.
- b) At higher globalisation of economy happens, environmental pollution reduces.
- c) Environmental degradation increases in the early stages of economic growth, but higher level of economic growth provides reduced environmental degradation.
- d) Greenhouse gas emissions and Per Capita income always have an inverse relationship.

Ans) c

Exp) Option c is the correct answer.

The environmental Kuznets curve (EKC) is a hypothesised relationship between various indicators of environmental degradation and per capita income. In the early stages of economic growth, pollution emissions increase and environmental quality declines, but beyond some level of per capita income (which will vary for different indicators) the trend reverses, so that **at high income levels, economic growth leads to environmental improvement**. This implies that environmental impacts or emissions per capita are an **inverted U-shaped function of per capita income**.

The Environmental Kuznets Curve is used to graph the idea that as an economy develops, market forces begin to increase and economic inequality decreases. More specifically that as the economy grows, initially the environment suffers but eventually the relationship between the environment and the society improves.



Source: <https://www.sciencedirect.com/topics/earth-and-planetary-sciences/environmental-kuznets-curve>

Q.36) Consider the following statements with reference to the Logistics Ease Across Different States (LEADS) Report:

1. It is released by the Union Ministry of Commerce and Industry.
2. It assesses the situation of logistics infrastructure across nine coastal states only.
3. Maharashtra has topped amongst the 'Achievers' states category in the 2022 LEADS Report.

Which of the above given statements is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1 only

Ans) a

Exp) Option a is the correct answer.

LEADS report acts as a guiding & bridging mechanism for the identification of interventions enhancing logistics efficiency at State/UTs.

Statement 1 is correct and 2 is incorrect: The Ministry of Commerce and Industry releases the Logistics Ease Across Different States (LEADS) Report. The LEADS is an indigenous data-driven index to assess logistics infrastructure, services, and human resources across all 36 States and UTs.

Statement 3 is correct: There are three categories under the LEADS Report i.e., Achievers, Fast Movers and Aspirers. In the 2022 LEADS report, Maharashtra has topped amongst the ‘Achievers’ states category. Source: Economic Survey 2022-23, Ch -12 Page: 351

Q.37) Consider the following statements with reference to the Indian Telegraph Right of Way Amendment Rules, 2022:

1. It does away with the need for permission from a government authority for installing telecom infrastructure over private property.
2. Under these rules, Telecom Regulatory Authority of India (TRAI) will be the one stop entity for all telecom related Right of Way applications.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

In the telecom sector, the “Right of Way” is a **right under which a telecom infrastructure provider will be facilitated the use of public property** upon application.

Statement 1 is correct: As per the Indian Telegraph Right of Way Amendment Rules, 2022, **Telecom licensees can enter into agreement with private property owners and will not require any permission from any government authority for installing telecom infrastructure** such as towers, poles or optical fibre. The amendments provide for a single window clearance system for Right of Way applications.

Statement 2 is incorrect: **Gati Shakti Sanchar Portal (not TRAI) of the Ministry of Communications** will be the single window portal for all telecom related Right of Way applications.

Source: <https://dot.gov.in/actrules/indian-telegraph-right-way-amendment-rules-2022>

Q.38) Consider the following statements with reference to the Special Economic Zones (SEZs) in India:

1. India does not have a specific SEZ legislation to provide statutory backing to such areas.
2. Entities in the SEZs are allowed duty-free import of goods for the operation and maintenance of SEZ units.
3. Units can be set up in SEZs only for manufacturing of goods and not for rendering services.
4. An entity in SEZ is prohibited from subcontracting its business operations to other entities in SEZs.

Which of the above given statements is/are correct?

- a) 2 only
- b) 2 and 4 only
- c) 1, 2 and 3 only
- d) 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect: The Special Economic Zones Act was passed in 2005. The Act came into force along with the SEZ Rules in 2006. Thus, SEZs are provided the legislative backing by the SEZ Act of 2005.

Statement 2 is correct: **The SEZs allows for Duty free import/domestic procurement of goods for development, operation and maintenance of SEZ units.** SEZ are essentially designated duty-free enclave

to be treated as a territory outside the customs territory of India for the purpose of authorized operations in the SEZ.

Statement 3 is incorrect: Units may be set up in SEZs for manufacturing goods and rendering services. In fact, many IT parks developed in India serve as SEZ.

Statement 4 is incorrect: An entity in the SEZ is given freedom for subcontracting its business operations to other entities in SEZs. Subcontracting is the practice of assigning, or outsourcing, part of the obligations and tasks under a contract to another party known as a subcontractor. Subcontracting is especially prevalent in areas where complex projects are the norm, such as construction and information technology.

Source: <http://sezindia.nic.in/FAQ.php>

Q.39) Which among the following best describes the 'Q-commerce' model, as seen in the news recently?

- A model of e-commerce that specifically focuses on rural areas and backward regions of the country.
- A model of e-commerce that emphasizes quick and fast delivery of goods to consumers.
- A model of e-commerce that promotes environmentally friendly and sustainable business practices.
- A model of e-commerce that targets rich consumers with luxurious and expensive products.

Ans) b

Exp) Option b is the correct answer.

"Q-commerce" (quick commerce) is a new model of e-commerce that emphasizes speed and convenience in the delivery of goods to consumers. This model aims to provide on-demand delivery of products within a very short time frame, sometimes as little as a few minutes. It usually involves the use of local micro-fulfillment centers, dark stores, or warehouses that are located in or near urban areas, enabling retailers to fulfill orders more quickly and efficiently. The Q-commerce model is gaining popularity due to the growing demand for instant gratification and convenience among consumers.

Source: <https://indianexpress.com/article/explained/grofers-rebranded-itself-as-blinkit-7669940/>

Q.40) With reference to 'Global Food Security Platform', consider the following statements:

- It is launched by the World Food Programme (WFO) in collaboration with the Food and Agriculture Organization.
- It provides finances to improve food security and to reduce volatility in food markets.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Global Food Security Platform is **not** launched by United Nations World Food Programme. It was launched by the World Bank's private sector investment arm, **the International Finance Corp.**

Statement 2 is correct:

Global Food Security Platform is a \$6 billion financing facility which will support vulnerable communities, boost the flow of vital commodities to emerging markets, and help **reduce food insecurity**. IFC's Global Food Security Platform **will seek to reduce volatility in food markets through emergency financing to**

farmers, commodity traders, food and feed processors, and other private players that face restricted funding and sudden spikes in costs that are limiting their operations.

Knowledge Base:

Additional information on Global Food Security Platform:

(a) It also aimed at facilitating trade of food commodities, delivery of inputs to farmers, supporting efficient production in major origins such as Iraq, Lebanon, Libya, and Tunisia etc, including Ukraine, and effective distribution of food products in destination countries

(b) The platform will supplement the World Bank's commitment of US\$30 billion in response to the food crisis.

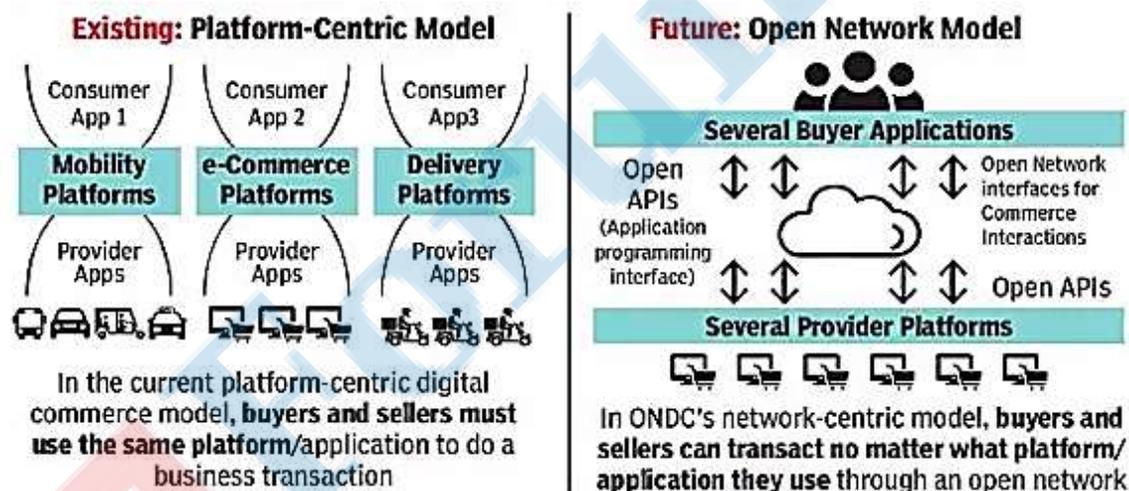
Source: Feeding the Future: IFC's Global Food Security Platform Confronts Multiple, Overlapping Crises
IFC launches financing platform to respond to global food crisis | Mint (livemint.com)

Q.41) The proposed Open Network Digital Commerce can democratize digital commerce as:

- it uses Artificial Intelligence to exclusively show the products of small businesses when user searches for a product in the category.
- it will provide sellers and consumers with a greater number of options.
- it will be utilizing machine learning algorithms that essentially favor MSME and Cottage industries.
- it will limit access to big marketplaces to the consumers and will allow exclusive access to new and innovative businesses.

Ans) b

Exp) Option b is the correct answer.



ONDC is an open e-commerce protocol set up by the Ministry of Commerce's Department of Promotion of Industry and Internal Trade (DPIIT). Under ONDC, it is envisaged that a buyer registered on one participating e-commerce site (for example, Amazon) may purchase goods from a seller on another participating e-commerce site (for example, Flipkart). Presently, buyers and sellers have to be on the same app for a transaction which happens through the same platform. For example, a buyer needs to go to Amazon, to buy a product from a seller on Amazon.

Open Network Digital Commerce has the potential to democratize digital commerce in several ways. It can promote greater competition by reducing entry barriers for smaller businesses and startups. Open networks allow businesses of all sizes (both small and big) to participate, providing a level playing field and greater opportunities for market access. **Main aim behind the ONDC is to increase the accessibility to various products by the consumers and enable the e-commerce companies, especially small companies to get access to a wider base of consumers.**

Source: <https://www.livemint.com/news/india/open-network-for-digital-commerce-will-democratize-e-commerce-goyal-11647706189203.html>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1884249>

Q.42) Consider the following statements with reference to the PM MITRA Scheme:

1. The scheme aims to improve the infrastructure facilities of the textile industry.
2. It provides support for both Greenfield and Brownfield projects.
3. The capital requirements of the projects under the scheme are fully funded by the Central Government.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The Mega Integrated Textile Region and Apparel (PM MITRA) Parks aims to integrate the entire textile value chain from spinning, weaving, processing/dyeing, printing to garment manufacturing at one location.

Statements 1 and 2 are correct: The scheme aims to develop integrated large scale and **modern industrial infrastructure facility for entire value-chain of the textile industry**. It will reduce logistics costs and improve competitiveness of Indian Textiles. Under the scheme, the **Centre will provide development capital support** for the development of common infrastructure of Rs 500 crore for each **greenfield MITRA park** and up to Rs 200 crore for each **brownfield park**.

Statement 3 is incorrect: PM MITRA Park will be developed by a Special Purpose Vehicle which will be owned by the Central and State Government and in a Public Private Partnership (PPP) Mode. The Centre will provide development capital support for the development of common infrastructure of Rs 500 crore for each greenfield MITRA park and up to Rs 200 crore for each brownfield park (**Hence central government only provide a fixed assistance and remaining amount will be accumulated through PPP model. Therefore, the projects under the scheme are not fully funded by the central government**) The scheme will help India in attracting investments, boosting employment generation and position itself strongly in the global textile market. These parks are envisaged to be located at sites which have inherent strength for Textile Industry to flourish and have necessary linkages to succeed.

Source: <https://www.india.gov.in/spotlight/pm-mega-integrated-textile-region-and-apparel-pm-mitra>
Economic Survey 2022-23, Ch -9 Page: 280

Q.43) Consider the following statements with reference to the Consumer Protection (E-Commerce) Rules, 2020:

1. It requires sellers in the ecommerce marketplace to provide information regarding the country of origin of their goods.
2. These rules are applicable to both marketplace and inventory models of e-commerce.
3. The rules require e-commerce entities to get registered with the Department for Promotion of Industry and Internal Trade (DPIIT).

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

To protect the consumers from unfair trade practices and to address their concerns, the Ministry of Consumer Affairs, Food and Public Distribution on July 23, 2020, notified the Consumer Protection (E-Commerce) Rules, 2020.

Statement 1 is correct: As per the Consumer Protection (E-Commerce) Rules, 2020, Any seller offering goods or services through a marketplace **e-commerce entity shall provide all relevant details about the goods and services offered for sale by the seller including country of origin** which are necessary for enabling the consumer to make an informed decision at the prepurchase stage.

Statement 2 is correct: The Consumer Protection (E-Commerce) Rules, 2020 are applicable to all goods and services bought or sold over digital or electronic network including digital products; all models of e-commerce, **including marketplace and inventory models of ecommerce;** all e-commerce retail, including multi-channel single brand retailers and single brand retailers in single or multiple formats.

Statement 3 is correct: The rules provided for a framework for registration of every e-commerce entity with **the DPIIT for allotment of a registration number which shall be displayed prominently on the website as well as invoice of every order placed by the e-commerce entity.** This would help create a database of genuine e-commerce entities and ensure that the consumers are able to verify the genuineness of an e-commerce entity before transacting through their platform.

Source: <https://consumeraffairs.nic.in/sites/default/files/E%20commerce%20rules.pdf>

https://www.icsi.edu/media/webmodules/Consumer_Protection_E-Commerce_Rules_2020.pdf

Q.44) Consider the following statements regarding Micro, Small and Medium Enterprises (MSMEs) sector in India:

1. Higher number of MSMEs are present in the Manufacturing sector, than in Services sector.
2. Retail and wholesale trades are now included under MSMEs.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Micro, Small and Medium Enterprises (MSMEs) form the cornerstone of the Indian economy. The MSME sector in India has exhibited a strong performance and protected the economy from global adversities and shocks.

Statement 1 is correct: Out of total registered MSMEs in India – 67% are manufacturing while around 33% are into service sector.

Statement 2 is correct: In July 2021, the Indian government announced inclusion of retail and wholesale trades as MSMEs to strengthen the sector and boost economic growth. It can benefit 2.5 Crore Retail and Wholesale Traders in India. As a result of this move, retail and wholesale trade can get benefits of priority sector lending under RBI guidelines.

Source: <https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf> chapter 9

<https://niveshmitra.up.nic.in/MSMEs.aspx#:~:text=India%20Overview&text=With%20around%20361.76%20lakh%20registered,in%20India%20after%20agriculture%20sector%20>

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1732193>

Q.45) With reference to ‘Sloth Bear’, consider the following statements:

1. This bear species is endemic to the Indian Subcontinent.
2. As compared to other bear species, Sloth Bear hibernate for the longest duration of time in a year.
3. It is listed as Critically Endangered in the IUCN red list.

Which of the statements given above is/are **incorrect**?

- a) 1 only
- b) 1 and 2 only
- c) 3 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

The first World Sloth Bear Day was observed on 12th October to generate awareness and strengthen conservation efforts around the unique bear species of India.

Statement 1 is correct: The sloth bear (*Melursus ursinus*) is an important species and **endemic to the Indian subcontinent** and 90% of the species population is found in India. A small population of bears is also **found in Nepal and Sri Lanka**. Sloth bears are omnivorous and survived on termites, ants and fruits.

Statement 2 is incorrect: Bears that **do hibernate** include the **Andean bear, the American black bear**, some Asiatic black bears. But unlike these bears, **Sloth bear do not hibernate**. Bears hibernate **due to cold temperatures and to conserve energy** when food is scarce, but some of its species **adapt in the ecology and do not hibernate**.

Statement 3 is incorrect: Sloth bear is classified as ‘**Vulnerable**’ in the International Union for the Conservation of Nature (IUCN). No fewer than 20,000 sloth bears survive in the forests of Indian and Sri Lanka. It is listed in **Schedule 1 of the Indian Wildlife Protection Act, 1972**. It is also listed in **Appendix 1 under CITES** conservation status.



Sloth Bear

Knowledge Base:

Threats for Sloth bear:

- (a) For a long time, sloth bears were exploited as dancing bears by the nomadic Kalandar community members,
- (b) There has been a rise of incidents of human sloth bear conflict in States like Gujarat, Rajasthan and Maharashtra among other states,
- (c) Habitat loss,
- (d) They are also poached for body parts and hunted because of their aggressive behaviour and destruction of crops.

Source: Experts call for protection of sloth bear on first World Sloth Bear Day (thehindu.com)

Sloth Bear: A day to explore bear necessities (forumias.com)

Q.46) Consider the following statements regarding Industry 4.0:

1. It integrates technologies such as cloud computing and machine learning into the manufacturing process.
2. SAMARTH Udyog Bharat 4.0 is an initiative which promotes Industry 4.0 in India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) option c is the correct answer.

Statement 1 is correct: The advent of the fourth industrial revolution or industry 4.0 as it's commonly referred to, has begun. **This transformation integrates new technologies such as cloud computing, IoT, machine learning, and artificial intelligence (AI) into manufacturing processes**, leading to efficiencies across the value chain.

Statement 2 is correct: The government is cognisant of the importance of industry 4.0 in achieving the goals of Aatmanirbharta and its ambitions of becoming a key player in global value chains. A few initiatives by the government include **the SAMARTH (Smart Advanced Manufacturing and Rapid Transformation Hubs) Udyog Bharat 4.0** under the Ministry of Heavy Industries and Public Enterprises, which aims to encourage technological solutions to Indian manufacturing units through awareness programmes and demonstrations. It aims to facilitate and create eco system for propagation of Industry 4.0 set of technologies in Indian manufacturing.

Source: <https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf> chapter 9

Q.47) Which among the following can be considered as benefits of the Central Bank Digital Currency (CBDC)?

1. It may foster financial inclusion in India.
2. It may bring resilience to the payments system.
3. It may boost innovation in cross border payment space.
4. It may reduce operational costs in payments by reducing the use of physical cash.
5. It may increase efficiency in the payments system.

Select the correct answer using the codes given below:

- a) 2 and 5 only
- b) 2, 3 and 5 only
- c) 1, 3, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

Reserve Bank of India broadly defines CBDC (Digital Rupee (e₹)) as the legal tender issued by a central bank in a digital form. It is akin to sovereign paper currency but takes a different form, exchangeable at par with the existing currency and shall be accepted as a medium of payment, legal tender and a safe store of value. The first pilot in the Digital Rupee - Wholesale segment (e₹-W) commenced on November 1, 2022. The Reserve Bank has also recently announced the launch of the first pilot for retail digital Rupee (e₹-R).

Benefits of CBDC

The introduction of CBDC will significantly boost digital financial services. Issuance of CBDC in India offers several benefits, which inter alia, include.

- 1) fostering financial inclusion, (**Statement 1 is correct**)

- 2) bringing resilience in payments system, (**Statement 2 is correct**)
- 3) boosting innovation in cross-border payments space, (**Statement 3 is correct**)
- 4) reduction in operational costs involved in physical cash management, (**Statement 4 is correct**)
- 5) increasing efficiency, and innovation in the payments system, and (**Statement 5 is correct**)
- 6) providing public with uses that any private virtual currencies can provide, without the associated risks.

Source:

<https://static.pib.gov.in/WriteReadData/specificdocs/documents/2022/dec/doc2022121139201.pdf>

<https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf> chapter 10

Q.48) Consider the following statements regarding National Productivity Council (NPC) and National Start-up Advisory Council (NSAC):

1. Non-official members are allowed in NPC, but not in NSAC.
2. Unlike NPC, NSAC functions under the Department for Promotion of Industry and Internal Trade.
3. The NPC aims to increase productivity in all spheres of industries, and NSAC will advise measures to foster a culture of innovation amongst citizens and students.

Which of the statements given above is/are correct?

- a) 2 and 3 only
- b) 3 only
- c) 1 and 3 only
- d) 1 and 2 only

Ans) b

Exp) Option b is the correct answer.

The National Productivity Council is an **autonomous organization under the Ministry of Commerce and Industry**, Govt. of India. NPC Plays a catalytic role in productivity promotion by undertaking consultancy, training and research assignments in frontier areas of micromanagement and technology-oriented disciplines. The Department for Promotion of Industry and Internal Trade (**DPIIT**) had set up the **National Startup Advisory Council** a year back to advise the government on measures needed to build an ecosystem for nurturing innovation and start-ups in the country.

Statement 1 is incorrect: The central government has decided to nominate the **non-official members on the National Start-up Advisory Council** representing various stakeholders such as founders of successful start-ups, veterans who have grown and scaled companies in India, persons capable of representing interest of investors into start-ups, and others.

The NPC also consists of non-official members like **scholars, research workers, consultants, consumers, small industries, technician and other interests.**

Statement 2 is incorrect: NPC functions under the Department for Promotion of Industry and Internal Trade, **Ministry of Commerce & Industry.**

Statement 3 is correct: The NPC aims to increase productivity in all spheres of industries including **light, small scale, medium and large-scale industries**; and to pave the way for launching productivity drive in all spheres of economic activity of the country. The NSAC council will suggest measures to foster a **culture of innovation among citizens and students in particular**, promote **innovation in all sectors and across semi-urban and rural areas**, promote creation, protection and commercialization of intellectual property rights and make it easier to start, operate, grow and exit businesses by reducing regulatory compliances and cost.

Source: <https://www.npcindia.gov.in/NPC/Files/RTI/cp5.pdf>

<https://www.timesnownews.com/business-economy/companies/article/govt-sets-up-national-startup-advisory-council-to-prevent-flipping-of-startups/709349>

<https://www.thehindubusinessline.com/news/national-start-up-advisory-panel-notified-may-spur-job-creation/article30618215.ece>

Q.49) With reference to the Real Estate Investment Trusts (REITs) and Infrastructure Investment Trusts (InvITs), consider the following statements:

1. They aim to provide steady flow of long-term funds for the growth of infrastructure sector.
2. They are not very popular as they are not accessible to retail investors.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Real Estate Investment Trusts (REITs) and Infrastructure Investment Trusts (InvITs) are financial instruments introduced by the SEBI in 2014. They are designed to pool small sums of money from several investors to invest in assets (real estate properties generating regular income) that give cash flow over a period.

REITs involve investing in investment grade and income-producing real estate properties such as offices, malls, industrial parks, warehouses, hospitality, healthcare centres, and almost any asset that can produce an annuity revenue stream.

InvITs involve investing in Specific infra like roads and highways, electricity generation & transmission, etc. which take a long time to generate steady cash flows.

Statement 1 is correct: REITs and InvITs are financial instruments that allow people to **pool money** and buy **units of infrastructure** like **roads, commercial buildings** etc, **without owning it**, just like mutual funds for securities. This ensures that **builders** have **access to long term funds** to create new infra which is critical for increasing the growth of the economy. The **loans from banks** are generally **short term** and **not suited** to these projects which have a **long gestation period** and start **creating revenue after many years** of construction.

Statement 2 is incorrect: They are popular as it makes **investing in real estate** very **accessible** to **small retail investors** as well. Like mutual funds, people are assigned units in the real estate dividends in ratio of the small investments which they make which are ultimately pooled to gather sums large enough for investing in real estate.

Knowledge Base: Minimum subscription limit for REITs Rs 50000 is and for InvITs is Rs 1 lakh.

Recently the dividends earned from capital gains from these have been brought under taxation (LTCG). Although it helps the exchequer, it is expected to decrease investor interest in them.

Source: <https://groww.in/p/difference-between-reit-and-invit>

https://www.chittorgarh.com/faq_pg/what-is-the-difference-between-reit-and-invit/754/

<https://www.livemint.com/money/personal-finance/should-retail-investors-put-money-in-invits-11617369980532.html>

Q.50) With reference to 'Telecom Technology Fund Scheme', consider the following statements:

- 1 The Scheme is launched by the Ministry of Science and Technology under the 'Fund for Industrial Research Engagement' initiative.
2. The exclusive objective of the scheme is to provide financial support for the development of 5G technology in India.
3. An allocation of 5% of annual collections from Universal Service Obligation Fund will be available for funding under this scheme.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 3 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Recently, Universal Service Obligation Fund (USOF), a body under the Department of Telecommunications, officially launched Telecom Technology Development Fund (TTDF) Scheme.

Statement 1 is incorrect: Telecom Technology Development Fund (TTDF) Scheme is not launched by Ministry of Science and technology, but it is launched by **Universal Service Obligation (USOF) Fund department of communication under Ministry of Communication.**

Statement 2 is incorrect: Its objective is to **promote technology ownership and indigenous manufacturing, create a culture of technology co-innovation, reduce imports, boost export opportunities and creation of Intellectual Property.** Whereas The USOF has largely been used to aid rural connectivity. But the objective of TDF is also to boost connectivity in underserved urban areas, R&D, skill development etc. It is not devised to exclusively fund 5G technology in India.

Statement 3 is correct: Apart from the existing R&D funding mechanisms, an **allocation of 5% of annual collections from USOF will be available for funding R&D in the Telecom sector under Telecom Technology Development Fund**, starting with the funds collected in the financial year 2021-22. Telecommunication technology products require significantly large funding and long gestation periods for R&D and commercialization including the additional efforts and resources for the products to move from prototype to commercial grade.

Knowledge Base:

Universal Service Obligation Fund:

- (a) The Universal Service Obligation Fund (USOF) was formed by an Act of Parliament, was established in April 2002 under the Indian Telegraph (Amendment) Act 2003.
- (b) It aims to provide financial support for the provision of telecom services in commercially unviable rural and remote areas of the country.
- (c) The resources for the implementation of USO are raised by way of collecting a Universal Service Levy (USL), which is 5 percent of the Adjusted Gross Revenue (AGR) of Telecom Service Providers.
- (d) USOF is a non-lapsable Fund. The Levy amount is credited to the Consolidated Fund of India. The fund is made available to USOF after due appropriation by the Parliament.

Source: <https://usof.gov.in/ttdf>

Universal Service Obligation Fund (USOF) launches Telecom Technology Development Fund scheme (forumias.com)

Q.1) Which of the following measures/actions by the government/RBI will most likely lead to an increase in Demand-Pull Inflation?

1. Increasing the salaries of government employees
 2. Increasing the minimum support price (MSP)
 3. Increasing customs duty of raw materials
 4. Reducing monetary policy interest rates
- Select the correct answer using the code given below.

- a) 1, 2 and 3 only
- b) 1 and 4 only
- c) 1, 2 and 4 only
- d) 2, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Demand-pull inflation exists when aggregate demand for a good or service outstrips aggregate supply. It starts with an increase in consumer demand. Sellers meet such an increase with more supply. But when additional supply is unavailable, sellers raise their prices. That results in demand-pull inflation, also known as "price inflation."

Option 1 is correct: Increasing the salaries of government employees will lead to an increase in government expenditure. With this consumer will have **more discretionary income to spend on goods and services**. When that increases faster than supply, it creates **demand pull inflation**.

Option 2 is correct: Enhancing the **minimum support price (MSP)** of the notified agricultural commodities will put more money into the hands of farmers. This will lead to an increase in money supply in the economy, thereby driving up the demand for goods and services thus contributing to **demand pull inflation**.

Option 3 is incorrect: Increasing customs duty will make import of **raw materials expensive** which drives up prices even without increase in aggregate demand. This is called **cost push inflation**. Cost-push inflation occurs when overall prices increase (inflation) due to increases in the cost of wages and raw materials (inputs).

Option 4 is correct: Lower interest rates: A cut in interest rates causes a **rise in consumer spending and higher investment**. This may cause a rise in aggregate demand and inflationary pressures.

Source :

<https://www.thebalancemoney.com/what-is-demand-pull-inflation-3306100#:~:text=When%20the%20government%20lowers%20taxes,rates%20increased%20demand%20of%20housing.>

Q.2) Which among the following is the primary aim of the recently launched PM VIKAS scheme?

- a) To ensure empowerment of Denotified and Nomadic Tribes (DNT) community.
- b) To provide livelihood to Safai Karamcharis
- c) To improve skills of artisans
- d) To tackle the issue of Substance Abuse

Ans) c

Exp) Option c is the correct answer.

Option a is incorrect: The Ministry, for the welfare of DNT communities has formulated a scheme namely **“Scheme for Economic Empowerment of DNT Communities (SEED)”** in February 2022 with total outlay of Rs. 200 Crore for next five years, having following four components: -

- 1) To provide coaching of good quality for DNT candidates to enable them to appear in competitive examinations,
- 2) To provide Health Insurance to them,
- 3) To facilitate livelihood initiative at community level and
- 4) To provide financial assistance for construction of houses for members of these communities.

Option b is incorrect: Swachhta Udyami Yojna (SUY) was launched with twin **objectives of cleanliness and providing livelihood to Safai Karamcharis** and liberating Manual Scavengers and their dependents.

Option c is correct: The PM VIKAS scheme is aimed at **improving the skills of artisans**, ensuring easy credit and also helping them in brand promotion so that their products reach the market quickly. It also seeks to handhold artisans and people associated with small businesses.

Option d is incorrect: To tackle the **issue of Substance Abuse** and a vision to make India Drug Free, **Nasha Mukh Bharat Abhiyaan (NMBA)** was launched in 2020, in 272 Districts identified as most vulnerable in terms of usage of drugs in the country. Youth, Educational Institutions, Women, Children, Civil Society Organizations/NGOs are envisioned as major target populations and stakeholders of the Nasha Mukh Bharat Abhiyaan.

Source : <https://www.thehindu.com/news/national/vikas-scheme-to-provide-holistic-institutional-support-to-artisans-pm-modi/article66606516.ece>

Q.3) With reference to the local level planning in India, consider the following statements:

1. It was brought to practice for the first time only after the 73rd Constitutional Amendment Act, 1992.
2. The Constitution provides for the establishment of District Planning Committees to consolidate the plans prepared by the Panchayats and the Municipalities.
3. The Community Development programme began in India on the recommendation of Ashok Mehta committee.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Local level planning is decentralized planning and is aimed at mobilization and utilization of local resources. They lay greater stress on people's participation in planned development.

Statement 1 is incorrect: The local level planning **started soon after the independence and not by the Constitutional Amendment Act of 1992.** The earliest attempts in local level planning were the Community Development Programme and its sequel the Panchayati Raj System. These were attempts of the 1950s to build structures for people's participation in planned development. These plans were being implemented at the local level via the blocks.

Statement 2 is correct: Article 243ZD provides that there shall be constituted in every State at the district level a District Planning Committee. This is to consolidate the plans prepared by the Panchayats and the Municipalities in the district and to prepare a draft development plan for the district as a whole.

Statement 3 is incorrect: The Community Development Programme was **started in 1952** to promote better living for the whole community with its active participation and initiative. The role of the government was to plan and organise the programmes on a national basis and to provide technical services and materials beyond the resources of the communities. Later, the **Balwant Rai Mehta team** was appointed in 1957 to study the Community Development Programme. **Ashok Mehta committee was appointed in 1977** to suggest measures to strengthen the declining Panchayati Raj institutions in the country.

Source: Indian Economy, Ramesh Singh, Chapter-5, Planning in India

Q.4) The budget 2023-24 adopts certain priorities. They complement each other and act as 'Saptarishi'. In this context which of the following are part of 'Saptarishi'?

1. Inclusive Development
2. Reaching the Last Mile
3. Vocal for Local
4. Unleashing the Potential
5. Youth Power
6. Free from discrimination

Select the correct answer using the code given below.

- a) 1, 2, 3 and 5 only
- b) 1, 3, 4 and 6 only
- c) 1, 2, 4 and 5 only
- d) 1, 2, 3, 4, 5 and 6

Ans) c

Exp) Option c is the correct answer.

The Budget adopts the following **seven priorities**. They complement each other and act as the '**Saptarishi**' guiding us through the Amrit Kaal.

- 1) Inclusive Development (Hence, option 1 is correct.)
- 2) Reaching the Last Mile (Hence, option 2 is correct.)
- 3) Infrastructure and Investment
- 4) Unleashing the Potential (Hence, option 4 is correct.)
- 5) Green Growth
- 6) Youth Power (Hence, option 5 is correct.)
- 7) Financial Sector

Vocal for Local and Free from discrimination are not part of 'Saptarishi'. Hence, option 3 and 6 are incorrect.

Source : https://www.indiabudget.gov.in/doc/budget_speech.pdf

Q.5) Consider the following statements regarding the Police Commissionerate system:

1. Commissioner of Police has magisterial powers under this system.
2. Power to regulate and issue license for explosives lies with the Commissioner of Police.
3. Presently, Bihar and Madhya Pradesh are the only states to follow Commissionerate system in India.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

In the Commissionerate system, the Commissioner of Police (CP) is the head of a unified police command structure, is responsible for the force in the city, and is accountable to the state government.

Statement 1 is correct: The office of CP also has magisterial powers, including those related to regulation, control, and licensing. The CP is drawn from the Deputy Inspector General rank or above and is assisted by Special/Joint/Additional/Deputy Commissioners.

Statement 2 is correct: Under the system, power to regulate manufacture and issue license for explosives lies with CP. Other powers enjoyed by CP are given in the box below.

POWERS UNDER POLICE COMMISSIONER	
Under the new system, the commissioner of police will have a number of powers which the district magistrate had till now	
<ul style="list-style-type: none"> ➤ It will be the commissioner of police (CP) who will issue orders to maintain public peace, such as imposition of section 144 and ordering curfew ➤ CP can directly enforce Goonda Act or Gangster Act against criminals ➤ All powers to initiate action under Immoral Traffic (Prevention) Act, 1956 will be under CP ➤ CP can direct to neutralise an animal if, in his opinion, it would be cruel to keep the animal alive, under Prevention of Cruelty to Animals Act, 1960 ➤ Power to regulate manufacture and issue licences for explosives also with CP 	 <ul style="list-style-type: none"> ➤ CP can slap penalty if prohibited items are taken into prison or rules for communication with prisoners are violated ➤ Under Act for prevention against and safety from fire, CP can issue penalty to violators, award compensation and introduce safety measures in buildings ➤ CP can take action against suspected foreigners staying in hotels, their departure or documents with them under Foreigners Act, 1946

Statement 3 is incorrect: Almost all states barring Bihar, Madhya Pradesh, UT of J&K, and some Northeastern states have a Commissionerate system. The British brought the system first in Kolkata and followed it in Mumbai and Chennai presidencies. Delhi turned into a Commissionerate during the Morarji Desai regime.

Source : <https://indianexpress.com/article/explained/explained-what-is-the-commissionerate-system-recently-implemented-in-lucknow-noida-6214871/>
<https://indianexpress.com/article/cities/lucknow/police-commissionerate-system-in-agra-ghaziabad-prayagraj-8290497/>

Q.6) Consider the following statements regarding “Indicative Planning”:

1. It recognises consumers’ sovereignty and producers’ freedom while achieving the targets.
2. In indicative planning, the State plays a marginal role in the economy.
3. Third Five Year Plan in India denotes India’s transition towards indicative planning.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: Indicative planning or planning by inducement is found in capitalist countries as well as in mixed economies, like India. The essence of indicative planning is that it **recognises not only consumers’ sovereignty but also producers’ freedom** so that the targets and priorities of the plans are achieved. It thus involves a middle path of planning mechanism and market mechanism—a kind of coordination between private and public activities.

Statement 2 is the correct: After the revival of the role and the need of market in promoting growth and development via the Washington Consensus (1985), the World Trade Organisation (1995) and the Santiago/New Consensus (1998) only indicative planning has remained possible in which the state plays

only a marginal role in the economy, especially in the areas of social importance (i.e., nutrition, healthcare, drinking water, education, social security, etc.).

Statement 3 is incorrect: India's Eighth Plan mentioned that planning would have to **be reoriented so as to make it indicative**. Eighth Plan was unique in the sense that it attempted to manage the transition from a centrally planned economy to a market-oriented economy without tearing down the socio-cultural framework of the country.

Source:

<https://www.economicdiscussion.net/economic-planning/economic-planning-imperative-and-indicative-planning/6469>

Indian Economy by Ramesh Singh, 12th Edition

Q.7) Regarding the Annual Plans adopted in India, which of following statements is **incorrect**?

- India resorted to annual planning just twice in the history of economic planning after independence.
- The annual plans were called Plan Holidays during 1966 to 1969.
- The highest allocation during annual plans of 1966-1969 was made to industry and minerals.
- The annual plans of 1990-1992 was due to balance of payment crisis.

Ans) a

Exp) Option a is the correct answer.

The Planning Commission was set up to prepare five-year plans which would indicate directions in which the Indian economy should move.

Option a is incorrect: India **resorted to annual planning thrice** in the history of economic planning:

- The first set of annual plans were announced for the period **1966-1969**. This was due to the **failure of the third five-year plans as well as the weak financial situation**.
- The Janata Government ended the fifth five-year plan one year earlier to its term i.e., only within four years span (1974-78) and introduced a new plan since April 1, 1978. This plan was named as the Rolling plan. **Rolling plan period was 1978-1980**. In the first phase of this rolling plan, the sixth plan was initially started for 5 years (1978-83). However, in 1980, the sixth plan (rolling plan) prepared by the Janata Government was abandoned by the congress Government and a new sixth plan was introduced for the period 1980-85.
- Later, annual plans were introduced between 1990 and 1992 due** political instability and balance of payment crisis.

Option b is correct: Due to the failure of the previous plan, the government announced three annual plans called Plan Holidays from 1966 to 1969. The main reason behind the plan holidays was the Indo-Pakistani war and the Sino-India war, leading to the failure of the third Five Year Plan.

Option c is correct: Almost **one-fourth (23%)** of the total resources during the annual plans of 1966-69 **went to industry and minerals**; 18% went to transport, communication and power sectors while **17% was allocated to agriculture and allied sectors**.

Option d is correct: The annual plans for the period between 1990 and 1992 was due to **severe balance of crisis**, which was **intensified by the Gulf war in 1990**. The fiscal deficit was widened and the related rise in money growth was contributing to a **rise in inflation and exerting pressure on the balance of payments (BoP)**. There was an **increase in external commercial borrowings** during 1988-90. India was thus faced with large internal and external financial imbalances and was vulnerable to adverse external shocks around 1990.

Source: Indian Economy, Ramesh Singh, Chapter-5, Planning in India

Q.8) Consider the following statements about International Bank of Reconstruction and Development (IBRD):

1. It was an outcome of the 1944 United Nations Monetary and Financial Conference.
2. It provides loans to middle-income developing countries and creditworthy lower-income countries.
3. The IBRD finances investments but does not provide technical assistance and expertise for a project.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The **International Bank for Reconstruction and Development (IBRD)** is an international financial institution established in 1944 and headquartered in Washington, D.C., United States, that is the lending arm of World Bank Group.

Statement 1 is correct. The Bretton Woods Conference, officially known as the United Nations Monetary and Financial Conference, was a gathering of delegates from 44 nations that met from July 1 to 22, 1944 in Bretton Woods, New Hampshire, to agree upon a series of new rules for the post-WWII international monetary system. The two major accomplishments of the conference were the creation of the International Monetary Fund (**IMF**) and the International Bank for Reconstruction and Development (**IBRD**).

Statement 2 is correct. The IBRD was founded in 1944 with the goal of helping war-torn European countries rebuild their infrastructure and their economies. Today, the IBRD provides loans at market rates of interest to **middle-income developing countries and creditworthy lower-income countries**.

Statement 3 is incorrect. The IBRD provides financial services as well as strategic coordination and information services to its borrowing member countries along with the **technical know-how**.

Source: <https://www.worldbank.org>

<https://2001-2009.state.gov/r/pa/ho/time/wwii/98681.htm>

Q.9) Consider the following statements regarding Producer Price Index (PPI):

1. PPI measures the average change in prices received by the producer excluding indirect taxes.
2. The PPI does not include the price of imported goods.
3. Both goods as well as services are covered under PPI.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: PPI measures the average change in prices received by the producer and excludes indirect taxes. The prices included in the PPI are from the first commercial transaction for many products and some services.

Statement 2 is correct: Both PPI and CPI are important economic measures because they point to monthly changes in prices. But they reflect prices from different standpoints. As noted above, the Producer Price Index measures prices based on the first commercial transaction for a product or service. This is in contrast to the consumer price index (CPI), which measures price changes encountered by the consumer. **Another**

key distinction is that the PPI does not include the price of imported goods, unlike the CPI. Conversely, the PPI includes export prices while the CPI does not.

Statement 3 is correct: The **Producer Price Index (PPI)** measures the average change in sale prices for the entire domestic market of raw **goods and services**. These goods and services are bought by consumers from their primary producers, bought indirectly from retail sellers, or purchased by producers themselves.

Source: <https://www.investopedia.com/terms/p/ppi.asp#toc-producer-price-index-ppi-vs-consumer-price-index-cpi>

[http://www.arthapedia.in/index.php/Producer_Price_Index_\(PPI\)](http://www.arthapedia.in/index.php/Producer_Price_Index_(PPI))

Q.10) The Black Sea, also known as the Euxine Sea, is one of the major water bodies and a famous inland sea in the world located between Eastern Europe and Western Asia. Which among the following countries share a border with the Black Sea?

1. Georgia
2. Turkey
3. Moldova
4. Romania
5. Bulgaria

Select the correct answer using the codes given below:

- a) 1, 2 and 4 only
- b) 2, 3 and 5 only
- c) 1, 2, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) c

Exp) Option c is the correct answer.

Spread across an area of 436,400 km², the Black Sea is located in Eurasia, surrounded by Europe, Caucasus and Anatolia. **The countries that share a border with the Black Sea include**

- 1) **Georgia (Statement 1 is correct)**
- 2) **Turkey (Statement 2 is correct)**
- 3) **Romania (Statement 4 is correct)**
- 4) **Bulgaria (Statement 5 is correct)**
- 5) **Ukraine**
- 6) **Russia**

Statement 4 is incorrect: Moldova is also an east European country but does not share border with Black Sea. Moldova is bounded by Ukraine to the north, east, and south and by Romania to the west.



Knowledge Base: The Black Sea connects with the Mediterranean Sea through the Bosphorus Strait and then through the Sea of Marmara and the Dardanelles Strait. The Black Sea links with the Aegean Sea and the Sea of Crete before meeting the Mediterranean.

Source : <https://www.britannica.com/place/Black-Sea>

<https://www.marineinsight.com/know-more/8-amazing-facts-about-the-black-sea/>

<https://www.britannica.com/place/Moldova>

Q.11) Which of the following were the key features of the Mahalanobis Model of the Indian Economy?

1. Rapid industrialisation with a focus on heavy industries and capital goods.
2. Launch of price wage policy to check the menace of inflation on the wage-earners.
3. Focus on poverty reduction through Integrated Rural Development Program (IRDP).

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The second five-year plan was to set India on the path of industrialisation. P.C. Mahalanobis was the moving spirit behind the second five-year plan. For the Second Five Year Plan, the plan period was 1956–61. The strategy of growth laid emphasis on **rapid industrialisation with a focus on heavy industries and capital goods**. The plan was developed by Professor Mahalanobis. Due to the assumption of a closed economy, shortages of food and capital were felt during this Plan.

Statement 2 is incorrect: The Mahalanobis model did not focus on price wage policy to check the menace of inflation on the wage-earners. This plan period also saw a lack of investment in agriculture and a period marked by food shortages and drought leading to inflation.

Statement 3 is incorrect: The Sixth Five Year Plan (1980–85) was launched with the slogan of ‘Garibi Hatao’ (alleviate poverty). The plan gave emphasis on socio-economic infrastructure in the rural areas; **eliminating rural poverty and regional disparities (through the IRDP)**; commencing ‘target group’ approach together with launching a number of national level programmes and schemes aimed at specific concerns and areas of development (‘target group’ approach).

The Integrated Rural Development Program (IRDP) was launched by the Government of India during 1978 and implemented during 1980.

Source: Indian Economy by Ramesh Singh, 12th Edition

Q.12) With reference to the World Bank & International Monetary Fund (IMF), consider the following statements:

1. While IMF aims at the expansion of international trade, the aim of World Bank is to reduce global poverty.
2. It is mandatory to be a member of World Bank to become eligible for loans by IMF.
3. While IMF lends to both member countries and private sector, World Bank only lends to the member countries.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The International Monetary Fund (IMF) oversees the stability of the world's monetary system, while the World Bank aims to reduce poverty by offering assistance to middle-income and low-income countries.

Statement 1 is correct. The **International Monetary Fund (IMF)** primarily aims to ensure the stability of the international monetary system—the system of exchange rates and international payments that enables countries and their citizens to transact with each other. It aims to **facilitate the expansion and balanced growth of international trade**. On the contrary, the **World Bank Group primarily aims at reducing poverty**, increasing shared prosperity, and promoting sustainable development. It provides financing, policy advice, and technical assistance to governments, and also focuses on strengthening the private sector in developing countries.

Statement 2 is incorrect. To become a member of the World Bank, under the International Bank for Reconstruction and Development (IBRD) Articles of Agreement, a **country must first join the International Monetary Fund (IMF) and not vice-versa**.

Statement 3 is incorrect. IMF loans are meant to **help only member countries** tackle balance of- payments problems, stabilize their economies, and restore sustainable economic growth. On the contrary, the **International Finance Corporation (IFC) of the World Banks lends to the private sector** while Multilateral Investment Guarantee Agency (MIGA) encourages private companies to invest in foreign countries.

Knowledge Base: Resources for IMF loans to its members on non-concessional terms are provided by member countries, primarily through **their payment of quotas**. Multilateral (New Arrangements to Borrow) and bilateral borrowing agreements serve as a second and third line of defence, respectively, by providing a temporary supplement to quota resources.

On the other hand, the World Bank's financial reserves come from several sources - from **funds raised in the financial markets, from earnings on its investments, from fees paid in by member countries**, from contributions made by members (particularly the wealthier ones) and from borrowing countries themselves when they pay back their loans.

Source: <https://www.worldbank.org/en/about/history/the-world-bank-group-and-the-imf>

<https://www.worldbank.org/en/about/leadership/members>

<https://www.imf.org/en/About/Factsheets/IMF-at-a-Glance>

https://www.worldbank.org/en/news/feature/2012/07/26/getting_to_know_theworldbank

Q.13) Consider the following statements regarding provisions under the Industrial Policy Resolution, 1948:

1. It provided for mixed economy as the model of Indian economic system.
2. It provided for the creation of District Industries Centers (DICs) to promote the expansion of small and cottage industries.
3. It gave permission to the multinational corporations (MNCs) to set up subsidiaries in the country.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: Industrial Policy Resolution, 1948 was the first industrial policy statement of India. It decided the model of the economic system (i.e., the mixed economy).

The major highlights of the policy are given below:

- 1) India will be a mixed economy.
- 2) Some of the important industries were put under the Central List such as coal, power, railways, civil aviation, arms and ammunition, defense, etc.
- 3) Some other industries (usually of medium category) were put under a State List such as paper, medicines, textiles, cycles, rickshaws, two-wheelers, etc.
- 4) Rest of the industries (not covered by either the central or the state lists) were left open.
- 5) for private sector investment—with many of them having the provision of compulsory licensing.
- 6) There was a 10-year period for review of the policy.

Statement 2 is incorrect: Decentralized industrialization was given attention under Industrial Policy Statement, 1977 with the objective of linking the masses to the process of industrialization. The District Industries Centers (DICs) were set to promote the expansion of small and cottage industries at a mass scale under this policy.

Statement 3 is incorrect: Under the Industrial Policy Statement, 1973, limited permission for foreign investment was given. Also, the **multinational corporations (MNCs) were allowed to set up subsidiaries in the country.**

Source: Indian Economy by Ramesh Singh, 12th Edition

Q.14) Which of the following were the possible reasons for India to opt for economic planning after the independence?

- 1. Market mechanism alone would not have been effective at the time to bring India out of low-level equilibrium trap.
- 2. There was lack of incentive for private sector to operate in social sector.
- 3. Economic planning in India was inspired by the success of planning and socialism in the Soviet Union.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

When India won independence in 1947, it was very backward economically, and the general consensus was that the planning was required for the economic development of the country.

Option d is correct: India opted for planning at the time of independence because of the following reasons:

- 1) Indian leaders were **inspired by the success of socialism in the Soviet Union.**
- 2) Relying entirely on market mechanism, India would not be able to come out of low-level equilibrium trap that it had fallen into.

- 3) Indian planners were also aware of the **dearth of the private capital** at the time of independence.
- 4) There was **lack of resources and incentive for private sector to operate in the social sector** where profit making was the main objective.
- 5) Planning was advocated to achieve social justice – reduction in poverty, tackling unemployment problem, reducing inequality etc.
- 6) Planning was needed to mobilise resources and its allocation to be done in the context of the overall development of the country.

Source: Indian Economy, Mishra & Puri, Chapter-55, Economic Planning

https://books.google.co.in/books?id=SL83EAAAQBAJ&pg=PA199&lpg=PA199&dq=Indian+leaders+opted+for+planning+as+they+were+inspired+by+the+success+of+soviet+union&source=bl&ots=3bUd2SqDC3&sig=ACfU3U0K0ebD6BGUSfkjru_9K7AWJk5itQ&hl=en&sa=X&ved=2ahUKEwi5o_LUnrT2AhX4zjgGHXQcDhwQ6AF6BAG-

EAM#v=onepage&q=Indian%20leaders%20opted%20for%20planning%20as%20they%20were%20inspired%20by%20the%20success%20of%20soviet%20union&f=false

Q.15) Consider the following statements regarding African Union (AU):

1. It is an intergovernmental organization comprising all the African Countries except Burundi.
2. It promotes participation of African citizens and civil society in decision making through the Economic, Social & Cultural Council (ECOSOCC).
3. India is implementing the Pan-African e-Network Project in conjunction with the AU.

Which of the statement(s) given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The African Union (AU) is a continental body consisting of the 55 member states that make up the countries of the African Continent. It was officially launched in 2002 as a successor to the Organization of African Unity.

Statement 1 is incorrect: The AU is made up of 55 Member States which represent all the countries on the African continent. Burundi is also a member of the African Union.

AU Member States are divided into five geographic regions i.e., Central Africa, Eastern Africa, Northern Africa, Southern Africa and Western Africa.

Statement 2 is correct: The work of the AU is implemented through several principal decision-making organs: - The Assembly of Heads of State and Government, the Executive Council, the Permanent Representatives Committee (PRC), Specialized Technical Committees (STCs), the Peace and Security Council and The African Union Commission.

The AU structure promotes participation of African citizens and civil society through the Pan-African Parliament and the Economic, Social & Cultural Council (ECOSOCC).

Statement 3 is correct: The proposal for establishing the Pan-African e-Network Project was made by the then President of India at the Pan-African Parliament in 2004 and **is being implemented in conjunction with the African Union.**

Source : <https://www.sadc.int/member-states>

<https://www.mea.gov.in/Portal/ForeignRelation/india-african-union-relations-march-2012.pdf>

Q.16) Consider the following statements regarding Stagflation:

1. It denotes a price rise of a small group of commodities over a sustained period of time.
2. It results in high inflation and unemployment levels in the economy.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Stagflation is a situation in an economy **when inflation and unemployment both are at higher levels**, contrary to conventional belief.

Whereas **Skewflation is a phenomenon in which there is a price rise of one or a small group of commodities** over a sustained period of time, without a traditional designation.

Statement 2 is correct: Stagflation is an economic cycle characterized by slow growth and a **high unemployment rate accompanied by inflation**. Economic policymakers find this combination particularly difficult to handle, as attempting to correct one of the factors can exacerbate another.

Source:

<https://www.thehindu.com/business/Economy/stagflation/article65422902.ece#:~:text=The%20idea%20of%20stagflation%20is,is%20low%2C%20inflation%20is%20high.>

Indian Economy by Vivek Singh, 5th Edition

Indian Economy by Ramesh Singh, 12th Edition

<http://www.arthapedia.in/index.php/Skewflation>

<https://www.investopedia.com/terms/s/subprime-meltdown.asp>

<https://www.investopedia.com/articles/07/subprime-blame.asp>

Q.17) Consider the following statements:

1. Indian economy has become the 5th largest in the world in terms of nominal GDP.
2. Per capita income of Indians has more than tripled in the last five years.
3. India becomes 4th largest country in the world in terms of Renewable Energy installed capacity.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

In the 75th year of India's Independence, the World has recognized the Indian Economy as a 'bright star' as the Economic Growth is estimated at 7 per cent, which is the highest among all major economies, in spite of the massive global slowdown caused by COVID-19 and Russia-Ukraine War.

Union Finance Minister in her recent budget speech has highlight some of the key achievements of India in the last 9 years. Few important achievements are discussed below:

Statement 1 is correct: In the last nine 9 years, the Indian economy has increased in size from being 10th to **5th largest in the world**. Moreover, the economy has become a lot more formalized as reflected in the EPFO membership, more than doubling to 27 crore, and 7,400 crore digital payments of Rs 126 lakh crore through UPI in 2022.

Statement 2 is incorrect. Since 2014, the per capita income has **more than doubled to Rs 1.97 lakh.**

Statement 3 is correct: India stands **4th globally in Renewable Energy Installed Capacity** (including Large Hydro), 4th in Wind Power capacity & 4th in Solar Power capacity (as per REN21 Renewables 2022 Global Status Report). A total of 14.21 GW of Renewable Energy (RE) capacity was added, during the period Jan to Oct. 2022 as compared to capacity of 11.9 GW added during the period Jan to Oct. 2021.



Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1895320>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1885147#:~:text=408.71%20GW%20as%20on%2031.10,Renewables%202022%20Global%20Status%20Report>

Q.18) With reference to Galloping Inflation, consider the following statements:

1. During galloping inflation, people try to get rid of currency by buying physical assets.
2. During galloping inflation, exporters will be much less motivated to export their products.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Galloping inflation refers to a condition when the inflation rate is extraordinarily high. In this scenario, the currency of the country will lose value. The salaries and income of common people will not be able to keep up with the ever-increasing prices of commodities. This will lead to the general instability of the economy and the country as a whole. Inflation in the double- or triple-digit range of 20, 100 or 200 percent a year is called galloping inflation.

Statement 1 is correct: As galloping inflation results in rapid decrease in the money value of local currency, people in order to preserve its real value tend to get rid of currency by purchasing precious metals, Land etc.

Statement 2 is incorrect: Exporters benefit during galloping inflation, as the local currency depreciates, making exports less expensive relative to overseas competitors. Exporters also receive hard foreign currency, which appreciates in value as the local currency depreciates. This can be a motivating factor for them to export their products.

Source :

https://www.indiaonline.com/article/news-top-story/what-are-the-different-types-of-inflation-113101402959_1.html https://insights.masterworks.com/finance/investing-strategies/who-benefits-from-inflation/#Who_Can_Benefit_From_Inflation_7_Biggest_Inflation_Winners

Q.19) With reference to the Agriculture Accelerator Fund, consider the following statements:

1. It will encourage young entrepreneurs in rural areas to set up Agri-startups.
2. It aims to open Model agricultural colleges throughout the country.
3. It mainly focuses on increasing the production of millets.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) option a is the correct answer.

Finance Minister Nirmala Sitharaman has announced the creation of an Agriculture Accelerator Fund in the latest budget. This fund would seek to fast-track agricultural entrepreneurial activity in a country where a little less than half the workforce is employed in agriculture which brings in about 18 per cent of GDP (gross domestic product).

Statement 1 is correct. The Agriculture Accelerator Fund will be set up to encourage Agri-startups by young entrepreneurs in rural areas. The Fund will aim at bringing innovative and affordable solutions for challenges faced by farmers and will also bring in modern technologies to transform agricultural practices, increase productivity and profitability, she added.

Statement 2 is incorrect. It does not aim to open new agricultural colleges throughout the country. Instead, the main aim of the fund is to provide innovative and affordable solutions in agricultural technological startups. These startups are using innovative technologies, financial services, and improved supply chain systems to improve the efficiency and profitability of Indian agriculture.

Statement 3 is incorrect. It does not mainly focus on millets. It focuses on agricultural startups which in turn aim to focus on cost effective solutions in agricultural fields. One of the primary objectives of these startups is to increase the productivity and efficiency of Indian agriculture.

Source: <https://www.investindia.gov.in/team-india-blogs/budget-2023-why-agriculture-accelerator-fund-good-idea>

Q.20) Recently, the term 'friendshoring, was seen in the news. Which among the following options best describe its meaning?

- a) Relocating business operations to countries with low risk of disruption from political chaos.
- b) Relocating a sport even to a nearby country in the hope of higher viewership.
- c) Transfer of income to another country in order to avoid taxation.
- d) Storing of data inside the boundaries of country where the data is generated

Ans) a

Exp) Option a is the correct answer.

Option a is correct: The term friend shoring has arrived out of recent economic crises and strains on global supply chains caused by various shocks to the global economy. These include the COVID-19 pandemic and Russia's invasion of Ukraine. Essentially friendshoring refers to the rerouting of supply chains to countries perceived as politically and economically safe or low risk, to avoid disruption to the flow of business.

Source: <https://www.weforum.org/agenda/2023/02/friendshoring-global-trade-buzzwords/#:~:text=Essentially%20friendshoring%20refers%20to%20the,to%20the%20flow%20of%20business.>

<https://indianexpress.com/article/explained/explained-economics/what-is-friendshoring-8277847/>

Q.21) Which among the following options correctly describes the term 'Inflationary Gap'?

- The difference between the current real GDP and the GDP of an economy operating at full employment.
- An economic cycle characterized by slow growth and a high unemployment rate accompanied by inflation.
- Measure of the changes in prices for all the goods and services produced in an economy.
- The overall change in consumer prices over time, based upon a representative basket of goods and services.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: An inflationary gap measures the difference between the current real GDP and the GDP of an economy operating at full employment. An inflationary gap exists when the demand for goods and services exceeds production due to higher levels of employment, increased trade activities, or elevated government expenditure. The real GDP can exceed the potential GDP, resulting in an inflationary gap. The inflationary gap represents the point in the business cycle when the economy expands as consumers purchase more goods and services. As demand increases but production lags, prices rise to restore market equilibrium.

Option b is incorrect: Stagflation is an economic cycle characterized by **slow growth and a high unemployment rate** accompanied by inflation. Economic policymakers find this combination particularly difficult to handle, as attempting to correct one of the factors can exacerbate another.

Option c is incorrect: The GDP (gross domestic product) price deflator, also known as the **GDP deflator** or the implicit price deflator, **measures the changes in prices for all the goods and services produced in an economy.** Using the GDP price deflator helps economists compare the levels of real economic activity from one year to another.

Option d is incorrect: The **Consumer Price Index** measures the overall **change in consumer prices based on a representative basket of goods and services over time.** The CPI is the most widely used measure of inflation, closely followed by policymakers, financial markets, businesses, and consumers.

Source: https://www.investopedia.com/terms/i/inflationary_gap.asp#toc-the-bottom-line

<https://www.investopedia.com/terms/s/stagflation.asp>

<https://www.investopedia.com/terms/g/gdppricedeflator.asp#toc-what-is-the-consumer-price-index-cpi>

<https://www.investopedia.com/terms/c/consumerpriceindex.asp>

Q.22) Consider the following statements with reference to the New Development Bank (NDB):

- Only BRICS countries can be members of the New Development Bank.
- It does not provide funds for projects in the private sector.

3. Recently, the NDB announced to set up its regional office in GIFT city (Gujarat), India.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

On 15 July 2014, the first day of the 6th BRICS Summit held in Fortaleza, Brazil, the BRICS states signed the Agreement on the New Development Bank, which makes provisions for the legal basis of the bank.

Statement 1 is incorrect. New development Bank is a multilateral development bank operated by BRICS countries (Brazil, Russia, India, China and South Africa). Apart from the BRICS countries its agreement specifies that all members of the United Nations could be members of the bank, however the share of the BRICS nations can never be less than 55% of voting power. In September 2021, Bangladesh, the United Arab Emirates and Uruguay joined the NDB.

In December 2021, the NDB admitted Egypt as a new member.

Statement 2 is incorrect. NDB, prioritise infrastructure and sustainable development projects that propel economic growth and improve the lives of people in member countries. To fulfil its purpose, NDB support projects in **both public and private sectors** through loans, equity investments, and other tailored instruments.

Statement 3 is correct. NDB, the Shanghai-based multilateral bank of the BRICS countries, will open its first regional office in India at the Gujarat International Finance Tec-City (GIFT City) to cater to infrastructure and sustainable development needs of the country.

Knowledge Base:

Objectives of NDB

The bank aims to contribute to the development plans established nationally through projects that are socially, environmentally and economically sustainable. Taking this into account, the main objectives of the NDB can be summarized as follows

- 1) Promote infrastructure and sustainable development projects with a significant development impact in member countries.
- 2) Establish an extensive network of global partnerships with other multilateral development institutions and national development banks.
- 3) Build a balanced project portfolio giving a proper respect to their geographic location, financing requirements and other factors.

Source: <https://www.ndb.int/about-ndb/focus-areas/>

<https://bricspolicycenter.org/en/new-development-bank>

#:-:text=Voting%20power%20is%20based%20on,NDB%20website%2C%20n.d.)..&

<https://www.hindustantimes.com/world-news/bricsled-new-development-bank-to-set-up-regional-office-in-india>

Q.23) Consider the following statements with respect to the impact of inflation:

1. Increase in inflation can lead to depreciation in the value of Indian rupee.
2. Rise in inflation rate will likely increase borrowing costs for businesses.
3. A decline in inflation leads to an increase in the savings rate.
4. Inflation may lead to a significant decrease in value of assets with adjustable cash flows.

Which of the statements given above are correct?

- a) 2 and 3 only
- b) 1, 3 and 4 only
- c) 1, 2 and 3 only
- d) 2 and 4 only

Ans) c

Exp) Option c is the correct answer.

Inflation is the steady rise of prices for goods and services over a period.

Statement 1 is correct: Inflation is one of the most important factors that affect the exchange rate.

Example: Suppose the exchange rate was exactly 1 in the first year. This means that with Rs 100, one could buy something that was priced at \$100 in the US. But suppose the Indian inflation is 20% and the US inflation is zero. Then, in the second year, an Indian would need Rs 120 to buy the same item priced at \$100, and the rupee's exchange rate would depreciate to 1.20. Thus, it would **lead to the depreciation of Indian rupee.**

Statement 2 is correct: High inflation may lead to **higher borrowing costs for businesses and people** needing loans and mortgages. Financial markets protect themselves against rising prices and increase the cost of borrowing **on short and longer-term debt.** If the cost of borrowing money rises, consumers and businesses have less money to spend. As demand falls, economic growth slows down.

Statement 3 is correct: Every rise in prices is affecting your cost of living, leaving a dent in your savings and investments. The reason is, with the rise in inflation, the **amount of saving or investment from income every month may not rise** at the same rate. Therefore, the rise in price puts extra pressure on your savings and investments. Similarly, decline in inflation rate leads to increase in savings rate as **relatively less amount will be spent on consumption.**

Statement 4 is incorrect: Assets with fixed, long-term cash flows tend to perform poorly when inflation is rising, since the purchasing power of those future cash flows falls over time. Conversely, commodities and **assets with adjustable cash flows (e.g., property rental income) tend to perform better with rising inflation.**

Source: <https://indianexpress.com/article/explained/how-covid-19-is-hurting-the-rupees-exchange-rate-with-other-currencies-6371536/>

<https://www.investopedia.com/articles/insights/122016/9-common-effects-inflation.asp>

Q.24) Consider the following statements regarding the 12th Ministerial Conference of the World Trade Organization (WTO):

1. An agreement on curtailing harmful fishing subsidies was agreed.
2. An agreement to temporarily waive Intellectual Property Patents on Covid-19 Vaccines could not be reached.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The Ministerial Conference is **the highest decision-making body of the WTO.** It is attended by trade ministers and other senior officials from the organization's 164 members. Under the Marrakesh Agreement establishing the WTO, the conference is held once every two years. At the 12th Ministerial Conference

(MC12) in June 2022, WTO members secured multilaterally negotiated outcomes on a series of key trade initiatives – the so-called Geneva Package – comprising ten agreements, declarations and decisions.

Statement 1 is correct. There is an agreement agreed on curtailing Harmful Fishing Subsidies on illegal, unreported and unregulated fishing for the next 4 years in order to protect global fish stocks.

India and other developing countries were able to win some concessions in this agreement. This would assist small scale fisherman and traditional farmers would not face any restrictions under this agreement.

Statement 2 is incorrect. The WTO members **agreed to temporarily waive Intellectual Property Patent on Covid-19 vaccine**, so that they can be more easily manufactured domestically. Members adopted a Ministerial Declaration on the WTO response to the current and future pandemics. This includes a waiver of certain requirements under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) concerning the use of compulsory licenses to produce COVID-19 vaccines.

Source: https://www.wto.org/english/thewto_e/minist_e/mc12_e/mc12_followup_e.htm

Q.25) Which of the following options best describes the term ‘Gram Manchitra’, recently seen in news?

- It is a national map, showing the geographical locations of all the gram panchayats of the country on a single platform.
- It is a geo spatial based app used to develop and monitor developmental activities on real time basis for Panchayats.
- It is a satellite-based app for monitoring green cover in gram panchayats.
- It is a geo tagging technique for marking villages in gram panchayats.

Ans) b

Exp) Option b is the correct answer.

Union minister for Panchayati Raj has launched spatial planning application by the name “Gram Manchitra”. The Gram Manchitra is a Geo spatial based decision support system for the Panchayats and this app helps them to plan, develop and monitor developmental activities on real time basis. Gram Manchitra is developed by the National Informatics Centre (NIC). The application based on NIC’s Multilayer GIS platform Bharatmaps, is a Geo Spatial based decision support system for the panchayats.

Knowledge Base:

GRAM MANCHITRA OBJECTIVES:

- Objectivity to the process of planning as a Decision support system for GPDP.
- Integrating inter-ministerial spatial and non-spatial data spanning 29 sector.
- Enable prioritization of activities based on available resources.
- ‘Real time’ monitoring of activities/ development work.

De-duplication of asset-based activities across schemes and programmes.

Source: https://www.panchayat.gov.in/documents/448457/0/01_GramManchitra_v2.1.pdf/20b2f1b0-977c-1012-c284-037fc7be6183?t=1650449272369

Q.26) With reference to the Network for Greening the Financial System, consider the following statements:

- It is a group of central banks that aims to mobilize capital for low-carbon investments.
- The Reserve Bank of India has joined it as a member.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The Reserve Bank of India (RBI) has joined the Central Banks and Supervisors Network for Greening the Financial System (NGFS) as a member in 2021. Network for Greening the Financial System (NGFS) was launched at the Paris One Planet Summit in December 2017.

Statement 1 is correct: It is a **group of Central banks** and financial supervisors. The Network's purpose is to help strengthen the global response required to **meet the goals of the Paris agreement** and to enhance the **role of the financial system** to manage risks and to mobilize capital for **green and low-carbon investments**. The Network defines and promotes **best practices** to be implemented within and outside of the Membership of the NGFS and conducts or commissions analytical work on green finance.

It is located at the Bank of France headquartered in Paris.

The NGFS consists of 108 members and 17 observers.

Statement 2 is correct: **Reserve Bank of India (RBI)** has joined the Network for Greening the Financial System (NGFS) as a **member**. As Green Finance has assumed significance in the context of climate change, the RBI expects to benefit from the membership of NGFS by learning and contributing to global efforts on Green Finance.

Source: https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=51496

<https://www.ngfs.net/en/about-us/membership>

<https://www.ngfs.net/en/about-us/governance/origin-and-purpose>

Q.27) With reference to the Organization for Economic Cooperation and Development (OECD), consider the following statements:

1. India is one of the founding members of the OECD.
2. 'World Employment and Social outlook' is a report published by the OECD.
3. The OECD's Base Erosion and Profit Shifting (BEPS) framework seeks to reform international tax rules to avoid tax evasion.

Which of the above statements is/are correct?

- a) 2 and 3 only
- b) 1 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Organization for Economic Co-operation and Development (OECD) is an international organization that works to build better policies for better lives. Its goal is to shape policies that foster prosperity, equality, opportunity and well-being for all.

Statement 1 is incorrect. The OECD was the result of the Rome treaties of 1957. It was in September 1961 when the final existence of OECD came into picture. India is neither a founding member of the OECD nor is the permanent member of OECD.

Statement 2 is incorrect. World Employment and Social outlook' is a report published by the International Labour Organization (ILO).

Statement 3 is correct. **Base erosion and profit shifting (BEPS)** refers to tax planning strategies used by multinational enterprises that exploit gaps and mismatches in tax rules to avoid paying tax. Working together in the OECD/G20 Inclusive Framework on BEPS, **over 135 countries and jurisdictions are implementing 15 Actions** to tackle tax avoidance, improve the coherence of international tax rules, ensure a more transparent tax environment and address the tax challenges arising from the digitalization of the economy.

Knowledge Base:

- 1) The Organisation for Economic Co-operation and Development (OECD) was founded in 1948 as the Organisation for European Economic Co-operation (OEEC).
- 2) The Organisation for European Economic Co-operation (OEEC) was established to oversee the Marshall Plan for postwar reconstruction on the continent, which was mostly sponsored by the United States.
- 3) When the United States and Canada joined in 1961, the OEEC was renamed the OECD to reflect a larger membership.

India and OECD.

Source: oecd.org/India

Q.28) Consider the following statements regarding the National Digital Library of India:

1. It is initiated under the National Mission on Education through Information and Communication Technology.
2. Budget 2023-24 has proposed to start a National Digital Library for children and adolescents.
3. Its objective is to integrate all the existing digitized and digital contents across educational institutions of the nation.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) option d is the correct answer.

To make available to the learners community learning resources through a single-window, National Mission on Education through Information and Communication Technology (NMEICT) has sponsored the National Digital Library of India (NDLI) project and arranged funding through Ministry of Education.

Statements 1 and 3 are correct. MHRD, under its National Mission on Education through Information and Communication Technology, has entrusted IIT Kharagpur to host, coordinate and set-up the National Digital Library (NDL) towards building a national asset. The objective of the project is to integrate all the existing digitized and digital contents across educational institutions of the nation to provide a single-window access with e-learning facility to different groups of users ranging from primary level to higher education level of our country.

Statement 2 is correct. In Budget Speech 2023 the Finance Minister of India has announced setting up a National Digital Library for Children and adolescents which will provide educational resources in all languages and will help in developing financial literacy among students to make up for pandemic-time learning losses.

Source: <https://library.iitkgp.ac.in/node/NationalDigitalLibrary.html>

Q.29) Consider the following statements regarding the PM PVTG Development Mission:

1. It aims to provide the particularly vulnerable tribal groups (PVTGs) habitations with basic facilities such as safe housing, and clean drinking water.
2. PVTGs are the subgroups of the Tribal Communities, which are least developed among the tribal communities.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

In 1973, the Dhebar Commission created Primitive Tribal Groups (PTGs) as a separate category, who are less developed among the tribal groups. In 2006, the Government of India renamed the PTGs as PVTGs i.e., Particularly Vulnerable Tribal Groups.

Statement 1 is correct. In Budget 2023 the finance minister announced PM PVTG development Mission and a fund of Rs 15000 Cr. was allocated for the mission. The allocated fund will be used to provide the facilities to the PVTGs like Sanitation, safe housing, access to health and education and connectivity etc.

Statement 2 is correct. In India, tribal population makes up for 8.6% of the total population.

PVTGs are more vulnerable among the tribal groups. Due to this factor, more developed and assertive tribal groups take a major chunk of the tribal development funds because of which PVTGs need more funds directed for their development.

Source: [https://pib.gov.in/PressReleasePage.aspx?PRID=1895298#:~:text=](https://pib.gov.in/PressReleasePage.aspx?PRID=1895298#:~:text=PRADHAN%20MANTRI%20PVTG%20DEVELOPMENT%20MISSION,15000%20CRORE)

[PRADHAN%20MANTRI%20PVTG%20DEVELOPMENT%20MISSION,15000%20CRORE](https://pib.gov.in/PressReleasePage.aspx?PRID=1895298#:~:text=PRADHAN%20MANTRI%20PVTG%20DEVELOPMENT%20MISSION,15000%20CRORE)

Q.30) Consider the following statements regarding India-UN Development Partnership Fund:

1. The fund is established as a dedicated facility under the United Nations Framework Convention on Climate Change.
2. The fund is created to provide support for achieving zero carbon emissions in developing countries by 2050.
3. The fund contributes to the financial resources as well as technical knowledge to support partner Governments in achieving the Sustainable Development Goals.

Which of the statements given above is/are correct?

- a) 3 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The India-UN Development Partnership Fund (India-UN Fund) was established in 2017. The Government of India has committed \$150 million over 10 years to the India-UN Fund, including \$50 million under a separate Commonwealth Window, \$14 million dedicated to countries of the Caribbean Community, and \$12 million for Pacific Island developing States.

Statement 1 is incorrect: The India-UN Fund is a notable example of South-South cooperation with the multilateral system. Sponsored by the Government of India and implemented through the United Nations system, with the United Nations Office for South-South Cooperation (UNOSSC) as the coordinating partner, the Fund supports projects that advance all Sustainable Development Goals (SDGs).

Statement 2 is incorrect: Guided by an ambitious agenda to promote multilateralism and shared prosperity in the global South, the India-UN Development Partnership Fund (India-UN Fund) contributes to the efforts of developing countries towards the realization of the 2030 Agenda for Sustainable Development. There is no such goal of achieving zero carbon emissions in developing countries by 2050.

Statement 3 is correct: The India-UN Fund responds directly to the national priorities and development objectives of partner countries, **contributing financial resources and technical knowledge to support partner Governments in achieving the SDGs.** Under the umbrella of the 2030 Agenda for Sustainable Development, the Fund responds to development partners' requests in areas of their choice.

Source: <https://unfccc.int/about-us/about-the-secretariat>

<https://indiaunfund.unsouthsouth.org/#about-us>

Q.31) Consider the following statements regarding the Asian Development Bank (ADB):

1. It assists its members by providing loans, technical assistance, grants, and equity investments.
2. It is dedicated to reducing poverty in Asia and the Pacific through various programmes.
3. Non - Asian countries can't be the member of ADB.
4. India's shareholding in ADB is greater than that of China.

Which of the above given statements is/are correct?

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1 and 2 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

The Asian Development Bank is a regional development bank (ADB) established on 19th December 1966. It is headquartered in Manila, Philippines.

Statement 1 is correct. The Asian Development Bank (ADB) is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. It assists its members and partners by providing loans, technical assistance, grants, and equity investments to promote social and economic development.

Statement 2 is correct. The ADB is dedicated to reducing poverty in Asia and the Pacific through inclusive economic growth, environmentally sustainable growth and regional integration.

Statement 3 is incorrect. Asian as well as non-Asian countries can be the member of ADB. From 31 members at its establishment in 1966, ADB has grown to encompass 68 members—of which 49 are from within Asia and the Pacific and 19 outside. The bank admits the members of United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and non-regional developed countries.

Statement 4 is incorrect. Indian shareholding in ADB is less than China. ADB's five largest shareholders are Japan and the US (each with 15.6% of total shares), China 6.4 %, India 6.3%, and Australia 5.8%.

Source: [https://www.adb.org/who-we-are/about#:~:text=](https://www.adb.org/who-we-are/about#:~:text=ADB%20assists%20its%20members%2C%20and,promote%20social%20and%20economic%20development.&https://www.adb.org/publications/series/asian-development-outlook#:~:text)

[ADB%20assists%20its%20members%2C%20and,](https://www.adb.org/who-we-are/about#:~:text=ADB%20assists%20its%20members%2C%20and,promote%20social%20and%20economic%20development.&https://www.adb.org/publications/series/asian-development-outlook#:~:text)

[promote%20social%20and%20economic%20development. &](https://www.adb.org/who-we-are/about#:~:text=ADB%20assists%20its%20members%2C%20and,promote%20social%20and%20economic%20development.&https://www.adb.org/publications/series/asian-development-outlook#:~:text)

[https://www.adb.org/publications/series/asian-development-outlook#:~:text](https://www.adb.org/who-we-are/about#:~:text=ADB%20assists%20its%20members%2C%20and,promote%20social%20and%20economic%20development.&https://www.adb.org/publications/series/asian-development-outlook#:~:text)

Q.32) With reference to differences between Disinflation and Deflation, consider the following statements:

1. Deflation means a fall in prices of commodities, while disinflation means a slowdown in the rate of inflation.
2. Deflation will always lead to a decrease in the value of money whereas disinflation will always lead to an increase in the value of money.
3. Compared to disinflation, deflation is good for the financial markets.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Deflation and disinflation refer to two very different conditions with respect to the direction and change of general price levels in the economy. Deflation refers to falling prices or in other words, the opposite of inflation (rising prices).

Disinflation does not refer to the direction of prices (as inflation and deflation do). It refers to the rate of change. It is a slowdown in the rate of inflation. For example, deflation would be an inflation rate of -1 percent, while disinflation would be a change in the inflation rate from 3 percent one year to 2 percent in the next.

Statement 1 is correct: Deflation means prices are falling and the inflation rate is in the negative, while disinflation means a slowdown in the rate of inflation while still remaining in the positive.

Disinflation occurs more commonly than deflation.

Statement 2 is incorrect: During times of **deflation**, since the money supply is tightened, there is an **increase in the value of money**, which increases the real value of debt. During disinflation the price of goods and services increase over time, effectively decreasing the number of goods and services one can buy with a rupee in the future as opposed to a rupee today. This effectively decreases the time value of money. **Since inflation is positive during disinflation, the value of money decreases.**

Statement 3 is incorrect: During disinflation Stocks can, and often do, perform well when the bonds are likely to deliver above-average returns in a disinflationary scenario since it makes central banks less likely to raise interest rates and more likely to reduce them. Whereas deflation is an extremely destructive condition for the economy and financial markets. During periods of deflation, stock prices are likely to perform poorly.

Source : <https://www.thebalancemoney.com/the-difference-between-deflation-and-disinflation-416888#:~:text=Deflation%20means%20prices%20are%20falling,occurs%20more%20commonly%20than%20deflation.>

Q.33) With reference to 'Unity Mall' mentioned in budget 2023-24, consider the following statements:

1. It will be set up in all the districts of India.
2. Unity Malls will be set up exclusively for the promotion and sale of products which have got a Geographical Indication tag.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Finance Minister Nirmala Sitharaman announced in the Budget that states would be encouraged to set up a "Unity Mall" in their capitals, their most prominent tourism centers, or their financial capitals.

Statement 1 is incorrect: States will be encouraged to set up a Unity Mall in their **state capital or most prominent tourism center or the financial capital**. At present it does not aim to set up such mall in all the districts of India.

Statement 2 is incorrect: Unity malls focus on the promotion and sale of the state's own **"ODOPs (one district, one product), GI products and other handicraft products, and for providing space for such products of all other States"**. So, it is not exclusively for GI products.

Knowledge Base:

What is ODOP? One District, One Product is an initiative by the government which aims to make regional products more accessible, while providing capital to those who produce them. Under the scheme, the State identifies the chief product for a district, and then offers support for its processing, storage and marketing.

What is GI? A **geographical Indication (GI) tag** is given to agricultural, natural or manufactured products that originate from a specific geographical area due to which they possess unique characteristics and qualities, according to the Agricultural and Processed Food Products Export Development Authority (APEDA). Essentially, the tag guarantees that the product is coming from that specific area. It's kind of a trademark in the international market.

Source : https://www.indiabudget.gov.in/doc/budget_speech.pdf

<https://indianexpress.com/article/explained/unity-mall-in-every-state-capital-what-does-the-budget-say-8418190/>

Q.34) With reference to iGOT Karmayogi, consider the following statements:

1. It is a comprehensive online platform to guide individual civil service officials.
2. It is only for newly recruited civil servants.
3. Competency hub is one of the key hubs in the iGOT platform.

Which of the statements given above is/are correct?

- a) 2 and 3 only
- b) 1 and 3 only
- c) 1 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Mission Karmayogi - National Programme for Civil Services Capacity Building has been envisioned by the Government to address the changing needs and aspiration of the citizen. The Programme has been designed to enhance the civil services under a national Programme, anchored by an apex body headed by the Prime Minister.

Statement 1 is correct: **iGOT Karmayogi platform** – a comprehensive online platform to guide individual civil service officials in their capacity building journey. It is not merely a learning platform; it is a solutioning space that combines five functional hubs for online learning, competency management, career management, discussions, and networking. This will enable officials to deliver more effectively, eventually enhancing government execution capabilities.

Statement 2 is incorrect: It is not only for newly recruited civil servants but **also for experienced civil servants**.

Statement 3 is correct: **Competency hub** is one of the key hubs in the iGOT platform detailing about the recommended competencies for your position and your acquired competencies thus giving information about your competency gap.

Source : <https://portal.igotkarmayogi.gov.in/public/faq>

<https://karmayogibharat.gov.in/platform.php>

<https://igotkarmayogi.gov.in/>

Q.35) Recently the Union Finance Minister approved the Sovereign Green Bonds Framework. In this context, which of the following statements are correct?

1. The Framework applies to all Sovereign Green Bonds issued by the Government of India.
2. Investors do not bear any project related risks in bonds issued under this Framework.
3. Expenditure related to Nuclear Power Generation projects is eligible for using the proceeds raised from Sovereign Green Bonds.
4. The Green Financing Working Committee (GFWC) is the body constituted to validate key decisions on issuance of Sovereign Green Bonds.

Select the correct answer using the code given below:

- a) 1 and 4 only
- b) 1 and 3 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Green bonds are bonds issued by any Sovereign entity, inter-governmental groups or alliances and corporates with the aim that the proceeds of the bonds are utilised for projects classified as environmentally sustainable. In keeping with the ambition to significantly reduce the carbon intensity of the economy, the Union Budget 2022-23 announced the issue of Sovereign Green Bonds

Statement 1 is correct. This Green Bond Framework (Framework) sets forth the obligations of the Government of India as a Green Bond issuer. The Framework applies to all sovereign Green Bonds issued by the Government of India.

Statement 2 is correct. Payments of principal and interest on the issuances under this Framework are not conditional on the performance of the eligible projects. Investors in bonds issued under this Framework do not bear any project related risks.

Statement 3 is incorrect Government of India will use the proceeds raised from Sovereign Green Bonds (SGrB) to finance and/or refinance expenditure (in parts or whole) for eligible green projects. Certain projects are excluded from getting the proceeds raised from SGrB. They are-Projects involving new or existing extraction, production and distribution of fossil fuels, including improvements and upgrades; or where the core energy source is fossil-fuel based • **Nuclear power generation** • Direct waste incineration • Alcohol, weapons, tobacco, gaming, or palm oil industries • Renewable energy projects generating energy from biomass using feedstock originating from protected areas • Landfill projects • Hydropower plants larger than 25 MW. Expenditures directly related to fossil fuel are excluded.

Statement 4 is correct. GFWC has been established with clear lines of authority to oversee and validate key decisions on issuance of Sovereign green bonds under the Chairmanship of Chief Economic Adviser, Government of India and members from implementing departments, Ministry of Environment, Forests and Climate Change (MoEFCC), Niti Aayog (India's premier public policy think-tank), Budget Division of Department of Economic Affairs (DEA) and Infrastructure Finance Secretariat, DEA

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1874788>

<https://dea.gov.in/sites/default/files/Framework%20for%20Sovereign%20Green%20Bonds.pdf>

Q.36) Union Budget 2023-24 refer to a term 'Shree Anna'. Which of the following options best explains the term Shree Anna?

- a) It calls for reducing the wastage of food.
- b) It is used in reference to millets or coarse grains.
- c) It is used in reference to the importance of pulses.
- d) It is a scheme to provide free cereals to all citizens.

Ans) b

Exp) Option b is the correct answer.

While Presenting Union Budget 2023-24, FM Nirmala Sitharaman named **Millets i.e., coarse grains as Shree Anna**. As India is at the forefront of programs to popularize Shree Anna. India is the **largest producer and second-largest exporter of Shree Anna** in the world. India grows several types of Shree Anna including Jowar, Raagi, Bajra, Ramdana, Cheena, and Saama. The Union Budget 2023-24 highlighted that to make

India a global hub for Shree Anna, the Indian Institute of Millet Research in Hyderabad will be made into a center of excellence for sharing best practices, research and technology at the international level.

Source : <https://www.investindia.gov.in/team-india-blogs/budget-2023-india-become-global-hub-millets-shree-anna>

Q.37) Government is implementing many programmes for green fuel, green energy, green farming, green mobility, green buildings, and green equipment, and policies for efficient use of energy across various economic sectors. Which of the following initiatives have been started to achieve Green Growth according to the Union Budget 2023?

1. MISHTI Initiative
2. PM PRANAM Scheme
3. Amrit Dharohar
4. Bharat SHRI

Select the correct answer using the code given below.

- a) 1 and 3 only
- b) 3 and 4 only
- c) 1, 2 and 3 only
- d) 2, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Green growth means fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies.

Option 1 is correct: 'Mangrove Initiative for Shoreline Habitats & Tangible Incomes' (**MISHTI initiatives**) is taken up for **mangrove plantation** along the coastline and on salt pan lands, wherever feasible, through convergence between MGNREGS, CAMPA Fund and other sources.

Option 2 is correct: PM Program for Restoration, Awareness, Nourishment and Amelioration of Mother Earth (PM PRANAM) is to be launched to incentivise states and union territories to promote alternative fertilisers and balanced use of chemical fertilisers. Under the PM-PRANAM, the Centre plans to incentivise the states for reducing the use of chemical fertilisers and ultimately bring down the subsidy burden.

Option 3 is correct: Special scheme called '**Amrit Dharohar**' is started for protecting vital wetlands which sustain aquatic biodiversity. The scheme aims to achieve sustainable ecosystem development with the help of local communities. **It falls under 'Green Growth', one of the seven priorities of the budget.** The government will promote their unique conservation values through Amrit Dharohar, a scheme that will be implemented over the next three years to encourage optimal use of wetlands, and enhance biodiversity, carbon stock, eco-tourism opportunities and income generation for local communities.

Option 4 is incorrect: **Bharat Shared Repository of Inscriptions (Bharat SHRI)** is to be set up in a digital epigraphy museum, with digitization of one lakh ancient inscriptions in the first stage. **It is not related to Green growth.**

Source : https://www.indiabudget.gov.in/doc/budget_speech.pdf

<https://www.cnbtv18.com/technology/budget-2023-what-are-data-embassies-that-fm-sitharaman-proposes-to-set-up-15824141.htm#:~:text=A%20data%20embassy%2C%20mentioned%20in,have%20already%20embraced%20this%20model.>

<https://www.downtoearth.org.in/news/wildlife-biodiversity/budget-2023-24-amrit-dharohar-to-encourage-cons>

<https://indianexpress.com/article/business/budget/budget-2023-fm-sitharaman-pm-pranam-scheme-alternative-fertilisers-8417390/>

Q.38) With reference to Lab Grown Diamonds (LGD), consider the following statements:

1. LGDs don't need to undergo similar processes of polishing and cutting like natural diamond.
2. Pure synthetic diamonds have high thermal conductivity, but negligible electrical conductivity.
3. LGDs are environment friendly.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Lab Grown Diamonds (LGD) is a technology-and innovation-driven emerging sector with high employment potential. These environment friendly diamonds have optically and chemically the same properties as natural diamonds.

Statement 1 is incorrect: Like natural diamonds, LGDs undergo similar processes of polishing and cutting that are required to provide diamonds their characteristic lustre.

Statement 2 is correct: LGDs are most often used for industrial purposes, in machines and tools. Their hardness and extra strength make them ideal for use as cutters. Furthermore, pure synthetic diamonds have high thermal conductivity, but negligible electrical conductivity.

Statement 3 is correct: Unlike mined diamonds, lab created diamonds do not cause pollution of air or water. Lab grown diamonds or eco-friendly diamonds are created in small diamond growing chambers inside safe laboratories. They produce close to negligent amounts of waste. The waste produced from these labs is recycled and disposed of by environmentally friendly methods. The energy use and emissions from diamond growing laboratories are negligible.

Source: https://www.indiabudget.gov.in/doc/budget_speech.pdf

<https://indianexpress.com/article/explained/explained-sci-tech/what-are-lab-grown-diamonds-nirmala-sitharaman-budget-speech-8417482/>

Q.39) With reference to the Financial Action Task Force (FATF), consider the following statements:

1. It works to prevent funding to weapons of mass destruction.
2. It prepares three lists sometimes referred to as – Black, Grey and White, to distinguish the countries based on performance.
3. A country entering the Black List may face sanctions from other countries.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Financial Action Task Force (FATF) is the global money laundering and terrorist financing watchdog. The inter-governmental body sets international standards that aim to prevent these illegal activities and the harm they cause to society.

Statement 1 is correct: As a policy-making body, the FATF works to generate the necessary political will to bring about national legislative and regulatory reforms in these areas.

The FATF also works to **stop funding for weapons of mass destruction.**

The FATF reviews money laundering and terrorist financing techniques and continuously strengthens its standards to address new risks, such as the regulation of virtual assets, which have spread as cryptocurrencies gain popularity.

Statement 2 is incorrect: FATF only prepares two lists – Jurisdictions Under Increased Monitoring List and High-Risk Jurisdictions subject to a Call for Action List.

Jurisdictions Under Increased Monitoring List: Also known as Grey List. Countries that are considered a safe haven for supporting terror funding and money laundering are put in this list. This inclusion serves as a warning to the country that it may enter the blacklist. Pakistan is under this list.

High-Risk Jurisdictions subject to a Call for Action List: Also known as Black List. Countries known as non-Cooperative are put on the blacklist. These countries support terror funding and money laundering activities. The FATF revises the blacklist regularly adding or deleting entries. The FATF blacklist has been issued by the FATF since 2000. Iran and North Korea are under this list.

Statement 3 is correct: The effect of the FATF Blacklist has been significant, and has proven more important in international efforts against money laundering than has the FATF Recommendations. The list is intended to serve not only as a way of negatively highlighting these countries on the world stage, but as a warning of the high money laundering and terrorism financing risk that they present. **It is extremely likely that blacklisted countries will be subject to economic sanctions and other prohibitive measures by FATF member states and international organizations.**

Knowledge Base:

The FATF has developed the FATF Recommendations, or FATF Standards, which ensure a co-ordinated global response to prevent organised crime, corruption and terrorism. They help authorities go after the money of criminals dealing in illegal drugs, human trafficking and other crimes.

Role of FATF in combating terrorism financing:

- 1) Set standards: The FATF is the global standard-setter for combating money laundering, terrorist financing and the financing of proliferation of weapons of mass destruction (WMD).
- 2) Protection: The role of the FATF is to protect the integrity of the financial system, and enhance its transparency, which contribute towards global security.
- 3) Studies: The FATF conducts and publishes expert operational and strategic studies on risks, trends, and methods. It also develops and sets global policies, standards, best practice, and guidance.
- 4) Evaluation: It evaluates FATF member countries and oversees in close cooperation with the FATF-style regional bodies.
- 5) Coordination: The FATF has developed a series of recommendations that are recognised as the international standard. They form the basis for a co-ordinated response to these threats to the integrity of the financial system and help ensure a level playing field.
- 6) Monitoring: The FATF monitors the progress of its members in implementing necessary measures, reviews money laundering and terrorist financing techniques and counter-measures.
- 7) Identify vulnerabilities: In collaboration with other international stakeholders, the FATF works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse.

Source: <https://blog.forumias.com/answered-analyse-the-role-and-effectiveness-of-fatf-financial-action-task-force-in-combating-the-financing-of-terrorism/>

<https://www.fatf-gafi.org/about/>

<https://complyadvantage.com/insights/fatf-blacklists-greylists/>

Q.40) Consider the following statements with reference to BIS Hallmark:

1. Hallmarking is the accurate determination and official recording of the proportionate content of precious metal in precious metal articles.
2. BIS Hallmark is done for precious items made of Gold, Silver, Diamond and Platinum.

3. At present, there is no charge to get a BIS Hallmark on gold jewellery.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct and 2 is incorrect. Hallmarking is the accurate determination and official recording of the proportionate content of precious metal in precious metal articles. Hallmarks are thus official marks used in many countries as a guarantee of purity or fineness of precious metal articles. The principle objectives of the Hallmarking Scheme are to protect the public against adulteration and to obligate manufacturers to maintain legal standards of fineness. In India, at present two precious metals namely **gold and silver** have been brought under the purview of Hallmarking.

Statement 3 is incorrect. A jeweller selling you BIS hallmarked gold jewellery will charge you Rs 35 per piece of gold jewellery for the hallmarking. The hallmarking charges will be added to the cost and mentioned on the bill. The price of hallmarking a jewellery is a flat charge irrespective of the weight of the gold jewellery

Source: https://www.business-standard.com/article/economy-policy/second-phase-of-mandatory-gold-hallmarking-to-be-begin-from-june-1-govt-122043000826_1.html

<https://economictimes.indiatimes.com/wealth/spend/three-signs-to-check-for-purity-of-gold-of-bis-hallmarked-jewellery/articleshow/91172525.cms>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1904262>

<https://www.bis.gov.in/wp-content/uploads/2020/12/brief-on-Hallmarking.pdf>

Q.41) With reference to the Bank for International Settlements (BIS), consider the following statements:

1. It aims to promote global monetary and financial stability through the coordination of global central banks.
2. The BIS is an autonomous institution that functions under the International Monetary Fund.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Bank for International Settlements was established in 1930 and is owned by 63 central banks, representing countries from around the world that together account for about 95% of world GDP.

Statement 1 is correct: The **Bank for International Settlements** (BIS) is an international financial institution that aims to promote **global monetary and financial stability** through the coordination of **global central banks** and their monetary policy efforts.

Statement 2 is incorrect: The Bank for International Settlements (BIS) is an international financial institution **owned by central banks** that fosters international monetary and financial cooperation and serves as a bank for central banks.

Source: https://www.bis.org/about/index.htm?m=1_1

Q.42) With reference to recent trends in inflation as per Economic Survey 2022-23, consider the following statements:

1. The Headline WPI Inflation and CPI-C Inflation have never converged in the last two years.
2. Retail inflation was mainly driven by higher food inflation in 2022-23.
3. Most of the States and UTs have witnessed higher rural inflation than urban inflation in 2022-23.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

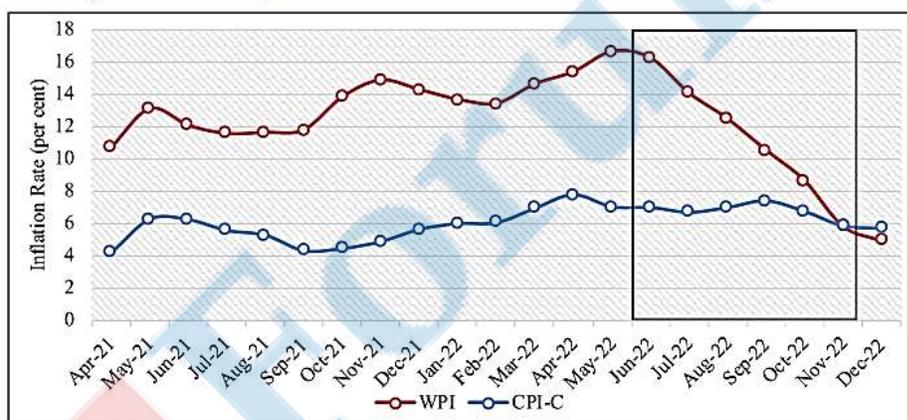
Ans) b

Exp) Option b is the correct answer.

In economics, inflation is an increase in the general price level of goods and services in an economy.

Statement 1 is incorrect: After global commodity prices, including crude oil softened and the effects of strong supporting domestic factors like favorable monsoon, vaccination-led economic resumption, etc., started to be felt, then the gap began to narrow between headline WPI and headline CPI-C inflation. **And the gap has been closed in November 2022, after 21 months.** The convergence between the WPI and CPI indices was **mainly driven by two factors.** **Firstly**, a cooling in inflation of commodities such as crude oil, iron, aluminum and cotton led to a lower WPI. **Secondly**, CPI inflation rose due to an increase in the prices of services. Services form a part of the core component of the CPI-C but are not included in the WPI basket. **Hence, the Headline WPI Inflation and Headline CPI-C Inflation have been equal in the Nov. 2022.**

Figure V.18: Convergence of Headline WPI Inflation with Headline CPI-C Inflation



Source: MoSPI and Office of Economic Adviser, DPIIT

Statement 2 is correct: In FY23, **retail inflation was mainly driven by higher food inflation**, while core inflation stayed at a moderate level. During FY23, ‘food & beverages’, ‘clothing & footwear’, and ‘fuel & light’ were the major contributors to headline inflation– the first two contributing more this fiscal than in the previous one. Food inflation ranged between 4.2 per cent to 8.6 per cent between April and December 2022, while the core inflation rate stayed at around 6 per cent except in April 2022.

Statement 3 is correct: Most of the States and UTs have witnessed **higher rural inflation than urban inflation** in the 2022-23, mainly due to marginally higher food inflation in rural areas.

Source: Economic Survey 2022-23 Chapter 5

<https://www.fortuneindia.com/budget-2023/economic-survey-2022-23-inflation-in-india-did-not-creep-too-far-above-rbis-target-level/111360>

Q.43) With reference to Pharmaceutical Drugs in India, which of the following statements is/are correct?

1. Ceiling prices for some drugs have been fixed by National Pharmaceuticals Pricing Authority.
2. Drug Price Control Order (DPCO) usually follows a cost-based pricing mechanism.
3. All the drugs marketed in the country are under price control.

Select the correct answer using the code given below.

- a) 1 only
- b) 2 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

The principles for the regulation of the prices of drugs are based on the National Pharmaceuticals Pricing Policy, 2012, administered by the Department of Pharmaceuticals.

Statement 1 is correct: Ceiling price means a price fixed by the Government for Scheduled formulations in accordance with the provisions of DPCO 2013. Until 31 December 2022, ceiling prices for 890 formulations of 358 drugs/medicines across various therapeutic categories under National List of Essential Medicines (NLEM), 2015 have been **fixed by National Pharmaceuticals Pricing Authority (NPPA)**.

Statement 2 is incorrect: Prior to 2013, the DPCO followed a **cost-based pricing mechanism** that was based on the costs involved in manufacturing a medicine along with reasonable profit margins. While, **at present the DPCO follows a market-based pricing mechanism**. The ceiling price is worked out on the basis of the simple average price of all brands having at least 1 percent market share of the total market turnover of that drug plus a notional 16 percent retailer's margin.

Statement 3 is incorrect: All the drugs marketed in the country are **not under price control**. Generally, **the scheduled medicines under the** National List of Essential Medicines (NLEM) are under the price control. The manufacturer of a non-scheduled drugs (drugs not under direct price control) is not required to take price approvals from NPPA for such drugs. However, the prices of other drugs can be regulated, if warranted in public interest.

Source: Economic Survey 2022-23 Chapter 5

<https://www.thehindubusinessline.com/economy/policy/move-to-allow-niti-aayog-to-steer-drug-price-control-raises-hackles/article26063023.ece>

<https://vikaspedia.in/health/nrhm/national-health-policies/faqs-on-drug-pricing#:~:text=No.,spread%20across%2027%20therapeutic%20groups>.

Q.44) Which of the following measures by the government will help in containing inflation in Food Commodities?

1. Imposing stock limits to avoid hoarding.
2. Increasing import duties on import of food commodities
3. Banning future and option contract trading in agricultural commodities

Choose the correct answer using code given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The government has taken several **supply-side measures** in the last year to control inflation. Prices of major essential commodities are monitored by the government on a regular basis and corrective action is taken from time to time.

Statement 1 is correct: Measures to control inflation by the government include **imposition of stock limits** on essential items. Government also maintains **buffer stock and takes measures to prevent hoarding** to check price rise.

Statement 2 is incorrect: To control inflation in essential commodities the government generally **reduces and rationalises the import duties** so that adequate supply can be maintained. Increase in import duties will lead to expansive import. It will further increase the already prevailing inflation.

Statement 3 is correct: Government sometimes ban the future and option (F&O) contracts trading in some agricultural commodities to curb the inflation. This helps in reducing speculation in prices of these agricultural commodities like rice, wheat etc. For example, government banned such trading in 7 agricultural commodities in December 2021. The commodities put under the ban list include wheat, paddy (non-basmati), chana, mustard seeds and their derivatives, soya bean, crude palm oil and moong. Read more at:

https://economictimes.indiatimes.com/markets/commodities/news/govt-bans-futures-trading-in-7-commodities-to-curb-inflation/articleshow/88384053.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

Source: <https://www.thehindu.com/business/Economy/measures-to-cool-food-inflation-will-deliver-in-coming-weeks-says-finance-ministry/article65883965.ece>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1778933>

<https://indianexpress.com/article/explained/simply-put-redefining-essential-items-6608203/>

Q.45) Consider the following statements about Critical Information Infrastructure (CII), which was recently seen in news:

1. It is a computer resource, whose destruction may impact the national security, economy, public health or safety of a country or organisation.
2. Centre for Development of Advanced Computing (C-DAC) is the nodal agency for taking all measures to protect the nation's critical information infrastructure.
3. Recently, certain database related to the Census and the National Population Register (NPR) has been declared as CII.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

World over governments have been moving with alacrity to protect their critical information infrastructure. IT resources form the backbone of countless critical operations in a country's infrastructure, and given their interconnectedness, disruptions can have a cascading effect across sectors. An information technology failure at a power grid can lead to prolonged outages crippling other sectors like healthcare and banking services.

Statement 1 is correct. The Information Technology Act of 2000 defines CII as computer resource, the incapacitation or destruction of which shall have deliberated impact on national security, economy, public health or safety. Example – Banking, e- government, defence etc.

Statement 2 is incorrect. National Critical Information Infrastructure Protection Centre (NCIIPC) is an organization of Government of India created under Section 70A of Information Technology Act, 2000. It is nodal agency for taking all measures to protect the nation's critical information infrastructure.

Statement 3 is correct. The government has declared as critical information infrastructure certain databases related to the Census and the National Population Register (NPR). In a notification, the Union home ministry said the decision has been taken after exercising the powers conferred to it under the Information Technology Act, 2000, (Amended 2008).

Source: <https://indianexpress.com/article/india/census-npr-database-critical-information-infrastructure-8257516/>

<https://indianexpress.com/article/explained/explained-what-is-critical-information-infrastructure-who-protects-it-7978951/>

Q.46) Which of the following statements are correct with respect to All India House Price Index?

1. It is published by the Reserve Bank of India.
2. The base year for price calculations under this index is 1986-87.
3. The index is released for all the state capital cities of India.

Choose the correct answer from the code given below:

- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Housing is one of the **necessities**, along with food and clothing. The Housing Price Index is a quarterly report by the Reserve Bank of India (RBI) based on the all-India price movement from data collected **from a few cities**. The indices are based on official data of property price transactions obtained from the respective state governments' registration authorities.

Statement 1 is correct: Reserve Bank of India releases house price index (HPI) on a quarterly basis. The overall increase in composite Housing Price Index indicates a growth in the housing sector which sets off a virtuous cycle of growth and investment.

Statement 2 is incorrect: Reserve Bank of India releases its quarterly house price index (HPI) which has **base year as 2010-11.**

Statement 3 is incorrect: Beginning with Mumbai, the Reserve Bank began compiling a house price index (HPI) in 2007 and published a quarterly HPI for **Mumbai**. The coverage has been expanded over the quarters by incorporating 9 more major cities, namely, **Delhi, Chennai, Kolkata, Bengaluru, Lucknow, Ahmedabad, Jaipur Kanpur, and Kochi**. So currently RBI publishes housing data for **ten major cities (and not for all the state capital cities)**.

Source: <https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf>

https://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=54293

<https://residex.nhbonline.org.in/Default.aspx>

Q.47) Consider the following statements regarding various socio-economic welfare measures provided in budget 2023-24:

1. Outlay for MGNREGA has been increased significantly compared to previous year.
2. The Aspirational Blocks Programme has been extended to all the blocks in the country.

3. The budgeted expenditure on health has reached the target of 2.5 per cent set by the National Health Policy.

4. Now under PM Garib Kalyan Anna Yojana, all Antyodaya and priority households will receive free food grains.

Which of the statements given above is/are correct?

- a) 2 and 4 only
- b) 1, 3 and 4 only
- c) 4 only
- d) 1 and 2 only

Ans) c

Exp) Option c is the correct answer.

The **Union Budget 2023-24** largely ring-fences financial outlays made to various social sectors, and it is reflected in nominal increases and consolidation of schemes and programmes to make them more effective.

Statement 1 is incorrect: The government has **sharply cut the budgetary allocation** of the rural job guarantee scheme Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA). It is anticipated that actual spends would be more **demand-driven** in key schemes such as MNREGA with the government retaining the recourse to supplementary budgets during the year.

Statement 2 is incorrect: Building on the success of the **Aspirational Districts Programme**, the Government has recently launched the **Aspirational Blocks Programme covering 500 blocks (and not all the blocks) for saturation of essential government services** across multiple domains such as health, nutrition, education, agriculture, water resources, financial inclusion, skill development, and basic infrastructure.

Statement 3 is incorrect: **The budgeted expenditure on health has reached 2.2 per cent of GDP**, against the 2025 target of 2.5 per cent set by the National Health Policy 2017.

Statement 4 is correct: **PM Garib Kalyan Anna Yojana (PMGKAY) aims to provide free food grain to all Antyodaya and priority households (8 million beneficiaries) for the next one year.** The entire expenditure of about 2 lakh crores will be borne by the Central Government.

Source: https://www.indiabudget.gov.in/doc/budget_speech.pdf

https://www.business-standard.com/budget/article/social-sector-the-emphasis-of-budget-is-on-the-consolidation-of-schemes-123020201839_1.html

[https://pib.gov.in/PressReleasePage.aspx?PRID=1895310#:~:text=Pradhan%20Mantri%20Garib%20Kalyan%20Anna%20Yojana%20\(PMGKAY\)&text=The%20entire%20expenditure%20of%20about,Government%20the%20Finance%20Minister%20said.](https://pib.gov.in/PressReleasePage.aspx?PRID=1895310#:~:text=Pradhan%20Mantri%20Garib%20Kalyan%20Anna%20Yojana%20(PMGKAY)&text=The%20entire%20expenditure%20of%20about,Government%20the%20Finance%20Minister%20said.)

Q.48) Which of the following items are included in calculation of both Consumer price index (CPI) and Wholesale price index (WPI) in India?

- 1. Fuel items
- 2. Electricity
- 3. Transportation Services
- 4. Educational Services
- 5. Food items

Choose the correct answer using the code given below:

- a) 1, 2 and 5 only
- b) 1,2, 3 and 5 only
- c) 2,3 and 4 only
- d) 2, 4 and 5 only

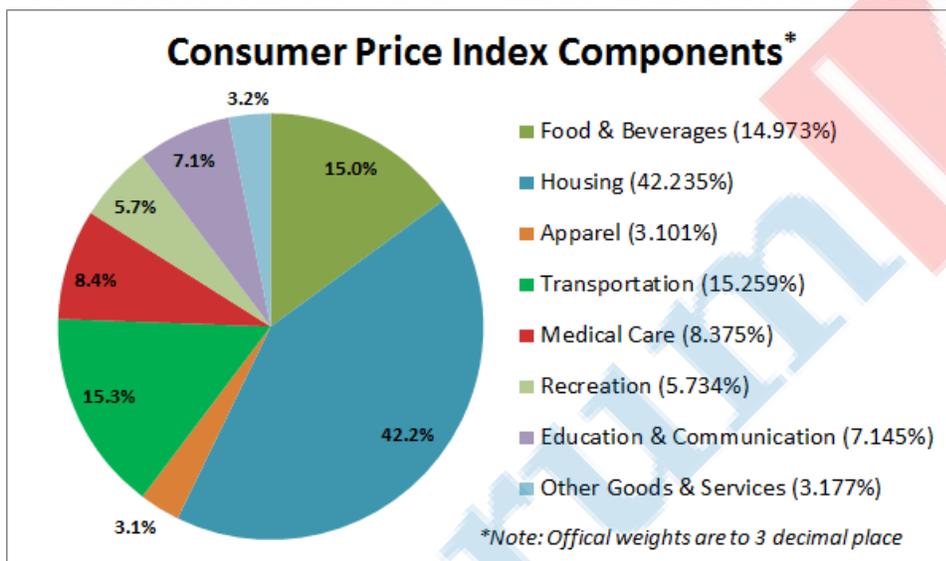
Ans) a

Exp) Option a is the correct answer.

The WPI is used to measure the change in the overall price of goods before they are sold at retail prices. This index measures inflation based on wholesale prices, or the prices of goods before they reach consumers. The Economic Adviser in the Ministry of Commerce and Industry reports the wholesale price index monthly. The index numbers used to calculate the retail inflation of a nation constitute the CPI, which is also known as the "market basket" and is responsible for tracking the shift in prices at the level of the household. The National Statistics Office (NSO) publishes CPI data every month.

Options 1, 2 and 5 are correct: The major difference between WPI and CPI is that the WPI does not measure the change in the price levels of services, but these are included in the calculation of CPI. The other items like the fuel items, electricity and food items are included in the calculation of both CPI and WPI.

Options 3 and 4 are incorrect: The services are excluded from the calculation of WPI, so Transportation services and Education services are not common items in calculation of both CPI and WPI.



Source: BLS; The most recent reweighting was in December 2015.

Composition of Wholesale Price Index		
Components	Weight (in %)	Inflation Rate (in %) In May 2022
Manufactured Products (cement, pharma, electronics, etc.)	64.23	10.11
Primary Articles (food, minerals, etc.)	22.62	19.71
Fuel And Power (LPG, petrol, etc.)	13.15	40.62
Total (All Commodities)	100	15.88

Source: https://www.business-standard.com/budget/article/measures-of-inflation-understanding-cpi-and-wpi-and-how-they-differ-123020100153_1.html#:~:text=CPI%20captures%20price%20change%20at,CPI%20uses%20the%20calendar%20year.

<https://indianexpress.com/article/explained/everyday-explainers/what-are-wholesale-price-index-consumer-price-index-inflation-rates-7820831/>

Q.49) With reference to the Non-Accelerating Inflation Rate of Unemployment (NAIRU), which of the following statements is correct?

- It is the highest level of unemployment rate that can be sustained without causing growth in wages.
- When unemployment is at NAIRU level, rate of inflation will be constant.
- It reflects the level of disguised unemployment in the country.
- It is always calculated by adjusting the inflation rate to the GDP of the economy.

Ans) b

Exp) Option b is the correct answer.

The non-accelerating inflation rate of unemployment (NAIRU) is the lowest level of unemployment that can occur in the economy before inflation starts to inch higher.

Option a is incorrect: The NAIRU is the **lowest unemployment rate (and not highest)** that can be sustained without causing wages growth and inflation to rise.

Option b is correct: The non-accelerating inflation rate of unemployment (NAIRU) is the specific unemployment rate at which the **rate of inflation stabilises and is constant** – inflation will neither increase nor decrease. When unemployment rises above NAIRU level, inflation decreases; when unemployment drops, inflation increases.

Option c is incorrect: NAIRU does not reflect the level of disguised unemployment in the economy. The **natural rate of unemployment** is sometimes called the NAIRU because it is consistent with an economy that is growing at its long-term potential, so there is **no upward or downward pressure on inflation**. Disguised unemployment is hidden unemployment where labour that is employed in a job is not actually utilised for the production of goods and services.

Option d is incorrect: There is no set formula to determine NAIRU. The countries use statistical models to put the NAIRU level. Example: The US Federal Reserve puts it somewhere between 5% and 6% unemployment.

Knowledge Base:

NAIRU is a concept that helps in gauging how much **'spare capacity'** there is in the economy and **phenomenon of hysteresis**. Hysteresis occurs when unemployed persons are unwilling to accept lower wage rates as a means of returning to work. NAIRU defies the **notion of cyclical, or self-adjusting, unemployment**. **Example:** If jobs are outsourced to lower-wage economies, workers of the home economy may over time become unqualified to take on those jobs should they return or become dependent on government welfare benefits. The NAIRU cannot be observed directly.

Source: <https://www.thehindu.com/opinion/op-ed/what-is-hysteresis-in-economics/article18701631.ece>

<https://www.investopedia.com/terms/n/non-accelerating-rate-unemployment.asp>

<https://www.economicsonline.co.uk/definitions/nairu.html/>

<https://www.imf.org/external/pubs/ft/fandd/basics/unemploy.htm>

Q.50) Which of the statements is correct with reference to Bluebugging?

- It is situation in which a pond becomes toxic due to excess growth of Blue-Green Algae.
- It is a form of hacking through Bluetooth connection.
- It is a parasitic syndrome related to human body due to lack of Nitrogen.
- It is a disease caused by coming in contact with blue bugs and it affects human nervous system.

Ans) b

Exp) Option b is the correct answer.

Bluebugging, as the name suggests is a form of snooping into Bluetooth-enabled devices. It lets attackers – hackers – access a device through its discoverable Bluetooth connection. Once the device or phone is

'bluebugged', the attackers can access calls, divert calls to their own numbers, steal materials stored on the phone, read and send text messages, etc. Initially, the bluebugging was started to target laptops with Bluetooth capabilities. Hackers, however, did not stop and the method evolved to attack any Bluetooth-enabled device, including mobile phone.

Once a device is blue bugged, a hacker can listen to the calls, read and send messages and steal and modify contacts. Even the most secure smart phones like I Phones are vulnerable to such attacks.

Knowledge Base:

Some tricks and techniques can prevent bluebugging. As per some cyber security experts, one must update phones and laptops to their latest software versions because such updates fix bugs in the existing versions. Secondly, do not use Bluetooth when not necessary and disconnect paired Bluetooth devices. Additionally, do not or limitedly use open connections such as public Wi-Fi.

Source: <https://www.thehindu.com/sci-tech/technology/what-is-bluebugging-and-how-is-it-used-to-hack-bluetooth-enabled-devices/article66191220.ece>

Q.1) In the context of Portuguese rule in India, which of the following events had taken place during the tenure of the Governor Alfonso De Albuquerque?

1. Establishment of the first Portuguese factory at Calicut.
2. Accession of the island of Bassein.
3. Abolition of Sati.
4. Introduction of 'Blue Water Policy'.
5. Acquisition of Goa from the Sultan of Bijapur.

Choose the correct answer from the codes given below:

- a) 1, 2 and 4 only
- b) 2, 3 and 5 only
- c) 4 and 5 only
- d) 3 and 5 only

Ans) d

Exp) Option d is the correct answer.

For the first time a Portuguese expedition arrived in India in 1498. It was led by Vasco Da Gama. In 1505, the King of Portugal appointed a Governor in India for the first time. Francisco De Almeida was the first such appointee. He was succeeded by Alfonso de Albuquerque, who came to India in 1512.

Option 1 is incorrect: Pedro Alvarez Cabral led a voyage to India after the successful expedition by Vasco Da Gama. Cabral arrived at **Calicut** in 1500, where is **established the first factory**. Locals made a stiff resistance to the Portuguese's factory at Calicut, but Cabral successfully retaliated by bombarding Calicut. He also signed treaties with the local rules of Cochin and Cannanore.

Option 2 is incorrect: In 1534, the ruler of Gujarat **Bahadur Shah ceded the island of Bassein** to Portuguese in return of their help during the conflict with Humayun. Portuguese also got a hold over dependencies and revenues of the Island. The ruler also promised a base in Diu. These events happened during the Governorship of **Nino da Cunha** (assumed office in 1529).

Option 3 is correct: Alfonso de Albuquerque was not only the first Portuguese leader, but also the first amongst Europeans to abolish the practice of 'sati' in Goa. The practice of sati had spread in Goa during the Shilahara-Kadamba period. Despite, abolishing of Sati, it prevailed clandestinely in some parts of the State.

Option 4 is incorrect: The Blue Water Policy was introduced by the first Governor- **Francisco de Almeida**. It envisioned to make Portuguese the master of the Indian Ocean. was opposed to the establishment of a territorial empire in India, preferring that the Portuguese maintain supremacy at sea and limit their activities to purely commercial transactions. This is known as the **Blue Water Policy**.

Option 5 is correct: Alfonso de Albuquerque **acquired Goa from the Sultan of Bijapur**, Ismail Adil Shah, in the year 1510. The ruler of Vijayanagar Krishnadevaraya helped the Portuguese Governor. Later, the capital of Viceroyalty was also transferred from Cochin to Goa.

Source : <https://timesofindia.indiatimes.com/city/goa/saving-history-not-sati/articleshow/45016268.cms>

Spectrum's A Brief History of Modern India (Page 23, Chapter 3)

Q.2) Consider the following statements with reference to the Martanda Verma:

1. He established an independent state of Kerala with Travancore as the capital.
2. He was strictly against organizing his army on the western model.
3. He was the first Indian ruler to accept the Subsidiary Alliance.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: Martanda Varma **established an independent state of Kerala** with Travancore as his capital. He extended the boundaries of his state from Kanyakumari to Cochin.

Statement 2 is incorrect: He made **efforts to organize his army along the Western model** and adopted various measures to develop his state.

Statement 3 is incorrect: Nizam of Hyderabad Nizam-ul-Mulk was the first Indian prince to accept the system of subsidiary Alliance in September 1798.

Source: Spectrum's A brief History of Modern India Ch 4 pg 77

Q.3) With reference to education during 18th century India, Consider the following statements:

1. Chatuspathis or Tols were the centers of primary education.
2. There was large scale participation of women in elementary schools.
3. Nadia and Utkala were famous centers of Sanskrit education.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

The education imparted in 18th-century India was still traditional which could not match with the rapid developments in the West. The knowledge was confined to literature, law, religion, philosophy, and logic and excluded the study of physical and natural sciences, technology and geography. In fact, due to over-reliance placed on ancient learning, any original thought got discouraged. The education was confined to reading, writing, and arithmetic.

Statement 1 is incorrect: Chatuspathis or Tols, as they were called in Bihar and Bengal, were the centers of **higher education (not primary)**.

Statement 2 is incorrect: Elementary education among the Hindus and the Muslims was quite widespread. Sometimes children from the lower caste also attended the schools, **but female presence was rare**.

Statement 3 is correct: Some of the famous centers for Sanskrit education were Kasi (Varanasi), Tirhut (Mithila), **Nadia and Utkala**.

Source: Spectrum's A brief History of Modern India Ch 4 pg 82

Q.4) Consider the following events:

1. Third Battle of Panipat
2. Battle of Buxar
3. Battle of Plassey
4. Battle of Karnal

What is the correct chronological sequence of the occurrence of the above events?

- a) 1-2-4-3
- b) 2-3-1-4
- c) 3-4-1-2
- d) 4-3-1-2

Ans) d

Exp) Option d is the correct answer.

The correct chronological sequence is 4-3-1-2

- 1) Battle of Karnal (1739)
- 2) Battle of Plassey (1757)
- 3) Third battle of Panipat (1761)
- 4) Battle of Buxar (1764)

Option 4: In 1739, Nadir Shah defeated the Mughals in the **Battle of Karnal** and later imprisoned Muhammad Shah and annexed areas west of the Indus into the Persian empire.

Option 3: Battle of Plassey in June 23, 1757 between Robert Clive and Siraj ud daula, Nawab of Bengal laid the territorial foundation of British rule in India.

Option 1: The **Third Battle of Panipat in 1761** between the Marathas and Ahmad Shah Abdali put an end to the Maratha ambition of ruling over India.

Option 2: Battle of Buxar in 1764 and Hector Munro's victory over the combined armies of Nawab of Bengal, Nawab of Awadh and the Mughal Emperor at Buxar laid the real foundation of the English power

Source: Spectrum's A brief History of Modern India Ch 5 pg. 95

Q.5) With reference to 'Mangrove Alliance for Climate', consider the following statements:

- 1. It is an initiative led by India and Bangladesh, formed in collaboration with United Nations Environment Programme (UNEP).
- 2. The Alliance aims to educate and spread awareness worldwide on the role of mangroves in curbing global warming.
- 3. The parties in the Alliance will decide their own commitments and deadlines regarding the planting and restoring of mangroves.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

At the **27th Session of Conference of Parties (COP27)**, Mangrove Alliance for Climate (MAC) was launched. Mangroves are salt tolerant trees and shrubs that grow in the intertidal regions of the tropical and subtropical coastlines. They are among the most carbon-rich forests in the tropics. Mangrove forests serve as natural barriers against storms and rising tides. They can store ten times more carbon per hectare as compared to terrestrial forests.

Statement 1 is incorrect: Mangrove Alliance for climate is an **initiative launched by the United Arab Emirates (UAE) in partnership with Indonesia** at COP27 Summit in Egypt in 2022. It includes UAE, Indonesia, India, Sri Lanka, Australia, Japan, and Spain.

Statement 2 is correct: The alliance will raise awareness about the role of mangroves as a “nature-based solution to climate change. It aims to educate and spread awareness worldwide on the role of mangroves in curbing global warming and its potential as a solution to climate change.

Statement 3 is correct: The alliance works on a **voluntary basis** which means that there are no real checks and balances to hold members accountable. Instead, the **parties will decide their own commitments and deadlines** regarding the planting and restoring of mangroves.

Source: <https://blog.forumias.com/what-is-the-mangrove-alliance-for-climate-which-india-joined-at-cop27/>

Q.6) Consider the following statements about Mir Kasim, the then Nawab of Bengal:

1. Mir Kasim agreed to finance East India Company's war efforts in the South India.
2. He shifted the capital of Bengal from Munger to Murshidabad.
3. He abolished inland tariffs, to put Indian traders on an equal footing with English traders.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Mir Jafar had shown disloyalty towards the company by joining hands with the Dutch and had failed to make payments due to the company. Hence, Vansittart, the new Governor of Calcutta, agreed to support Mir Kasim's claim as Nawab after a treaty between Mir Kasim and the Company was signed in 1760.

Statement 1 is correct: The treaty signed between Mir Kasim and the company had following provisions:

- 1) Mir Kasim agreed to cede to the Company the districts of Burdwan, Midnapur and Chittagong.
- 2) The Company would get half of the share in chunam trade of Sylhet.
- 3) Mir Kasim agreed to pay off the outstanding dues to the Company.

4) Mir Kasim promised to pay a sum of rupees five lakh towards financing the Company's war efforts in southern India.

Statement 2 is incorrect: Mir Kasim shifted the capital from **Murshidabad to Munger in Bihar**. The move was taken to allow a safe distance from the Company at Calcutta.

Statement 3 is correct: Mir Kasim took the bold decision to **abolish all inland tariffs**, putting **Indian traders on an equal footing with English traders**. The majority of the Governor's Council members desired to force the Nawab to tax his subjects since only under such situation could English merchants take advantage of the Dastak.

Source: Spectrum, Chapter 5, Expansion and consolidation of British power in India

Q.7) Consider the following pairs:

Regional State	Founder
1. Hyderabad	Burhan-ul-Mulk
2. Awadh	Nizam-ul-Mulk
3. Bengal	Murshid Kuli Khan

Which of the above given pairs is/are correctly matched?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

Pair 1 is incorrectly matched: The founder of Hyderabad was Chin Kilich Khan, popularly known as **Nizam-ul-Mulk**. It was Zulfikar Khan who had first conceived the idea of an independent state in the Deccan. But with his death in 1713 the dream remained unfulfilled.

Pair 2 is incorrectly matched: The founder of Awadh was **Saadat Khan**, popularly known as **Burhan-ul-Mulk**. He had joined in a conspiracy against the Sayyid brothers, which resulted in his being given an increased mansab. Later, driven out of court, he was prompted to find a new independent state. He was succeeded by Safdar Jang as the Nawab of Awadh.

Pair 3 is correctly matched: **Murshid Kuli Khan** was the founder of the independent state of **Bengal**. He was a capable ruler and made Bengal a prosperous state. He was succeeded in 1727 by his son Shuja-ud-din. His successor, Sarfaraz Khan, was killed in 1740 by Alivardi Khan, the deputy governor of Bihar at Gheria, who assumed power and made himself independent of the Mughal emperor by giving yearly tribute.

Source: Spectrum's A brief History of Modern India Ch 4 pg 75

Q.8) Consider the following statements about the Treaty of Allahabad signed in August 1765:

1. It was signed between the British, the Nawab of Awadh and Mir Kasim.
2. Under the treaty, Nawab of Awadh agreed to surrender Allahabad and Kara directly to the East India Company.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The combined armies of Mir Kasim, the Nawab of Awadh and Shah Alam II were defeated by the English forces under Major Hector Munro at Buxar on October 22, 1764, in a closely contested battle. After the battle, Robert Clive concluded the treaty of Allahabad in August 1765.

Statement 1 is incorrect: **Robert Clive after the Battle of Buxar signed two treaties at Allahabad in 1765, one with the Nawab of Awadh (Shuja-ud-Daula) and the other with the Mughal Emperor, Shah Alam II.** Mir Kasim was not a party to this treaty. He was the Nawab of Bengal from 1760 to 1763.

Statement 2 is incorrect: Under the treaty, Nawab of Awadh **Shuja-ud-Daula** agreed to:

- 1) surrender Allahabad and Kara to Emperor Shah Alam II (and not directly to the company);
- 2) pay Rs 50 lakh to the Company as war indemnity; and
- 3) give Balwant Singh, Zamindar of Banaras, full possession of his estate.

Source: Spectrum, Chapter 5, Expansion and consolidation of British power in India

Q.9) Consider the following statements regarding Kolhapur and Savant Vadi Revolt:

1. The main cause behind the revolt was the government's step to raise the salt duty.
2. The Samangarh and Bhudargarh forts were the hotspots of the revolt.
3. Kundara Proclamation was issued by the villagers under the revolt to oust British from their region.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 2 only
- d) 3 only

Ans) c

Exp) Option c is the correct answer.

Gadkaris (Hereditary militant class) from the Kolhapur and Savant Vadi areas revolted against British.

Statement 1 is incorrect: The Gadkaris were a hereditary military class which was garrisoned in the Maratha forts. These garrisons were disbanded during administrative reorganization in Kolhapur state after 1844. Facing the spectre of unemployment, the Gadkaris rose in revolt against British. Similarly, the simmering discontent caused a revolt in Savantvadi areas.

Whereas in Surat Salt Agitations (1840s), a strong anti-British sentiment resulted in attacks by the local Surat population on the Europeans in 1844 over the issue of the government's step to raise the salt duty from 50 paise to one rupee. Faced with a popular movement, the government withdrew the additional salt levy.

Statement 2 is correct: Facing the spectre of unemployment, the frustrated Gadkaris rose in revolt and occupied the Samangarh and Bhudargarh forts.

Statement 3 is incorrect: In the Diwan Velu Thampi's Revolt (1808-09), Velu Thampi addressed a gathering in Kundara, openly calling for taking up arms against the British to oust them from the native soil. This was later known as the Kundara Proclamation. As a result of which there was large-scale rebellion against the British.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.10) With reference to 'E-Waste Management Rules, 2022', consider the following statements:

1. The rules have restricted the use of lead and mercury in the manufacturing of electrical and electronic equipment.
2. The provisions for transaction of Extended Producer Responsibility (EPR) Certificate have been introduced in these rules.
3. The rule does not apply to packaging plastics which are covered under the Plastic Waste Management Rules, 2016.
4. The National Green Tribunal is tasked to monitor the compliance of reduction of hazardous substances provisions.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1, 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

The government has notified E-waste (management) rules 2022, which will come into force from 1 April next year and apply to every manufacturer, producer, refurbisher, dismantler and recycler of e-waste. These rules will replace E-waste (Management) Rules, 2016 and will be effective from 1st April 2023.

Statement 1 is correct: The rules restricted the **use of hazardous substances (such as lead, mercury, and cadmium)** in manufacturing electrical and electronic equipment that have an adverse impact on human health and the environment.

Statement 2 is correct: E-Waste (Management) Rules, 2022 will launch a new Extended Producer Responsibility (EPR) regime for e-waste recycling. The salient feature of new rules is as under:

- 1) **Provision for generation and transaction of EPR Certificate has been introduced.**
- 2) Provisions for environment compensation and verification & audit have been introduced.
- 3) Provision for constitution of Steering Committee to oversee the overall implementation of these rules.

Statement 3 is correct: The E-waste (management) rules 2022 do not apply to waste batteries, packaging plastics, micro enterprises and radio-active waste. **It is also not applicable for packaging plastics, which are covered under the Plastic Waste Management Rules, 2016.** It also does not apply for micro enterprises and radio-active wastes, which are covered under the Micro, Small and Medium Enterprises Development Act, 2006 and Atomic Energy Act, 1962 respectively.

Statement 4 is incorrect: The **Central Pollution Control Board** shall conduct random sampling of electrical and electronic equipment placed on the market to **monitor and verify the compliance of reduction of hazardous substances provisions.** Companies that don't meet their annual targets will have to pay a fine or an 'environmental compensation' but the draft doesn't specify the quantum of these fines.

Source: <https://journalsofindia.com/e-waste-management-rules-2022/#:~:text=It%20is%20the%20responsibility%20of,the%20provisions%20of%20the%20law.>

[https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1881761#:~:text=Ministry has notified the](https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1881761#:~:text=Ministry%20has%20notified%20the%20regime%20for%20e-waste%20recycling.)

[E,regime for e-waste recycling.](https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1881761#:~:text=Ministry%20has%20notified%20the%20regime%20for%20e-waste%20recycling.)

Q.11) Consider the following statements regarding Durgadas Rathore:

1. He was the Rajput General in the Kingdom of Marwar.
2. He rebuilt many temples which were destroyed by Aurangzeb.
3. He was elected as the leader of the Rajput Rebellion (1708–1710) against Mughals.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Durgadas Rathore (13 August 1638 – 22 November 1718) was the Rathore Rajput General of the **Kingdom of Marwar.** He preserved the rule of the Rathore dynasty over Marwar, following the death of Maharaja Jaswant Singh in the 17th century.

Statement 2 is correct: He rebuilt a large number of temples destroyed by the Aurangzeb. He also gave courage to the Hindus to stand up against the oppression of Aurangzeb.

Statement 3 is correct: He was elected as the leader of the **Rajput Rebellion (1708–1710)** along with Raja Jai Singh II of Jaipur. The Rajput rebellion **was against Mughals**, due to the harsh treatment of the Rajput Rajas by the Mughal emperor. He won a number of victories against the Mughals and forced many Mughal officers to pay tribute to him in the form of Chauth.

Source: Spectrum's A brief History of Modern India Ch 4 pg 76

<https://www.indianrajputs.com/famous/Durgadas-Rathore.php>

<https://www.hindujagruiti.org/history/21205.html>

Q.12) The Dual Government established in Bengal in 1765 was abolished by which of the following?

- a) Robert Clive
- b) Major Hector Munro
- c) Warren Hastings
- d) Lord Cornwallis

Ans) c

Exp) Option c is the correct answer.

Robert Clive introduced the dual system of government, i.e., the rule of the two—the Company and the Nawab—in Bengal in which both the diwani, i.e., collecting revenues, and nizamat, i.e., police and judicial functions, came under the control of the Company. The Company exercised diwani rights as the diwan and the nizamat rights through its right to nominate the deputy subahdar. The Company acquired the diwani functions from the emperor and nizamat functions from the subahdar of Bengal.

However, the dual system led to an administrative breakdown and proved disastrous for the people of Bengal. Neither the Company nor the Nawab cared for administration and public welfare.

Hence, **Warren Hastings did away with the dual system in 1772 and Bengal was brought under direct control of the British. The Nawabs remained as the mere pensioners of the East India Company.**

Source: Spectrum, Chapter 5, Expansion and consolidation of British power in India, pg. 94-95

Q.13) Which among the following can be considered as the causes behind the Revolt of 1857?

1. Corruption in the Company's administration
2. Activities of Christian missionaries
3. Revival of the older system of zamindari
4. The ruin of Indian handicrafts industry

Select the correct answer using the codes given below:

- a) 1 and 3 only
- b) 1, 2 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

In 1857, Indian soldiers rose up against their British commanders. They were joined by native rulers and thousands of ordinary people in a struggle that threatened to destroy British colonial power on the Indian subcontinent. Main causes behind the revolt of 1857 are discussed below:

Statement 1 is correct: Rampant corruption in the Company's administration, especially among the police, petty officials, and lower law courts, was a major cause of discontent. Indeed, it is the view of many historians that the rampant corruption we see now in India is a legacy of the Company rule. Also, the character of the British rule imparted a foreign and alien look to it in the eyes of Indians: a kind of absentee sovereignty.

Statement 2 is correct: Racial overtones and a superiority complex characterised the British administrative attitude towards the native Indian population. The activities of Christian missionaries who followed the British flag in India were looked upon with suspicion by Indians. The attempts at socio-religious reform such as abolition of sati, support to widow-marriage, and women's education were seen by a large section of the population as interference in the social and religious domains of the Indian society by outsiders. These fears were compounded by the government's decision to tax mosque and temple lands and making laws such as the Religious Disabilities Act, 1856, which modified Hindu customs, for instance, declaring that a change of religion did not debar a son from inheriting the property of his 'heathen' father.

Statement 3 is incorrect: Zamindars were the traditional landed aristocrats. They often saw their land rights forfeited with frequent use of a quo warranto by the administration. This resulted in a loss of status for them in the villages. In Awadh, the storm centre of the revolt, 21,000 taluqdars had their estates confiscated and suddenly found themselves without a source of income, "unable to work, ashamed to beg, condemned to penury". These dispossessed taluqdars seized the opportunity presented by the sepoy revolt to oppose the British and try to regain what they had lost. Thus, in this manner the older system of zamindari was forced to disintegrate.

Statement 4 is correct: The ruin of Indian industry increased the pressure on agriculture and land, which could not support all the people; the lopsided development resulted in pauperisation of the country in general.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.14) Consider the following statements about the Second Anglo Mysore War:

1. English attempt to capture Mahe instigated Haider Ali to fight the Second Anglo Mysore war.
2. Haider Ali had forged an anti-English alliance at the beginning of the war.
3. Haider was able to successfully defeat English at the Porto Novo.
4. Treaty of Seringapatam was signed to conclude the war.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 3 and 4 only
- d) 1, 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

The Second Anglo Mysore war was fought between Haider Ali of Mysore on one side and the British on the other.

Statement 1 is correct: Haidar Ali accused the English of breach of faith and non-observance of the Treaty of Madras when in 1771 he was attacked by the Marathas, and the English failed to come to his aid. Also, he got closer to the French who were fighting against the British in the American War of Independence. Also, through Mahe, a French possession on the Malabar coast, some French war material was brought to Mysore. This rising friendship between the French and Haider rose concerns for the British. **They therefore tried to capture Mahe, which Haidar regarded to be under his protection. Haidar considered the English attempt to capture Mahe a direct challenge to his authority.**

Statement 2 is correct: Haidar forged an anti-English alliance with the Marathas and the Nizam. He followed it up by an attack in the Carnatic, capturing Arcot, and defeating the English army under Colonel Baillie in 1781. However, in the meantime, the English (under Sir Eyre Coote) detached both the Marathas and the Nizam from Haidar's side.

Statement 3 is incorrect: It wasn't the English, but Haider Ali faced the defeat at Porto Novo at the hands of former. However, he regrouped his forces and defeated the English and captured their commander, Braithwaite.

Statement 4 is incorrect: Treaty of Mangalore was signed by the English and Tipu Sultan (as Haider Ali died in 1782) in March 1784, as both the sides were fed up with the inconclusive war. Both sides opted for peace, negotiating the treaty under which each party gave back the territories it had taken from the other.

Treaty of Seringapatam (1792) was signed after the Third Anglo Mysore War.

Source: Spectrum, Chapter 5, Expansion and consolidation of British power in India, pg. 97-98

Q.15) With reference to 'Carbon Dating Method', consider the following statements:

1. It can only determine the age of materials older than sixty thousand years.
2. It can be used to determine the age of organic materials like animal remains.
3. It can be helpful in studying the origins and evolution of various life forms on the earth.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Carbon dating is a widely used method to establish the age of organic materials, things that were once living. It can be estimated by measuring the amount of carbon-14 isotope present in the subject.

Statement 1 is incorrect: Carbon dating method **cannot determine the age of organic materials older than 60 thousand years.** Organic materials that are even older than about 40,000 years are extremely difficult. This is because after 8-10 cycles of half-lives, the amount of C-14 becomes almost very small and is almost undetectable. Over 60,000 years old, and they can't be dated at all.

Statement 2 is correct: Carbon dating is used by archeologists to date organic materials like remains of trees, plants, and animal. A living organism takes in both carbon-12 and carbon-14 from the environment in the same relative proportion that they existed naturally. Once the organism dies, it stops replenishing its carbon supply, and the total carbon-14 content in the organism slowly disappears. Scientists can determine how long ago an organism died by measuring how much carbon-14 is left relative to the carbon-12.

Statement 3 is correct: Carbon Dating is used in archaeology to determine the age of artefacts and ruins and ascertain the scientific basis of ancient civilizations. Carbon dating has a host of other uses in fields of forensics and criminal investigations, and in **studying the origins and evolution of various life forms on the earth.**

Knowledge Base:

How does Carbon Dating Method work?

- 1) Plants and animals get their carbon from the atmosphere, they too acquire C-12 and C-14 in roughly the same proportion as is available in the atmosphere.
- 2) While C-12 is stable, the radioactive C-14 reduces to one-half of itself in about 5,730 years– known as its 'half-life'.
- 3) The changing ratio of C-12 to C-14 in the remains of a plant or animal after it dies can be measured and can be used to deduce the approximate time when the organism died.

Source: <https://blog.forumias.com/what-is-carbon-dating-and-how-does-the-varanasi-court-order-impact-the-dispute/>

Explained: What Is Carbon Dating And How Is It Relevant To The Gyanvapi Mosque Row? (outlookindia.com)

Q.16) Consider the following pairs about the treaties signed between the Marathas and the British:

Treaties	Major provisions of the treaty
1. Treaty of Surat	British ceded the territories of Salsette and Bassein to Marathas.
2. Treaty of Salbai	Peshwa should not support any other European nation than British
3. Treaty of Bassein	English troops to be kept permanently in Maratha territory.

Which of the pairs given above is/are correctly matched?

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The years between the last quarter of the 18th century and the first quarter of the 19th century witnessed the Marathas and the English clashing thrice for political supremacy, with the English emerging victorious in the end. In the meantime, both the sides signed numerous treaties, which intelligently gave the English the key to India.

Pair 1 is incorrect: The background for Surat treaty was set in the context of the power tussle in the house of Peshwa between Raghunathrao and Sawai Madhavrao (minor) under the regency of Nana Phadnavis. Raghunathrao sought help from the English at Bombay by signing the Treaty of Surat in 1775. **Under the treaty, Raghunathrao ceded the territories of Salsette and Bassein to the English along with a portion of the revenues from Surat and Bharuch districts.** In return, the English were to provide Raghunath Rao with 2,500 soldiers.

Pair 2 is correct: Warren Hastings, the Governor-General in Bengal, rejected the Treaty of Wadgaon and sent a large force of soldiers against the Marathas. During struggle in February 1781 the English, under General Camac, finally defeated Sindhia at Sipri. Sindhia, hence, proposed a new treaty between the two sides, the Treaty of Salbai in 1782. **The treaty guaranteed peace between the two sides for twenty years.**

Under this, Salsette should continue in the possession of the English; The whole of the territory conquered since the Treaty of Purandhar (1776) including Bassein should be restored to the Marathas; The English should not offer any further support to Raghunath Rao and the Peshwa should grant him a maintenance allowance; **The Peshwa should not support any other European nation.**

Pair 3 is correct: Treaty of Bassein was signed between the Peshwa Bajirao II and the English on December 31, 1802. Under this treaty, **the Peshwa agreed: to receive from the Company a native infantry (consisting of not less than 6,000 troops), with the usual proportion of field artillery and European artillery men attached, to be permanently stationed in his territories.**

Source: Spectrum, Chapter 5, Expansion and consolidation of British power in India

Q.17) With reference to Trade during 18th century India, consider the following statements:

1. India's exports were more than its imports.
2. India imported Tea and Silk from China.
3. India's major exports were textiles and precious stones.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Eighteenth century India failed to make progress economically, socially or culturally, at an adequate pace. India became a land of contrasts because extreme poverty and extreme luxury existed side by side. Though trade, internal and foreign, continued without disruption and even prospered, the rest of the economy stagnated.

Option 1 is correct: On account of being self-sufficient in handicrafts and agricultural products, India did not import foreign goods on a large scale. On the other hand, its industrial and agricultural products were in good demand in foreign markets. **Hence its exports were more than its imports.**

Option 2 is correct: Items of Import from the Persian Gulf Region– pearls, raw silk, wool, dates, dried fruits, and rose water; from Arabia coffee, gold, drugs, and honey; **from China-tea, sugar, porcelain, and silk;** from Tibet–gold, musk, and Woollen cloth; from Africa–ivory and drugs; from Europe– woolen cloth, copper, iron, lead and paper.

Option 3 is correct: Major items of Export from India were **Cotton textiles, raw silk and silk fabrics,** hardware, indigo, saltpetre, opium, rice, wheat, sugar, pepper and other spices, **precious stones,** and drugs.

Source: Spectrum's A brief History of Modern India Ch 4 pg 80

Q.18) Consider the following statements regarding the Dutch Rule in India:

1. Their commercial interests remained confined only to the areas South of the Krishna River.
2. They defeated the Portuguese in the Battle of Hooghly (1759).

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Commercial interests led the Dutch to make voyages in the East. They were involved in the trade in India, Indonesia, Malay Archipelago etc.

Statement 1 is incorrect: The Dutch founded their first factory in Masulipatnam in 1605. They continued to expand their trading activities across the different parts of the country. They had **established factories in Gujarat, Uttar Pradesh, Bengal and Bihar (thus not confined south of Krishna River)**. Their principal factories in India were at Surat (1616), Bimlipatam (1641), Karaikal (1645), Chinsura (1653), Baranagar, Kasimbazar (near Murshidabad), Balasore, Patna, Nagapatam (1658), and Cochin (1663).

Statement 2 is incorrect: The Battle of Hooghly (1759) was fought between the **Dutch and the English**. The **Dutch were defeated** by the English, which paved the way for their decline in India.

Source: Spectrum's A Brief History of Modern India (Page 36, Chapter 3)

Q.19) Consider the following events regarding the setting up of factories in India by the European powers:

1. First French Factory at Surat
2. First Danes Factory at Tranquebar
3. First Dutch Factory at Masulipatnam
4. First Portuguese Factory at Calicut

Which of the following options represents the correct chronological order of the above events?

- a) 4-3-2-1
- b) 4-3-1-2
- c) 2-4-3-1
- d) 4-2-3-1

Ans) a

Exp) Option a is the correct answer.

Option 4: First Portuguese Factory at Calicut: It was **set up in 1500** by Pedro Alvarez **Cabral** to trade for spices. There was an incident of conflict when the Portuguese factory at Calicut was attacked by the locals. In retaliation, Cabral inflicted heavy damage and bombarded the city of Calicut. Later, Cabral succeeded in making advantageous treaties with the local rulers of Cochin and Cannanore.

Option 3: First Dutch Factory at Masulipatnam: In 1605, the Dutch founded their first factory at Masulipatnam. They also captured Nagapatnam from Portuguese and made it their stronghold in South India. They also established factories at Gujarat, Uttar Pradesh, Bengal, Bihar etc.

Option 2: First Danes Factory near Tanjore: In 1620, the Danes (Denmark) established their **first factory at Tranquebar, near Tanjore**. They sold their factories to British in 1845. The Danes are better known for their missionary activities than for commerce.

Option 1: First French Factory at Surat: The French did not achieve much success in Madagascar. In **1667, Francois Caron headed an expedition to India, setting up a factory in Surat**. This was the first French factory established in India.

Source: Spectrum's A Brief History of Modern India (Chapter 3)

Q.20) With reference to India's international engagements, the 'Delhi Dialogue' is-

- a focus group of QUAD for securing mutual cooperation.
- a '2+2' Strategic dialogue between India and USA.
- an UN platform to combat terrorists' use of advanced technologies
- an annual international conference between ASEAN and India.

Ans) d

Exp) Option d is the correct answer.

India organized the 12th edition of the Delhi Dialogue in New Delhi on 16-17 June 2022. The Delhi Dialogue was co-organized by Ministry of External Affairs, Government of India, Research, and Information System for Developing Countries (RIS), the ASEAN India Centre in the RIS and Economic Research Institute for ASEAN and East Asia (ERIA). ERIA has been a partner of the Delhi Dialogue since 2009.

Delhi Dialogue is India's premier annual track 1.5 international conference bringing together foreign ministers, senior officials, business leaders, scholars, academicians and eminent persons of India and ASEAN to discuss ways to further strengthen the ASEAN-India Strategic Partnership. Launched in 2009, twelve editions of the Dialogue have been held so far.

Since 2009 when the conference was first held, Delhi Dialogue has emerged as an important forum at which political leaders, policy makers, researchers, academicians, business leaders and media persons converge for brainstorming on a range of issues pertaining to ASEAN-India relations. Nine editions of Delhi Dialogue have been held so far.

Source:

<https://www.indmissionasean.gov.in/pages/MjI,#:~:text=Delhi%20Dialogue%20is%20an%20annual,issues%20between%20ASEAN%20and%20India>.

<https://www.investindia.gov.in/team-india-blogs/2022-key-year-india-asean-relations>

Q.21) The Farrukhsiyar's Farman (1715) gave the East India Company (EIC) many valuable privileges in Bengal, Gujarat and Hyderabad. In this context, consider the following statements:

- The Mission to seek a Farman in 1715 was led by Sir Thomas Roe.
- The Farman decreed that the coins of EIC, minted at Bombay, could be used as currency throughout the Mughal Empire.
- The Farman provided that Company's trade in Bengal was fully exempted from custom duties.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

The Farrukhsiyar's Farman of 1715 gave many valuable privileges to East India Company (EIC) in Bengal, Gujarat and Hyderabad. These were regarded as the Magna Carta of the Company.

Statement 1 is incorrect: In 1715, the English Mission to seek Farman from Farrukhsiyar was led by **John Surman**. Thomas Roe came to India in 1615 in the Court of Jahangir. He was unsuccessful in concluding a commercial treaty with the Mughal emperor, but he was able to secure a number of privileges including to set up factories at Agra, Ahmedabad and Broach.

Statement 2 is correct: The Farman decreed that the **coins of the Company** minted at Bombay shall **have currency value throughout the Mughal Empire**. In other words, EIC's coins could be used as currency now throughout the Mughal Empire.

Statement 3 is incorrect: In Bengal, huge concessions were granted with respect to the payment of customs duty. The company's imports and exports were exempted from additional customs duties excepting the **annual payment of 3,000 rupees**, as settled in advance. There was no full exemption from custom duties.

Knowledge Base: Other privileges granted by Farman:

- (a) The Company was permitted to issue passes (dastaks) for the transportation of goods.
- (b) The Company was permitted to rent more lands around Calcutta.
- (c) In Hyderabad, the Company retained its existing privilege of freedom from duties in trade (d) But Company had to pay prevailing rents in Madras).

Exemption from levy of all duties in Surat on payment of 10,000 rupees.

Source: Spectrum's A Brief History of Modern India (Chapter 3)

Q.22) Consider the following pairs:

Leaders of 1857 revolt	Key reason of his/her revolt
1. Nana Saheb	Refusal of the Family Title
2. Kunwar Singh	Deprivation from his own estates
3. Khan Bahadur	Against the policy of Doctrine of Lapse
4. Begum Hazrat Mahal	Annexation of Awadh

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

Ans) c

Exp) Option c is the correct answer.

The causes of the revolt of 1857 emerged from all aspects—socio-cultural, economic, and political—of daily existence of Indian population cutting through all sections and classes. Key leaders of the 1857 revolt along their reason of resistance are discussed below:

Pair 1 is correct: At Kanpur, leadership came to **Nana Saheb** naturally as he was the adopted son of the last peshwa, Baji Rao II. **He was refused the family title and banished from Poona and** was living near Kanpur. Nana Saheb expelled the English from Kanpur, proclaimed himself the peshwa, acknowledged Bahadur Shah as the Emperor of India, and declared himself to be his governor.

Pair 2 is correct: In Bihar, the revolt was led by **Kunwar Singh**, the zamindar of Jagdishpur. An old man in his 70s, **he nursed a grudge against the British who had deprived him of his estates.** He unhesitatingly joined the sepoys when they reached Arrah from Dinapore (Danapur).

Pair 3 is incorrect: At Bareilly, **Khan Bahadur**, a descendant of the former ruler of Rohilkhand, was placed in command. **Not enthusiastic about the pension being granted by the British**, he organised an army of 40,000 soldiers and offered stiff resistance to the British. The Doctrine of Lapse was not the reason for him joining the revolt.

Pair 4 is correct: Awadh was annexed by the British East India Company in 1856 and Nawab Wajid Ali Shah, the last Nawab of Awadh was sent into exile to Calcutta. Begum Hazrat Mahal took over the reins at Lucknow where the rebellion broke out on June 4, 1857, and popular sympathy was overwhelmingly in favour of the deposed Nawab. Her son, Birjis Qadir, was proclaimed the Nawab.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

<https://indianculture.gov.in/stories/begum-hazrat-mahal-revolutionary-queen-awadh>

Q.23) With reference to social condition of India during 18th century, consider the following statements:

1. Women were not at all allowed to work outside their houses.
2. Offspring of slaves were usually considered free citizens.
3. With the advent of Europeans, slavery got heightened in India.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 2 and 3
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

The society of 18th century India was characterized by traditional outlook and stagnation. Though there existed a certain degree of broad cultural unity, people were divided by caste, religion, region, tribe and language. The family system was primarily patriarchal, and caste was the central feature of the social life of the Hindus.

Statement 1 is incorrect: While upper class women remained at home, **lower class women worked in fields and outside their homes supplementing the family income.**

Statement 2 is correct: Status of slaves in India was better than that in Europe. Slaves were usually treated as hereditary servants rather than as menials. Marriages took place among the slaves, and the **offspring coming out of such wedlock were considered free citizens.**

Statement 3 is correct: The **advent of Europeans heightened the slavery** and slave trade in India. European trading companies purchased slaves from the markets of Bengal, Assam and Bihar and took them to the European and American market.

Source: Spectrum's A brief History of Modern India Ch 4 pg 84

Q.24) The English had been successful in ousting other European powers in the arena of political domination in India. In this context, consider the following statements regarding reasons for their success against other European powers in India:

1. East India Company (EIC) was State-owned since beginning, leading to convergence of political and commercial interests.
2. More acceptability of English by natives due to their lesser zeal for religion.
3. Total abstinence by British from use of debt to fund the Wars.
4. Naval superiority of British over its rivalries.

Which of the statements given above is/ are correct?

- a) 4 only
- b) 2 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Of all the European nations who came as traders to India after new sea routes were discovered, England emerged as the most powerful and successful by the end of the 18th century. They defeated the Portuguese, Dutch, and the French.

Statement 1 is incorrect: In the beginning, **EIC was not owned by the State**. Instead, it was formed through amalgamation of several rival companies at home. It was controlled by a **board of directors** whose members were elected annually. The shareholders of the company exercised considerable influence. The trading companies of France and Portugal were largely owned by the State, and their nature was in many ways feudalistic. The French Company was simply managed as a department of the State and no meetings of shareholders took place between 1725 and 1765.

The English company was a private enterprise—this created a sense of enthusiasm and self-confidence among the people.

Statement 2 is correct: As compared to Spain, Dutch or Portugal, Britain was **less interested in the spread of Christianity**. Its rule was, therefore, far more acceptable to the subjects than the other colonial powers.

Statement 3 is incorrect: The **use of debt** was one of the most **important factors** which helped Britain in succeeding against other colonial powers. The world's first central bank—the Bank of England—was established to sell government debt to the money markets on the promise of a decent return on Britain's defeating rival countries like France and Spain. Britain was thus **enabled to spend much more** on its military than its rivals.

Statement 4 is correct: The **Royal Navy of Britain** was the largest and the **most advanced** of its times. British were able to defeat the Portuguese and the French due to strong and fast movement of the naval ships. The English learnt from the Portuguese the importance of an efficient navy and improved their own fleet technologically.

Source: Spectrum's A Brief History of Modern India (Page 53, Chapter 3)

Q.25) Which of the following countries are primarily part of 'Black Sea Grain Initiative' that was recently seen in news?

1. Germany
2. Ukraine
3. India
4. Turkey
5. Russia

Select the correct answer using the codes given below:

- a) 1, 3 and 4 only
- b) 1, 2 and 4 only
- c) 2, 4 and 5 only
- d) 1, 2, 4 and 5 only

Ans) c

Exp) Option c is the correct answer.

The Black Sea Grain initiative was brokered by the United Nations (UN) and Turkey. It was signed in Istanbul in July 2022. The Black Sea Grain initiative endeavors to tackle escalating food prices emanating from supply chain disruptions because of Russian actions in the world's 'breadbasket'.

Black Sea Grain Initiative: Also known as Initiative on the Safe Transportation of Grain and Foodstuffs from Ukrainian ports, it is an agreement between **Russia and Ukraine made with Turkey** and the **United Nations (UN)** during the 2022 Russian invasion of Ukraine.

- 1) It was aimed to tackle **escalating food prices emanating from supply chain disruptions** because of Russian actions in the world's 'breadbasket'.
- 2) It created **procedures to safely export grain from certain ports** to attempt to address the 2022 food crisis.
- 3) A **joint coordination and inspection center was set up in Turkey**, with the UN serving as secretariat. By late November, over 500 voyages had successfully left Ukrainian ports carrying over 12 million Tonnes of grain and other food products.



Source: https://www.un.org/en/black-sea-grain-initiative?gclid=Cj0KCQiAwJWdBhCYARIsAJc4idBf4pNYFdi6KBzBj30y79jK8CIUw54FNZ8v1h6kxUr_m6HEaO9gQ5IaAmqlEALw_wcB
<https://blog.forumias.com/suspension-of-black-sea-grain-initiative-expected-to-further-exacerbate-food-security-fuel-fertilizer-supply-challenges-india/>

Q.26) Consider the following statements regarding the administration of Portuguese in India:

1. 'Vedor de Fazenda' was an official responsible for the collection of revenues.
2. The Church played an important role in the administrative affairs of the State.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The possessions of Portuguese were administered by a Governor, generally appointed for a period of three years. He served as the highest authority and had command over military, financial and other administrative matters.

Statement 1 is correct: In Portuguese administration, Viceroy/ Governor served as the highest authority. He generally served for a period of three years. He was assisted by his secretary and the Council. Another important person in the administrative hierarchy was **Vedor de Fazenda** who was responsible for the **collection of revenues** and cargoes and dispatch of fleets. The **administration was decentralized**, with great powers being held by the individual fortress Captains. Like the governors and viceroys, fortress captains served for three years, however their terms could be renovated.

Statement 2 is correct: The **Church played an important role** in the State. The administrative and religious affairs of the State were interrelated. For example, one of the main missions of Vasco-da-Gama for finding the sea route to India was to seek “Christians and spices”. The confiscated lands of the temples were handed over to the Church and the Comunidades. In 1557, Goa became the seat of an archbishop. Religious Orders of the Augustinians, Franciscans, Dominicans and Jesuits established mission headquarters in Goa, **giving the Catholic Church a very visible presence and influence in the capital of the State of India**, for which it earned the nickname of “Rome of the East”.

Source: Spectrum’s A Brief History of Modern India (Page 29, Chapter 3)

https://www.goa.gov.in/what_to_see/churches/

Q.27) Consider the following events during the reign of various Mughal emperors:

1. Emperor Jahandar Shah levied Jaziya tax for the first time since the emperor Akbar abolished it in 1564.
2. The independent State of Hyderabad was founded during the reign of the Emperor Muhammad Shah.
3. Iranian invader Ahmad Shah Abdali attacked Mughals for the first time during the reign of Ahmad Shah Bahadur.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Jahandar Shah (1712-13) is known to have **abolished Jaziya tax**. It is a tax imposed on non-Muslims by the Muslim rulers. Jahandar Shah appointed Zulfikar Khan as his Prime Minister. He introduced the Izara (revenue farming) system to improve the financial condition of the empire.

Statement 2 is correct: Muhammad Shah (1719-48) got suspicious over the activities of the Sayyid Brothers (Abdulla Khan and Hussain Ali). Muhammad Shah, with the help of Nizam-Ul-Mulk, killed the Sayyid Brothers. In 1724, **Nizam-Ul-Mulk** became the wazir and **founded the independent state of Hyderabad**. Hyderabad state, for all practical purposes, was ruled independently by Nizam. Also, Nadir Shah invaded India during his period.

Statement 3 is incorrect: Between 1748 and 1767, **Ahmad Shah Abdali** is known to come India for 8 times. He **attacked Mughals in India for the first time in 1748 during the reign of Mughal emperor Mohammad Shah (1719-1748)**. Ahmad Shah Bahadur was the predecessor of Alamgir II (1748-54). He was an incompetent ruler who left the state affairs in the hands of Udham Bai, the ‘Queen Mother’.

Source: Spectrum’s A Brief History of Modern India (Page 63, Chapter 4)

Q.28) In the context of the history of India, who were the Pindaris?

- They were allies of Haider Ali in the First Anglo-Mysore war.
- They were the rulers of the Sindh region, prior to the rule of Talpur Amirs.
- They were the mercenaries attached to the Maratha army.
- They were a class of bankers in the Bengal region.

Ans) c

Exp) Option c is the correct answer.

The Pindaris, made up of many castes and classes, were **attached to Maratha armies as mercenaries**. When the Marathas became weak after the third Anglo Maratha war, the Pindaris could not get regular employment. As a consequence, they **started plundering** neighbouring territories, including those of the Company. The English charged the Marathas with giving shelter to the Pindaris. Pindari leaders like Amir Khan and Karim Khan surrendered while Chitu Khan fled into the jungles.

The Treaty of Bassein, described as “a treaty with a cipher (the Peshwa)”, wounded the feelings of the other Maratha leaders. They saw the treaty as an absolute surrender of independence. Lord Hastings’ actions taken against the Pindaris were seen as a transgression of the sovereignty of the Marathas; they served to once again unite the Maratha confederacy. A repentant Bajirao II made a last bid in 1817 by rallying together the Maratha chiefs against the English in course of the Third Anglo-Maratha War.

Source: Spectrum, Chapter 5, Expansion and consolidation of British power in India, pg. 107-108

Q.29) Consider the following statements regarding the relation between Sindh and the British:

- Annexation of Sindh was done during the tenure of Governor General Lord William Bentinck.
- The Treaty of Eternal Friendship allowed free passage to the English traders through Sindh.
- Sindh was annexed by the British under the Doctrine of Lapse.
- Charles Napier was the first Governor of Sindh after annexation by the British.

Which of the statements given above is/are correct?

- 1 and 2 only
- 3 and 4 only
- 4 only
- 1, 2 and 4 only

Ans) c

Exp) Option c is the correct answer.

In the early 19th century, the English started to show an interest in Sindh where they enjoyed some trade facilities authorised by a farman of the Mughal Emperor in 1630.

Statement 1 is incorrect: Annexation of Sindh (1843) was done during the term of Governor General Lord Ellenborough (1842-1844) and not under Lord William Bentinck (1828-1835). Annexation of Mysore (1831) took place during latter’s tenure.

Statement 2 is incorrect: The Treaty of Eternal friendship was signed between the Amirs of Sindh and the British to exclude the French from Sindh and to exchange agents at each other’s court. The treaty was renewed in 1820 with the addition of an article excluding the Americans and resolving some border disputes on the side of Kachch. Whereas **the Treaty of 1832** by Colonel Pottinger (British officer) and the Amirs allowed for free passage for the English traders and travellers through Sindh.

Statement 3 is incorrect: Sindh was not annexed by the British under doctrine of lapse, rather Sindh accepted **Subsidiary Alliance** in 1839. According to which a British subsidiary force had to be stationed at Shikarpur and Bukkar and the Amirs of Sindh were to pay Rs 3 lakh annually for the maintenance of the Company’s troops”. Henceforth, the Amirs were debarred from having any negotiations with foreign states without the knowledge of the Company.

Statement 4 is correct: Sindh was merged into the British Empire in 1843, under Governor-General Ellenborough, and **Charles Napier was appointed its first governor.**

Source: Spectrum, Chapter 5, Expansion and consolidation of British power in India.

Q.30) Recently seen in news, 'Dirty Bomb' is a-

- Type of explosive that utilizes oxygen from the surrounding air to generate an intense explosion.
- Weapons that can attack space systems in orbit and attack targets on the earth from space.
- Second-generation thermonuclear weapon based on fusion explosion.
- Device containing radioactive material as well as conventional explosives.

Ans) d

Exp) Option d is the correct answer.

Recently, Russia has delivered a letter to the United Nations claiming that Ukraine is preparing to detonate a dirty bomb on its territory. The allegations, however, have been denied by Ukraine.

Option d is the correct: A **dirty bomb** also known as a radiological dispersal device is a weapon that **combines conventional explosives like dynamite and radioactive material** such as uranium.

- The primary objective of a dirty bomb is to **create panic, confusion and anxiety** by hurling radioactive dust and smoke into the atmosphere. Hence, it has been long feared as a potential weapon of terrorists.
- A dirty bomb doesn't need to contain highly refined radioactive material, as is used in a nuclear bomb. Instead, it could use radioactive materials from hospitals, nuclear power stations or research laboratories. This makes them much cheaper and quicker to make than nuclear weapons.

Option a is incorrect: A thermobaric bomb is a type of explosive that utilizes oxygen from the surrounding air to generate an intense, high-temperature explosion, and in practice the blast wave typically produced by such a weapon is of a significantly longer duration than that produced by a conventional condensed explosive. The fuel-air bomb is one of the best-known types of thermobaric weapons.

Option b is incorrect: Space weapons are weapons used in space warfare. They **include weapons that can attack space systems in orbit** (i.e., anti-satellite weapons), attack targets on the earth from space or disable missiles travelling through space.

Option c is incorrect: A thermonuclear weapon, **fusion weapon or hydrogen bomb** (H bomb) is a second-generation nuclear weapon design. Its greater sophistication affords it vastly greater destructive power than first-generation nuclear bombs, a more compact size, a lower mass, or a combination of these benefits.

Source: <https://blog.forumias.com/russia-tells-china-india-ukraine-planning-dirty-bomb-attack/>

https://www.icanw.org/what_are_dirty_bombs

<https://www.bbc.com/news/world-63373637>

Q.31) Consider the following statements regarding the Sikhs during the British period:

- Sikhs lost the territory of Kashmir after they failed to pay the war indemnity under Treaty of Lahore.
- The Treaty of Bhairowal was signed between the Sikhs and the British after the Second Anglo Sikh War.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The British interest in the region of Punjab began when the prospects of a joint Franco-Russian invasion of India through the land-route had alarmed the English. Hence, in 1807, Lord Minto sent Charles Metcalfe to Lahore at Ranjit Singh's court. From here, the power struggle began in Punjab.

Statement 1 is correct: The Treaty of Lahore was signed on March 8, 1846, after the First Anglo-Sikh war. Under this, Sikhs had to give war indemnity of more than 1 crore of rupees to the British. However, **Sikhs failed to do so, hence, Kashmir including Jammu was sold to Gulab Singh and he was required to pay Rupees 75 lakh to the Company as the price.**

Statement 2 is incorrect: Treaty of Bhairawal was not signed after the Second Anglo Sikh War. It was signed between the Sikhs and the British when the Sikhs were not satisfied with the Treaty of Lahore over the issue of Kashmir, so they rebelled. According to the provisions of this treaty, Rani Jindan was removed as regent and a council of regency for Punjab was set up.

Source: Spectrum, Chapter 5, Expansion and consolidation of British power in India.

Q.32) With reference to developments in Art, Architecture and Culture during 18th century India, consider the following statements:

1. Bada Imambara was built during the rule of Nishapur Dynasty at Lucknow.
2. Rajputana and Kangra schools of painting lost their prominence.
3. Heer Ranjha, the romantic epic in Punjabi literature, was composed.
4. Mirza Raja Man Singh I constructed pink city of Jaipur.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 1 and 3 only
- c) 2 and 4 only
- d) 1, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

The decline of the imperial Mughals forced talented people to seek the patronage of newly established state courts like Hyderabad, Lucknow, Jaipur, Murshidabad, Patna, Kashmir, etc.

Statement 1 is correct: At Lucknow, **Asaf-ud-Daula** (belonged to Persian Shia Muslim dynasty from **Nishapur**) built the **bada Imambara** in 1784.

Statement 2 is incorrect: new schools of painting were created and achieved distinction in the 18th century. The paintings of the **Rajputana and Kangra schools became prominent** and revealed new vitality and taste.

Statement 3 is correct: A distinct feature of the literary life of the 18th century was the growth of regional languages. During this period, **Heer Ranjha**, the romantic epic in Punjabi literature, was composed by **Warris Shah**.

Statement 4 is incorrect: In the first half of the 18th century, **Sawai Jai Singh built the pink city of Jaipur** and five astronomical observatories at Delhi, Jaipur, Benares, Mathura and Ujjain. He also prepared a set of timetables called Jij Muhammad-shahi, to help the people in the study of astronomy.

Source: Spectrum's A brief History of Modern India Ch 4 pg 85

<https://prepp.in/news/e-492-avadh-regional-states-of-north-and-south-india-medieval-india-history-notes#HereditaryNawabs>

Q.33) Consider the following statements about the Policy of Ring Fence employed by the British in India:

1. It was first introduced and employed by Lord Wellesley in India.
2. The States brought under the ring fence system were provided assured military assistance against external aggression at Company's expense.
3. The company employed this policy on the frontiers of Awadh to prevent its rule from the attacks of Marathas and Afghans.

Which of the statements given above is/are **incorrect**?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1 only

Ans) a

Exp) Option a is the correct answer.

The process of imperial expansion and consolidation of British paramountcy was carried on by the Company during the 1757-1857 period through a two-fold method: (a) policy of annexation by conquest or war; and (b) policy of annexation by diplomacy and administrative mechanisms. Later used diplomatic tools like 'ring-fence' policy, 'subsidiary alliance', and 'doctrine of lapse'.

Statement 1 is incorrect: 'Ring-fence' policy was followed by the Governor General Warren Hastings and not by Lord Wellesley. Rather, the latter resort to the Subsidiary alliance to stronghold company's position in India.

Statement 2 is incorrect: The policy aimed at creating buffer zones to defend the Company's frontiers. Broadly speaking, it was the policy of defence of their neighbours' frontiers for safeguarding their own territories. **The states brought under the ring-fence system were assured of military assistance against external aggression—but at their own expense.** In other words, these allies were required to maintain subsidiary forces which were to be organised, equipped and commanded by the officers of the Company who, in turn, were to be paid by the rulers of these states.

Statement 3 is correct: The chief danger to the Company's territories was from the Afghan invaders and the Marathas. **To safeguard against these dangers company adopted the ring fence policy. Under this, the Company undertook to organise the defence of the frontiers of Awadh** on the condition that the Nawab would defray the expenses of the defending army. The defence of Awadh constituted the defence of Bengal during that time.

Source: Spectrum, Chapter 5, Expansion and consolidation of British power in India.

Q.34) Consider the following statements about the Anglo-Nepalese relations during the British period in India:

1. The conflict between the Gorkhas and the British began during the period of Lord Hastings.
2. The Treaty of Yandabo was signed between the British and the Gorkhas to ensure mutual peace.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: In 1801, the English annexed Gorakhpur which brought the Gorkhas' boundary and the Company's boundary together. The Gorkhas wrested control of Nepal from the successors of Ranjit

Malla of Bhatgaon in 1760 itself. The conflict started due to the Gorkhas' capture of Butwal and Sheoraj during the period of **Lord Hastings (1813-23)**.

Statement 2 is incorrect: The war between both sides forced them to sign the Treaty of Sagauli in 1816. However, the Treaty of Yandabo was signed between the British and the Burmese in 1826 after the First Burma War (1824-26).

Knowledge Base: The Treaty of Sagauli, 1816 was actually in favour of the British. Under this, Nepal accepted a British resident. It ceded the districts of Garhwal and Kumaon, and abandoned claims to Terai and withdrew from Sikkim. **This agreement also made the Gorkhas to join the British Indian Army in large numbers.**

Source: Spectrum, Chapter 5, Expansion and consolidation of British power in India.

Q.35) With reference to the Law Commission of India, consider the following statements:

1. It is a non-constitutional and non-statutory body.
2. Its recommendations are binding on the Government.
3. It can be chaired only by a retired judge of the Supreme court.
4. Its origin can be traced back to the pre-independent India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1, 3 and 4 only
- c) 2 and 4 only
- d) 1 and 4 only

Ans) d

Exp) Option d is the correct answer.

Recently, the Supreme Court issued notice to the Centre on **PIL seeking the Law Commission to be declared a 'statutory body'**. The PIL contended that the non-working of the Law Commission is depriving the Centre of the benefit of the law commission's insights on the various aspects of the law.

Statement 1 is correct: Law Commission of India is a non-constitutional and non-statutory body and is constituted by a **notification of the Government of India** to carry out research in the field of law and make recommendations to the Government.

Statement 2 is incorrect: The recommendations of the law commission are not binding on the government even the recommendations were made on the matter referred to it by the Supreme court. The law commission has **taken up various subjects on references made by the Department of Legal Affairs, Supreme Court and High Courts and submitted 277 reports.**

Statement 3 is incorrect: The retired chief justice of the High court can also become a **chairperson of the Law commission.** Retired High Court Chief Justice Rituraj Awasthi has been appointed as the **chairperson of the 22nd law commission of India** which was constituted in 2020. Also **Mr. M. C. Setalvad who is the first chairperson of the law commission was an Attorney General of India.**

Statement 4 is correct: The first Law Commission was established during the British Raj era in 1834. It was established by the **Charter Act of 1833 and was chaired by Lord Macaulay.** In 1955, the first Law Commission of independent India was established for a three-year term. Since then, twenty-one more Commissions have been established.

Source:

[https://lawcommissionofindia.nic.in/#:~:text=Law%20Commission%20of%20India%20is,Government%20\(in%20the%20form%20of](https://lawcommissionofindia.nic.in/#:~:text=Law%20Commission%20of%20India%20is,Government%20(in%20the%20form%20of)

<https://indianexpress.com/article/india/sc-notice-to-centre-on-pil-seeking-law-commission-to-be-declared-statutory-body-7161881/>

Q.36) In the context of Modern Indian history, Consider the following statements regarding uprisings in Ganjam and Gumsur in the first half of 19th century:

1. Strikara Bhanj and Dhananjay Bhanj were the leaders of this uprising.
2. The main cause of the revolt was the resentment caused due to subsidiary alliance arrangement.
3. One of the main Centers of this uprising was in the Northern Circar region.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Ganjam and Gumsur uprising occurred in the Northern Circar region in the late 18th century against British rulers over payment of unjustifiable revenues to them.

Statement 1 is correct: Under Ganjam and Gumsur uprisings, the Northern Circars, Ganjam and its adjoining regions rose in revolt against the British rule. Strikara Bhanj, a zamindar of Gumsur in Ganjam district, refused to pay revenues in 1797. In 1800, he openly rebelled and defied the public authorities.

Dhananjay Bhanj, a son of Strikara Bhanj rose in rebellion for the second time when the British forces occupied Gumsur and Kolaida in November 1835. The revolt greatly reduced the government's authority, but Dhananjay died in December 1835 and his followers continued the resistance.

Statement 2 is incorrect: Subsidiary alliance was not the cause of revolt in the Ganjam and Gumsur. The revolt was against the payment of revenue.

Statement 3 is correct: As mentioned above, the Northern Circars, Ganjam and its adjoining regions rose in revolt against the British rule in the uprisings in Ganjam and Gumsur.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.37) Read the following paragraph carefully:

“This Mughal Emperor was also known as Ali Gauhar. He inherited a crumbling and a rather small Mughal empire. During his reign, the Mughal Empire extended only from Delhi to Palam – a suburb of Delhi. His reign saw two decisive battles—the Third Battle of Panipat (1761) and the Battle of Buxar (1764)”.

The above description is best associated with which of the following Mughal Emperor?

- a) Muhammad Shah
- b) Shah Jahan III
- c) Shah Alam II
- d) Bahadur Shah II

Ans) c

Exp) Option c is the correct answer.

The Mughal Emperor **Shah Alam II** (1760–1806) was also known as Ali Gauhar. During his tenure, the mighty Mughal empire had shrunk and confined only from **Delhi to Palam**. The fortunes of Shah Alam II rarely prospered during his lifetime. He saw two important battles-

- 1) **Third Battle of Panipat (1761):** It was fought between the Maratha Empire and the invading army of Durrani Empire. The Afghans were supported by four key allies in India: the Pashtun Rohillas under the command of Najib ad-Dawlah the Baloch Khanate of Kalat, and the Oudh State under Shuja-ud-Daula as well as elements of the declining Mughal Empire

2) **The Battle of Buxar (1764):** It was a battle fought between the English Forces, and a joint army of the Nawab of Oudh, Nawab of Bengal, and the Mughal Emperor. The battle was the result of misuse of trade privileges granted by the Nawab of Bengal.

The British won the Battle of Buxar and Treaty of Allahabad was signed. Under this treaty, Shah Alam II was taken under the East India Company's protection and resided at Allahabad. He was made to issue a Farman to grant in perpetuity the Diwani (revenue collection) rights in Bengal, Bihar and Orissa. In 1772, the Marathas took him to Delhi where he lived till 1803. In 1803, he again accepted the protection of the English, after the defeat of Daulat Rao Scindia by the English. Afterwards, the Mughal emperor became the pensioner of the English.

Source: Spectrum's A Brief History of Modern India (Page 63, Chapter 4)

Q.38) Consider the following statements regarding Rani Laxmibai's role in the revolt of 1857:

1. She raised a revolt against British rulers to oppose the policy of Doctrine of Lapse.
2. Tantia Tope and Scindia Ruler of Gwalior supported her in the struggle against British.
3. She defeated Sir Hugh Rose in the Battle at Kalpi.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

Rani Lakshmi Bai is remembered for her valour during the Indian Mutiny of 1857–58. During a siege of the fort of Jhansi, she offered stiff resistance to the invading forces and did not surrender even after her troops were overwhelmed.

Statement 1 is correct: Lord Dalhousie, the governor general, had refused to allow Rani Laxmibai's adopted son to succeed to the throne after her husband Raja Gangadhar Rao died, and had annexed the state by the application of the infamous 'Doctrine of Lapse'. Driven out of Jhansi by British forces, she gave the battle cry—"main apni Jhansi nahin doongi" (I shall not give away my Jhansi).

Doctrine of Lapse: It was a formula devised by Lord Dalhousie, governor-general of India (1848–56), to deal with questions of succession to Hindu Indian states.

Statement 2 is incorrect: In her struggle against British, Rani Laxmibai was joined by Tantia Tope, a close associate of Nana Saheb, after the loss of Kanpur. The Rani of Jhansi and Tantia Tope marched towards Gwalior where they were hailed by the Indian soldiers. The Scindia, the local ruler, however, decided to side with the English and took shelter at Agra.

Statement 3 is incorrect: When Jhansi was captured by British troops in June 1858, Lakshmbai fled to Kalpi, joined forces with Tantia Tope, and captured Gwalior fort by defeating the army of the Raja of Gwalior. The Rani, however, was killed in battle and Tantia Tope went into hiding before he was finally caught and hanged in 1859. This signalled the end of the Revolt.

Sir Hugh rose defeated Rani Laxmibai and captured Jhansi in 1858. In his tribute to Rani Laxmibai he said, "Here lay the woman who was the only man among the rebels."

Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.39) Consider the following statements regarding the revolt of Moamarias:

1. The Moamarias were low-caste peasants who followed the teachings of Aniruddhadeva.
2. Jatra Bhagat was one of the key leaders of the revolt of Moamarias.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Moamarias Revolt represents socio-religious strife that ultimately (if not immediately) led to the fall of Ahom Kingdom in Assam.

Statement 1 is correct: The Moamarias were low-caste peasants who followed the teachings of Aniruddhadeva (1553–1624), and their rise was similar to that of other low-caste groups in North India. Their revolts weakened the Ahoms and opened the doors for others to attack the region. For instance, in 1792, the King of Darrang (Krishnanarayan), assisted by his band of burkandazes (the demobilised soldiers of the Muslim armies and zamindars), revolted.

Statement 2 is incorrect: Jatra Bhagat was associated with the Tana Bhagat Movement that happened during 1920–1921. He was not associated with the revolt of the Moamarias that happened in 1769.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.40) With reference to “UNSC Counter-Terrorism Committee”, consider the following statements:

1. It was established by UN Security Council resolution in the wake of the 9/11 terror attacks in the US.
2. It consists of the representatives from all the members of the United Nations.
3. The committee provides technical assistance on counter terrorism directly to the Member States.
4. The decisions of the committee with respect to counterterrorist activities are binding on all the member states of the United Nations.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1, 2 and 3 only
- c) 2 and 4 only
- d) 1, 2 and 4 only

Ans) a

Exp) Option a is the correct answer.

Recently, India has hosted a **special meeting of the United Nations Security Council’s Counter Terrorism Committee (CTC)** to discuss terror-financing through crypto-currency and use of drones in the new-age terrorism. This will be the first such meeting of the UNSC-CTC in India since its establishment in 2001. The Permanent Representative of India (Ruchira Kamboj) to the UN (United Nations) serves as the Chair of the CTC for 2022.

Statement 1 is correct: United Nations Security Council’s Counter Terrorism Committee (CTC) was established by **Security Council resolution 1373** which was adopted unanimously on 28th September 2001 **in the wake of the 9/11 terror attacks** in the US.

Statement 2 is incorrect: The Committee **comprises all 15 Security Council members**. Five permanent members: China, France, Russian Federation, the United Kingdom, and the United States, and ten non-permanent members elected for two-year terms by the General Assembly. **Secretary-General of the UN and presiding officer of the UN General Assembly are not the members of UN CTC.**

Statement 3 is incorrect: The **UNSC Counter-Terrorism Committee do not provide technical assistance directly to Member States**. Rather, they facilitate the delivery of technical assistance, in accordance with

the CTC Policy Guidance on Technical Assistance, through **close engagement with a broad range of donor and provider organizations**.

Statement 4 is incorrect: The decisions of the committee with respect to counterterrorist activities are **non-binding**. The Committee is tasked with monitoring the implementation of resolution 1373 which **requested countries to implement a number of measures** aimed at enhancing their legal and institutional ability to counterterrorist activities.

Source: <https://blog.forumias.com/india-to-chair-counter-terrorism-committee-of-unsct-in-january-2022-after-ten-yrs/>

<https://www.un.org/securitycouncil/ctc/>

Frequently Asked Questions (FAQs) | Security Council – Counter-Terrorism Committee (CTC)

Q.41) Consider the following statements regarding the Treaty of Lhasa, 1904:

1. Lord Curzon was the Viceroy of India when this treaty was concluded.
2. The Treaty of Lhasa mandated Tibet to recognize and accept the border of Sikkim.
3. The treaty provided that England can negotiate with the Tibet only through the mediation of the Chinese government.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Tibet was ruled by a theocracy of Buddhist monks (lamas) under nominal suzerainty of China. The British efforts to establish friendly and commercial relations with Tibet had not yielded any result in the past and a deadlock had been reached by the time of Curzon's arrival in India.

Statement 1 is correct: Lord Curzon served as viceroy of India from 1899 to 1905. The treaty of Lhasa was concluded in 1904. Hence Curzon was the viceroy of India when the Treaty of Lhasa was concluded.

Statement 2 is correct:

Key provisions of the treaty of Lhasa are:

Treaty of Lhasa (1904)

- (a) Tibet would pay an indemnity of 75 lakh rupees at the rate of one lakh rupees per annum;
- (b) as a security for payment, the Indian Government would occupy the Chumbi Valley (territory between Bhutan and Sikkim) for 75 years;
- (c) Tibet would respect the frontier of Sikkim;**
- (d) Trade marts would be opened at Yatung, Gyantse, Gartok; and
- (e) Tibet would not grant any concession for railways, roads, telegraph, etc., to any foreign state, but give Great Britain some control over foreign affairs of Tibet.

Later, on the insistence of the Secretary of State and true to the pledge given to Russia, the treaty was revised reducing the indemnity from Rs 75 lakh to Rs 25 lakh and providing for evacuation of Chumbi valley after three years (the valley was actually evacuated only in January 1908).

Statement 3 is incorrect: The Anglo-Russian convention of 1907 (Not the treaty of Lhasa) provided that the two great powers would not negotiate with Tibet, except through the mediation of the Chinese government.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.42) Consider the following statements with reference to the British policy in India:

1. Forward policy of Auckland implied that it was East India Company's responsibility to protect the boundary of British India from a probable Russian attack.
2. John Lawrence started a foreign policy of 'proud reserve' which was aimed at safeguarding 'spheres of influence'.
3. Lord Curzon created the North-West Frontier Province (NWFP) directly under the control of Government of India.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Primary motive behind establishing relations with Afghan rulers was British quest to search for a scientific frontier from the Indian side. Passes of the north-west seemed to hold the key to enter India. The need was felt for Afghanistan to be under control of a ruler who would be friendly to the British.

Statement 1 is correct: Auckland came to India as the governor general in 1836 and advocated a forward policy. This implied that the Company government in India itself had to take initiatives to protect the boundary of British India from a probable Russian attack. This objective was to be achieved either through treaties with the neighboring countries or by annexing them completely.

Statement 2 is incorrect: Lytton, a nominee of the Conservative government under Benjamin Disraeli (1874–80), became the Viceroy of India in 1876. He started a new foreign policy of 'proud reserve', which was aimed at having scientific frontiers and safeguarding 'spheres of influence'. According to Lytton, the relations with Afghanistan could no longer be left ambiguous.

Statement 3 is correct: Curzon, the viceroy between 1899 and 1905, followed a policy of withdrawal and concentration. British troops withdrew from advanced posts, which were replaced by tribal levies, trained and commanded by British officers. He also encouraged the tribals to maintain peace. He created the North-West Frontier Province (NWFP) directly under the Government of India (earlier, it was under control of the lieutenant-governor of Punjab). Overall, Curzon's policies resulted in a peaceful north-west frontier. Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.43) Which of the following were the major causes of civil uprisings that occurred in India during the British rule?

1. Encroachments on tribal lands by the East India Company.
2. Rapid changes in the land revenue system
3. The ruin of Indian handicraft industries.
4. British interference in religious practices of Indians.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2, 3 and 4 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Civil uprising comprises of those uprisings which were generally led by deposed native rulers or their descendants, former zamindars, landlords, poligars and officials of the conquered kingdoms, or sometimes by religious leaders. The mass support generally came from rack-rented peasants, unemployed artisans, and demobilised soldiers, although at the centre of these uprisings were erstwhile power-wielding classes.

Major Causes of Civil Uprisings

- 1) Colonial land revenue settlements, heavy burden of new taxes, eviction of peasants from their lands, and encroachments on tribal lands by the East India Company. Hence, Statement 1 is correct.
- 2) Under the Company rule, there were rapid changes in the economy, administration, and land revenue system that went against the people. Hence, Statement 2 is correct.
- 3) Several zamindars and poligars, who had lost control over their land and its revenues due to the colonial rule, had personal scores to settle with the new rulers.
- 4) The ego of traditional zamindars and poligars was hurt due to being sidelined in rank by government officials and a new class comprising of merchants and money-lenders.
- 5) The ruin of Indian handicraft industries due to colonial policies impoverished millions of artisans whose misery was further compounded by the disappearance of their traditional patrons and buyers—princes, chieftains, and zamindars. Hence, Statement 3 is correct.
- 6) British interference in religious practices of native people was another cause of these popular rebellion. Revolts like 1857 were the direct outcome of the British interference in the religious matters of the Indian people. When Sati was abolished and Widow Remarriage Act was enacted, many people rose up against the interference of the British in their religious matters. Hence, Statement 4 is correct.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.44) Consider the following statements regarding the Revolt of Raja of Vizianagaram:

1. The primary cause of the revolt was the British annexation of Vizianagaram by applying the 'Doctrine of Lapse'.
2. The Battle of Padmanabhan is associated with this revolt.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Application of Doctrine of Lapse is not associated with the Revolt of Raja of Vizianagaram. In 1758, a treaty was made between the English and Ananda Gajapatiraju, the ruler of Vizianagaram, to jointly oust the French from the Northern Circars. In this mission they were successful. After their victory, the British went back on their words, demanded a tribute from the Raja and asked him to disband his troops. Raja of Vizianagaram did not accept the demands of the British and started the revolt.

Statement 2 is correct: The battle at Padmanabham is associated with this revolt. The raja died in a battle at Padmanabham (in modern Visakhapatnam district in Andhra Pradesh) in 1794 while fighting the British troops.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.45) With reference to challenges in the promotion of electric vehicles (EV) in India, consider the following statements:

1. High capital cost in purchasing of electric vehicle.
2. Insufficient charging infrastructure compared to traditional petrol stations.

3. Lack of constant power supply for EV users in India.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

India offers the world's largest untapped Electric Vehicle market, especially in case of two-wheelers. The government is aggressively promoting EV adoption in India, but it has various challenges associated with it. These include inadequate infrastructure, lack of high performing EVs and high upfront cost.

Statement 1 is correct: 63% of consumers believe that an EV is beyond their budget. Hence, **High capital cost** has always been a major factor in determining the purchase of Electric vehicle.

Statement 2 is correct: The lack of adequate charging infrastructure in our country is a huge barrier in the promotion of electric vehicle. Compared to traditional petrol stations, charging stations are harder to find, normally limited by investment costs. It is anticipated that there will be a shortage of nickel, that may cause manufacturers to use lower-quality mineral inputs, adversely affecting battery performance.

Statement 3 is correct: Power shortage is a huge barrier in the promotion of electric vehicle. There has been increasing trend of power shortages in past six years which aggravated the issue. maximum EV users will be two and three wheelers and this consumer does not get power supply 24/7.

Source: [https://www.thehindu.com/sci-tech/technology/the-road-to-the-future-of-electric-vehicles-in-](https://www.thehindu.com/sci-tech/technology/the-road-to-the-future-of-electric-vehicles-in-india/article65233617.ece#:~:text=While%20the%20government%20is%20aggressively,hindrance%20for%20its%20mass%20adoption.)

[india/article65233617.ece#:~:text=While%20the%20government%20is%20aggressively,hindrance%20for%20its%20mass%20adoption.](https://www.thehindu.com/sci-tech/technology/the-road-to-the-future-of-electric-vehicles-in-india/article65233617.ece#:~:text=While%20the%20government%20is%20aggressively,hindrance%20for%20its%20mass%20adoption.)

Q.46) During the struggle for establishment of supremacy in South India, the English and the French had fought a series of Carnatic Wars. In this context, consider the following statements:

1. The English forces won over the combined forces of Nawab of Carnatic and French in the Battle of St. Thome.
2. The French, led by Governor Duplex, won the Battle of Wandiwash in 1760.
3. The Treaty of Peace of Paris is related to the Third Carnatic War.

Which of the statements given above is/ are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 3 only
- d) None of the above.

Ans) c

Exp) Option c is the correct answer.

Both the British as well as French came to India for trading purposes. Later, their rivalry grew deeper due to involvement into the politics of India.

Statement 1 is incorrect: The **Battle of St. Thome took place 1746** during the First Carnatic War (1740–48). It was perceived as an extension of Anglo–French war in Europe which was caused by Austrian War of Succession. In the Battle of St. Thome, **French got the victory**. The Nawab Anwar-ud-din was supported by British and had a relatively larger army than the French. But under the leadership of Captain Paradise, French emerged victorious.

Statement 2 is incorrect: Governor Dupleix was involved in the Second Carnatic War (1749–54), whereas **Battle of Wandiwash (1760) took place during the Third Carnatic War** (1758–63). The Second Carnatic war was the result of meddling in the internal politics of Hyderabad and Carnatic regions. Dupleix was recalled from India in 1754 due to initial defeat of French army and the heavy cost incurred by the Company due to his political decisions. The **English won the Battle** of Wandiwash (1760) during the Third Carnatic War. It was **led by General Eyre Coot**. French side was led by Count Thomas Arthur de Lally.

Statement 3 is correct: The **Third Carnatic War** (1758–63) concluded with the signing of **Treaty of Peace of Paris**. As per the Treaty, The British restored to the French their factories. However, their **political influence disappeared** after the War. Thereafter, French confined themselves to their small enclaves and to commerce. The Treaty is decisive because now English had become the supreme European power in the Indian sub-continent.

Source: Spectrum's A Brief History of Modern India (Chapter 3)

Q.47) Which of the following statements is correct regarding “misl”, related to the Sikhs?

- Misls were groups of military officers first formed by Maharaja Ranjit Singh.
- Misls were democratic in nature and their administration was based on Gurumatta Sangh.
- Misls were mainly formed to protect Punjab from the invasion of Nadir Shah.
- The Unity of Khalsa weakened due to powerful nature of misls.

Ans) b

Exp) Option b is the correct answer.

Misl refers to major Sikh confederacies that sought to expand Sikh rule across the Panjab.

Statement a is incorrect. These are not formed by Maharaja Ranjit Singh. These are **powerful confederacies of Sikhs which were organized in 12 misls** and operated in different parts of the province.

Statement b is correct. These misls are **democratic in nature** and are based on **principles of equality**, with all members having an **equal voice in deciding the affairs** of misls. The central administration of a misl was based on Gurumatta Sangh which was essentially a political, social and economic system.

Statement c is incorrect. These were formed with the withdrawal of Abdali from the Punjab. And by that time Nadir Shah had already invaded. **These were formed to fill the political vacuum created by the withdrawal of Ahmad Shah Abdali.**

Statement d is incorrect. Unity of Khalsa weakened not due to powerful nature of misls, but due to weakening of democratic nature of misls. **When misl's power got weakened, the spirit of brotherhood and the unity of Khalsa also disappeared** as the powerful chiefs constantly quarreled with one another and set themselves up as independent chieftains.

Source: Class- 12 MODERN India NCERT by Bipin Chandra Chapter-2

Q.48) Which of the following statements best describes the Cartaz System?

- Under the system, British traders had to pay tax to the Mughal emperor for trade in India.
- It was a land revenue system introduced by British government in India.
- It was a sea pass introduced by the Portuguese East India Company in the Indian Ocean.
- It was a system under which Portuguese got right to trade spices from India by land route.

Ans) c

Exp) Option c is the correct answer.

Cartaz System a sea-pass introduced by the Portuguese East India Company in the Indian Ocean region including Bay of Bengal in the early sixteenth century. Traditionally, the Arab and Persian mariners were predominant in the Indian Ocean traffic and by virtue of their supremacy they maintained order and

security in the maritime trade of the region. From the early sixteenth century, the Portuguese superseded the Muslim dominance in the maritime regime of the Indian Ocean. By declaring sovereignty over the Indian Ocean, the Portuguese introduced *cartaz* system as a mark of their authority.

Source: https://en.banglapedia.org/index.php/Cartaz_System

Q.49) “He possessed qualities of an effective administrator and a diplomat. He was conferred the title of ‘Nawab’ by a Mughal emperor. He was the first European to interfere in the internal politics of the Indian rulers and paved the path of European conquest of India. He used the Nawab of Carnatic to forbid the English from waging war in his territories. He is considered the originator of the practice of subsidiary alliance in India.”

The above paragraph best describes which of the following personalities?

- Lord Wellesley
- Warren Hastings
- Joseph Dupleix
- Robert Clive

Ans) c

Exp) Option c is the correct answer.

Joseph Francis Dupleix, born in 1697, was the son of a wealthy Farmer-General of Taxes and Director-General of the Company of the Indies. He possessed qualities of an administrator, a diplomat, and a leader besides having political insight with a broad vision.

- In 1730, Dupleix won his case, and was appointed as governor of Chandernagore.
- In **1741**, he was **appointed as the Director-General of French colonies** in India. Later, he was **conferred the title of Nawab** by the Mughal emperor and the subahdar of Deccan, Muzaffar Jang.
- He **enhanced the defences of Pondicherry** and made it the emporium of commerce in south India.
- The effective diplomacy of Dupleix can be seen from the analysis of the first two Carnatic wars. He used the Nawab of Carnatic to forbid the English from waging war in his territories so that the French settlements at Pondicherry could be protected till the French forces acquired enough strength.
- Dupleix was the **first European to interfere in the internal politics** of the Indian rulers. He **supported Muzaffar Jang for Hyderabad and Chanda Sahib for Carnatic** and his candidates emerged successful and, in return, gave great concessions to Dupleix.
- Dupleix was, in fact, the **originator of the practice of subsidiary alliance** in India. He placed a French army at Hyderabad at the expense of the subahdar.

Source: Modern History, Spectrum, Chapter-3, Pg. 47-48

Q.50) With reference to Glyphosate, consider the following statements:

- It is a broad-spectrum herbicide that can control a range of weeds.
- Indian Government has completely banned the usage of glyphosate by farmers.
- US Environmental Protection Agency recently classified glyphosate as carcinogenic.

Which of the statements given above is/are correct?

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

It is an herbicide used to kill weeds. It is used to kill weeds, especially annual broadleaf weeds and grasses that compete with crops.

Statement 1 is correct: Glyphosate is a broad-spectrum herbicide that can control a wide range of weeds, whether broadleaf or grassy. It is also non-selective, designed to kill all plants encountering it. The chemical cannot ordinarily distinguish between crop and weed. Hence, it can be used in tea or rubber plantations, but not in fields where the crops and weeds are at almost the same level.

Statement 2 is incorrect: The Ministry of Agriculture and Farmers Welfare has **not banned and only restricted its usage**. The spraying of glyphosate and its derivatives shall henceforth only be permitted through pest control operators. The limited usage has been done in normal agricultural crops by virtue of it being a non-selective herbicide.

Statement 3 is incorrect: The US Environmental Protection Agency **has denied any risks to human health from current uses of glyphosate and of it causing cancer**. World Health Organisation although classified glyphosate as “probably carcinogenic to humans”, but this was based on evidence for cancer in experimental animals from “pure” glyphosate. This is opposed to that in humans from real-world exposures through diluted formulations.

Source: <https://indianexpress.com/article/explained/why-centre-has-restricted-use-of-a-herbicide-in-demand-among-farmers-8257175/>

SFG 2023 | LEVEL 2 | Test #20 – Solutions | 

Q.1) Consider the following statements with reference to the reason for growth of militant nationalism during the first decade of the twentieth century:

1. There was an emergence of trained leadership
2. There occurred several international events which demolished the myth of European supremacy
3. Several unfavorable legislations were passed including Indian Universities Act of 1904.
4. There was an increase in the unemployment in the country.

Which of the above given statements are correct?

- a) 1, and 2 only
- b) 1, 3 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

A radical trend of a militant nationalist approach to political activity in India started emerging in the 1890s, and it took a concrete shape by 1905.

Statement 1 is correct: By the dawn of the 20th century, a band of nationalist thinkers had emerged who advocated a more militant approach to political work. These included Raj Narain Bose, Ashwini Kumar Dutta, Aurobindo Ghosh, and Bipin Chandra Pal in Bengal; Vishnu Shastri Chiplunkar and Bal Gangadhar Tilak in Maharashtra; and Lala Lajpat Rai in Punjab. The **new leadership could provide a proper channelization of the immense potential for political struggle which the masses possessed and, as the militant nationalists thought, were ready to give expression to.** This energy of the masses got a release during the movement against the partition of Bengal, which acquired the form of the swadeshi agitation.

Statement 2 is correct: The **defeat of the Italian army by Ethiopians (1896), the Boer wars (1899– 1902) where the British faced reverses, and Japan’s victory over Russia (1905) demolished myths of European invincibility.** Also, the nationalists were inspired by the nationalist movements worldwide—in Ireland, Russia, Egypt, Turkey, Persia, and China. The Indians realised that a united people willing to make sacrifices could take on the mightiest of empires.

Statement 3 and 4 are correct: The **Indian Universities Act of 1904 ensured greater government control of British government over Indian universities,** which it described as factories producing political revolutionaries. While, on the one hand, the spread of education led to an increased awareness among the masses, **on the other hand, the rise in unemployment and underemployment among the educated drew attention to poverty and the underdeveloped state of the country’s economy under colonial rule. This added to the already simmering discontent among the more radical nationalists.**

Source: A Brief History of Modern India (Spectrum), 6th Edition Page no. 274

Q.2) "He advocated widow remarriage and opposed polygamy and child marriage. Instead of depending on the scriptures, he mainly cited medical opinion against child marriage. He wrote a book named 'Bhugol', which is considered as the first science-related book written in Bangla. He also authored the Padarthavidya. He worked as an editor of the Tattvabodhini Patrika."

The above description is related to who among the following?

- a) Behramji Malabari
- b) Raja Ram Mohan Roy
- c) Ishwar Chandra Vidyasagar
- d) Akshay Kumar Datta

Ans) d

Exp) Option d is the correct answer.

Akshay Kumar Datta/Dutta (1820-1886) educationist, social reformer and the chief activist of Adi Brahma Samaj. He was a rationalist and one of the initiators of the Bengal Renaissance. In advocating widow remarriage and opposing polygamy and child marriage, Akshay Kumar was least concerned with searching for any religious sanction or finding out whether they existed in the past. His arguments were mainly based on their noticeable effects on society. Instead of depending on the scriptures, **he cited medical opinion against child marriage**. He used to teach geography and physics at Tathvabodhini Pathashala. As Bangla books on these two subjects were not available at that time, **he wrote two textbooks Bhugol (1841) and Padarthavidya (1857)**. His **Bhugol is the first science-related book written in Bangla**, and through this book Akshay Kumar introduced punctuation marks in the Bangla language. He also wrote Padarthavidya. On 16 August 1843, Tattvabodhini Patrika was launched under the patronization of Debendranath Thakur **with Akshay Kumar Datta as editor**. This paper was the organ of the Brahma Samaj, and its objective was to discuss the Brahma religion and spiritual knowledge.

Source: <https://egyankosh.ac.in/bitstream/123456789/73860/1/Unit-9.pdf>

https://en.banglapedia.org/index.php/Datta,_Akshay_Kumar

Q.3) Which of the following statements is/are correct regarding Aruvippuram Movement?

1. This movement was started to liberate the temples in Kerala from the administrative control of the British.
2. It was started by EV Ramaswamy Naicker among the upper castes of Kerala.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The Aruvippuram/Sree Narayana Guru Dharma Paripalana (SNDP) movement arose from caste conflict. It was started by **Sree Narayana Guru Swamy** (1856- 1928). He began his public activity as a rebel against the Brahmanical tradition. He coined the slogan **one religion, one caste, one God for mankind**.

Statement 1 is incorrect: The Aruvippuram movement was an example of a regional movement born out of **conflict between the depressed classes and upper castes**. Sri Narayana Guru in **Kerala led a lifelong struggle against upper caste domination (and not against Britishers)**. The lower caste people were banned from entering the temples and even using the public roads.

Statement 2 is incorrect: The Aruvippuram movement was started by **Sree Narayana Guru Swamy (and not by EV Ramaswamy Naicker) among the Ezhavas of Kerala**, who were a **backward caste (and not upper caste) of toddy-tappers** and were considered to be untouchables, **denied education and entry into temples**. Sri Narayana Guru was a **saint, philosopher, poet and social reformer**. He focused on education and united lower castes for social justice.

Knowledge Base: Thus, the Aruvippuram Sree Narayana Guru Dharma Paripalana Yogam (in short SNDP) was registered in 1903 under the Indian Companies Act, with Narayana Guru as its permanent chairman, and Kumaran Asan as the general secretary.

Source: Chapter-9: A General Survey of Socio- Cultural Reform Movements, A brief history of modern India by Rajiv Ahir.

Q.4) Consider the following statements regarding the economic critique of British imperialism:

1. R. C. Dutt and Dinshaw Wacha put forward the “drain theory” to explain economic exploitation of India.
2. Early nationalists considered the policy of free trade as a major obstacle to rapid industrial development in India.
3. Indian leadership demanded encouragement to modern industry through tariff protection and direct government aid.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The early nationalists of India analysed the colonial character of British rule in India in great detail. The economic critique produced by them was one of the remarkable achievements of the moderate nationalists.

Statement 1 is correct: The early nationalists, led by Dadabhai Naoroji, **R.C. Dutt, Dinshaw Wacha** and others, carefully analysed the political economy of British rule in India, and put forward the “**drain theory**” to explain British exploitation of India. They opposed the transformation of a basically self-sufficient Indian economy into a colonial economy (i.e., a supplier of raw materials and food stuff, an importer of finished goods and a field of investment for British capital).

Statement 2 is correct: According to early nationalists, a **major obstacle** to rapid industrial development was the **policy of free trade** which was, on the one hand running India's handcraft industries and on the other hand forcing the Infant and underdeveloped modern industries in to a premature and hence unfair and distorted competition which the highly organized and developed industries of the west.

Statement 3 is correct: To mitigate the deprivation characterizing Indian life, the early nationalists demanded severance of India's economic subservience to Britain and development of an independent economy through involvement of Indian capital and enterprise. The early nationalists demanded reduction in land revenue, abolition of salt tax, improvement in working conditions of plantation labour, reduction in military expenditure, and **encouragement to modern industry** through **tariff protection and direct government aid**.

Source: A Brief History of Modern India- 2020 edition, chapter 11

[https://www.deshbandhucollege.ac.in/pdf/resources/1586504125_BA\(P\)-IV-His-EM-lec.pdf](https://www.deshbandhucollege.ac.in/pdf/resources/1586504125_BA(P)-IV-His-EM-lec.pdf)

Q.5) With reference to ‘North Eastern Council’, consider the following statements:

1. It is an executive body under the administrative purview of the Prime Minister's Office (PMO).
2. President nominates the chairman of the council.
3. The council is only an advisory body and cannot allocate funds for development projects in the region.

Which of the statement(s) given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) None

Ans) d

Exp) Option d is the correct answer.

The **North Eastern Council (NEC)** was established in 1971 as a regional planning body for the eight states in the northeastern region of India: Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland,

Tripura, and Sikkim. The Golden Jubilee of the NEC was celebrated in Shillong on the 18th of December 2022.

Statement 1 is incorrect: North Eastern Council is a **statutory body under the administrative purview of Ministry of Development of the North Eastern Region (not PMO)**. North Eastern Council (NEC) is a statutory advisory body constituted under the North Eastern Council Act 1971 and came into being on 7 November 1972 at Shillong.

Statement 2 is incorrect: The **North Eastern Council Act was amended by Parliament in 2002**. The 'North Eastern Areas' now means the area comprising the States of Assam, Manipur, Meghalaya, Nagaland, Tripura, Arunachal Pradesh, Sikkim and Mizoram. The Council comprises of Governors and Chief Ministers of constituent States and three members to be nominated by the President as per clause (iii) of Section 3 of the North Eastern Council (Amendment) Act, 1971. **The Union Home Minister is ex-Officio Chairman and the Minister of State-Independent Charge (MoS(IC)) DoNER is the ex-Officio Vice-Chairman of the NEC (Hence chairperson is not nominated by President)**.

Statement 3 is incorrect: The mandate of North Eastern Council is not just to formulating and coordinating the implementation of development plans and programs for the northeastern states, it also **allocates and utilizes funds for development projects** in the region. The strategy for NEC is to encourage the State Governments to fully leverage funds from the Central Ministries/Central organisations and then use **NEC funds for meeting critical gaps not covered under the Central schemes/programmes**.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1884485>

https://necouncil.gov.in/sites/default/files/NEC%20General%20Guidelines_2020.pdf

<https://necouncil.gov.in/about-us/nec-amendment-act-2002-0>

Q.6) Consider the following statements regarding the Prarthana Samaj:

1. It was founded by Mahadeo Govind Ranade as a precursor of Paramhansa Sabha.
2. It supported women education and monotheism.
3. The samaj directly opposed the Hindu orthodoxy on social issues through violent measures.

Which of the statements given above is/are **incorrect**?

- a) 1 only
- b) 2 and 3 only
- c) 3 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

Prarthana Samaj, (Prayer Society) was established in Bombay in the 1860s. It is a movement for religious and social reform in Bombay, based on earlier reform movements. **A precursor of the Prarthana Samaj was the Paramhansa Sabha, something like a secret society to spread liberal ideas and encourage the breakdown of caste and communal barriers.**

Statement 1 is incorrect: In 1867, Keshab Chandra Sen helped Atmaram Pandurang found the Prarthana Samaj in Bombay. **Mahadeo Govind Ranade joined the samaj in 1870 (he was not a founder member)**. His efforts made the samaj gain an all-India character. Other leaders of the samaj were **R.G. Bhandarkar and N.G. Chandavarkar. A predecessor of the Prarthana Samaj was the Paramhansa Sabha, a secret society to promote liberal ideas and discourage caste barriers.** So, statement 1 is incorrect.

Statement 2 is correct: The Prarthana Samaj emphasised on **monotheism**, but on the whole, the samaj was **more concerned with social reforms** than with religion. The samaj denounced priestly domination and caste distinctions. The samaj focused on **women's education and widow remarriage**.

Statement 3 is incorrect: The samaj relied on education and persuasion and not on confrontation with Hindu orthodoxy (so the samaj was not in confrontation with religious orthodox). The samaj was also focused upon disapproval of the caste system and raising the age of marriage for both males and females. Source: Chapter-9: A General Survey of Socio- Cultural Reform Movements, A brief history of modern India by Rajiv Ahir

Q.7) Consider the following statements about the Revolutionary activities during the first two decades of the 20th century:

1. The revolutionaries followed the methodology of Russian nihilist which involved individual heroic actions.
2. The “Zimmerman Plan” & the “Taxicab dacoities” are related with the Jugantar Party.
3. For promoting the revolutionary activities outside India, “India House” was established in London by Lala Har Dayal.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. The revolutionaries considered creating a violent mass revolution throughout the country but did not find it practical. Therefore, they **opted to follow the footsteps of Russian nihilists or the Irish Nationalists.** This methodology **involved individual heroic action**, such as organizing assassinations of unpopular officials and of traitors and informers among the revolutionaries themselves.

Statement 2 is correct. During the First World War, The **Jugantar Party** arranged to import German arms and ammunitions through sympathizers and revolutionaries abroad which is known as the **“German Plot or The Zimmerman Plan”**. The Jugantar party raised funds through a series of dacoities which came to be known as taxicab dacoities and boat dacoities, so as to work out the plan.

Statement 3 is incorrect. **Shyamji Krishnavarma** started in London in 1905 an Indian Home Rule society- “India House” as a center for Indian students, a scholarship scheme **to bring radical youth from India**, and a journal “The Indian Sociologist”. Revolutionaries such as **Savarkar and Hardayal became the members of India House.**

Source: Spectrum (Page 290, 291 and 292).

Q.8) Which of the following statements is/are correct regarding Bal Gangadhar Tilak and Gopal Ganesh Agarkar?

1. Due to his differences with Tilak, Agarkar resigned from the editorship of ‘Kesari’ and established a separate newspaper called ‘Sudharak’.
2. Tilak believed in reformation of society by Indians themselves whereas Agarkar had no hesitation in taking help from the British.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Gopal Ganesh Agarkar was a proponent of rationalism, equality, and humanism, and believed that education and the press could play a critical role in spreading these ideas. Tilak and Agarkar decided to dedicate their lives to nation building. One way to do this was through education and raising public awareness through the press. **The Deccan Education Society in 1884 and Fergusson College in 1885** was established by these stalwarts of India's freedom struggle.

Statement 1 is correct: Bal Gangadhar Tilak and Gopal Ganesh Agarkar started **two newspapers Kesari in Marathi and Maratha in English in 1881. Agarkar became the editor of Kesari and Tilak that of Maratha.** Due to differences between Agarkar and Lokmanya Tilak, Agarkar resigned from the editorship of Kesari. Therefore, from then he started his own **newspaper Sudharak. Agarkar's Sudharak, like Tilak's Kesari, was available in Marathi,** a language understood by the masses.

Statement 2 is correct: Tilak believed that **Indian society can best be reformed by Indians themselves** and objected to any British interference in reforming Hindu society. **Agarkar was impressed by the democratic tradition of the West and had no hesitation in taking help from the British administration in introducing reforms in India.** Tilak believed that the answers to what ailed us could be found in the evolution of our own traditions. Tilak repeatedly stated that he is not against social reforms per se, but it should not be a top priority of the Indian struggle. Agarkar had no compunctions about borrowing from principles of modernity in the West, if this would help spawn a more progressive Indian society.

Knowledge Base: **Gopal Ganesh Agarkar was an ardent devotee of John Stuart Mill.** He was inspired from the **Age of Enlightenment in Europe** and the writings of Mill, Spencer, Voltaire and Rousseau which made him a proponent of scientific rationalism. His social reform agenda included women liberation, opposition to superstitious rituals, removal of caste discrimination, spread of scientific temperament and promotion of education for both men and women.

Source: <https://theprint.in/theprint-profile/gopal-ganesh-agarkar-is-maharashtras-forgotten-apostle-of-rationalism-look-beyond-tilak/1038248/>

<https://indianhistorycollective.com/the-great-debaters-tilak-vs-agarkar/>

<https://indianliberals.in/hi/content/gg-agarkar-modern-indian-liberal-and-reformer-2/>

<https://egyankosh.ac.in/bitstream/123456789/20638/1/Unit-8.pdf>

Chapter-9: A General Survey of Socio- Cultural Reform Movements, A brief history of modern India by Rajiv Ahir.

Q.9) Consider the following statements regarding Singh Sabha Movement:

1. One of its objectives was to promote modern western education among Sikhs.
2. The Akali Movement was an offshoot of Singh Sabha Movement.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The Singh Sabha Movement was founded at Amritsar in 1873. The movement's aims were the **revival of the Sikh Gurus' teachings.** This movement sought to revive **Sikh doctrine in its pristine purity.** The first unit, formed in Amritsar in 1873. The Singh Sabha Movement concerned itself with **Sikh education and religious matters.**

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Statement 1 is correct: One of the objectives of the Singh Sabha Movement was **to make modern western education available to the Sikhs**. For this objective, a **network of Khalsa schools** was established by the Sabha throughout Punjab. Also, its aim was the establishment of the Khalsa codes of conduct and lifestyle, as taught by the Sikh Gurus.

Statement 2 is correct: The **Akali movement** (also known as **Gurudwara Reform Movement**) was an offshoot of the Singh Sabha Movement. It aimed at **liberating the Sikh gurudwaras from the control of corrupt Udasi mahants** (the post having become hereditary). The government tried its repressive policies against the non-violent non-cooperation satyagraha launched by the Akalis in 1921 but had to bow before popular demands; it passed the **Sikh Gurudwaras Act in 1922**.

Source: https://www.discoversikhism.com/sikhism/singh_sabha.html

<https://www.britannica.com/topic/rahit-nama>

Chapter-9: A General Survey of Socio- Cultural Reform Movements, A brief history of modern India by Rajiv Ahir.

Q.10) With reference to ‘United Nations Biodiversity Conference (COP15), consider the following statements:

1. The conference was held at Montreal, Canada, under the presidentship of China.
2. The conference adopted the Global Biodiversity Framework (GBF) for the sustainable use and sharing of benefits from genetic resources.
3. A Special Trust Fund is established under the Global Environment Facility to support the implementation of the Global Biodiversity Framework.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Convention on Biological Diversity (CBD) is the international legal instrument for “the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources” that has been ratified by 196 nations.

Statement 1 is correct: The **2022 United Nations Biodiversity Conference (COP15) of the Parties to the UN Convention on Biological Diversity (CBD) was planned to be held in April 2022 in Kunming, China, but was postponed**, for a fourth time, to the third quarter of 2022 according to the UN secretariat office on March 29. It was originally scheduled to be held in October 2020, but was delayed due to the COVID-19 pandemic. In June 2022, the UN secretariat for the Convention on Biological Diversity and China’s environment ministry said in separate statements that the meeting was held in **December 2022 in Montreal, Canada, where the secretariat is based, though China would remain the president of the summit.**

Statement 2 is correct: The 15th Conference of Parties (COP15) to the UN Convention on Biological Diversity (CBD) adopted the **Global Biodiversity Framework (GBF)** for sustainable use and a sharing of benefits from genetic resources. GBF features 23 targets to achieve by 2030, including: a) Restoration of 30% of terrestrial and marine ecosystems, b) Reduce to near zero the loss of areas of high biodiversity importance and high ecological integrity, c) Halving global food waste.

Statement 3 is correct: The **Global Environment Facility (GEF)** has been asked to establish in 2023, and until 2030, a **Special Trust Fund** to support the implementation of the GBF. By 2030, the GBF hopes to see

at least \$200 billion raised per year from all sources – domestic, international, public and private – towards implementation of the national action plans.

Source: <https://blog.forumias.com/explained-a-new-global-biodiversity-framework/>

<https://www.unep.org/un-biodiversity-conference-cop-15#:~:text=7%2D19%20December%202022%20in,global%20warming%20to%201.5%20degrees.>

<https://blog.forumias.com/india-pushes-for-new-biodiversity-fund/>

Q.11) Kadambini Ganguly, the first women graduate of Calcutta University, addressed Congress Session in 1890. Who among the following presided this session of the Congress?

- Sir William Wedderburn
- Alfred Webb
- P. Ananda Charlu
- Pherozezshah Mehta

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: Sir William Wedderburn came to India in 1860. During his service in India, his attention was focused on famine, the poverty of the Indian peasantry, the problem of agricultural indebtedness and the question of reviving the ancient village system. His concern with these problems brought him in touch with the Indian National Congress. **He presided over the fourth Congress held in Bombay in 1889.**

Option b is incorrect: Alfred Webb was an Irishman and was the third non-Indian to have presided over the Indian National Congress. He was a member of the British Parliament. **He was the President of the Madras Session of Congress in 1894.**

Option c is incorrect: P. Ananda Charlu started the Triplicane Literary Society in 1884. In 1884 he joined several public workers in Madras and founded the Madras Mahajana Sabha which became the leading public forum for years. In 1885 he was one of the seventy-two delegates to the first session of the Indian National Congress held in Bombay. **He was elected as the President of the Nagpur Session of INC in 1891.**

Option d is correct: Pherozezshah Mehta was a part of the Liberal School of Indian politics. He saw in education the means by which India could modernise itself rapidly. **He presided over the Congress session held in Calcutta (1890)** and was twice elected the President of the Reception Committee when the Congress sessions met in Bombay (1889 and 1904). **Kadambini Ganguly**, the first woman graduate of Calcutta University, addressed the Congress session of 1890 held at Calcutta. It symbolised the **commitment of the freedom struggle to give the women of India their due status in national life.**

Source : <https://www.inc.in/leadership/past-party-presidents/pherozeshah-mehta>

A Brief History of Modern India- 2017 edition, chapter 10

Q.12) With reference to Bharat Mahila Parishad, consider the following statements:

- Pandita Ramabai Saraswati founded Bharat Mahila Parishad.
- It was formed under the parent organization 'National Social Conference'.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

In the ancient and medieval periods women were largely connected only to the family. The educational experiments of the late 19th and early 20th centuries produced a new woman with interests that went beyond the household.

Statement 1 is incorrect: Ramabai Ranade (not Pandita Ramabai Saraswati) founded the Ladies Social Conference (Bharat Mahila Parishad) in 1904 in Bombay. Pandita Ramabai Saraswati founded the Arya Mahila Samaj to serve the cause of women.

Statement 2 is correct: Ladies Social Conference (Bharat Mahila Parishad) was formed under the parent organisation National Social Conference.

Indian (National) Social Conference was founded by M.G. Ranade and Raghunath Rao. It was virtually the social reform cell of the Indian National Congress. Its first session was held in Madras in December 1887.

Source: Microsoft Word - Quadrant-1.docx (infnlibnet.ac.in)

A Brief History of Modern India Chapter 8 Socio-Religious Reform Movements: General Features

Q.13) Consider the following statements regarding the British Committee of the Indian National Congress, established in 1889 in London:

1. Its purpose was to raise awareness about Indian issues among the public in Britain.
2. Dadabhai Naoroji was the first chairman of this committee.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

British committee of the Indian National Congress was established in London in 1889 with India as its organ.

Statement 1 is correct: Its purpose was **to raise awareness of Indian issues to the public in Britain**, to whom the Government of India was responsible. It followed the work of W.C. Bonnerjee and Dadabhai Naoroji, who raised India related issues in the British parliament through the support of radical MPs like Charles Bradlaugh.

Statement 2 is incorrect: William Wedderburn served as the first chairman of the British committee of the Indian National Congress and William Digby as secretary. However, Dadabhai Naoroji spent a substantial portion of his life and income campaigning for India's case abroad.

Source: A Brief History of Modern India- 2020 edition, chapter 11

https://dbpedia.org/page/British_Committee_of_the_Indian_National_Congress

Q.14) Consider the following statements regarding development of modern industries in British India:

1. Britishers aggressively encouraged the growth of Indian steel industry to fulfil the supply gap in the international markets.
2. Heavy industries and power generation were neglected during British period in India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The loss of traditional livelihood was not accompanied by a process of industrialisation in India, as had happened in other rapidly industrialising countries of the time. This resulted in deindustrialisation of India at a time when Europe was witnessing an intensified Industrial Revolution

Statement 1 is incorrect: The British **did not allow the Indian steel industry to grow**. Industries like the Tatas which began to produce steel after a **lot of trouble getting the required permissions** were restricted by being forced to produce a higher standard of steel for British use. The firms were **not able to produce the lower standard of steel** at the same time, so they were left out of the larger market that demanded the lower quality of steel. As restrictions were placed by Britain on Indian steel imports, this steel could only be used in India. Obviously, the **growth of the industry was hampered**.

Statement 2 is correct: The colonial factor caused certain structural and institutional changes. The industrial development was characterised by a lopsided pattern—**core and heavy industries and power generation were neglected**, and some regions were favoured more than the others—causing regional disparities. These regional disparities hampered the process of nation-building.

Source: Economic Impact of British Rule in India Pg 547

Q.15) With reference to ‘Orans of Rajasthan’, consider the following statements:

1. It is the open stretch of land which receives long hours of sunlight and brisk winds.
2. It is the last natural habitat for White Rumped Vulture, a critically endangered bird.
3. Recently, Ministry of Environment, Forest and Climate Change has categorized these lands as deemed forest to protect the loss of biodiversity.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 3 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

Recently, 60 activists came together to create awareness over the longest ‘Oran Bachao Yatra’ and called for urgent action to preserve the sacred groves as lifelines for the desert. A unique 225-km-long yatra taken out through remote villages and hamlets in western Rajasthan for protection of orans or sacred groves.

Statement 1 is correct: Oran lands (sacred groves of Rajasthan) are the **open stretch of land, which receives long hours of sunlight and brisk winds, has become a hub of green energy with windmills and solar photovoltaic dotting it**. But these Orans are also sacred spaces, which are rich in biodiversity and usually include a water body. Communities in Rajasthan have been conserving these Orans for centuries and their lives have been intricately linked around these spaces.

Statement 2 is incorrect: The orans are among the **last natural habitats of the Great Indian bustard (not White Rumped Vulture)**. White Rumped Vulture have habitat from all the Rajasthan. Orans included varieties of grasses making these grasslands home to more than 50 species of birds and animals, including the great Indian bustard, McQueen bustard, chinkara, Indian desert cat, desert fox, etc.

Statement 3 is incorrect: Recently, Central government allotted these ancient traditions lands to various energy companies citing a huge capability for the hub of green energy. Now the villagers and activists are trying to save the sacred land and preserve the biodiversity. In 2018, the Supreme Court had ordered the

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Orans be recorded as 'deemed forests' in the revenue records in the TN Godavarman vs. Union of India case, but **not even one Oran has been recorded as a deemed forest so far.**

Source: Orans: Sacred community-conserved areas in Rajasthan, India - Updates - ICCA Consortium
A 225-km yatra to save the endangered sacred groves of Rajasthan (thehindu.com)

Q.16) Which one of the following statements is **not correct** regarding 'Raja Rammohan Roy and his contributions towards the society'?

- He advocated for Indianisation of superior civil services and separation of the executive from the judiciary.
- The first book published by him was a Persian treatise with an Arabic preface "Tuhfat-ul-Muwahhidin".
- He took the support of Vedas and Upanishads to prove that monotheism was not an original belief of Hindu religion.
- He believed that English-language education was superior to the traditional Indian education system

Ans) c

Exp) Option c is the correct answer.

Raja Ram Mohan Roy (1772 -1833) was an Indian reformer who was one of the founders of the Brahmo Sabha, the precursor of the Brahmo Samaj, a social-religious reform movement in the Indian subcontinent. He was given the **title of Raja by Akbar II**, the Mughal emperor.

Option a is correct: As a political activist, Roy condemned **oppressive practices of Bengali zamindars and demanded fixation of maximum rents**. He also demanded abolition of taxes on tax-free lands. He called for a reduction of export duties on Indian goods abroad and abolition of the East India Company's trading rights. He **demande d the Indianisation of superior services and separation of the executive from the judiciary**. He demanded judicial equality between Indians and Europeans and that trial be held by jury.

Option b is correct: After the death of his father in 1803, Roy moved to Murshidabad where he published his **first book, a Persian treatise with an Arabic preface, "Tuhfat-ul-Muwahhidin"** or "**A Gift to Monotheism**". In addition to acquiring knowledge of the ancient Vedantic literature, he also studied the Tantric works with the aid of Hariharananda Tirthaswami.

Option c is incorrect: Raja Rammohan Roy was **deeply opposed to the caste system** that prevailed in Indian society. A humanist and democrat to the core, he wrote and talked against the caste system. Another important area that concerned him was Hindu theology. **Study of the Vedas and Upanishads gave him ground to show that monotheism was the original Hindu belief and hence he denounced polytheism and idolatry**. In fact, the philosopher did not insist on the creation of a new religion but merely endeavoured to 'purify' the Vedic religion from the crude and most ignorant superstitions.

Option d is correct: Roy supported **education, particularly education of women**. He believed that **English-language education was superior to the traditional Indian education system**, and he opposed the use of government funds to support schools teaching Sanskrit. In 1822, he founded a school based on English education.

Source: Survey of Socio-Cultural Reform Movements ☆ 209
CH.10.pdf (nios.ac.in)

Ram Mohan Roy | Biography, Importance, & Facts | Britannica

Raja Ram Mohan Roy: 'The apostle of a religious revival' | Who Is News, The Indian Express

Welcome to the Official Website of West Bengal Council of Higher Secondary Education : (wbchse.nic.in)

Q.17) M. Viraraghavachari, B. Subramaniya Aiyer and P. Anandacharlu were associated with which of the following associations in the history of Modern India?

- The Madras Mahajan Sabha

- b) The East India Association
- c) The Indian National Association
- d) The Indian League

Ans) a

Exp) Option a is the correct answer.

Option a is correct: The Madras Mahajan Sabha was founded in 1884 by M. Viraraghavachari, B. Subramaniya Aiyer and P. Anandacharlu. It is considered as a predecessor of the Indian National Congress along with other organisations such as Poona Sarvajanik Sabha.

Option b is incorrect: The East India Association was organised by Dadabhai Naoroji in 1866 in London to discuss the Indian question and influence public men in England to promote Indian welfare. Later, branches of the association were started in prominent Indian cities.

Option c is incorrect: Indian Association of Calcutta (also known as the Indian National Association) was founded in 1876 by younger nationalists of Bengal led by Surendranath Banerjee and Ananda Mohan Bose, who were getting discontented with the conservative and pro-landlord policies of the British Indian Association. It was the most important of pre- Congress associations. It aimed to “promote by every legitimate means the political, intellectual and material advancement of the people.”

Option d is incorrect: The Indian League was started in 1875 by Sisir Kumar Ghosh with the object of “stimulating the sense of nationalism amongst the people” and of encouraging political education.

Source: A Brief History of Modern India- 2017 edition, chapter 10

Q.18) Consider the following statements with reference to the features of early nationalists (moderate faction) on the freedom struggle of India:

1. They made the protection of civil rights an integral part of the freedom struggle.
2. They widened the democratic base of the freedom struggle by attracting masses on large scale.
3. They exposed the exploitative character of colonial rule.

Which of the above-given statements is/are correct?

- a) 1, 2 and 3
- b) 1 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

The early nationalists believed in using constitutional methods and channels to press for their demands and to achieve their goals.

Statement 1 is correct: Civil rights included the right to speech, thought, association, and a free press. Through an incessant campaign, the nationalists were able to spread modern democratic ideas, and soon the **defence of civil rights became an integral part of the freedom struggle.**

Statement 2 is incorrect: The early nationalists **did a great deal to awaken the national sentiment, even though they could not draw the masses to them.** They failed to widen their democratic base and the scope of their demands. Nonetheless, they represented the most progressive forces of the time.

Statement 3 is correct: The early nationalists exposed the basically exploitative character of colonial rule, thus undermining its moral foundations. **Their political work was based on hard realities, and not on shallow sentiments, religion, etc.** They were able to establish the basic political truth that India should be ruled in the interest of Indians.

Source: A Brief History of Modern India (Spectrum), 6th Edition Page no. 269

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Q.19) Consider the following statements with reference to the attitude of British towards the Indian National Congress (INC) during moderate phase of freedom struggle:

1. The British Indian government wanted INC to be limited to the social issues.
2. The British officials condemned INC and called them 'disloyal babus'.
3. Lord Curzon expressed an explicit desire to ensure the demise of the INC.

Which of the above given statements is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The British Indian Government was hostile to the Congress from the beginning despite the latter's moderate methods and emphasis on loyalty to the British Crown.

Statement 1 and 2 are correct: The official attitude of the British Indian government stiffened further after 1887 when the government failed to persuade the Congress to confine itself to social issues when the Congress was becoming increasingly critical. The government resorted to open condemnation of the Congress, calling the nationalists "seditious brahmins" and "disloyal babus".

Statement 3 is correct: Lord Curzon was the Viceroy of India from 1899 to 1905. **Lord Curzon stated that "In my belief, Congress is to totter to its fall and one of my great ambitions while in India is to assist it to a peaceful demise".** Curzon was a British Conservative Statesman.

Source: A Brief History of Modern India (Spectrum), 6th Edition Page no. 271

Q.20) With reference to Defense capabilities of India, consider the following pairs:

Ships	Categories
1. INS Vagir	Attack Submarines
2. INS Marmagao	Aircraft carriers
3. INS Vikrant	Destroyers
4. INS Dhruv	Research and tracking vessels

Which of the pairs given above are correct?

- a) 1 and 2 only
- b) 1 and 4 only
- c) 2 and 3 only
- d) 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correctly matched: INS Vagir (S25) is the fifth submarine of the first batch of six Kalvari-class submarines for the Indian Navy. It is a **diesel-electric attack submarine** based on the Scorpène class, designed by French naval defence and energy group Naval Group and manufactured by Mazagon Dock Limited, an Indian shipyard in Mumbai, Maharashtra.

**INS Vagir**

Pair 2 is incorrectly matched: **INS Mormugao** is the second ship of the Visakhapatnam-class **stealth guided-missile destroyers of the Indian Navy**. Its firepower comprises BrahMos surface-to-surface missiles (SSM), Barak-8 surface-to-air (SAM) missiles for a long range of shore and sea-based targets and a 76mm super rapid gun mount. It is built with over 75% indigenous content, the commissioning of INS Mormugao is a shot in the arm for India's self-reliance efforts.

**INS Mormugao**

Pair 3 is incorrectly matched: **INS Vikrant** is an **aircraft carrier** constructed by the Cochin Shipyard Limited (CSL) at Kerala for the Indian Navy. It is the first aircraft carrier to be built in India. It is named Vikrant as a tribute to India's first aircraft carrier, INS Vikrant (1961). Up to 26 Dassault Rafale-M with 4 Kamov Ka-31 or 4 MH-60R multi-role helicopters will fly from INS Vikrant.

**INS Vikrant**

Pair 4 is correctly matched: **INS Dhruv (A40)** is a research vessel and missile range instrumentation ship built by India's Hindustan Shipyard Limited (HSL). The ship can gather electronic intelligence and will be used to track missile and satellites to aid India's strategic weapons and anti-ballistic missiles. It will be jointly operated by National Technical Research Organisation, Defence Research and Development Organisation and the Indian Navy.

Source: Explained | The INS Mormugao and its capabilities - The Hindu

Q.21) Consider the following pairs:

Reform movement	Tenets/features of the movement
1. Faraizi Movement	Aimed at the eradication of social innovations or Un-Islamic practices among the Muslims
2. Ahmadiyya Movement	Its objective was propagating pure teachings of the Quran and keeping alive the spirit of jihad.
3. Deoband Movement	Based on the principles of universal religion of all humanity, opposing jihad and spreading western liberal education among the Muslims.

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- All the three pairs
- None of the pairs

Ans) a

Exp) Option a is the correct answer.

There was a sense of loss of prestige among India's educated and elite Muslims due to the **transfer of power from the Mughals to the British**, and the **replacement of Persian as the language of employment and advancement in the new bureaucracy by English**. The first signs of Muslim Socio-Religious Reform Movements appeared in the **early nineteenth century, led by Sir Syed Ahmed Khan of Bareilly** in Uttar Pradesh and Shariatullah of Bengal. This was due to the **influence of western ideas and modern education, as well as Christian missionaries**. As a result, they dedicated themselves to purifying and strengthening Islam.

Pair 1 is correctly matched: The movement, also called the Faraizi Movement because of its emphasis on the Islamic pillars of faith, was founded by Haji Shariatullah in 1818. **Its scene of action was East Bengal, and it aimed at the eradication of social innovations or un-Islamic practices current among the Muslims of the region and draw their attention to their duties as Muslims**. Under the leadership of Haji's son, Dudu Mian, the movement became revolutionary from 1840 onwards. He gave the movement an organisational system from the village to the provincial level with a khalifa or authorised deputy at every level. Dudu Mian asked his followers not to pay rent to indigo planters. The organisation even established its own Law courts.

Pair 2 is incorrectly matched: The Ahmadiyya forms a sect of Islam which originated from India. It was founded by Mirza Ghulam Ahmad in 1889. It was based on liberal principles. It described itself as the standard-bearer of Mohammedan Renaissance, and **based itself, like the Brahmo Samaj, on the principles of universal religion of all humanity, opposing jihad (sacred war against non-Muslims)**. The movement

spread Western liberal education among the Indian Muslims. They believed in separating the mosque from the State as well as in human rights and tolerance. However, the Ahmadiyya Movement, like Bahaism which flourished in the West Asian countries, suffered from mysticism.

Pair 3 is incorrectly matched: The Deoband Movement was organised by the orthodox section among the Muslim ulema as a revivalist movement with **the twin objectives of propagating pure teachings of the Quran and Hadis among Muslims and keeping alive the spirit of jihad against the foreign rulers.** The Deoband Movement was begun at the Darul Uloom (or Islamic academic centre), Deoband, in Saharanpur district (United Provinces) in 1866 by Mohammad Qasim Nanotavi and Rashid Ahmed Gangohi to train religious leaders for the Muslim community.

Knowledge Base: **The Aligarh Movement emerged as a liberal, modern trend among the Muslim intelligentsia based in Mohammedan Anglo-Oriental College, Aligarh.** It aimed at spreading (i) **modern education** among Indian Muslims without weakening their allegiance to Islam; (ii) **social reforms** among Muslims relating to purdah, polygamy, widow remarriage, women's education, slavery, divorce, etc. The ideology of the followers of the movement was based on a **liberal interpretation of the Quran** and they sought to harmonise Islam with modern liberal culture. They wanted to impart a distinct socio-cultural identity to Muslims on modern lines. Soon, **Aligarh became the center of religious and cultural revival of the Muslim community.**

Source: Chapter-9: A General Survey of Socio- Cultural Reform Movements, A brief history of modern India by Rajiv Ahir.

Q.22) Consider the following statements regarding socio-religious reform movements in South India:

1. The Justice movement in Madras was started mainly to secure representation of the non-brahmins in the legislature.
2. The Self-Respect movement was started by Sri Narayan Guru Swamy.
3. The Vaikom Satyagraha was led by K.P. Kesava for opening of Hindu temples to the untouchables.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Non-Brahminism is a movement in **opposition to caste-based discrimination and hierarchical social order.** The Non-Brahman Movement was begun in many parts of South India. It was begun by the informed and rich non-Brahman classes.

Statement 1 is correct: The Justice movement in Madras Presidency was started by C.N. Mudaliar, T.M. Nair and P. Tyagaraja to secure jobs and representation for the non-brahmins in the legislature. In 1917, **Madras Presidency Association** was formed which demanded separate representation for the lower castes in the legislature.

Statement 2 is incorrect: The Self-Respect movement was started by E.V. Ramaswamy Naicker (and not Sree Narayana Guru Swamy) commonly known as **Periyar**, in the mid-1920s. The movement aimed at nothing short of a **rejection of the Brahmanical religion and culture** which Naicker felt was the prime instrument of exploitation of lower castes. He sought to undermine the position of brahmin priests by **formalising weddings without brahmin priests.**

Statement 3 is correct: In 1924, the Vaikom Satyagraha led by K.P. Kesava, was launched in Kerala demanding the throwing open of Hindu temples and roads to the untouchables. The satyagraha was

reinforced by jathas from Punjab and Madurai. **Mahatma Gandhi undertook a tour of Kerala in support of the movement.**

Source: Chapter-9: A General Survey of Socio- Cultural Reform Movements, A brief history of modern India by Rajiv Ahir

Q.23) With respect to Constitutional Developments in British India, which of the following was/were the features of Indian Councils Act, 1892?

1. The act gave the legislative councils the power of discussing the budget and addressing questions to the executive.
2. It, for the first time, empowered the Viceroy to make rules and orders for the more convenient transaction of business in the council.
3. For the first time, the term 'election' was used in context of selection of some of the non-official members to the council.
4. It provided for the association of Indians with the executive councils of the Viceroy and Governors.

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 and 4 only
- c) 3 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

In 1885, the Indian National Congress was founded. The Congress saw reform of the councils as the "root of all other reforms". It was in response to the **Congress' demand** that the legislative councils be expanded that the number of non-official members was increased both in the central (Imperial) and provincial legislative councils by the **Indian Councils Act, 1892**.

Statement 1 is correct:

The features of **Indian Councils Act of 1892** were:

- 1) It increased the number of additional (non-official) members in the Central and provincial legislative councils but maintained the official majority in them.
- 2) It increased the functions of legislative councils and gave them the **power of discussing the budget and addressing questions to the executive**.
- 3) It provided for the **nomination of some non-official members** of the (a) Central Legislative Council by the viceroy on the recommendation of the provincial legislative councils and the Bengal Chamber of Commerce, and (b) that of the provincial legislative councils by the Governors on the recommendation of the district boards, municipalities, universities, trade associations, zamindars and chambers.

Statement 2 is incorrect: Indian Councils Act of 1861 empowered the Viceroy to make rules and orders for the more **convenient transaction of business in the council**. It also gave a recognition to the 'portfolio' system, introduced by Lord Canning in 1859.

Statement 3 is incorrect: The term '**election**' was **firmly avoided** in the **Indian Councils Act of 1892**, an element of indirect election was accepted in the selection of some of the non-official members.

Statement 4 is incorrect: Indian Councils Act, 1909 provided (for the first time) for the association of Indians with the executive councils of the Viceroy and Governors. **Satyendra Prasad Sinha became the first Indian to join the Viceroy's executive council**. He was appointed as the Law Member.

Source: Spectrum Chapter 26 Constitutional, Administrative and Judicial Developments

Laxmikanth- Historical Background pg 508

Q.24) Consider the following statements:

1. Sudesha Geetham was written by Subramania Bharati to arouse nationalism during Swadeshi Movement.
2. Jagdish Chandra Bose established the Bengal Chemical Swadeshi store in protest of the British as a part of the Swadeshi Movement.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: **Subramania Bharati** was a poet, freedom fighter and social reformer from Tamil Nadu. His *songs on nationalism and freedom of India* helped to rally the masses to support the Indian Independence Movement in Tamil Nadu. He published the sensational “*Sudesa Geethangal*” in 1908 to arouse nationalism during Swadeshi phase.

Statement 2 is incorrect: **Prafullachandra Roy** (not J C Bose) established Bengal Chemical Swadeshi store in protest of the British as a part of the Swadeshi Movement. He established the first modern Indian research school in chemistry (post classical age) and is regarded as the father of chemical science in India.

Source: Chapter 12 Era of Militant Nationalism (1905-1909)

Bengal Chemicals employees protest against Centre's decision to sell major stake (millenniumpost.in)

Q.25) With reference to “World Restoration Flagships”, consider the following statements:

1. It is a part of the United Nations Decade on Ecosystem Restoration.
2. Initiatives under this flagship are eligible for funding from the United Nations.
3. Namami Ganga initiative of India is part of this initiative.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

At the UN Biodiversity Conference (COP15), the United Nations has recognized ten ground-breaking initiatives from across the world for their role in restoring the natural ecosystems. These initiatives are included under World Restoration Flagships.

Statement 1 is correct: **World Restoration Flagship is part of the United Nations Decade on Ecosystem Restoration**, a global movement coordinated by the United Nations Environment Programme (UNEP) and the United Nations Food and Agriculture Organization (FAO). The UN decade on Ecosystem Restoration aims to prevent and reverse the degradation of natural spaces across the planet.

Statement 2 is correct: The initiatives which are part of World Restoration Flagships are eligible to receive **UN-backed promotion, advice or funding**. The United Nations has recognized 10 ground-breaking efforts from around the globe for their role in restoring the natural world and these 10 winning initiatives were unveiled at the UN Biodiversity Conference (COP15) in Montreal.

Statement 3 is correct: **Total 10 initiatives across the world, including Namami Ganga initiative of India, are included in the World Restoration Flagship**. Together, the 10 flagships aim to restore more than 68 million hectares – an area bigger than Myanmar, France or Somalia – and create nearly 15 million jobs.

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Knowledge Base: The ten World Restoration Flagships are Trinational Atlantic Forest Pact (Brazil, Paraguay and Argentina), Abu Dhabi Marine Restoration (UAE), Great Green Wall (African Union), Namami Gange (India), Multi-Country Mountain Initiative (Serbia, Kyrgyzstan, Uganda and Rwanda), Small Island Developing States Restoration Drive (Vanuatu, St Lucia and Comoros), Altyn Dala Conservation Initiative (Kazakhstan), Central American Dry Corridor (Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama), Building with Nature (Indonesia), and Shan-Shui Initiative (China).

Source: <https://www.unep.org/news-and-stories/press-release/un-recognizes-10-pioneering-initiatives-are-restoring-natural-world>

Q.26) Consider the following statements:

1. According to Aurobindo, Swaraj meant some sort of self-government, while for Tilak Swaraj meant complete independence from foreign rule.
2. According to Tilak there could be no social reform, no industrial progress, no fulfillment of national life without Swaraj.
3. According to Aurobindo Ghosh final fulfillment of the Vedantic ideas in politics is the true Swaraj for India.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. For **Tilak**, Swaraj meant some sort of **self – Government**, while for **Aurobindo** it meant **complete independence** from foreign rule.

Statement 2 is correct. According to Tilak Swaraj or self-government is essential for exercise of swadharma. Without swaraj there could be no social reform, no industrial progress, no useful education, no fulfillment of national life.

Statement 3 correct. According to **Aurobindo Ghosh** Swaraj is the fulfillment of ancient life of India under modern conditions, the return of satyuga of National greatness, self- liberation of the people for final **fulfillment of vedantic ideas in politics**, that is the true Swaraj for India.

Source: Spectrum (Page 266 and 272)

Q.27) Consider the following statements regarding the Ghadr Movement:

1. Ghadr revolutionaries were mainly peasants and ex-soldiers.
2. Ghadr party followed mainly the Sikh religious ideology in its strong sense.
3. It published a weekly paper, the Ghadr in English only.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 1 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Ghadar Party was established by the Punjabi Sikhs of the United States and Canada in June 1913. The main aim of the party was to free India from the British Rule.

Statement 1 is correct. The Ghadr Party was a revolutionary group organized around a weekly newspaper 'The Ghadr' with its headquarters at San Francisco. These revolutionaries included mainly **ex-soldiers and peasants** who had **migrated from the Punjab to the USA and Canada** in search of better employment opportunities.

Statement 2 is incorrect: Ghadar party's ideology was **secular in its strong sense**. According to Sohan Singh Bhakna, "We were not Sikhs or Punjabis. Our religion was patriotism".

Statement 3 is incorrect: Ghadr movement published a weekly paper, Ghadar, in **Urdu, Hindi, Punjabi and in other languages of India**.

Source: https://amritmahotsav.nic.in/blogdetail.htm?6/The_Ghadr_Movement
https://www.indianetzone.com/21/ghadar_party.htm

Q.28) Which of the following statements is **incorrect** regarding the Berlin Committee for Indian Independence?

1. It was established in Germany before the World War I by Shyamji Krishna Varma.
2. It aimed to organised an armed invasion of British India.
3. It worked to organise a Provisional Government of India in Kabul.

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

During the First World War, Berlin became an organisational hub for Indian nationalist and revolutionary activities.

Statement 1 is incorrect. Berlin Committee for Indian Independence was established in 1915 by **Virendranath Chattopadhyay, Lala Hardayal and others under Zimmerman Plan**. This organisation was established with the aim to promote the cause of Indian Independence. In the beginning the organisation was called the Berlin-Indian Committee. Later, this Berlin-Indian Committee played an instrumental part in the Hindu-German Conspiracy.

Statement 2 is correct: Revolutionaries aimed to mobilise the Indian settlers abroad to send volunteers and arms to India. It mainly aimed to **incite rebellion** among Indian troops there & to **organize an armed invasion of British India to liberate the country**.

Statement 3 is correct: The committee is also known to have spread missions to Istanbul, Persia, Baghdad, and Kabul to work among Indian troops and Indian prisoners of war and to incite rebellion among Indian troops there & to organize an armed invasion of British India to liberate the country. One mission under **Raja Mahendra Pratap Singh**, Barkatullah and Obaidullah Sindhi went to Kabul to **organise a Provisional Government of India**.

Source: Spectrum Revised edition 2019 chapter-13 page-290, 291

Q.29) Which of the following statements is/are correct regarding the contributions of Dhondo Keshav Karve?

1. He setup the 'Stree Shikshan Samstha' Society for the education of women.
2. He founded the Nishkam Karma Math in Pune.
3. He founded the first women's university in India in 1916.

Select the correct answer using the code given below:

- a) 1 only
- b) 1, 2 and 3
- c) 1 and 2 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Dhondo Keshav Karve (DK Karve), popularly known as **Maharshi Karve**, was a social reformer in India in the field of women's welfare. Karve was a pioneer in promoting widows' education. The Government of India awarded him with the highest civilian award, the Bharat Ratna, in 1958, the year of his 100th birthday. He organized a conference against the practice of devdasi. He started 'Anath balikashram' an orphanage for girls. His intention was to give education to all women and make them stand on their own feet.

Statement 1 is correct: The **Stree Shikshan Samstha society** was also set up by **D K Karve** for women's education. Efforts were made by Professor D.K. Karve in **western India to advocate widow remarriage. Karve himself married a widow** in 1893.

Statement 2 is correct: In 1910, **D K Karve founded the Nishkam Karma Math (Monastery of Disinterested Work) in Pune** with the aim of creating activists who would sacrifice their body, mind and money for public service. He sought to revive Hinduism based on **ancient India's religious texts and concepts of Vedanta** against caste restrictions, oppression, superstition in Hinduism and aimed to overhaul the education system.

Statement 3 is correct: D K Karve was a **pioneer in promoting widows' education**. The **Indian Women's University set up by Professor D.K. Karve in 1916** was one of the outstanding institutions imparting education to women. **Shreemati Nathibai Damodar Thackersey (SNDT) Women's University is the first Women's university in India as well as in South-East Asia**. The first five women graduated in 1921 from this University. **The University Headquarters is in Churchgate Campus, Mumbai.**

Knowledge Base: D K Karve dedicated his life to the upliftment of Hindu widows and became the **secretary of the Widow Remarriage Association**. He **opened a widows' home in Poona** to give the high caste widows an interest in life by providing them with facilities for vocational training.

Source: <https://sndt.ac.in/about-us/founder>

<https://www.coursehero.com/file/p363jboa/Nislikam-Karma-Math-Monastery-of-Disinterested-Work-Pune-1910-People-Associated/>

Chapter-9: A General Survey of Socio- Cultural Reform Movements, A brief history of modern India by Rajiv Ahir.

Q.30) With reference to Public Financial Management System (PFMS), consider the following statements:

1. It is a web based online platform developed by National Payment Corporation of India (NPCI).
2. It tracks expenditure incurred by the Government regarding direct payment to beneficiaries under all Schemes of central government.
3. Currently it is integrated with the Core banking system of all public sector banks in India.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The primary function of the Public Financial Management System (PFMS) today is to facilitate a sound Public Financial Management System for the Government of India by establishing an **efficient fund flow system as well as a payment cum accounting network**. PFMS provides various stakeholders with a real time, reliable and meaningful management information system and an effective decision support system, as part of the Digital India initiative of Government of India.

Statement 1 is incorrect: The Public Financial Management System (PFMS) is a web-based online software application **developed and implemented by the Controller General of Accounts (CGA) (not by National Payment Corporation of India)** Department of Expenditure, **Ministry of Finance**.

Statement 2 is correct: It is true that PFMS tracks expenditure incurred on direct payment to beneficiaries of all schemes. PFMS started during 2009 with the objective of tracking funds released under all **Plan schemes** of Government of India, and real time reporting of expenditure at all levels of Programme implementation. Subsequently, the scope was enlarged to cover direct payment to beneficiaries under all Schemes.

Statement 3 is correct: PFMS is integrated with the Core Banking system to facilitate better financial management in the country. For example, the Government can first validate the account before pushing online payments to almost every beneficiary. At present, PFMS has interface with the **Core Banking System (CBS) of over 300 Banks, including all Public Sector Banks**, all Regional Rural Banks, major private sector banks, Reserve Bank of India, India post and Cooperative Banks

Source: <https://cga.nic.in/Page/Public-Finance-Management-System-PFMS.aspx>

<https://pfms.nic.in/NewDefaultHome.aspx>

Q.31) Consider the following statements regarding Indian Association of Calcutta:

1. It was formed in 1866 by superseding the East India Association.
2. It was led by Surendranath Banerjea and Ananda Mohan Bose.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The Indian Association of Calcutta was the most important of pre- Congress associations. It aimed to “promote by every legitimate means the political, intellectual and material advancement of the people.”

Statement 1 is incorrect: The Indian Association of Calcutta was formed in 1876. It is also known as the Indian National Association and superseded the Indian League (and not East India Association). Its main objectives were–

- (a) To create a strong public opinion on political questions, and
- (b) To unify Indian people in a common political programme.

Statement 2 is correct: Indian Association of Calcutta was founded by younger nationalists of Bengal led by Surendranath Banerjea and Ananda Mohan Bose, who were getting discontented with the conservative and pro-landlord policies of the British Indian Association.

Source: A Brief History of Modern India- 2017 edition, chapter 10

Q.32) Arrange the following organisations in the correct chronological order based on their year of establishment:

1. The Poona Sarvajanik Sabha
2. The Bombay Presidency Association
3. The Indian League

Select the correct answer using the codes given below:

- a) 3-2-1
- b) 3-1-2
- c) 1-3-2
- d) 1-2-3

Ans) c

Exp) Option c is the correct answer.

The correct chronology is option c i.e., 1-3-2

Option 1: The **Poona Sarvajanik Sabha** was founded in **1867** by **Mahadeo Govind Ranade** and others, with the object of serving as a bridge between the government and the people.

Option 3: The **Indian League** was started in **1875** by **Sisir Kumar Ghosh** with the object of “stimulating the sense of nationalism amongst the people” and of encouraging political education.

Option 2: The **Bombay Presidency Association** was started by **Badrudin Tyabji, Pherozshah Mehta** and **K.T. Telang** in **1885**.

Source: A Brief History of Modern India- 2017 edition, chapter 10

Q.33) Consider the following statement with reference to the Partition of Bengal:

1. The British government's decision to partition Bengal was made public in 1903.
2. S N Banerjea and K.K. Mitra were among the moderate leaders of anti-partition movement.
3. By partitioning Bengal, the British wanted to promote Muslim communalists to counter the Congress and the national movement.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The **Partition of Bengal** in 1905 was a significant event that spurred the nationalist movement in the country.

Statement 1 is correct: The **British government's decision to partition Bengal had been made public in December 1903**. The idea was to have two provinces: Bengal comprising Western Bengal as well as the provinces of Bihar and Orissa, and Eastern Bengal, and Assam. Bengal retained Calcutta as its capital, while Dacca became the capital of Eastern Bengal. The official reason given for the decision was that Bengal, with a population of 78 million (about a quarter of the population of British India), had become too big to be administered.

Statement 2 is correct: In the period 1903–05, **the anti-partition movement was led by men like Surendranath Banerjea, K.K. Mitra, and Prithwishchandra Ray**. The methods adopted were petitions to the government, public meetings, memoranda, and propaganda through pamphlets and newspapers such as Hitabadi, Sanjibani, and Bengalee. Their objective was to exert sufficient pressure on the government through an educated public opinion in India and England to prevent the unjust partition of Bengal from being implemented.

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Statement 3 is correct: Easter half of the partitioned Bengal was to be a Muslim majority province. Trying to woo the Muslims, Curzon, the viceroy at that time, argued that Dacca could become the capital of the new Muslim majority province, which would provide them with a unity not experienced by them since the days of old Muslim viceroys and kings. Thus, it was clear that the government was up to its old policy of **propping up Muslim communalists to counter the Congress and the national movement**
 Source: A Brief History of Modern India (Spectrum), 6th Edition Page no. 277

Q.34) Consider the following statements about differences between Moderates and Extremists during India's struggle for freedom:

1. Extremists took ideological inspiration mainly from European history whereas Moderates took ideological inspiration only from Indian history and culture.
 2. Extremists accepted 'Providential Mission Theory' while moderates rejected it.
 3. Extremists mainly professed loyalty to the British Crown while Moderates vehemently rejected it.
- Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 only
- d) None

Ans) d

Exp) Option d is the correct answer.

There were several commonalities between Moderates and extremists, but there were also key differences between them as well.

Statement 1 is incorrect: Ideological inspiration of **Moderates were drawn from the western liberal thought** and European history. While on the other hand, the **Ideological inspiration of extremists were drawn from Indian history**, cultural heritage, and Hindu traditional symbols.

Statement 2 is incorrect: Many in Britain believed that their conquests in India had a providential purpose, and that imperial Britain had been called by God to Christianize India through an alliance of Church and empire and bring social justice. **Extremists rejected the 'providential mission theory'** as an illusion. Moderates believed that political connections with Britain to be in India's social, political, and cultural interests.

Statement 3 is incorrect: Moderates professed loyalty to the British Crown. While on the other hand, the **extremists believed that the British Crown was unworthy of claiming Indian loyalty.**

Source: A Brief History of Modern India (Spectrum), 6th Edition Page no. 275

Q.35) With reference to Price Monitoring Division, consider the following statements:

1. The division was established under the Essential commodities Act, 1995 to regulate the prices of essential goods.
2. The Union Government provides financial grants to States to strengthen the Price Monitoring Centres.
3. The prices of Sugar, Groundnut oil and Salt are monitored by this division.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 3 only

Ans) c

Exp) Option c is the correct answer.

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Statement 1 is incorrect: Price Monitoring Division (PMD) was not established under the Essential Commodities Act, 1995. PMD is a division of the Department of Consumer Affairs, Ministry of Consumer Affairs, responsible for monitoring prices of selected essential commodities. The activities of the division include monitoring of the retail and wholesale prices, and spot and future prices of selected essential commodities on a daily basis.

Statement 2 is correct: It is true that Union Government i.e., the Department of Consumer Affairs, Ministry of Consumer Affairs provides financial grants to States to strengthen Price Monitoring Centres at States. Such grants will be released only through Public Financial Management System and those grants should be used by the states only for specified purposes.

Statement 3 is correct: It is true that prices of Sugar, Groundnut oil and Salt are some of the items monitored by this division. PMC monitors prices for 22 essential commodities (Rice, Wheat, Atta, Gram Dal, Tur (Arhar) Dal, Urad Dal, Moong Dal, Masur Dal, Sugar, Gur, Groundnut Oil, Mustard Oil, Vanaspati, Sunflower Oil, Soya Oil, Palm Oil, Tea, Milk, Potato, Onion, Tomato and Salt) based on data collected from 340 market centres spread across the country.

Source: <https://consumeraffairs.nic.in/price-monitoring-cell/price-monitoring-cell>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1880537#:~:text=50%25%20will%20be%20funded%20by%20State%20government%20and%2050%25>

Q.36) Consider the following statements regarding Swami Vivekananda:

1. Swami Vivekanand joined Keshab Chandra Sen's Nava Vidhan.
2. He authored a book titled "Women of India".
3. He founded Ramakrishna Mission to preach ideas of his guru.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Narendranath Datta (1862-1902), who later came to be known as **Swami Vivekananda** spread Ramakrishna's message and tried to reconcile it to the needs of contemporary Indian society. **He emerged as the preacher of neo-Hinduism. The teachings of the Upanishads and the Gita and the examples of the Buddha and Jesus are the basis of Vivekananda's message to the world about human values.** He subscribed to the Vedanta which he considered a fully rational system with a superior approach. At the **Parliament of Religions held at Chicago in 1893, Swami Vivekananda called for a blend of the materialism of the West and the spiritualism of the East** into a new harmony to produce happiness for mankind.

Statement 1 is correct: In 1880 Swami Vivekanand joined Keshab Chandra Sen's Nava Vidhan, which was established by Sen after meeting Ramakrishna. He became a member of a Freemasonry lodge "at some point before 1884" and of the Sadharan Brahmo Samaj in his twenties, a breakaway faction of the Brahmo Samaj led by Keshab Chandra Sen and Debendranath Tagore. From 1881 to 1884, he was also active in Sen's Band of Hope, which tried to discourage youths from smoking and drinking.

Statement 2 is correct: Vivekananda wrote a book titled **Women of India to describe the contemporary position of the women in India.** Swami Vivekananda also referred to the stature and glory of Indian women on several other occasions that are presented in this book. Raja-Yoga, Karma Yoga: The Yoga of Action, Meditation and Its Methods, Jnana-Yoga, Vedanta: Voice of Freedom, My India: The India Eternal, Powers of The Mind, Essentials of Hinduism, Living at the Source, My Idea of Education, Work and Its Secret, Steps

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to Realisation, To the Youth of India, Pearls of Wisdom, Life after Death, The East and the West, Religion of Love are some other books written by him.

Statement 3 is correct: The Ramakrishna Mission is a Hindu religious and spiritual organization that is at the heart of the Ramakrishna Movement, also known as the Vedanta Movement. **The mission was created on May 1, 1897, by Ramakrishna Paramhansa's (1836-1886) principal follower Swami Vivekananda,** and is named after and inspired by the Indian spiritual Guru Ramakrishna Paramahansa. The organization primarily promotes Advaita Vedanta, a Hindu philosophy, as well as four yogic ideals: Jnana, Bhakti, Karma, and Raja yoga.

Source: Chapter-9: A General Survey of Socio- Cultural Reform Movements, A brief history of modern India by Rajiv Ahir

Q.37) Consider the following statements with reference to the Militant School of thought and their leaders:

1. After the partition of Bengal, Bipin Chandra Pal started the 'Bande Mataram' Newspaper.
2. Lala Lajpat Rai founded the 'Servant of the People Society' to enlist and train national missionaries for the service of the motherland.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

As the counter of the early nationalists, militant nationalism spread rapidly across several parts of the country.

Statement 1 is correct: In 1906, after a year of partition of Bengal, Bipin Chandra pal started the nationalist daily paper-Bande Mataram (Bande Mataram's Paris publication was started by Madam Bhikaji Cama).

Statement 2 is correct: Servants of the People Society was founded by Lala Lajpat Rai in 1921 at Lahore, which was inaugurated by Mahatma Gandhi. The object of the Society is to enlist and train national missionaries for the service of the motherland. It is their duty to work for the educational, cultural, social, economic and political advancement of the country under the supervision of the Society.

Source: https://loksabhadocs.nic.in/Refinput/eprofiles/English/27052022_152305_1021206200.pdf

<https://sops.in/>

<https://inc.in/congress-sandesh/tribute/lala-lajpat-rai-28th-january-1865-17th-november-1928-1>

<https://amritmahotsav.nic.in/district-repository-detail.htm?13351>

Q.38) Consider the following statements:

1. The Anushilan Samiti was founded by Promotha Mitter.
2. Kal and Sandhya were the two secret societies working in Bengal during 1900s.
3. Barrah Dacoity was organised by Khudiram Bose in 1914.

Which of the statements given above is/are correct?

- a) 1, 2 and 3
- b) 1 and 2 only
- c) 1 only
- d) 3 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: The Anushilan Samiti was one of the secret revolutionary organisations. The purpose of the Samiti was to propound revolutionary violence as a means to end British colonialism in India. It was established in the year **1902 by Promotha Mitter**. The Samiti had two prominent and somewhat independent arms in the East and West Bengal identified as the Dhaka Anushilan Samiti centred in modern day Bangladesh and the Jugantar group, situated in erstwhile Calcutta. The members of Anushilan Samiti were **primarily school and college students** who belonged to the Hindu Bhadrakalok or the upper-class Bengali households.

Statement 2 is incorrect: Kal in Maharashtra and Sandhya in Bengal **were the newspapers advocated revolutionary terrorism after 1905.**

Statement 3 is incorrect: In 1908, Barrah dacoity was organised by **Dacca Anushilan under Pulin Das** to raise funds for revolutionary activities.

Source: https://www.indianetzone.com/21/anushilan_samiti.htm

Spectrum Revised edition 2019 chapter-13 page- 283, 284 ,285

Q.39) Consider the following description:

“He set up Swadesh Bandhab Samiti to propagate the Swadeshi Movement and led the Muslim peasants of Barisal in their protests. The Partition of Bengal drew him to the Swadeshi movement. He attempted reconciliation between the groups of Moderates and Extremists.”

Which among the following leader of the freedom struggle is described above?

- Romesh Chandra Dutta
- Ashwini Kumar Dutta
- Praful Ray
- Aurobindo Ghosh

Ans) b

Exp) Option b is the correct answer

Ashwini Kumar Dutt was a schoolteacher who set up Swadesh Bandhab Samiti to propagate the Swadeshi Movement and led the Muslim peasants of Barisal in their protests. Swadesh Bandhab Samiti of Ashwini Kumar Dutta emerged as a very popular and powerful means of mass mobilization. He was attracted to the Swadeshi movement due to the partition of Bengal. He was also educationist, philanthropist, and also a social reformer. When the moderates and the extremists parted ways in the Surat session, he attempted a reconciliation between the two groups. In 1908, the government of the newly formed Eastern Bengal and Assam banned the Swadesh Bandhab Samiti and deported him to the United Provinces where he was interred at the Lucknow jail. After his release in 1910, he concentrated on sustaining the Brojomohun School and Brojomohun College.

Source: A Brief History of Modern India (Spectrum), 6th Edition Page no. 843, 623

Q.40) In order to strengthen the regulatory framework of Urban Cooperative Banks (UCBs), the Reserve Bank of India (RBI) recently recategorized UCBs into four categories. In this context, which of the following statement/s is/are correct?

- The framework is applicable to all Primary Urban Cooperative Banks in India.
- This classification of UCBs is based on their credit risk.
- RBI's supervisory tool called Prompt Corrective Action (PCA) framework is applicable to all UCBs.

Which of the statement(s) given above is/are correct?

- 1 only
- 1 and 2 only
- 2 and 3 only
- 3 only

Ans) a

Exp) Option a is the correct answer.

Recently the Reserve Bank of India (RBI) announced a four-tiered regulatory framework for categorisation of Urban Cooperative Banks (UCBs), while the existing regulatory framework classifies UCBs into two tiers Tier I and Tier II. This new four tier categorisation is based on the recommendation of the Expert Committee on Urban Co-operative Banks (Chairman - Shri N. S. Vishwanathan,) constituted by RBI.

Statement 1 is correct: It is true that this new framework is applicable to all Primary (Urban) Co-operative Banks in India. Primary Cooperative Banks, popularly known as Urban Cooperative Banks (UCBs) are cooperative societies registered under provisions of the respective State Cooperative Societies Act or Multi-state Cooperative Societies Act, 2002.

Statement 2 is incorrect: The classification of Urban Cooperative Banks (UCBs) into four categories is based on the size of deposits of the UCBs (not based on their credit risk). The UCBs have been categorised into following four tiers for regulatory purposes:

- (a) Tier 1 - All unit UCBs and salary earners' UCBs (irrespective of deposit size), and all other UCBs having deposits up to ₹100 crore;
- (b) Tier 2 - UCBs with deposits more than ₹100 crore and up to ₹1000 crore;
- (c) Tier 3 - UCBs with deposits more than ₹1000 crore and up to ₹10,000 crore;
- (d) Tier 4 - UCBs with deposits more than ₹10,000 crore.

Statement 3 is incorrect: Prompt Corrective Action (PCA) Framework, a supervisory tool of RBI does not apply to Cooperative banks in India. Rather a Supervisory Action Framework (SAF) (similar to PCA) seeks to ensure expeditious resolution of financial stress faced by some of the UCBs. The parameters used by SAF are similar to PCA and they are Net Non-Performing Assets (NPAs), Return on assets and Capital to Risk Weighted Assets Ratio (CRAR) of UCBs.

Source:

<https://rbidocs.rbi.org.in/rdocs/notification/PDFs/NOTI144A9762C659ECF4F54AFC9B1CF131D5E23.PDF>

<https://www.thehindubusinessline.com/money-and-banking/rbi-tightens-supervisory-action-for-urban-co-operative-banks/article30495833.ece>

Q.41) Dayananda Saraswati was founder of the Arya Samaj. With reference to him, which of the following statements are correct?

- 1. His vision of India included classless but not casteless society.
- 2. Satyarth Prakash is his famous work in which he published his views.
- 3. He was critical about the escapist Hindu belief in Maya.
- 4. He considered Vedas to be 'India's Rock of Ages'.

Select the correct answer using the codes given below:

- a) 2 and 3 only
- b) 1 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2, 3, and 4

Ans) c

Exp) Option c is the correct answer.

Swami Dayanand Saraswati was a socio-religious leader of India who left deep impact on the Indian society. He founded the Arya Samaj that brought about changes in the religious perception of Indians. He voiced his opinions against idolatry and the pointless emphasis on empty ritualism, and man-made dictates that women are not allowed to read the Vedas.

Statement 1 is incorrect. Dayananda's vision of India included **classless and casteless society**, a united India (religiously, socially and nationally), and an India free from foreign rule, with Aryan religion being the common religion for all.

Statement 2 is correct. Dayananda's views were published in his famous work, **Satyarth Prakash (The True Exposition)**.

Statement 3 is correct. He strongly **criticized the escapist Hindu belief in Maya (illusion)** as the running theme of all physical existence and the aim of human life as a struggle to attain Moksha through escape from this evil world to seek union with God.

Statement 4 is correct. He took inspiration from the Vedas and **considered them to be 'India's Rock of Ages'**, the infallible and the true original seed of Hinduism. **He gave slogan 'Back to the Vedas'**.

Source: A brief history of modern India (Spectrum), Unit 4, chapter 9, page no. 235 and 236

Q.42) Consider the following statements with reference to the Extremists' Program of Swadeshi Movement:

1. The Extremists gave a call for passive resistance.
2. They called for the boycott of government schools and colleges.
3. They asked for boycott of the courts and the legislative councils as well.
4. Their program included non-payment of taxes to the government.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1, 3 and 4 only
- c) 1, 2 and 3 only
- d) 2, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Statement 1, 2, and 3 are correct: Emboldened by Dadabhai Naoroji's declaration at the Calcutta session (1906) that self-government or swaraj was to be the goal of the Congress, the Extremists gave a call for passive resistance in addition to swadeshi and boycott which would include a boycott of government schools and colleges, government service, courts, legislative councils, municipalities, government titles, etc.

Statement 4 is incorrect: The militant nationalists put forward several fresh ideas at the theoretical, propaganda, and programme levels including Boycott of Foreign Goods, Public Meetings and Processions Corps of Volunteers or 'Samitis', Imaginative use of Traditional Popular Festivals and Melas, Programme of Swadeshi or National Education, Swadeshi or Indigenous Enterprises. **However, there was no program of non-payment of taxes to the government as a part of Extremists' Program of Swadeshi Movement.**

Source: A Brief History of Modern India (Spectrum), 6th Edition Page no 279

Q.43) Consider the following statements regarding the freedom fighter Sachin Sanyal:

1. He was one of the founders of the Hindustan Republican Association.
2. He established a branch of an organization called Anushilan Samiti in Patna.
3. During his imprisonment in Bengal, he penned his book, 'Bandi Yatri'.
4. He opposed Gandhi's gradual approach of non-violence as the way forward for the freedom struggle.

Which of the statements given above are correct?

- a) 1, 2 and 4 only
- b) 1, 3 and 4 only
- c) 1 and 2 only
- d) 1, 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. Sachin Nath Sanyal, a hardcore nationalist and freedom fighter, **was one of the founders of a revolutionary organization, Hindustan Republican Association (HRA), which later in 1928 became the Hindustan Socialist Republican Association (HSRA).** The top priority of HSRA was to use arms, force, and other stringent measures to resist British rule in India.

Statement 2 is correct. Sanyal was the pivotal force in awakening revolutionary ideas during the British Raj in India, and it all began in 1913. During this period, **he established a branch of an organization called the Anushilan Samiti in Patna.** This outfit supported violent measures against British rule in India and was a conglomeration of local youths from akharas (gyms).

Statement 3 is incorrect. Sanyal was believed to be the highest-ranking leader of India's revolutionary movement, after the departure of Bose to Japan. He was also a part of the Ghadar party conspiracy, where the plan was to smuggle in large scale arms and ammunitions to India to initiate an anti-British uprising across the nation. Sanyal was arrested and a life sentence was handed down to him for his involvement in the conspiracy. **During his imprisonment at Cellular jail in the Andaman and Nicobar Island (NOT in Bengal), he penned his book, "Bandi Jeevan" in 1922.**

Statement 4 is correct. An interesting narrative is the infamous argument between Sanyal and Gandhi ji, published in 'Young India'. The discussion related to issue of violence and Nonviolence. It is said that while on one hand, Sanyal vehemently opposed Gandhi's gradual approach, Gandhi on other hand, countered him by reiterating that non-violence was the only sensible way forward.

Source : <https://indianculture.gov.in/node/2800915>

Q.44) Consider the following statements about the Ramosi Uprising:

1. The Ramosis were the hill tribes of Western Ghats who were employed by Maratha administration.
2. Chittur Singh and Babu Trimbakji Sawant were the main leaders related to the Ramosi uprising.
3. The main reason for Ramosi uprising was the British policies related to the famine of 1822.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. The Ramosis, were the hill tribes of Western Ghats who were employed by the Maratha administration and had not reconciled to British rule and British pattern of administration.

Statement 2 is correct. The Ramosi uprising took place in 1822 under Chittur Singh and they plundered the country around Satara. Again, there were eruptions in 1825-26 under Umaji Nayak of Poona and his supporter Babu Trimbakji Sawant, and the disturbances continued till 1829.

Statement 3 is incorrect. The Ramosis revolted against the British policy of annexation and not for famines of 1822. After the annexation of the Maratha territories by the British, the Ramosis, who had been employed by the Maratha administration, lost their means of livelihood. Hence, they revolted against the Britishers.

Source: Spectrum page no. 163

Q.45) Which of the following statements regarding the Paris Club is/are correct?

1. It is an informal group of official creditors exclusively supporting technological solutions to combat climate change.

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2. Representatives of international institutions like IMF and World Bank are observers of the club.
3. India is a permanent member of the Paris Club.

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 2 and 3 only
- c) 2 only
- d) 1 only

Ans) c

Exp) Option c is the correct answer.

The Paris Club will provide financial assurances to the IMF on Sri Lanka's debt.

Statement 1 is incorrect: The Paris Club is an informal group of official creditors whose role is to find coordinated and sustainable solutions to the payment difficulties experienced by debtor countries. As debtor countries undertake reforms to stabilize and restore their macroeconomic and financial situation, Paris Club creditors provide an appropriate debt treatment. Paris Club creditors provide debt treatments to debtor countries in the form of rescheduling, which is debt relief by postponement or, in the case of concessional rescheduling, reduction in debt service obligations during a defined period (flow treatment) or as of a set date (stock treatment). **The Club is not associated with providing exclusive supporting technological solutions to combat climate change.**

Statement 2 is correct: Representatives of international institutions like IMF, World Bank, OECD, UNCTAD, European Commission, African Bank of development, Asian Bank of development, European Bank for Reconstruction and Development, Inter-American Bank of development are one of the 3 categories of observers of Paris Club. Observers attend a negotiation meeting but do not participate in the negotiation itself and do not sign the agreement that formalizes the result of the negotiation.

Statement 3 is incorrect: India is one of the Ad Hoc Participants and not one of the 22 permanent member countries of the Paris Club which include US, UK and Russia.

Source: <https://clubdeparis.org/en>

Q.46) With reference to the National movement in India, Consider the following statements with respect to Vinayak & Ganesh Savarkar:

1. They founded a secret society by the name, "Mitra Mela".
2. They founded Abhinav Bharat society influenced from Mazzini's 'Young Italy' Movement.
3. They assassinated Curzon Wylie, who was the India office bureaucrat residing in London.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. Vinayak Damodar Savarkar along with his brother Ganesh Damodar Savarkar organized Mitra Mela, a secret society, in 1899. This society influenced the members to fight for "absolute political independence" of India. It merged with Abhinav Bharat in 1904.

Statement 2 is correct. The Abhinav Bharat society was founded by Vinayak Damodar Savarkar and his brother Ganesh Damodar Savarkar in Nasik in 1904. The organization's name is derived from Giuseppe Mazzini's political movement, "Young Italy".

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Statement 3 is incorrect. Neither Vinayak Damodar Savarkar nor did Ganesh Damodar Savarkar assassinated Curzon Wylie, who was the India office bureaucrat residing in London. It was Madan Lal Dhingra who assassinated the India office bureaucrat, Curzon Wylie, in London.

Source: <https://cmsadmin.amritmahotsav.nic.in/district-repository-detail.htm?11408> and Spectrum

Q.47) With reference to Indian freedom struggle, consider the following statements regarding revolutionary leader Ajit Singh:

1. He was associated with the revolutionary activities in Bengal.
2. He established Bharatmata society and published a journal called “Bharat Mata”.
3. In 1907, he was deported to Mandalay jail in Burma.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. Sardar Ajit Singh was the uncle of Bhagat Singh (also an inspiration to him) and was an early protester in Punjab region (not Bengal), who challenged British rule and openly criticized the Indian colonial government and the anti-farmers Laws. He was active in urging non-payment of revenue and water rates among Chenab colonists.

Statement 2 is correct. Ajit Singh founded the Bharat Mata Society, which was centered around Lahore aiming to mobilize the unrest (people’s anger over the Farm Laws) into a revolt against the British Government. Many young revolutionaries like Sufi Amba Prasad, Lal Chanda Falak, Kishan Singh and Lala Ram Sarandas were among the members of Bharat Mata Society. Sardar Ajit Singh also published a journal by the name Bharat Mata, later it was compiled in a book with the same name ‘Bharat Mata’

Statement 3 is correct: In 1907, Ajit Singh was arrested and deported to Myanmar’s Mandalay jail for leading an agitation for peasant rights, popularly known as ‘Pagri Sambhal Jatta’, which planned to commemorate the 50th anniversary of 1857, the first war of Independence. Singh, alongside Congress leaders, mobilized peasants against two new colonial laws, the Colonization Act and the Doab Bari Act. These laws, instead of providing ownership of land, reduced the status of the peasants to sharecroppers.

Source: Spectrum (page – 294 and 295)

<https://thewire.in/history/sardar-ajit-singh-freedom-fighter-who-died-the-day-independent-india-was-born>

Q.48) Consider the following pairs:

Conspiracy Cases	Leader(s) associated with the cases
1. Alipore Conspiracy Case	S. A. Dange
2. Nasik Conspiracy Case	Anant Laxman Kanhere

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- | | |
|---------------------------------|-------------------------------------|
| 3. Meerut
Conspiracy
case | Khudiram Bose and
Prafulla Chaki |
| 4. Lahore
Conspiracy
case | Bhagat Singh and
Sukhdev |

Which of the pairs given above are correctly matched?

- 1 and 4 only
- 3 and 4 only
- 1, 2 and 3 only
- 2 and 4 only

Ans) d

Exp) Option d is the correct answer.

Pair 1 is incorrect: Alipore Conspiracy case- It is also known as Manicktolla bomb Conspiracy or Muraripukur Conspiracy case. The Ghosh brothers (Aurobindo and Barindra) were charged with conspiracy or waging war against the king, equivalent to high treason and punishable with death by hanging. Chittaranjan Das defended Aurobindo. Aurobindo was acquitted of all the charges whereas Barindra Ghosh was given death penalty which was later commuted to life imprisonment. S.A. Dange was not related to this case and **hence pair 1 is incorrect.**

Pair 2 is correct: Nasik Conspiracy case- After the merger of the Mitra-Mela with Abhinav Bharat in 1904, Nasik, Poona and Bombay emerged as centers of bomb manufacturing. In 1909, A.M.T. Jackson, the collector of Nasik was killed by Anant Laxman Kanhere, a member of Abhinav Bharat. This killing is known as the Nasik Conspiracy case.

Pair 3 is incorrect: Meerut Conspiracy case- This case of 1929, was a court case initiated in British India in March 1929 and got finalized in 1933. Several communists including three English men were arrested for organizing an Indian railway strike. After this case the growth of communist party in India got slowed down. The main charges were framed on S. A. Dange, Shaukat Usmani, Muzaffar Ahmed along with 3 English men by the name Philip Spratt, Lester Hutchinson and Benjamin Francis Bradley. Khudiram Bose and Prafulla Chaki are not related to the Meerut Conspiracy Case, **hence pair 3 is incorrect.**

Pair 4 is correct: Lahore Conspiracy Case- To take the revenge of Lala Lajpat Rai's death during protest against Simon Commission, Bhagat Singh, Sukhdev and his associates plotted the assassination of James A. Scott, the Superintendent of Police. However, the revolutionaries mistakenly killed J. P. Saunders. This incident is famously known as the Lahore Conspiracy case of 1929.

Source: Spectrum (Page No. – 291, 292, 294)

Q.49) With regard to revolutionary activities in Punjab during 1900-1920, which of the following statements is/are correct?

- Lala Lajpat Rai organized the extremist Anjuman-i-Mohisban-i-Watan in Lahore.
- Extremism in Punjab died down quickly after 1907 after deportation of Lajpat Rai and Ajit Singh.
- Rise in land revenue and irrigation tax are the factors responsible for Punjab extremism.

Select the correct answer using the code given below:

- 1 and 2 only
- 3 only
- 2 and 3 only
- 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

The 1st phase of revolutionary activities formed as a fallout of the Swadeshi and boycott movement. After the decline of the movement the patriotic energies of younger nationalists looked for new expression but were disillusioned to find new form of struggle.

Statement 1 is incorrect: Ajit Singh (Bhagat Singh's uncle) organised the extremist Anjuman-i-Mohisban-i-Watan in Lahore with its journal, Bharat Mata. Lala Lajpat Rai brought out Punjabee (with its motto of self-help at any cost).

Statement 2 is correct: After 1907, Ajit Singh and a few other associates Sufi Ambaprasad, Lalchand, Bhai Parmanand, Lala Hardayal developed into **full-scale revolutionary terrorists**. So revolutionary activities in Punjab did not die down. Infact **Extremism died down quickly** after the Government struck in May 1907 with a ban on political meetings and the deportation of Lajpat Rai and Ajit Singh.

Statement 3 is correct: The Punjab extremism was fuelled by issues such as frequent famines coupled with **rise in land revenue and irrigation tax, practice of 'begar' by zamindars** and by the events in Bengal.

Source: Spectrum Revised edition 2019 chapter-13 page-287

Q.50) Economic Cooperation Trade Agreement (ECTA) is sometimes seen in the news in the context of negotiations held between India and-

- a) United Arab Emirates
- b) Mauritius
- c) Afghanistan
- d) Australia

Ans) d

Exp) Option d is the correct answer.

India and Australia have entered into an Economic Cooperation and Trade Agreement (Ind-Aus ECTA). The Ind-Aus ECTA was signed last year on 2nd April 2022; after Ratification and Exchange of Written Instruments, the Agreement has come into force on 29th December 2022.

ECTA provides an institutional mechanism to encourage and improve trade between two countries and covers almost all tariff lines dealt by India and Australia. Since the trade between the two countries is hugely complementary, this offers opportunities on both sides and will pave the way for a win-win solution for both India and Australia. All the labour-intensive industries with export potential for India are included in this, including gems and jewellery, textiles, leather, footwear, furniture, food, agricultural products, engineering products, medical technology, and autos. Meanwhile, India will grant Australia preferential access to over 70 percent of its tariff lines, including those that are relevant to Australia from export perspective, including raw materials and intermediaries like coal, mineral ores, wines, etc.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1889525>

Directions for the following 40 (Forty) items:

Read the following 24 passages and answer the item that follows the passages. Your answers to these items should be based on the passages only.

Passage 1

The monoculture of the mind, that reduces diversity to uniformity, and uniqueness to the bland sameness of the mass market, is the foundation of globalization. This monoculture is imposed by the violent homogenization of the world through colonialism and imperialism, and by the forced reduction of the world to a single dimension through the commodity fetishism of the global marketplace. This fetishism is based on the illusion that everything can be reduced to a commodity, that everything can be assigned a price, and that everything can be owned and traded like a thing. This illusion of commodification is the denial of the sacredness and diversity of life, the denial of the intrinsic worth of every being, and the denial of the interdependence and interconnectedness of all beings. The global monoculture of the mind is the ultimate manifestation of a worldview that is rooted in separation and fragmentation. This worldview sees the world as a collection of discrete objects, rather than a web of relationships. It sees nature as a resource to be exploited, rather than a partner to be nurtured. It sees human beings as consumers, rather than citizens. It sees the market as the measure of all value, rather than a tool for meeting human needs. This worldview is the root cause of the multiple crises we face today, including the ecological crisis, the social crisis, and the political crisis.

Q.1) What does the passage suggest is the root cause of the ecological, social, and political crises faced today?

- The violent homogenization of the world through colonialism and imperialism.
- The reduction of the world to a single dimension through the commodity fetishism of the global marketplace.
- The denial of the sacredness and diversity of life.
- The reduction of everything to a commodity that can be owned and traded.

Ans) b

Exp) Option b is the correct answer.

According to the passage, the root cause of the ecological, social, and political crises faced today is the **global monoculture of the mind, which is based on the reduction of the world to a single dimension through the commodity fetishism** of the global marketplace.

Q.2) What is the central idea of the passage?

- The need for nurturing nature.
- The role of colonialism in imposing a monoculture.
- The denial of sacredness, diversity, and interdependence in the global monoculture.
- The role of globalization in reducing the worth of beings.

Ans) c

Exp) Option c is the correct answer.

The central idea of the passage is the global monoculture of the mind that reduces diversity to uniformity, uniqueness to bland sameness, and denies the sacredness, diversity, and interdependence of life. The key idea of the passage is clearly the impact and dangers of the monoculture and not just the causes of monoculture.

Passage 2

The sun beat down mercilessly on the parched desert landscape, the heat waves distorting the horizon and creating a mirage-like effect. The only sound was the occasional rustle of a scorpion or lizard as it scurried across the sandy terrain. In the distance, a lone figure could be seen trudging through the dunes, their face obscured by a tattered scarf. As they drew nearer, it became apparent that the figure was a woman, her skin tanned and weathered by the unforgiving sun. Her eyes were narrowed against the bright light, and her hair was pulled back in a tight bun to keep it from her face. She carried a heavy pack on her back, which seemed to weigh her down with each step.

Q.3) Which of the following statements best reflects the inference that can be made from the passage above?

- a) The woman is a skilled desert traveller who is accustomed to the harsh conditions.
- b) The woman is lost in the desert and does not know where she is going.
- c) The woman is carrying valuable items in her pack that she must protect.
- d) The woman is searching for water in the desert.

Ans) a

Exp) Option a is the correct answer.

The passage describes the woman as trudging through the dunes, her skin tanned and weathered by the sun, and her hair pulled back in a tight bun. These details suggest that the woman is not lost, but rather is a seasoned traveller who is able to navigate the desert.

Passage 3

The world is facing a major environmental crisis, with issues such as climate change, deforestation, and pollution threatening the health and wellbeing of humans and the planet. Climate change happens cyclically. It had started from a colder ice age and currently it is much warmer than it was two million years ago. Deforestation refers to the purposeful clearing or thinning of trees and forests. When deforestation occurs, much of the carbon stored by the trees is released back into the atmosphere and it contributes significantly to climate change. While there are many factors contributing to this crisis, one of the primary causes is the unsustainable use of natural resources. According to Global Resources Outlook 2019, the extraction and processing of materials, fuels and food contribute half of total greenhouse gas emissions and over 90% of biodiversity loss and water stress.

Q.4) Which one of the following statements best reflects the critical message conveyed by the passage given above?

- a) The environmental crisis is a significant concern.
- b) The primary cause of the environmental crisis is natural disasters.
- c) The unsustainable use of natural resources is a major contributor to the environmental crisis.
- d) Humans are responsible for climate change.

Ans) c

Exp) Option c is the correct answer.

The passage highlights the unsustainable use of natural resources as a primary cause of the environmental crisis. Therefore, the critical message conveyed by the passage is that the unsustainable use of natural resources is a major contributor to the environmental crisis.

Passage 4

Income inequality is a significant issue in today's society, with the gap between the rich and the poor widening in many countries. This has led to a range of negative consequences, including decreased social mobility, higher levels of poverty, and political instability. In societies with high levels of income inequality, it is more difficult for individuals to move up the socioeconomic ladder, as those born into poverty face systemic barriers. This can lead to a concentration of wealth among a small group of individuals, which can undermine the stability of the political system. High levels of poverty can also have negative effects on physical and mental health, education outcomes, and overall quality of life.

Q.5) Which one of the following statements best reflects the critical message conveyed by the passage given above?

- a) Income inequality is hindering social mobility.
- b) The gap between the rich and the poor is widening in many countries.
- c) Political stability is affected by income inequality.
- d) Income inequality has a range of negative consequences.

Ans) d

Exp) Option d is the correct answer.

The passage states that income inequality is a significant issue and has led to a range of negative consequences, including decreased social mobility, higher levels of poverty, and political instability. Therefore, the critical message conveyed by the passage is that income inequality has a range of negative consequences.

Passage 5

According to recent studies, a lack of sleep can have serious health consequences, including an increased risk of heart disease, diabetes, and obesity. Despite these risks, many people continue to prioritize work and other responsibilities over getting enough rest. Lack of sleep can also lead to decreased productivity, poor cognitive function, and mood changes. Getting enough rest is essential for overall health and well-being. Lack of sleep can also weaken the immune system, making individuals more susceptible to illnesses. It can cause mood swings, irritability, and decreased cognitive function, leading to decreased productivity and impaired decision-making. Chronic sleep deprivation can also increase the risk of depression, anxiety, and other mental health disorders. Additionally, lack of sleep has been linked to an increased risk of accidents, both on the road and in the workplace.

Q.6) What is the most logical and rational inference that can be drawn from this passage?

- a) Lack of sleep has disastrous effects on health.
- b) Sleep is a critical component of overall health.
- c) Work and responsibilities are important than sleep.
- d) Heart disease, diabetes, and obesity are serious health issues.

Ans) b

Exp) Option b is the correct answer.

The passage indicates that a lack of sleep can have serious health consequences, including an increased risk of heart disease, diabetes, and obesity. Therefore, the most logical and rational inference that can be drawn from this passage is that sleep is a critical component of overall health.

Passage 6

Recent studies have shown that regular exercise can have an impact on mental health. Regular physical activity has been shown to reduce symptoms of depression and anxiety, improve mood, and increase self-esteem. Exercise releases endorphins, which are natural chemicals that create feelings of happiness and well-being. It can also improve cognitive function, helping individuals to think more clearly and feel more focused. Additionally, exercise can provide a sense of accomplishment and boost self-confidence, leading to improved mental well-being. The relationship between exercise and mental well-being underscores the importance of physical activity as a component of health and wellness.

Q.7) What is the most logical and rational inference that can be drawn from this passage?

- Exercise provides a sense of accomplishment.
- Mental health has light connection to physical activity.
- Exercise can improve mental health and well-being.
- Exercise is effective for physical health.

Ans) c

Exp) Option c is the correct answer.

The passage indicates that regular exercise can have a significant impact on mental health, reducing symptoms of depression and anxiety, improving mood, and increasing self-esteem. Therefore, the most logical and rational inference that can be drawn from this passage is that exercise can improve mental health and well-being.

Passage 7

The public realm is the common world that gathers us together and yet prevents our falling over each other, that in the common things and events of our everyday life separates us from our merely private selves. Its creation and maintenance is the first task of politics. But the common world is worldly only in so far as it remains fit for common use. It is exposed to the wear and tear of time and of the elements, and needs incessant care if it is to retain its identity as a world in which men live and which they pass on to the following generations. Nothing, indeed, is more dangerous to the continuance of the public realm than the continuing life of those who are born into it and who have grown up in it as though it were a natural inheritance. The greatest enemy of the public realm is the total domination of life by private interests. This problem arises whenever the sphere of private interests becomes so large that it threatens to engulf the public realm itself.

The public realm is constituted by speech and action. It is a realm of appearances, where men and women show themselves to one another and to the world, and this showing is an end in itself. The public realm is where we appear as unique individuals, distinct from one another and yet united in our common humanity. In the public realm, we are judged and held accountable for our actions, and this judgment is necessary for the continued existence of the common world. However, the public realm is not a realm of individuality in the sense that we understand it in the private realm. It is a realm of anonymity, where our unique characteristics are subordinated to the common good. In the public realm, we are not judged for who we are as individuals, but for what we do as members of a community.

Q.8) According to the passage, what is the public realm and why is it important in politics?

- The public realm is a space that brings people together for individual expression, and it is important because it provides individuals with a space to express themselves freely.
- The public realm is a common world that separates individuals from their private selves, and it is important in politics because it is the first task of politics to create and maintain it.

- c) The public realm is a realm of anonymity where individual characteristics are subordinated to the common good, and it is important in politics because it is a space where individuals are judged for what they do as members of a community.
- d) The public realm is a sphere of private interests that threatens to engulf the common world, and it is important in politics because it creates a problem that must be addressed.

Ans) b

Exp) Option b is the correct answer.

According to the passage, the public realm is the common world that separates individuals from their private selves and provides a space where they come together. The passage further states that the first task of politics is to create and maintain the public realm.

Q.9) What does the author suggest is the greatest threat to the public realm?

- a) The wear and tear of time and the elements that require incessant care.
- b) The continuing life of those who are born into the public realm and who have grown up in it as though it were a natural inheritance.
- c) The domination of life by private interests that becomes so large that it threatens to engulf the public realm itself.
- d) The inability to distinguish between the public and private realm.

Ans) c

Exp) Option c is the correct answer.

The author suggests that the greatest enemy of the public realm is the total domination of life by private interests. This problem arises whenever the sphere of private interests becomes so large that it threatens to engulf the public realm itself.

Q.10) Which of the following best represents the author's view of the relationship between the private and public realm in politics?

- a) The private realm is more important than the public realm in politics.
- b) The public realm is more important than the private realm in politics.
- c) The private and public realms are equally important in politics.
- d) The public realm is necessary for the continued existence of the common world but the private realm is necessary for individuality.

Ans) b

Exp) Option b is the correct answer.

The author argues that the public realm is the first task of politics and the greatest enemy of the public realm is the total domination of life by private interests. The public realm is more important than the private realm in politics. The author also argues that the private and public realms are distinct and serve different functions. The private realm is necessary for individuality while the public realm is necessary for the continued existence of the common world. However, the author does not argue that the private and public realms are equally important. Author does not suggest that the private realm is necessary for individuality in the public realm.

Passage 8

India, a country with a population of over 1.3 billion, has a healthcare system that is woefully inadequate to cater to the needs of its citizens. The system is plagued with numerous problems, including a shortage of healthcare professionals, inadequate funding, poor infrastructure, and corruption. The lack of

healthcare facilities in rural areas is a major concern, as the majority of the population resides in these areas. The government's efforts to improve the healthcare system have been largely unsuccessful due to rampant corruption and mismanagement.

Moreover, India's public healthcare system suffers from a severe shortage of resources, including medical equipment, medicines, and hospital beds. This leads to long waiting times, inadequate treatment, and a high rate of medical errors. Additionally, the private healthcare sector, which is largely unregulated, is out of reach for most Indians due to high costs. India's poor healthcare system has far-reaching consequences, including increased mortality rates, lower life expectancy, and reduced economic growth. The system also exacerbates social inequality, as the poor and marginalized are the most affected. The people who are just above the poverty line get drawn into the vicious cycle of poverty and due to high out of pocket expenditure on healthcare, the education and other needs of their next generation gets compromised, thus pushing them further into the well of poverty.

Q.11) Based on the above passage following assumptions have been made:

1. Most of the Indians reside in villages.
2. There is rampant corruption in India in every sector.
3. The government has failed to regulate private healthcare.

Which of the above assumptions is/are valid ?

- a) 3 only
- b) 1 and 3 only
- c) 1 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Passage states that 'The lack of healthcare facilities in rural areas is a major concern, as the majority of the population resides in these areas'. So, statement 1 is correct.

In the passage it's mentioned that 'The government's efforts to improve the healthcare system have been largely unsuccessful due to rampant corruption', so it assumes that corruption is rampant in the healthcare system, but it can't be said for every sector. Hence statement 2 is incorrect.

The passage states that 'private healthcare is largely unregulated', but it doesn't mean that the government has failed to regulate it. Hence statement 3 is invalid assumption.

Q.12) What are the main consequences of India's poor healthcare system?

1. Inadequate treatment of people.
2. Rise in mortality rates.
3. Rural Indians are becoming poorer.
4. The inequality in society is increasing.

Which of the above statements are correct?

- a) 1 and 2 only
- b) 3 and 4 only
- c) 2 and 3 only
- d) 1, 2 and 4 only

Ans) d

Exp) Option d is the correct answer.

The passage states that 'India's public healthcare system suffers from a severe shortage of resources, including medical equipment, medicines, and hospital beds. This leads to long waiting times, inadequate treatment'. So, statement 1 is correct.

In the passage it's mentioned that 'India's poor healthcare system has far-reaching consequences, including increased mortality rates. So, statement 2 is correct.

The passage states that 'The people who are just above the poverty line get drawn into the vicious cycle of poverty', but it doesn't mean directly that rural Indians are becoming poorer. Hence statement 3 is incorrect.

In the passage it's stated that 'The system also exacerbates social inequality', so statement 4 is correct.

Passage 9

The cacophony of car horns, screeching tires, and shouting pedestrians assaulted my ears as I made my way through the crowded city streets. The sun beat down mercilessly, causing sweat to bead on my forehead and soak through my shirt. Everywhere I looked, there were people rushing to and fro, all with their own destinations and purposes. It was overwhelming, to say the least. As I walked, I couldn't help but wonder: where was everyone going? What was driving them forward, day after day, in this endless rat race? Was it money? Success? Happiness? Or was it something deeper, more primal? An innate desire to achieve something greater, to make their mark on the world? The thought lingered in my mind as I turned a corner and found myself face-to-face with a homeless man. He was sitting on the sidewalk, his back against the wall, with a cardboard sign that read "Anything helps." His eyes were hollow, his skin leathery from years spent in the sun, and his clothes were tattered and dirty. As I passed him by, I felt a pang of guilt. Here I was, rushing around in my air-conditioned office, while this man was sitting on the street with nothing to his name. But what could I do? I was just one person, after all.

Q.13) Which of the following best reflects the main theme of the passage?

- The daily struggles of a busy city life.
- The inner drive to achieve success and make a mark on the world.
- The feeling of helplessness in the face of societal problems.
- The disparity between the rich and the poor in society.

Ans) d

Exp) Option d is the right answer.

The passage describes the chaos and rush of a busy city, but the focus shifts to the narrator's musings on the motivation behind people's actions. It then leads to a chance encounter with a homeless man, highlighting the stark difference in living conditions between the narrator and the man. This emphasizes the main theme of the passage, which is the disparity between the rich and poor in society.

Q.14) With reference to the above passage, which of the following inferences can be drawn?

- The author feels overwhelmed and unsettled by the crowded city streets.
- The city provides opportunities for success and happiness.

Select the correct answer using the code given below:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The passage describes the author's experience of walking through crowded city streets and feeling overwhelmed by the noise, crowds, and fast-paced environment. Hence statement 1 can be inferred. In the passage it's stated that "As I walked, I couldn't help but wonder: where was everyone going? What was driving them forward, day after day, in this endless rat race? Was it money? Success? Happiness?". Implies the author questions everything. Hence statement 2 can't be inferred. So incorrect.

Passage 10

Advertising and marketing techniques have become increasingly sophisticated in their ability to influence consumer behavior, creating a situation where the individual is no longer in control of their own desires and choices. This is particularly true in the realm of consumer culture, where the manipulation of desire and the creation of artificial needs has become a dominant feature of modern capitalism.

The use of subliminal messages, hidden persuaders, and psychological profiling are just some of the techniques employed by advertisers and marketers to create a sense of need and desire in the consumer. These techniques are designed to bypass the conscious mind and appeal directly to the unconscious desires and fears of the individual, creating a situation where the individual is shaped and controlled by external stimuli and messages.

This has profound implications for the nature of individual autonomy in a society where the ability to make free and autonomous choices is increasingly undermined by the techniques of persuasion employed by those in power. The hidden persuaders have infiltrated every aspect of modern life, shaping our desires and beliefs in ways that are often invisible and insidious. It is only by becoming aware of these techniques and taking steps to resist their influence that we can hope to maintain our autonomy and control over our own lives.

Q.15) According to the passage, how do advertisers and marketers influence consumer behavior?

- By directly controlling individual desires and choices.
- By using subliminal messages and psychological profiling to manipulate unconscious desires and fears.
- By identifying real needs that override conscious decision-making.
- By eliminating individual autonomy through their techniques of persuasion.

Ans) b

Exp) Option b is the correct answer.

The passage states that advertisers and marketers use techniques such as subliminal messages and psychological profiling to create a sense of need and desire in the consumer. These techniques are designed to bypass the conscious mind and appeal directly to the unconscious desires and fears of the individual, thereby influencing their behaviour.

Q.16) Which of the following is a dominant feature of modern capitalism in the realm of consumer culture?

- The promotion of conscious decision-making in consumers.
- The creation of artificial needs in consumers.
- The provision of products and services based on consumer demand.
- Fostering independence and self-determination in how consumers make choices.

Ans) b

Exp) Option b is the correct answer.

The creation of desire and artificial needs has become a dominant feature of modern capitalism. This implies that advertisers and marketers use various techniques to create a sense of need and desire in the consumer, rather than catering to pre-existing consumer demand.

Q.17) What is the key message of the author that can be inferred from the passage?

- a) The manipulation of individual desires and fears by those in power.
- b) The elimination of conscious decision-making in consumers.
- c) The creation of invisible and insidious beliefs and desires.
- d) The need to become aware of and resist the influence of these techniques.

Ans) d

Exp) Option d is the correct answer.

The passage suggests that the use of advertising and marketing techniques has profound implications for individual autonomy, as individuals are increasingly shaped and controlled by external stimuli and messages. Therefore, the passage advocates becoming aware of these techniques and taking steps to resist their influence in order to maintain individual autonomy and control over one's own life.

Passage 11

In recent years, there has been a growing concern over the use of plastic products and their impact on the environment. Single-use plastic items such as straws, utensils, and grocery bags are particularly problematic, as they often end up in landfills and oceans. This has led to a push for alternatives such as paper straws and reusable bags. However, it is important to note that the manufacturing and disposal of these alternatives also have environmental impacts, and therefore the most effective solution is to reduce the overall use of single-use plastic products.

Q.18) What is the most logical conclusion that can be drawn from this passage?

- a) Paper straws and reusable bags are effective solutions for reducing plastic waste.
- b) The impact of single-use plastic products on the environment is significant.
- c) The most effective solution for reducing plastic waste is to eliminate the use of all plastic products.
- d) The most effective solution for reducing plastic waste is to reduce the overall use of single-use plastic products.

Ans) d

Exp) Option d is the correct answer.

The passage highlights the growing concern over the impact of plastic products on the environment and the push for alternatives. However, it also notes that the manufacturing and disposal of these alternatives have environmental impacts, and therefore the most effective solution is to reduce the overall use of single-use plastic products. Therefore, the most logical conclusion that can be drawn from this passage is that the most effective solution for reducing plastic waste is to reduce the overall use of single-use plastic products.

Passage 12

The increasing demand for renewable energy has led to the development of various sources such as wind, solar, hydro, and geothermal power. These sources are considered more environment friendly than traditional sources such as coal and oil, which release harmful emissions into the atmosphere, which is a major contributor to greenhouse effect and climate change. In addition to reducing greenhouse gas emissions, the use of renewable energy also helps in reducing dependence on foreign oil and creating jobs in the renewable energy sector. They are environmentally friendly and do not produce harmful emissions that contribute to air and water pollution. Renewable energy sources are also becoming more cost-effective, making them more accessible and affordable for everyone. They offer an excellent opportunity for energy security. Renewable energy sources also have significant health benefits. They do not produce harmful pollutants, which can lead to respiratory and cardiovascular diseases.

Q.19) Which of the following statement best reflects the crux of the passage given above?

- a) The benefits of renewable energy sources over traditional sources.
- b) The increasing demand for renewable energy.
- c) The harmful effects of traditional energy sources.
- d) The various sources of renewable energy and traditional sources of energy.

Ans) a

Exp) Option a is the correct answer.

The passage discusses the increasing demand for renewable energy and the various sources of renewable energy such as wind, solar, hydro, and geothermal power. However, the crux of the passage is the benefits of renewable energy sources over traditional sources such as coal and oil, which release harmful emissions into the atmosphere. The passage highlights that renewable energy not only reduces greenhouse gas emissions but also reduces dependence on foreign oil and creates jobs in the renewable energy sector. Therefore, the crux of the passage is the benefits of renewable energy sources over traditional sources.

Passage 13

In an era of globalization and rapid technological advancements, the demand for skilled workers is increasing. Education plays a crucial role in developing these skills, but traditional approaches to education may no longer be sufficient. To meet the needs of a changing workforce, educational institutions must embrace innovative strategies that emphasize practical, hands-on learning experiences. This will require a shift away from traditional classroom instruction towards more interactive and experiential learning opportunities.

Q.20) Which one of the following statements best reflects the most logical, rational, and practical suggestion implied by the passage given above?

- a) Educational institutions must prioritize interactive learning opportunities over traditional classroom instruction.
- b) Educational institutions must embrace innovative strategies that emphasize practical, hands-on learning experiences.
- c) The demand for skilled workers will increase in the future, so the government should focus on skill development.
- d) The role of education in developing skills is highly important, so state must open more schools.

Ans) b

Exp) Option b is the correct answer.

The passage specifically mentions that practical, hands-on learning experiences must be emphasized, and that a shift away from traditional classroom instruction is necessary. Therefore, the most logical, rational, and practical suggestion implied by the passage is that educational institutions must embrace innovative strategies that emphasize practical, hands-on learning experiences. Answer option C correctly reflects this suggestion.

Passage 14

The 'enlightenment', which discovered the liberties, also invented the disciplines. It is no accident that the asylum, the prison, the school, and the factory all resemble one another in certain fundamental features. They were all inscribed in the same system of coercion, which guaranteed the submission of forces and bodies. The 'enlightenment' had established them as institutions that would make possible the exercise of power without recourse to violence, which was seen as archaic, inefficient and uncertain.

These institutions represented an economy of power, reduced the random exercise of violence, and made it possible to maximize its effects by a whole series of interventions and corrections that were distributed throughout the entire social body.

Q.21) What is the key assumption of the author in the given passage?

- The institutions of asylum, prison, school, and factory are necessary for functioning society.
- The 'enlightenment' was responsible for establishing institutions that would help the society exercise power without violence.
- The concept of coercion is extremely efficient and gives us certitude of security.
- There is an inherent necessity of usage of violence in any society to make it work.

Ans) b

Exp) Option b is the correct answer.

The passage implies that the 'enlightenment' era is responsible for creating institutions that allowed power to be exercised without resorting to violence. It suggests that these institutions were created to make the random exercise of violence unnecessary and promote a more effective exercise of power through interventions and corrections.

Q.22) What does the author mean by the term 'economy of power'?"

- A system that uses a limited amount of power to maintain order, despite the potential for violence.
- A system where power is used sparingly and only in cases of absolute necessity, such as during times of crisis or emergency.
- A theory of power that emphasizes the importance of voluntary consent and individual autonomy.
- A theory of power that emphasizes the potential for violence as the primary means of maintaining social control.

Ans) a

Exp) Option a is the correct answer.

The term "economy of power" in the passage refers to a system where power is distributed and used in a controlled manner, rather than being exercised randomly or through violence. The passage suggests that institutions like prisons, asylums, schools, and factories were established as part of this system of controlled power, allowing the ruling class to maintain order without resorting to violence.

Passage 15

Autosuggestion is a term that applies to all suggestions and all self-administered stimuli which reach one's mind through the five senses. Stated in another way, autosuggestion is self-suggestion. It is the agency of communication between that part of the mind where conscious thought takes place, and that which serves as the seat of action for the subconscious mind. Through the dominating thoughts which one permits to remain in the conscious mind, (whether these thoughts be negative or positive, is immaterial), the principle of autosuggestion voluntarily reaches the subconscious mind and influences it with these thoughts. All voluntary or involuntary actions, feelings, and emotions are the result of these impressions upon the subconscious mind. The subconscious mind will not remain idle! If you fail to plant desires in your subconscious mind, it will feed upon the thoughts which reach it as the result of your neglect.

Q.23) Which one of the following is implied by the passage?

- The subconscious mind is only influenced by positive thoughts.
- The subconscious mind can only be controlled through conscious thought.

- c) The subconscious mind is solely responsible for conscious decision-making.
 d) The subconscious mind is not inactive if desires are not planted in it.

Ans) d

Exp) Option d is the correct answer.

The subconscious mind is not inactive if desires are not planted in it. This is implied by the statement "If you fail to plant desires in your subconscious mind, it will feed upon the thoughts which reach it as the result of your neglect." The passage suggests that the subconscious mind is constantly active and influenced by thoughts, whether positive or negative. It is up to the individual to actively plant positive desires in their subconscious mind in order to achieve their goals.

Q.24) What is the main idea of the passage?

- a) The subconscious mind is influenced by self-administered stimuli through the five senses.
 b) The subconscious mind is responsible for all actions, feelings, and emotions.
 c) The principle of autosuggestion voluntarily reaches the subconscious mind and influences it with thoughts.
 d) The subconscious mind requires conscious effort in order to achieve success.

Ans) c

Exp) Option c is the correct answer.

The principle of autosuggestion voluntarily reaches the subconscious mind and influences it with thoughts. This is the main idea of the passage as it is emphasized throughout. The passage explains the concept of autosuggestion and how it applies to all self-administered stimuli that reach the subconscious mind through the five senses. It also suggests that all voluntary or involuntary actions, feelings, and emotions are the result of impressions upon the subconscious mind, which is influenced by dominating thoughts in the conscious mind. The passage encourages the reader to actively plant positive desires in their subconscious mind through autosuggestion in order to achieve their goals.

Passage 16

Sugarcane is a crop that plays an important role in the global economy, providing sugar for human consumption and biofuels for transportation. However, sugarcane production is associated with a range of environmental issues. One of the main concerns is water consumption. Sugarcane requires a significant amount of water to grow, which can lead to water scarcity in areas where water is already in short supply. Sugarcane production can contribute to soil erosion and depletion, as well as deforestation as land is cleared to make way for sugarcane fields. The use of pesticides and fertilizers in sugarcane production can lead to water pollution and harm wildlife, including fish and other aquatic species. These environmental issues associated with sugarcane production highlight the need to minimize negative impacts on the environment.

Q.25) Which one of the following statements best reflects the **corollary to the passage given above?**

- a) Sugarcane production will lead to a water crisis in the world.
 b) Aquatic species will become extinct due to water pollution.
 c) Deforestation due to sugarcane production will lead to upsurge in landslides.
 d) Sustainable farming practices are necessary to save the environment.

Ans) d

Exp) Option d is the correct answer.

In the passage it's stated that "Sugarcane requires a significant amount of water to grow, which can lead to water scarcity in areas where water is already in short supply". So, the water crisis in the world can't be the natural consequence of it, as this reflects extreme case. So, statement 1 is incorrect.

The passage states that "The use of pesticides and fertilizers in sugarcane production can lead to water pollution and harm wildlife, including fish and other aquatic species". But again, extinction of aquatic species is an extreme consequence. So, statement 2 is incorrect.

It's stated in the passage that "Sugarcane production can contribute to soil erosion and depletion, as well as deforestation". But it's nowhere hinted that it will lead to an upsurge in landslides. So, statement 3 is incorrect.

The passage ends with "These environmental issues associated with sugarcane production highlight the need to minimize negative impacts on the environment". So 'sustainable farming practices are necessary' is the best way to minimize the negative impact of sugarcane production. Hence statement 4 is correct.

Passage 17

Marriage in India is a sacred institution that is deeply rooted in tradition and cultural values. In Chile, the concept of marriage is highly valued, but the customs and traditions surrounding it are quite different. In India, arranged marriages are still common, and the decision to marry is often influenced by family members. In contrast, Chilean couples typically choose their own partners and have more freedom in their decision-making. Additionally, Indian marriages often involve elaborate ceremonies and rituals that can last for days, while Chilean weddings are typically simpler and more straightforward. Despite these differences, both cultures place a strong emphasis on the importance of commitment and the lifelong nature of marriage.

Q.26) Which of the following statement best reflects the central idea of the passage given above?

- a) Indian marriages involve more elaborate ceremonies than Chilean weddings.
- b) The concept of marriage is highly valued in both Indian and Chilean cultures.
- c) The decision to marry is typically influenced by family members in India.
- d) Chilean couples have more freedom in their decision-making regarding marriage than Indian couples

Ans) b

Exp) Option b is the correct answer.

The passage compares and contrasts the customs and traditions surrounding marriage in India and Chile. It notes that Indian marriages are often arranged and involve elaborate ceremonies, while Chilean weddings are typically simpler and involve greater individual choice. However, the central idea of the passage is that the concept of marriage is highly valued in both Indian and Chilean cultures. This is reflected in the deeply rooted traditions and cultural values surrounding marriage in India and the concept of marriage being highly valued in Chilean society, as well as the strong emphasis on commitment and the lifelong nature of marriage. Answer option b correctly reflects the central idea of the passage. Answer options a, c, and d are incorrect because they focus on specific details that are not the main point of the passage.

Passage 18

Transgender individuals in India face a number of challenges and discrimination on a daily basis. Many are ostracised by society and have limited access to education and job opportunities. They also face difficulties in accessing healthcare services and often experience violence and abuse. In 2014, the Indian government recognised transgender people as a third gender, but this has not translated into significant improvements in their lives. Transgender people continue to face discrimination and violence, and many

are forced into begging or sex work to survive. The lack of legal protection and social acceptance means that they are often denied basic human rights and treated as second-class citizens.

Q.27) What is the most logical assumption that can be made from the passage given above?

- The Indian government has tried to address the issues faced by transgender individuals to a considerable extent.
- Transgender people in India have unequal access to education and job opportunities.
- Transgender people in India are completely unaccepted by society.
- Discrimination against transgender people in India is a widespread and persistent problem.

Ans) d

Exp) Option d is the right answer.

The passage highlights the challenges and discrimination faced by transgender individuals in India, including limited access to education and job opportunities, difficulties in accessing healthcare services, and experiencing violence and abuse. The passage also notes that despite the government's recognition of transgender people as a third gender, their lives have not significantly improved. Therefore, the assumption made by the author is that discrimination against transgender people in India is a widespread and persistent problem. Answer option c correctly reflects this assumption.

Passage 19

The development of agricultural technology has been a key factor in the growth and sustainability of human civilization. From the invention of the plow to the use of genetically modified crops, technological advances have revolutionized the way we produce and consume food.

Throughout history, agricultural technology has enabled humans to increase crop yields, reduce labour costs, and improve food quality. The use of irrigation systems and fertilizers, for example, has allowed farmers to cultivate crops in previously arid regions, while the development of mechanized farm equipment has reduced the amount of time and effort required to tend to crop.

However, with the increasing use of technology in agriculture comes new challenges. The overuse of fertilizers and pesticides can lead to environmental degradation, while the use of genetically modified crops raises ethical concerns about the potential long-term effects on human health and the environment.

Despite these challenges, the development of agricultural technology remains crucial for meeting the demands of a growing global population. As we continue to confront these challenges, it is important to consider both the potential benefits and drawbacks of new technologies, and to prioritize sustainability and ethical considerations in agricultural development. India's centuries old farming is based on sustenance and innovation. A right mix of technology and tradition will change the direction of farming from production centric to sustainability focused.

Q.28) Which of the following statement best describes the main idea behind the passage?

- The benefits of agricultural technology
- The ethical consideration in agricultural development.
- The history of agricultural technology.
- The need of sustainable agriculture.

Ans) d

Exp) Option d is the correct answer.

The passage discusses the benefits of agricultural technology, so it's an idea mentioned but not the main idea. hence option a is incorrect.

It's stated in the passage that 'ethical considerations should be prioritised', so its again an idea put forward, but not the main idea. So, option b is incorrect.

The history of agriculture has been explained so its again an idea but not the main idea, so option c is incorrect.

As a conclusion of this passage, author has mentioned that India's centuries old farming is based on sustenance and innovation. A right mix of technology and tradition will change the direction of farming from production centric to sustainability focused. Hence option d is the main idea of passage.

Q.29) Based on the above passage, the following assumptions have been made:

1. The agricultural technology has drawbacks.
2. The use of genetically modified crops is unethical
3. Environmental degradation is a concern in agriculture

Which of the above assumptions is/are valid?

- a) 1 and 2 only
- b) 2 only
- c) 1 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The author acknowledges the benefits of agricultural technology but emphasizes the importance of considering the potential drawbacks and prioritizing sustainability and ethical considerations. The author assumes that agricultural technology has drawbacks. But Author has not concluded anywhere that it's unethical to use genetically modified crops. Hence, statement 1 is a valid and statement 2 is an invalid assumption.

Author also acknowledged that overuse of fertilizers and pesticides can lead to environmental degradation which has potential impact on human health and the environment. but it can't be implied that it affects agriculture in adverse way, hence it is no where implied in the passage that Environmental degradation is a concern in agriculture. So, statement 3 is an invalid assumption.

Q.30) Which of the following statement best reflects the inference that can be drawn from the passage above?

- a) Agricultural technology is the cause of environmental degradation in farming.
- b) The use of genetically modified crops is universally accepted in agriculture.
- c) The benefits of agricultural technology outweigh the potential drawbacks.
- d) Agricultural technology must be developed and used responsibly.

Ans) d

Exp) Option d is the correct answer.

The passage emphasizes the importance of considering the potential drawbacks of agricultural technology and prioritizing sustainability and ethical considerations, suggesting that responsible development and use of agricultural technology is necessary.

Passage 20

The Earth's environment is changing rapidly, and we must adapt to these changes in order to survive. The future environment of Earth may not remain same. Climate change, rising sea levels, and extreme weather events are just a few of the challenges we will face in the coming decades. One of the biggest challenges we face is climate change. The Earth's temperature is rising, and this is causing a number of

problems. For example, sea levels are rising as polar ice caps melt, leading to more frequent and severe flooding in coastal areas. The changing climate is also affecting the distribution of plant and animal species, as well as the availability of food and water for humans.

Another major challenge is the increasing scarcity of natural resources. Fossil fuels are becoming more difficult and expensive to extract, while water resources are being depleted in many areas. This is leading to conflicts over resources and a growing need for alternative sources of energy and water. In order to address these challenges, Human beings need to adopt sustainable approaches. We will need to find ways to reduce our carbon footprint and adopt more sustainable practices in agriculture, industry, and transportation. We will also need to invest in new technologies that can help us adapt to the changing environment and mitigate its impacts.

In the future, we may see the development of new, sustainable cities that are designed to be more resilient to climate change and other environmental challenges. These cities may be built using advanced materials and technologies that allow them to generate their own energy and water, and to recycle waste more efficiently.

Overall, the future environment of Earth will be shaped by our actions today. It is up to us to take responsibility for our impact on the planet and to work together to create a more sustainable and resilient future for ourselves and future generations.

Q.31) According to the passage, the author wants to convey:

1. The future environment of Earth is likely to be very different from the one we know today.
2. Number of challenges humans will face in future will become insurmountable.
3. We will need to make significant changes in the way we live and work to address environmental challenges.
4. In future, the mankind will develop technologies to overcome Fossil fuels and water deficiency.

Select the correct answer using the code given below.

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1 and 4 only

Ans) a

Exp) Option a is the correct answer.

It's stated in the passage that The future environment of Earth may not remain same so obviously the author wants to convey "The future environment of Earth is likely to be very different from the one we know today." Hence statement 1 is correct.

The passage states that Climate change, rising sea levels, and extreme weather events are just a few of the challenges we will face in the coming decades. But he is not meaning that challenges will be insurmountable. Hence statement 2 is incorrect.

In the passage it's stated that in order to address these challenges, Human beings need to adopt sustainable approaches. So, the author is conveying that We will need to make significant changes in the way we live and work to address environmental challenges. Hence statement 3 is correct.

Author has no where explained relation between technology with Fossil fuels and water. So, statement 4 is incorrect.

Q.32) Based on the above passage, which of the following statements is/are correct:

1. Climate change is a real and pressing threat to the environment.
2. Natural resources are becoming increasingly scarce.
3. The rising temperature of earth is the cause of environmental degradation.

Select the correct answer using the code given below.

- a) 1 only
- b) 1 and 2 only
- c) 1, 2 and 3
- d) 2 only

Ans) b

Exp) Option b is the correct answer.

The author assumes that climate change is a real and pressing threat to the environment, that natural resources are becoming increasingly scarce, and that we must make significant changes in the way we live and work to address environmental challenges. The temperature increase of earth is the effect (not the cause) of climate change.

Q.33) Which of the following statement best reflects **the crux of the passage?**

- a) The future environment of Earth is likely to be very different from the one we know today.
- b) We must adapt to the changes in the environment to survive.
- c) We must take responsibility for our impact on the planet and work together to create a more sustainable and resilient future.
- d) Sustainable cities may be built using advanced materials and technologies.

Ans) c

Exp) Option c is the correct answer.

The crux of the passage is that we must take responsibility for our impact on the planet and work together to create a more sustainable and resilient future.

Passage 21

The winds were howling, and the rain was coming down in sheets. Lightning flashed across the sky, illuminating the dark and stormy night. I huddled under my blanket, listening to the sounds of the storm outside. It was a comforting sound, in a strange sort of way. It reminded me that nature was a powerful force, something that could not be tamed or controlled. As I drifted off to sleep, I found myself thinking about the fragility of human existence. We are so small and insignificant in the grand scheme of things. Our lives are but a fleeting moment in the vast expanse of time. And yet, we strive to make our mark on the world, to leave behind something that will outlast us. But what is the point of it all? Why do we bother striving for greatness, when in the end, we will all fade into nothingness? The storm continued through the night, but I eventually fell into a deep sleep, my dreams filled with visions of great civilizations rising and falling, of epic battles waged over the centuries, and of individuals who had left their mark on history. When I woke up the next morning, the storm had passed, leaving behind a world that was fresh and renewed. The air smelled of damp earth and growing things, and the sun was just starting to peek over the horizon. As I stepped outside, I felt a sense of gratitude for being alive, for being able to witness the beauty and power of nature.

Q.34) With reference to the passage, the following assumptions have been made:

1. All the human efforts to subjugate nature have been futile till now.
2. Leaving behind something that will outlast us is a human desire.
3. The sounds of the storm are comforting.

Which of the above assumptions is/are valid?

- a) 1 only
- b) 1 and 2 only
- c) 2 only
- d) 3 only

Ans) c

Exp) Option c is the correct answer.

It's stated in the passage that 'It reminded me that nature was a powerful force, something that could not be tamed or controlled', but it does not mention or imply that humans have made any effort to subjugate it. Hence statement 1 is invalid assumption.

The author discusses the fragility of human existence and our desire to make our mark on the world, indicating that leaving behind something that will outlast us is a human desire. So, statement 2 is a valid assumption.

The author finds the sounds of the storm comforting in a strange sort of way. So, it can't be assumed that they are comforting in general. So, statement 3 is invalid assumption.

Q.35) Which one of the following statements best describes the **crux of the passage?**

- a) The power of nature during a stormy night.
- b) The fragility of human existence.
- c) The significance of human life among grand things.
- d) The need to strive for greatness

Ans) b

Exp) Option b is the correct answer.

The passage is centered around the author's contemplation of the transience and fleeting nature of human existence. The stormy night serves as a backdrop to the author's reflections on the impermanence of life and the question of why humans strive for greatness despite their mortality.

Passage 22

The sun was setting, casting a warm glow over the landscape. I stood on the edge of a cliff, looking out at the vast expanse of land before me. In the distance, I could see the outline of a city, its lights twinkling like stars in the darkness. The wind was gentle, caressing my face and playing with my hair. It was a moment of perfect stillness, a moment of serenity. But even as I stood there, taking in the beauty of the world around me, I couldn't help but feel a sense of unease. It was a feeling that had been growing within me for some time, a feeling that something was not quite right. I couldn't put my finger on it, but I knew that something was off. As I turned to leave, I heard a rustling in the bushes behind me. I spun around, my heart pounding in my chest. But there was nothing there, just the sound of the wind and the rustling of leaves. I took a deep breath and turned to go, but then I heard it again - the rustling, this time louder. And then, a voice "Hello". I turned around to see a figure emerging from the bushes. It was a man, tall and lanky, with shaggy hair and a scruffy beard. He looked like he had been living in the wilderness for some time. He smiled at me, revealing a row of yellowed teeth. "Hello there," he said again. "What brings you to this place?" I hesitated for a moment, unsure of how to respond. The man seemed harmless enough, but something about him made me uneasy. "I was just admiring the view," I said finally. The man nodded, his eyes fixed on me. "It's a beautiful view, isn't it?" he said. "But it can be dangerous up here. You should be careful." With that, he turned and disappeared back into the bushes, leaving me standing there alone. I shook my head, trying to clear my thoughts, and made my way back down the cliffside.

Q.36) With reference to the passage, the following assumptions have been made:

1. People who live in the wilderness are unpredictable and potentially dangerous.
2. It is best to avoid secluded areas like the one the author is visiting.
3. The natural world can be both beautiful and dangerous.

Which of the above assumptions is/are valid?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) None of the above.

Ans) c

Exp) Option c is the correct answer.

The passage states that “The man seemed harmless enough, but something about him made me uneasy.” Something making the author uneasy doesn’t mean that people who live in the wilderness are potentially dangerous. So, statement 1 is invalid assumption.

The author was also enjoying the serenity of the place, even if there was a sense of unease within him. So, it can’t be implied that such secluded areas should be avoided. Hence statement 2 is invalid assumption.

The passage describes a moment of serenity as the protagonist admires the beauty of the natural world, but also hints at a sense of unease and danger. This is confirmed when the man emerges from the bushes and warns the protagonist about the potential danger of the area. In the passage it’s mentioned that ‘The man nodded, his eyes fixed on me. “It’s a beautiful view, isn’t it?” he said. “But it can be dangerous up here”. So, the passage suggests that the natural world can be both beautiful and dangerous. So, statement 3 is a valid assumption.

Q.37) Which one of the following statements best reflects the message of the author of the passage?

- a) The unease and apprehension that can come with being alone in nature.
- b) The beauty of nature and the serenity it can bring.
- c) The danger and unpredictability of the natural world.
- d) The excitement and adventure that can come with exploring the outdoors.

Ans) a

Exp) Option a is the correct answer.

The passage describes a serene moment in nature, but the author also mentions feeling a sense of unease and that something is not quite right. The rustling in the bushes and the voice saying “hello” at the end add to the overall sense of foreboding. Therefore, the author is trying to convey a sense of unease and apprehension to the reader.

Passage 23

The Cybersecurity has become an increasingly critical issue in India due to the rising number of cyber-attacks and data breaches. Cyber-attacks include a wide range of activities such as hacking, phishing, identity theft, cyberstalking, and cyberbullying. In recent years, there has been a significant rise in cyber-attacks incidents in India. According to a report by the National Crime Records Bureau, cyber-attacks in India increased by 63.5% in 2019 as compared to the previous year.. In recent years, India has been targeted by several high-profile cyber-attacks, including the 2016 data breach at the National Payments Corporation of India and the 2017 WannaCry ransomware attack. This highlights the need for more robust cybersecurity measures and better awareness among the public about cybercrime prevention. The Indian government has taken several steps to improve cybersecurity, such as launching the Cyber Swachhta Kendra to provide free antivirus software to citizens and setting up the National Cyber Coordination

Centre to monitor cyber threats. However, these steps have been inadequate in comparison to the intensity of attacks on critical infrastructure. There is still a need for more robust cybersecurity measures, particularly in the government sector. As more and more businesses move online, the need for cybersecurity measures becomes even more crucial. It is essential for organizations to invest in cybersecurity to protect their sensitive data and prevent cyber-attacks. In addition, individuals should be educated on safe internet practices to prevent falling victim to cybercrime.

Q.38) With reference to the passage, the following assumptions have been made:

- The steps taken by the government have failed to enhance cybersecurity.
- Protecting all organizational information is quite important nowadays.
- Cyber education is the most important tool to prevent cyber-attacks.
- Cyber-attacks are becoming a more significant threat to India's security.

Ans) d

Exp) Option d is the correct answer.

In the passage it's stated that 'these steps have been inadequate in comparison to the intensity of attacks on critical infrastructure', This doesn't imply that they have failed. So, statement 1 is an invalid assumption.

It's stated that 'It is essential for organizations to invest in cybersecurity to protect their sensitive data', so it's not meant that all organizational information has to be protected. So, statement 2 is an invalid assumption.

The passage states that 'This highlights the need for more robust cybersecurity measures and better awareness among the public about cybercrime prevention.', so cyber education is one of the tools, not the most important tool. So, statement 3 is an invalid assumption.

The passage discusses the rising number of cyber-attacks and data breaches in India and highlights the need for more robust cybersecurity measures and better awareness among the public about cybercrime prevention. Therefore, the underlying assumption of the passage is that cyber-attacks are becoming a more significant threat to India's security.

Q.39) Which of the following statements best reflects the crux of the passage?

- Cybersecurity is necessary for government organizations in India.
- Investing in cybersecurity and cyber education is the need of the hour.
- Cyber-attacks are increasing at an alarming rate in India.
- Critical infrastructure of India is at vulnerable state.

Ans) b

Exp) Option b is the correct answer.

In the passage it's stated that 'There is still a need for more robust cybersecurity measures, particularly in the government sector.' So it's an idea discussed but not the crux of the passage. So, statement 1 is incorrect.

The main idea of the passage is that cybersecurity has become an increasingly critical issue in India due to the rising number of cyber-attacks and data breaches. The passage discusses the increasing number of cyber-attacks in India and highlights the need for more robust cybersecurity measures and better awareness among the public about cybercrime prevention. Therefore, the crux of the passage is that 'Investing in cybersecurity and cyber education is the need of the hour.' So, statement 2 is correct.

The passage discusses the increase in cybercrimes in India, why it is increasing and what are the forms of cybercrimes. So, it's an idea but not the crux. So, statement 3 is incorrect.

The passage states that 'these steps have been inadequate in comparison to the intensity of attacks on critical infrastructure'. So, it's an idea but not the crux. So, statement 4 is incorrect.

Passage 24

The sky was a dark, foreboding gray, and the wind whipped through the trees, rustling their leaves in a frantic dance. The atmosphere was charged with an eerie electricity, and the birds had ceased their chirping, sensing the coming storm. As the first drops of rain began to fall, a lone figure appeared on the horizon, moving with a purposeful stride. The figure was shrouded in a long, flowing cloak that billowed in the wind, and a hood obscured their features. It was impossible to tell whether the figure was male or female, young or old. But one thing was certain: they were not to be trifled with. The air crackled with tension as the figure drew closer, until finally they came to a halt in front of the gathered crowd.

The question hung in the air: Who was this mysterious figure, and what did they want?

Q.40) What is the most likely inference drawn about the mysterious figure based on the passage?

- a) The figure is a benevolent being who has come to help the crowd.
- b) The figure is a powerful and enigmatic presence.
- c) The figure is an antagonist who has come to cause trouble.
- d) The figure is a harmless traveller who has gotten caught in the storm.

Ans) b

Exp) Option b is the correct answer.

The passage describes a mysterious figure who appears on the horizon during a storm. The figure is shrouded in a long, flowing cloak and is not easily identifiable as male or female, young or old. The passage also notes that the figure is not to be trifled with and that the atmosphere is charged with tension when they arrive. Based on these details, the most likely inference drawn about the mysterious figure is that they are a powerful and enigmatic presence. Answer option b correctly reflects this inference. Options a, c, and d are all incorrect because they either go against or are unrelated to the main point of the passage.

Q.1) What was the primary objective of the Indemnity Act, passed by the British Parliament in 1920?

- a) To give the Indian members of the Indian civil service the same powers and rights as those enjoyed by their European colleagues.
- b) To empower the rulers of Indian Princely states to carry out social welfare activities without consulting the British Government.
- c) To provide for the financial solvency of the East India Company.
- d) To provide protection to the officers who had acted in good faith for maintaining the public order and safety.

Ans) d

Exp) Option d is the correct answer.

Option d is correct. The British Parliament had passed an **Indemnity Act in 1920 (or white washing bill) for the protection of its officers.** The Act deals with the indemnity granted to persons who have carried out duties for the purpose of maintaining discipline and order, and have done other executive acts; side by side with that the Bill proposes to validate certain acts of courts and of regulations made in various parts of the world.

It provided that no action or other legal proceeding whatsoever, whether civil or criminal, shall be instituted in any court against a person belonging to the naval, military, Air Force, or civil, or by any other person acting under the authority of a person. If the act is done in good faith for the defence of the Britain interest or the public safety.

Source: A Brief History of Modern India by Rajiv Ahir - Emergence of Gandhi 326

<https://api.parliament.uk/historic-hansard/commons/1920/may/03/indemnity-bill-1>

Q.2) Which of the following factor(s) led to the launch of the Home Rule Movement in India?

1. Rise in the prices of goods.
2. Disappointment of the moderates about the Morley-Minto reforms.
3. Release of Tilak from the jail

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Home Rule Movement was the Indian response to the First World War in a less charged but a more effective way than the response of Indians living abroad which took the form of the romantic Ghadr adventure.

Statement 1 is correct: People were feeling the burden of wartime miseries caused by high taxation and a rise in prices, and were ready to participate in any aggressive movement of protest.

Statement 2 is correct: Moderates and their followers got disappointed by the level of reforms that were introduced by the Morley-Minto reforms as they did not meet the expectations of the moderate leaders. Questions were raised about their methods of petitions and prayers. Home Rule league movement provided them another opportunity.

Statement 3 is correct: Tilak published a series of articles in his Marathi newspaper Kesari, against the British. On July 3rd, 1908, Bal Gangadhar Tilak was arrested by the British under the charge of sedition. Tilak was sentenced to jail for a period of six years i.e from 1908 to 1914 in Mandalay in Burma. Tilak was ready to assume leadership after his release in June 1914, and had made conciliatory gestures– to the

government reassuring it of his loyalty and to the Moderates that he wanted, like the Irish Home Rulers, a reform of the administration and not an overthrow of the government. He also admitted that the acts of violence had only served to retard the pace of political progress in India. He urged all Indians to assist the British government in its hour of crisis.

Source: **Spectrum and India's Struggle for Independence**

Q.3) In the context of modern history of India, which of the following statements is/are correct about the Lucknow Session of the Indian National Congress that was held in 1916?

1. In this session, Congress- League Pact accepted the Muslim League's position on separate electorates.
2. Annie Beasant was elected as the first women president of the Congress in this Session.
3. Jan-Gan-Man was recited for the first time in this session

Select the correct answer from the code given below:

- a) 2 and 3 only
- b) 1 and 2 only
- c) 1 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

The Lucknow session between could be considered an important event in the course of the nationalistic struggle for freedom.

Statement 1 is correct: One of the major outcomes of the Lucknow session 1916 was the Lucknow pact between Congress and the Muslim league. Under this Pact, while the League agreed to present joint constitutional demands with the Congress to the government, the Congress accepted the Muslim League's position on separate electorates. The Muslims were also granted a fixed proportion of seats in the legislatures at all-India and provincial levels.

Statement 2 is incorrect: Annie Beasant was elected as first women president of the congress in 1917 Calcutta session of the Indian National Congress (not in Lucknow session). The president of the 1916 Lucknow session was Ambica Charan Mazumdar.

Statement 3 is incorrect: Jan-Gan-Man was recited for the time in the 1911 session of the Indian National Congress that was held in Calcutta.

Source: Indias Struggle for Independence by Bipin Chandra

Q.4) In the context of India's freedom struggle, who among the followings were referred to as the Responsivists?

- a) Those who withdrew from the legislative councils and renounced the government offices.
- b) Those who concentrated on constructive work and believed in continuation of boycott and non-cooperation.
- c) Those who advocated a consistent anti-imperialist struggle against the British to achieve Purna Swarajya.
- d) Those who wanted to cooperate with the government and hold public offices wherever possible.

Ans) d

Exp) Option d is the correct answer.

Due to several communal riots and the government strategy of divide and rule, the Swarajists began to break down into several factions as communal, Responsivists and Non-responsivists.

Option a is incorrect: Non-Responsivists like Motilal Nehru withdrew from the legislature in 1926, and renounced the public offices.

Option b is incorrect: The Non-Changers like C. Rajagopalachari, Vallabhbhai Patel, Rajendra Prasad and M.A. Ansari opposed council entry, advocated concentration on constructive work, and continuation of boycott and non-cooperation, and quiet preparation for resumption of the suspended civil disobedience programme.

Option c is incorrect: The Socialists and the leaders from the left wing within the congress like Jawaharlal Nehru and Subhash Chandra Bose were critical of both Swarajists and No-Changers. They advocated a more consistent anti-imperialist line in the form of a slogan for purna swarajya (complete independence).

Option d is correct: The Responsivist leaders among Swarajists—Lala Lajpat Rai, Madan Mohan Malaviya and N.C. Kelkar—advocated cooperation with the government and holding of office wherever possible to continue the struggle on the Constitutional lines and use councils to either end or mend them.

Source: Spectrum: A brief history of Modern India, Chapter 17, Emergence of Swarajists, Socialist Ideas, Revolutionary Activities and Other New Forces.

Q.5) Consider the following statements with reference to Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC):

1. BIMSTEC Secretariat was established in Dhaka in 2014.
2. Ministerial Meetings is the supreme decision-making body of BIMSTEC.
3. The BIMSTEC Charter allows the admission of new countries in the organisation.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Intro: The BIMSTEC Charter was signed and adopted during the Fifth BIMSTEC Summit held in virtual format in Colombo, Sri Lanka, on 30 March 2022.

Statement 1 is correct: The permanent BIMSTEC Secretariat, which was established in Dhaka in 2014 replaced the Bangkok Working Group as main coordinating body.

Statement 2 is incorrect: BIMSTEC Summit is the supreme decision-making body of BIMSTEC and not the Ministerial Meetings.

Statement 3 is correct: Unlike the SAARC Charter, Article 6 of the BIMSTEC Charter talks about the 'Admission of new members' to the group. This paves the way for the admission of countries such as the Maldives.

Knowledge Base: There is also a major weakness in BIMSTEC Charter, to boost **economic integration**, does not contain the **flexible participation scheme** found in ASEAN Charter. This flexible scheme, also known as the '**ASEAN Minus X**' formula, allows two or more ASEAN members to initiate negotiations for economic commitments.

A flexible '**BIMSTEC Minus X**' formula might have allowed India and Bangladesh or India and Thailand to conduct their ongoing bilateral **free trade agreement** negotiations under the broader BIMSTEC umbrella. This would have eventually strengthened BIMSTEC by enabling the gradual and incremental expansion of these binding commitments to other members.

Source: <https://www.thedailystar.net/opinion/views/news/sri-lanka-crisis-why-saarc-missing-action-3078226>

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<https://www.orfonline.org/research/saarc-vs-bimstec-the-search-for-the-ideal-platform-for-regional-cooperation/>
https://drive.google.com/file/d/1Z-P447ounplkWmGNQ6iC6k_Ofs2Dxbk5/view
<https://bimstec.org/bimstec-charter/>

Q.6) In the context of Indian History, what was the significance of the ‘August Declaration of 1917’?

- Through this, Congress for the first time, adopted the extra constitutional means for achieving independence.
- It marked the starting of the Champaran Satyagraha, which is considered as the first civil dis-obedience movement in India.
- It proposed increased participation of Indians in administration and development of self-governing institutions in India
- Through this declaration, INC established a committee under Motilal Nehru for drafting a constitution for India.

Ans) c

Exp) Option c is the correct answer.

The Secretary of State for India, Edwin Samuel Montagu, made a statement on August 20, 1917 in the British House of Commons in what has come to be known as the **August Declaration of 1917**.

The statement said: “The government policy is of an **increasing participation of Indians in every branch of administration and gradual development of self-governing institutions** with a view to the progressive realisation of responsible government in India as an integral part of the British Empire.”

Source: **India’s Struggle for Independence**

Q.7) What was the main objective of Bhagat Singh and his comrades of throwing a bomb in the Central Legislative Assembly in 1929?

- To take revenge for the death of Lala Lajpat Rai.
- To get arrested and use the trial court as forum for propaganda.
- To demonstrate their anger against the Jallianwala Bagh Massacre.
- To physically harm the British officials.

Ans) b

Exp) Option b is the correct answer.

The Hindustan Socialist Republican Association (HSRA) leadership decided to let the people know about its changed objectives and the need for a revolution for the masses. Bhagat Singh and Batukeshwar Dutt were asked to throw a bomb in the Central Legislative Assembly on April 8, 1929.

Option a is incorrect: The revolutionaries Bhagat Singh and Shivaram Rajguru shot and killed John Saunders in **December 1928** to take revenge of Lala Lajpat Rai death during a lathi charge. **This event was happened before the throwing of bomb in the Central Legislative Assembly on April 8, 1929.**

Option b is correct: The objective was to get arrested and to use the trial court as a forum for propaganda so that people would become familiar with their movement and ideology.

Option c is incorrect: Option c is not related to the objective behind throwing a bomb in the Central Legislative Assembly in 1929.

Option d is incorrect: The bombs had been deliberately made harmless and were aimed at making ‘the deaf hear’.

Source: Spectrum, CHAPTER 17: Emergence of Swarajists, Socialist Ideas, Revolutionary Activities, and Other New Forces.

Q.8) With reference to Gandhi's activities in South Africa, consider the following statements:

1. He started a newspaper called 'Indian Opinion'.
 2. Phoenix Farm was established by Gandhi to experiment with Satyagraha, Sarvodaya and Ahimsa.
 3. During his stay in South Africa, he extended his support to British Empire during the Second Boer War.
- Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: On 4th June 1903, Mahatma Gandhi started his newspaper 'Indian Opinion' in South Africa to fight against racial discrimination and demand civil rights for Indians in that country.

Statement 2 is correct: Phoenix farm was founded by Mahatma Gandhi in 1904 on the north-western edge of Durban, South Africa to experiment with Satyagraha, Sarvodaya and Ahimsa (non-violence). It was here Gandhiji first used 3 principles to champion the cause of mine and sugarcane workers, liberation of women and fight against alcohol. The Phoenix Settlement was set up to put into practice the values which he followed and preached for the rest of his life – self-help, dignity of labour and simplicity.

Statement 3 is correct: Two Boer wars were fought between the British Empire and the two independent Boer republics, during the 1880 to 1902 period. Gandhi extended his support to British Empire during Second Boer war 1899. Gandhi wished to support the British in a hope that they would take steps to improve the conditions of Indians after the war. For his contributions during war, Gandhi was bestowed with a title of 'kaiser-i-Hind' by British.

Source: Spectrum's A brief History of Modern India ch-15 pg:347-351

Q.9) With reference to Gandhi's early movements in India, consider the following pairs:

Movement	Causes
1. Champaran satyagraha	Against the Tinkathia system
2. Ahmedabad mill strike	Demand for remission of taxes
3. Kheda satyagraha	Discontinuation of Plague bonus

How many of the above given pairs are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) All the three pairs
- d) None of the pairs

Ans) a

Exp) Option a is the correct answer.

Pair 1 is correctly matched: Champaran Satyagraha of 1917 was the first civil disobedience movement of India. Gandhi was requested by Rajkumar Shukla, a local man, to look into the problems of the farmers in context of indigo planters of Champaran in Bihar. The European planters had been forcing the peasants to grow indigo on 3/20 part of the total land (called **tinkathia system**). When German synthetic dyes replaced

indigo at the end of the nineteenth century, European planters still demanded high rents and illegal dues from the peasants in order to maximize their profits before the peasants could switch to other crops. Furthermore, the peasants were forced to sell their produce at European-determined prices. One of the major objectives of the Champaran Satyagraha was to challenge this tinkatia system.

Pair 2 is incorrectly matched: In March 1918, Gandhi intervened in a dispute between cotton mill owners of Ahmedabad and the workers over the issue of **discontinuation of the plague bonus**. Gandhi asked the workers to go on a strike and demand a 35 percent increase in wages instead of 50 percent. When negotiations with mill owners did not progress, he himself undertook a **fast unto death (his first)** to strengthen the workers' resolve.

Pair 3 is incorrectly matched: Because of drought in 1918, the crops failed in Kheda district of Gujarat. According to the Revenue Code, if the yield was less than one-fourth the normal produce, the **farmers were entitled to remission**. The government, however, remained adamant and said that the property of the farmers would be seized if the taxes were not paid.

Gandhi asked the farmers not to pay the taxes (First non-cooperation). The revolt was remarkable in that discipline and unity were maintained. Ultimately, the government sought to bring about an agreement with the farmers. It agreed to suspend the tax for the year in question, and for the next; reduce the increase in rate; and return all the confiscated property.

Source: Spectrum's A brief History of Modern India ch-15 pg:353-356

Q.10) Consider the following statements regarding the UN Commission on Status of Women (CSW):

1. It was established by the UN General Assembly (UNGA).
2. Members to the CSW are elected for a term of eight years.
3. It monitors and reviews progress and problems in the implementation of the Beijing Declaration.

Which of the above given statements is/are correct?

- a) 2 only
- b) 1 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Commission on the Status of Women (CSW) is the principal global intergovernmental body exclusively dedicated to the promotion of gender equality and the empowerment of women.

Statement 1 is incorrect: It was established by the ECOSOC resolution of June 1946. The Commission comprises 45 Member States of the United Nations. The Commission on the Status of Women is a functional commission of the UN Economic and Social Council (UN-ECOSOC).

Statement 2 is incorrect: Forty-five Member States of the United Nations serve as members of the Commission at a time. Members are elected for a period of four years. India was elected a member of the United Nations Commission on the Status of Women, securing the most votes ahead of China.

Statement 3 is correct: In 1996, ECOSOC expanded the Commission's mandate and decided that it should take a leading role in monitoring and reviewing progress and problems in the implementation of the Beijing Declaration and Platform for Action, and in mainstreaming a gender perspective in UN activities.

Knowledge Base:

2000 Resolution: On the eve of International Women's Day, leading women's rights campaigners at the United Nations and the African Union and a Nobel Peace Prize laureate criticised male-dominated governments on March 7 for excluding women from peace negotiations.

They complained that governments are ignoring a U.N. resolution adopted in 2000 demanding equal participation for women in talks to end conflicts.

Since the 20th anniversary of the resolution in 2020 Afghanistan's Taliban rulers have imposed “gender apartheid” and war in Ethiopia's northern Tigray region reportedly led to sexual violence “at a staggering scale.”

Source: <https://www.unwomen.org/en/csw/brief-history>

<https://indianexpress.com/article/india/india-beats-china-to-win-crucial-election-to-un-commission-on-women-6596659/>

<https://indianexpress.com/article/world/india-abstains-on-un-resolution-to-oust-iran-from-commission-on-status-of-women-8325671/>

Q.11) Many legislations were enacted in British India to curb the freedom of the Indians and to suppress the revolutionary activities of the people. In this context, Why Anarchical and Revolutionary crimes Act is infamous in India?

- For the first time, it allowed the government to arrest a person on the grounds of sedition.
- It allowed political activists to be imprisoned without a trial
- It notified certain tribes in India as criminal tribes.
- It mandated that only a European judge can trial British subjects

Ans) b

Exp) Option b is the correct answer.

Anarchical and Revolutionary crimes Act but popularly known as the Rowlatt Act, (February 1919), legislation passed by the Imperial Legislative Council, the legislature of British India. **The act allowed certain political cases to be tried without juries and permitted imprisonment of suspects without trial.** Their objective was to replace the repressive provisions of the wartime Defence of India Act (1915) by a permanent law.

Source: <https://wikisummaries.org/defense-of-india-act-impedes-the-freedom-struggle/>

Q.12) Consider the following statements about the events in the aftermath of the Jallianwala Bagh Massacre:

- As a symbol of protest, Gandhi gave up his title of Kaiser-e-Hind.
- An All-White Hunter Committee with no Indian representation, was constituted to inquire into the massacre.
- Bhagat Singh immediately established a Bharat Naujawan Sabha to protest against the massacre.

Which of the statements given above is/are correct?

- 1 only
- 1 and 3 only
- 2 and 3 only
- 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

The 13 April 1919 Jallianwala Bagh Massacre (aka Amritsar Massacre) was an infamous episode of brutality which saw General Dyer order his troops to open fire on an unarmed crowd of men, women, and children trapped in an abandoned walled garden.

Statement 1 is correct: To protest against this brutal action of the British troops, Rabindranath Tagore renounced his knighthood in protest and **Gandhi gave up the title of Kaiser-i-Hind**, bestowed by the British for his work during the Boer War.

Statement 2 is incorrect: on October 14, 1919, the Government of India announced the formation of the Disorders Inquiry Committee, which came to be more widely and variously known as the Hunter Committee/Commission. **It was not an all-white committee since there were three Indians** among the members, namely, Sir Chimanlal Harilal Setalvad- Vice Chancellor of Bombay University, and advocate of

the Bombay High Court; Pandit Jagat Narayan- lawyer and Member of the Legislative Council of the United Provinces; and Sardar Sahibzada Sultan Ahmad Khan-a lawyer from Gwalior State.

Statement 3 is incorrect: Bhagat Singh was just 11 at the time of the Jallianwala Bagh massacre. Bhagat Singh's Bharat Naujawan Sabha was established in 1926.

Source: Spectrum's A brief History of Modern India ch-15 pg:358-364

Q.13) Some leaders of the Congress who were dissatisfied with the methods of struggle adopted choose to form a new organisation named Indian National Liberation Federation (INLF) in 1919. Who among the following was one of the founders of INLF?

- Acharya Narendra Dev
- Motilal Nehru
- Surendranath Banerjea
- Anand Mohan Bose

Ans) c

Exp) Option c is the correct answer.

The disputes within the Congress over the strategy of struggle forced some of the moderates to form a different front known as Indian National Liberal Federation in 1919. **This was founded by Surendranath Banerjea along with Tej Bahadur Sapru, S. Srinivasa Shastri and M. R. Jayakar.**

However, this front played a minor role in the national politics henceforward. Their goals and methods were inspired from the British liberalism. They aimed towards parliamentary democracy, both as an institutional structure and as a system of value which will help achieve national welfare through peaceful negotiations. The party members regularly participated in the elections to legislative assembly and councils at the town, provincial and central levels.

Source: Spectrum: A brief history of Modern India, Chapter 16, Non-Cooperation Movement and Khilafat Aandolan.

Q.14) Consider the following statements about the Nagpur Session of the Indian National Congress, held in December 1920:

- It provided for 'attainment of Swaraj only through constitutional means' as the goal of Congress.
- Provincial congress committee on linguistic basis were organised.
- It was held under the presidentship of Motilal Nehru.

Which of the statements given above is/are **incorrect**?

- 1 and 2 only
- 3 only
- 1 and 3 only
- 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

By the mid-1920s, the Non-Cooperation Khilafat movement was started by the Khilafat committee to condemn the wrongs evil deeds of the British in Punjab and on the question of Khilafat.

The Nagpur session of the Indian National Congress (INC) which took place in December 1920 endorsed the program of Non-cooperation movement approved by INC in the special session of Calcutta (September 1920), along with other provisions.

Statement 1 is incorrect: The goal of the INC changed from the attainment of self-government through constitutional means, to attainment of swaraj through peaceful and legitimate means, by committing itself

to an extraconstitutional mass struggle. Hence, INC envisaged to attain swaraj by resorting to extraconstitutional means.

Statement 2 is correct: INC made following organisational changes in the party.

1) a congress working committee (CWC) of 15 members was set up to lead the Congress from now onwards
2) provincial congress committees on linguistic basis were organised

3) ward committees were organised

entry fee was reduced to four annas.

Statement 3 is incorrect: The Nagpur session of 1920 was held under the Presidentship of C. Vijayaraghavachariar. However, Motilal Nehru was the president of the earlier held Amritsar Session of the Indian National Congress in 1919.

Source: Spectrum: A brief history of Modern India, Chapter 16, Non-Cooperation Movement and Khilafat Aandolan

Q.15) Which of the following statements is correct with respect to India's social security system?

- National Pension System (NPS) is applicable to both Civil servants as well as Armed forces.
- Pradhan Mantri Kisan Maan Dhan Yojna (PMKMY) is a pension scheme for Small and Marginal Farmers.
- Employee Pension Scheme (EPS) is provided to workers engaged in the unorganised sector.
- All Indian citizens in the age group of 18 to 40 years are eligible to become beneficiaries of Atal pension yojana.

Ans) b

Exp) Option b is the correct answer.

The pension scheme of India especially the Old Pension Scheme (OPS) and New Pension scheme (NPS) was frequently in news due to the **decision of some States to implement the Old Pension scheme**. This sparked the debate between OPS and NPS in India.

Option a is incorrect: The New Pension Scheme (NPS) also known as National Pension System (NPS) is **not applicable to armed forces** (i.e. Army, Navy & Air Force). NPS which replaced the OPS, is **applicable to Civil servants** who joined the service after December 31,2003 i.e. NPS will start to take effect from January 1,2004.

Option b is correct: Pradhan Mantri Kisan Maan Dhan Yojna (PMKMY) is being implemented in order to **provide social security net for the Small and Marginal Farmers (SMF) by way of pension**. It is an old age pension scheme for all land holding Small and Marginal Farmers (SMFs) in the country. Under this scheme, provision has been made for payment of a minimum fixed pension of Rs. 3,000/- to the eligible small and marginal farmers, subject to certain exclusion clauses, on attaining the age of 60 years. The Scheme is a voluntary and contributory pension scheme, with entry age of 18 to 40 years. The eligible beneficiary can opt to become member of the Scheme by subscribing to a Pension Fund. The beneficiary is required to contribute Rs 100/- per month at median entry age of 29 years. The Central Government also contributes to the Pension Fund in equal amount, managed by the Life Insurance Corporation, which is also responsible for pension pay out.

Option c is incorrect: The Employee Pension Scheme (EPS) scheme provides pension benefits to **employees of the organised sector (not to unorganised sectors)** as a way of social security after their **retirement**. Employee Pension Scheme is administered by Employees' Provident Fund Organisation (EPFO).

Option d is incorrect: Under the Atal Pension Yojana (APY) **any citizen who is or has been an income-tax payer**, shall **not be eligible** to join APY. APY aims to create a universal social security system for all Indians, especially the poor, the under-privileged and the workers in the **unorganised sector**. APY is open to all

bank account holders in the age group of **18 to 40 years** and the contributions differ, based on the pension amount chosen.

Source: [https://npstrust.org.in/content/eligibility#:~:text=Autonomous%20Bodies%20\(CABs\)-,The%20Central%20Government%20had%20introduced%20the%20National%20Pension%20System%20\(NPS,also%20mandatorily%20covered%20under%20NPS.](https://npstrust.org.in/content/eligibility#:~:text=Autonomous%20Bodies%20(CABs)-,The%20Central%20Government%20had%20introduced%20the%20National%20Pension%20System%20(NPS,also%20mandatorily%20covered%20under%20NPS.)

<https://financialservices.gov.in/pension-reforms-divisions/Atal-Pension-Yojana>

<https://mintgenie.livemint.com/news/personal-finance/old-pension-scheme-vs-new-pension-scheme-a-comprehensive-comparison-151678436996584#:~:text=invested%20in%20annuities.-,Eligibility,-%3A%20Only%20government>

Q.16) In the context of the Indian National Movement, which of the following movements/revolts were contemporary to the Non-Cooperation Movement?

1. Awadh Kisan Movement
2. Eka Movement
3. Mappila Revolt
4. Kherwar Movement
5. Gurudwara Reform Movement

Select the correct option from the codes given below.

- a) 1, 2 and 3 only
- b) 2, 4 and 5 only
- c) 1, 2, 3 and 5 only
- d) 1, 3, 4 and 5 only

Ans) c

Exp) Option c is the correct answer.

During 1919-22, the British were opposed through two mass movements—the Khilafat and Non-Cooperation. The movement was led by Gandhiji and the Ali brothers who took a nationwide tour and spread the movement to major nooks and corners of the nation. This spirit of defiance and unrest of the movement gave rise to many local struggles and people movements.

Statement 1 is correct: Awadh Kisan Movement (Uttar Pradesh) came into existence in October 1920, when the differences between nationalist ranks came to the fore. The movement asked the kisans to refuse to till bedakhali land, not to offer hari and begar (forms of unpaid labour), to boycott those who did not accept these conditions and to solve their disputes through panchayats.

Statement 2 is correct: Towards the end of 1921, Eka movement rose because of discontentment among the peasants in some northern districts of the United Provinces—Hardoi, Bahraich, Sitapur over the issues of high rents, operation of thikadars and practice of share rents. Madari Pasis and other lower caste leaders gave grassroot leadership to the Eka movement.

Statement 3 is correct: The Mappilas were the Muslim tenants inhabiting the Malabar region where most of the landlords were Hindus. They had earlier too resented against the oppression of the landlords. However, **during the Non-Cooperation Khilafat movement the two movements merged and leaders like Gandhi, Shaukat Ali and Maulana Azad addressed Mappila meetings and gave it a leadership.** Over the course of the movement, it got communal shades and hence this led to isolation of the movement from the Khilafat Non-Cooperation movement.

Statement 4 is incorrect: The Kherwar movement of the Santhals took place in 1833, which was motivated by the desire to return to an idealised past of tribal independence. The word "Kherwar" is said to be an ancient name of Santhals and in their opinion, it is linked to the Golden age of their history.

Statement 5 is correct: The Akali movement (also known as Gurudwara Reform Movement), 1921 was an offshoot of the Singh Sabha Movement. It aimed at liberating the Sikh gurudwaras from the control of

corrupt Udasi mahants (the post having become hereditary). Thus, it was a contemporary movement of Non-Cooperation Movement.

Source: Spectrum: A brief history of Modern India, Chapter 16, Non-Cooperation Movement and Khilafat Aandolan

<https://egyankosh.ac.in/bitstream/123456789/20640/1/Unit-15.pdf>

Q.17) In the context of Indian history, consider the following statements about the ‘Swarajists’, which emerged in India.

1. Swarajists advocated use of legislative councils as an arena of political struggle.
2. It was led by C. Rajagopalachari and M. A. Ansari among others.
3. Congress Party did not allow Swarajists to contest the Council elections or work in the Councils.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

After Gandhi’s arrest (March 1922), there was disintegration, disorganisation and demoralisation among nationalist ranks. A debate started among Congressmen on what to do during the transition period, i.e., the passive phase of the movement. It led to formation of two poles in the congress, Swarajists on one side and No-changers on the other.

Statement 1 is correct: The Swarajists advocated entry into legislative councils so that the nationalists could enter them to expose the basic weaknesses of these assemblies and use these councils as an arena of political struggle to arouse popular enthusiasm. In other words, they wanted to ‘end or mend’ these councils, i.e., if the government did not respond to the nationalists’ demands, then they would obstruct the working of these councils.

Statement 2 is incorrect: The Swarajists were led by C.R. Das, Motilal Nehru and Ajmal Khan among others. However, the No-Changers were led by C. Rajagopalachari, Vallabhbhai Patel, Rajendra Prasad and M.A. Ansari. Hence, at the Gaya session of the Congress (December 1922). C.R. Das and Motilal Nehru resigned from the presidentship and secretaryship respectively of the Congress and announced the formation of Congress-Khilafat Swarajya Party or simply Swarajist Party, with C.R. Das as the president and Motilal Nehru as one of the secretaries.

Statement 3 is incorrect: Gandhi was initially opposed to the Swarajist proposal of council entry. But after his release from prison on health grounds in February 1924, he gradually moved towards a reconciliation with the Swarajists. Due to a government crackdown on revolutionary terrorists and the Swarajists towards the end of 1924, the agitated Gandhi had expressed his solidarity with the Swarajists by surrendering to their wishes. Both sides came to an agreement in 1924 that **the Swarajists would work in the councils as an integral part of the Congress.**

Source: Spectrum: A brief history of Modern India, Chapter 17, Emergence of Swarajists, Socialist Ideas, Revolutionary Activities and Other New Forces.

Q.18) Which of the following were part of the Joint Constitutional demands raised by Congress and Muslim League as part of the Lucknow Pact?

1. Elected majorities in representative assemblies at both central and Provincial level.
2. Government should declare that it would confer self-government on Indians as early as possible.
3. Half the members of the viceroy’s and provincial governor’ executive councils should be Indians.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Lucknow Pact between the Congress and the Muslim League could be considered an important event in the course of the nationalistic struggle for freedom.

The joint demands were–

- 1) Government should declare that it would confer self-government on Indians at an early date. Hence statement 2 is correct.
- 2) The representative assemblies at the central as well as provincial level should be further expanded with an elected majority and more powers given to them. Hence statement 1 is correct.
- 3) The term of the legislative council should be five years.
- 4) The salaries of the Secretary of State for India should be paid by the British treasury and not drawn from Indian funds.
- 5) Half the members of the viceroy's and provincial governors' executive councils should be Indians. Hence statement 3 is correct.

Source: Sonali Bansal TMH book and Ishita Banerjee Book

Q.19) Consider the following pairs regarding the activities of various nationalist leaders abroad:

Leaders	Contributions
1. Tarak Nath Das	Started a journal 'Free Hindustan'
2. G. D. Kumar	Established the 'Swadesh Sevak Home'
3. Lala Har Dayal	Established the 'Hindi Association'

How many of the pairs above are correctly matched?

- a) Only One pair
- b) Only Two pairs
- c) All the Three pairs
- d) None of the pairs

Ans) c

Exp) Option c is the correct answer.

While the British government was keen on Indians going to Fiji to work as labourers for British planters, it did not want them to go to North America where they might be infected by ideas of liberty. With this awareness, sustained agitations, both in Canada and the United States, led to the creation of a nationalist consciousness and feeling of solidarity among immigrant Indians.

Pair 1 is correctly matched: Tarak Nath Das, launched his journal named "Free Hindustan". With its columns he started influencing the American public opinion about the real condition of India and circulated the cause of a free Indian republic. He established the Indian Independence League in California and also helped Lala Hardayal in organizing the Ghadar Party Movement in the USA.

Pair 2 is correctly matched: G.D. Kumar set up a **Swadesh Sevak Home in Vancouver** on the lines of the India House in London. He also began to bring out a Gurmukhi paper called Swadesh Sevak which advocated social reform and also asked Indian troops to rise in revolt against the British. In 1910, **Tarak Nath Das and G.D. Kumar**, by now forced out of Vancouver, set up the **United India House in Seattle** in the US

Pair 3 is correctly matched: Lala Har Dayal set up the **Hindi Association** in Portland in May 1913. At the very first meeting of the Association Har Dayal set forth his plan of action: ‘Do not fight the Americans, but use the freedom that is available in the US to fight the British; you will never be treated as equals by the Americans until you are free in your own land, the root cause of Indian poverty and degradation is British rule and it must be overthrown, not by petitions but by aimed revolt; carry this message to the masses and to the soldiers in the Indian Army; go to India in large numbers and enlist their support.’

Source: **India’s Struggle for Independence** by Bipin Chandra

Q.20) The development of which one of the following climatic phenomena is responsible for extreme cold weather conditions in North American Continent in the recent past?

- Anti-Cyclonic Conditions
- Polar Vortex
- Cold Oceanic Gyre Current
- Sub Tropical Jet Streams

Ans) b

Exp) Option b is the correct answer.

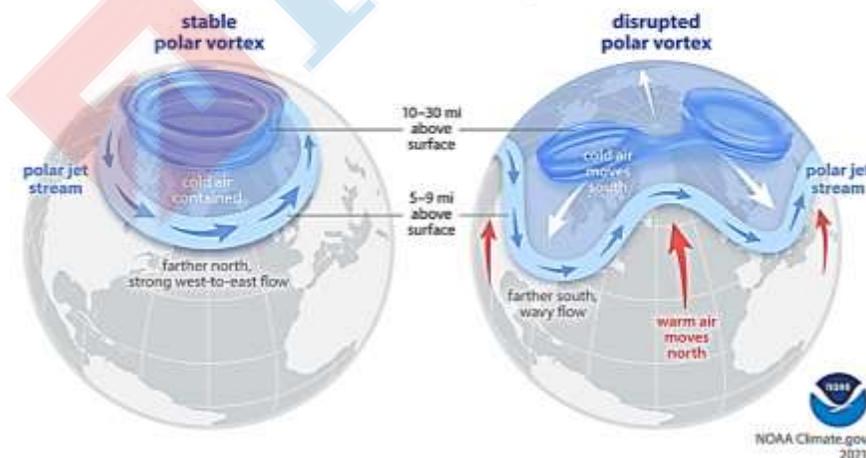
Polar Vortex is a mass of cold, low-pressure air that consistently spins over the Arctic region counter-clockwise, just like a hurricane does. Usually, the polar vortex remains strong and compact, meaning the mass of frigid air stays at the North Pole. But sometimes it weakens (like a wobbling top) and expands to influence the jet stream – an area of fast-moving air high in the atmosphere that surrounds the polar vortex. Once the jet stream is impacted, the cold polar air finds its way towards the mid-latitude regions.

Understanding the polar vortex

The Arctic polar vortex is a strong band of winds in the stratosphere, surrounding the North Pole 10–30 miles above the surface.

The polar vortex is far above and typically does not interact with the polar jet stream, the flow of winds in the troposphere 5–9 miles above the surface. But when the polar vortex is especially strong and stable, the jet stream stays farther north and has fewer “kinks.” This keeps cold air contained over the Arctic and the mid-latitudes warmer than usual.

Every other year or so, the Arctic polar vortex dramatically weakens. The vortex can be pushed off the pole or split into two. Sometimes the polar jet stream mirrors this stratospheric upheaval, becoming weaker or wavy. At the surface, cold air is pushed southward to the mid-latitudes, and warm air is drawn up into the Arctic.



The **polar vortex has been expanding more than twice as frequently in recent years**, owing to the steadily warming Arctic. The melting sea ice in the Barents and Kara seas north of Russia and Scandinavia and increasing Siberian snowfall create larger and more energetic atmospheric waves that ultimately stretch the polar vortex. **This has resulted in extreme winter weather in the US and other places.**

Knowledge Base:

About Polar Vortex:

- The polar vortex is a large area of low pressure and cold air surrounding both of the Earth's poles. It is typically circular and centered around the poles, with a radius of about 3,000 kilometers (1,864 miles).
- Within the polar vortex, the air is very cold and dry, and the winds are strong and constant. The polar vortex is caused by the Earth's rotation and the shape of the planet's surface, and it is most pronounced at high latitudes.
- During the winter months, the polar vortex can become distorted and weaken, allowing cold air to spill out from the polar regions and into lower latitudes.

Source: <https://indianexpress.com/article/explained/explained-climate/recent-study-finds-link-between-rapidly-warming-arctic-and-extreme-cold-weather-in-the-us-8348878/>
<https://www.firstpost.com/explainers/explained-snowmageddon-how-arctic-warming-is-causing-extreme-cold-in-the-us-11875041.html>

Q.21) With reference to the Hindustan Republican Association/Army (HRA), which of the following is/are correct?

1. Bhagat Singh was the founding member of HRA.
2. HRA's constitutional document 'The Revolutionary' was written by Ram Prasad Bismil.
3. HRA wanted to establish a 'Federal Republic of the United States of India'.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The revolutionary activity in north India was dominated by the Hindustan Republican Association/Army or HRA (later renamed Hindustan Socialist Republican Association or HSRA).

Statement 1 is incorrect: The HRA was founded in October 1924 in Kanpur by **Ramprasad Bismil, Jogesh Chandra Chatterjee, and Sachin Sanyal**, with an aim to organise an armed revolution to overthrow the colonial government and establish in its place the Federal Republic of United States of India whose basic principle would be adult franchise. **Bhagat Singh was not the founding members of HRA. He joined it later as member.**

Statement 2 is correct: The Revolutionary was published by the Hindustan Republican Association (HRA), a revolutionary organisation. **It was written by Ram Prasad Bismil**, a leader of the Association, but was signed under a fake name. The document expressed the ideology, plans and vision of the HRA on questions regarding foreign rule, the independence movement and the future of India. It was widely circulated in different parts of the country and aimed to galvanise the people of India to mount a revolution to overthrow British rule.

Statement 3 is correct: HRA aimed to establish (through 'organised and armed revolution') a 'Federal Republic of the United States of India'. It called for a Constitution to be framed, and the resulting Constitutional republic would be based on principles that included: universal adult suffrage, nationalisation of major industries, right to recall elected representatives and group rights.

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Source: Spectrum, CHAPTER 17: Emergence of Swarajists, Socialist Ideas, Revolutionary Activities, and Other New Forces

https://www.constitutionofindia.net/historical_constitutions/the_revolutionary_hindustan_socialist_republican_association_1925_1st%20January%201925

Q.22) With reference to the Government of India Act, 1919, consider the following statements:

1. Bicameralism was introduced at the Provincial level.
2. As per the act, the “reserved subjects” were to be administered by the governor only on the advice of ministers responsible to the legislative Council.
3. It provided for limited voting rights to women.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 3 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Montague-Chelmsford reforms were implemented through the Government of India Act, 1919.

Statement 1 is incorrect: A bicameral arrangement was introduced at the central level. Hence the lower house or Central Legislative Assembly would consist of 145 members and the upper house or Council of State would have 60 members, of which 26 were to be nominated and 34 elected—20 General, 10 Muslims, 3 Europeans, and 1 Sikh

Statement 2 is incorrect: The Act divided the provincial subjects into two parts i.e., transferred and reserved. The transferred subjects were to be administered by the governor with the aid of ministers responsible to the legislative Council. **The reserved subjects, on the other hand, were to be administered by the governor and his executive council without being responsible to the legislative Council.** This dual scheme of governance was known as 'dyarchy'.

Statement 3 is correct: The Government of India Act, 1919 provided **for limited voting rights to women.** Only women with certain income criteria could be enfranchised by provinces if they wish to do so. However, women were not allowed to contest elections.

Source: Spectrum's A brief History of Modern India ch-15 pg:343-346

Q.23) With reference to the achievement of the Swarajists, consider the following statements:

1. Their efforts forced the government to appoint a committee to look into the defects of the Government of India Act 1919.
2. Their efforts led to the election of Vithalbhai Patel as the first Indian President of Central Legislative Assembly
3. They set up national schools and colleges throughout India.
4. They helped in the defeat of Public Safety Bill in the Council.

Which of the statements given above are correct?

- a) 1, 2 and 4 only
- b) 2 and 4 only
- c) 1, 2 and 3 only
- d) 1, 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

After Non-cooperation Movement, one section led by C.R. Das, Motilal Nehru, and Ajmal Khan wanted to expose the basic weaknesses of legislative councils and use these councils as an arena of political struggle to arouse popular enthusiasm. So those advocating entry into legislative councils came to be known as the ‘Swarajists’.

Statement 1 is correct: The Government of India was forced to appoint a committee under Sir Alexander Muddiman, the Home Member, to enquire into the defects in the working of the Act of 1919 and to suggest remedies. The committee including eminent Indians like T.B. Sapru, M.A. Jinnah, R.P. Paranjyaya, Sir Sivaswamy Iyer, Motilal Nehru.

Statement 2 is correct: One of the swarajists achievements was the election of Vithalbhai Patel as the first Indian President of Central Legislative Assembly in 1925.

Statement 3 is incorrect: National schools and colleges were set up by No-changers (not Swarajists). The No-Changers devoted themselves to constructive work that connected them to the different sections of the masses.

Statement 4 is correct: A noteworthy achievement of Swarajists was the **defeat of the Public Safety Bill in 1928**, which was aimed at empowering the Government to deport undesirable and subversive foreigners (because the Government was alarmed by the spread of socialist and communist ideas and believed that a crucial role was being played by the British and other foreign activists being sent by the **Commintern**).

Knowledge Base: **The Communist International (Comintern)**, also known as the Third International, was a Soviet-controlled international organization founded in 1919 that advocated world communism.

Source: Spectrum, CHAPTER 17: Emergence of Swarajists, Socialist Ideas, Revolutionary Activities, and Other New Forces

https://loksabhadocs.nic.in/Refinput/eprofiles/English/27092021_121404_102120691.pdf

Bipan chandra-Indias struggle for independence-ch- The Years Of Stagnation – Swarajists, No-Changers And Gandhiji

Q.24) Which among the following can be considered as major drawbacks of the Government of India Act, 1919?

1. The provinces are now completely deprived of their financial powers and resources.
2. The decisions of Provincial Ministers could be overruled by the Governor.
3. Separate electorates for Muslims for election to the central legislative council was established for the first time.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

In line with the government policy contained in Montagu’s statement of August 1917, the government announced constitutional reforms in July 1918, known as Montagu-Chelmsford or Montford Reforms. Based on these, the Government of India Act, 1919 was enacted. The reforms had many drawbacks; few of them are discussed below:

Statement 1 is incorrect: This statement is not true as **Dyarchy** in the provinces was introduced under this act. Dyarchy was a substantial step towards **transfer of power**. Further the act separated for the first time the provincial and central budgets, where provincial legislatures being **authorized to make their budgets**. Thus, the act provided for more financial power to provinces rather than depriving them.

Statement 2 is correct: The provincial ministers had no control over finances and over the bureaucrats; this would lead to constant friction between the two. Ministers were often not consulted on important matters too; in fact, **they could be overruled by the governor on any matter that the latter considered special.**

Statement 3 is incorrect: Under Indian Councils Act of 1909 (and not under the Government of India Act, 1919), separate electorates for Muslims for election to the central council was established for the first time.

Source: A brief history of Modern India- Spectrum Publication- 2020 Edition

Q.25) With reference to Autonomous District Councils (ADC's) constituted under the Sixth Schedule of the Indian Constitution, consider the following:

1. They are empowered to try both civil and criminal cases.
2. They can make rules for the control of trading by non-tribals in the autonomous area.
3. They can prescribe the language for primary schools on prior approval of President.
4. They have the power to levy taxes on professions and employments.

Which of the statements given above are correct?

- a) 2, 3 and 4 only
- b) 1, 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

The Sixth Schedule consists of provisions for the administration of tribal areas in Assam, Meghalaya, Tripura and Mizoram, according to Article 244 of the Indian Constitution. The tribal areas in the four states of Assam, Meghalaya, Tripura and Mizoram have been constituted as autonomous districts. The district and regional councils administer the areas under their jurisdiction. They can make laws on certain specified matters like land, forests, canal water, shifting cultivation, village administration, inheritance of property, marriage and divorce, social customs and so on. But all such laws require the assent of the Governor.

Statement 1 is correct: Autonomous District Councils (ADC's) can try both civil and criminal cases. District Council or the Regional Council of autonomous areas are being conferred with powers under the Code of Civil Procedure, 1908, and the Code of Criminal Procedure, 1898.

Statement 2 is correct: Autonomous District Councils are empowered to make regulations for the **control of money-lending and trading by non-tribals.** i.e. they may make rules for the regulation and control of money-lending or trading within the district by persons other than Scheduled Tribes resident in the district.

Statement 3 is incorrect: District Council for an autonomous district can construct, or manage primary schools, dispensaries, markets, ferries, fisheries, roads, road transport and waterways in the district. **And with the previous approval of the Governor (not President) may prescribe the language** and the way primary education shall be imparted in the primary schools in the district.

Statement 4 is correct: Autonomous District Councils have the power to levy and collect all the taxes on professions, trades, callings and employments.

Source: <https://www.mea.gov.in/Images/pdf1/S6.pdf>

Q.26) In the context of the Indian independence movement, Santi Ghosh and Suniti Chandheri were known for which of the following?

- a) They were the first women graduates of Indian Women University.
- b) They provided underground support during the Quit India Movement.

- c) They participated in revolutionary activities in Bengal.
d) They provided leadership in the Dandi march.

Ans) c

Exp) Option c is the correct answer.

During the **new phase of the revolutionary movement in Bengal** there was a **large-scale participation of young women** (especially under Surya Sen). These women provided shelter, carried messages and fought with guns in hand. **Prominent women revolutionaries in Bengal** during this phase included **Pritilata Waddedar**, who died conducting a raid. **Kalpna Dutt** who was arrested and tried along with Surya Sen and given a life sentence. **Santi Ghosh** and **Suniti Chandheri**, schoolgirls of Comilla, who shot dead the district magistrate in December 1931 and **Bina Das** who fired point blank at the governor while receiving her degree at the convocation in February 1932. **Manikuntala Sen and Ashalata Sen** played a crucial role in the national movement and in organizing peasants and labour.

Source: <https://egyankosh.ac.in/bitstream/123456789/21037/1/Unit-3.pdf>

Chapter-17: Revolutionary Activities, A brief history of modern India by Rajiv Ahir

Q.27) Consider the following statements regarding comparison between the Home Rule Leagues of Bal Gangadhar Tilak and Annie Besant:

1. Annie Besant set up her Home Rule League much earlier than Tilak set up his League.
2. Tilak's League was restricted to Maharashtra only while Annie Besant's league covered the rest of India.
3. Tilak's League had lesser number of branches as compared to Annie Besant's league.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

The Home Rule Movement was the Indian response to the First World War in a less charged but in a more effective way than the response of Indians living abroad which took the form of the romantic Ghadar adventure. Two Indian Home Rule Leagues were organised on the lines of the Irish Home Rule Leagues, and they represented the emergence of a new trend of aggressive politics. Annie Besant and Bal Gangadhar Tilak were the pioneers of this new trend. By early 1915, Annie Besant had launched a campaign to demand self-government for India after the war on the lines of white colonies. Later they set up their leagues for this purpose. Tilak and Besant set up their separate leagues to avoid any friction.

Statement 1 is incorrect: Tilak set up his **Home Rule League in April 1916**. Annie Besant set up her league in **September 1916 in Madras**. So, Tilak's league was set up earlier than Annie Besant's league.

Statement 2 is incorrect: Tilak's **Home Rule League** was restricted to Karnataka, Central Provinces, Berar and Maharashtra (excluding Bombay city). Thus, it was **not restricted to Maharashtra only**. Its demands included swarajya, formation of linguistic states and education in the vernacular. Annie Besant's league covered the rest of India (including Bombay city).

Statement 3 is correct: Tilak's League had six branches while Annie Besant's league had 200 branches. Annie Besant's league was loosely organised as compared to Tilak's League. It had George Arundale as the organising secretary. B.W. Wadia and C.P. Ramaswamy Aiyar were also associated with it.

Source: Chapter-14: Home Rule League Movement, A brief history of modern India by Rajiv Ahir

Q.28) Which of the following personalities became the members of the Home Rule League?

1. Jawaharlal Nehru
2. Mohammad Ali Jinnah
3. Lala Lajpat Rai
4. Gopal Krishna Gokhale
5. Madan Mohan Malaviya

Select the correct answer using the code given below:

- a) 1, 3 and 4 only
- b) 2, 3 and 4 only
- c) 1, 2, 3 and 5 only
- d) 1, 3, 4 and 5 only

Ans) c

Exp) Option c is the correct answer.

The Home Rule Movement was the Indian response to the First World War in a less charged but in a more effective way than the response of Indians living abroad which took the form of the romantic Ghadar adventure. Two Indian Home Rule Leagues were organised on the lines of the Irish Home Rule Leagues, and they represented the emergence of a new trend of aggressive politics. Annie Besant and Tilak were the pioneers.

Options 1, 2, 3, and 5 are correct. The Home Rule agitation was later joined by Motilal Nehru, Jawaharlal Nehru, Bhulabhai Desai, Chittaranjan Das, Madan Mohan Malaviya, Mohammad Ali Jinnah, Tej Bahadur Sapru and Lala Lajpat Rai. Some of these leaders became heads of local branches. Many of the Moderate Congressmen who were disillusioned with Congress inactivity. However, **Anglo-Indians, most of the Muslims and non-brahmins from the South did not join** as they felt Home Rule would mean rule of the Hindu majority, and that too mainly by the high caste.

Option 4 is incorrect. Gopal Krishna Gokhale died on 19 February 1915. Thus, he was not part of home rule movement.

Source: Chapter-14: Home Rule League Movement, A brief history of modern India by Rajiv Ahir

Q.29) “He is a prominent freedom fighter who participated in the Mainpuri conspiracy of 1918. Due to the conflicting views with the Gandhi and growing resentment with the Congress party, he formed the Hindustan Republic Association (HRA) which soon had leaders like Bhagat Singh. On August 9, 1925, along with his companions he executed the plan of looting the train at Kakori near Lucknow. After the trial in the so-called Kakori conspiracy, he was sentenced to be hanged”.

Which leader has been described in the above given paragraph?

- a) Ram Prasad Bismil
- b) Ashfaq Ulla Khan
- c) Chandrashekhar Azad
- d) Sachindra Nath Sanyal

Ans) a

Exp) Option a is the correct answer.

About Ram Prasad Bismil:

1) Ram Prasad Bismil got his name etched as a prominent freedom fighter with his participation in the Mainpuri conspiracy of 1918. Bismil along with Genda Lal Dixit organised youth from Etahwah, Mainpuri, Agra and Shahjahanpur districts to strengthen their organisations, ‘Matrivedi’ and ‘Shivaji Samiti’. He published a pamphlet titled ‘Deshwasiyon ke Naam’ and distributed it along with his poem ‘Mainpuri ki Pratigya’ on January 28, 1918. To collect funds for the parties, they looted government coffers.

2) His ideals of freedom struggle stood in stark contrast to that of Mahatma Gandhi and he would reportedly say “independence would not be achieved by means of non-violence”. After conflicting views and growing resentment with the Congress party, he formed the Hindustan Republic Association which soon had leaders like Bhagat Singh and Chandrashekhar Azad.

3) On August 9, 1925, Ram Prasad Bismil along with companions Ashfaqulla Khan and others executed the plan of looting the train at Kakori near Lucknow. Within a month of the attack, the angered colonial authorities arrested more than a dozen HRA members. After the trial in the so-called Kakori conspiracy, he was sentenced to be hanged.

Source: <https://amritmahotsav.nic.in/unsung-heroes-detail.htm?45> and Spectrum

Q.30) With reference to works and contribution by Sri Aurobindo, consider the following:

1. He was the proponent of complete independence from British rule.
2. He was strictly against the teaching western language at the primary level of education system in India.
3. He had developed a spiritual practice called Integral yoga.

Which of the statements given above is/are correct?

- a) 1 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Sri Aurobindo was an Indian philosopher, yogi, maharishi, poet, and Indian nationalist. He was also a journalist of newspapers such as Bande Mataram. He joined the Indian movement for independence from British colonial rule. Later, he became a spiritual reformer, introducing his visions on human progress and spiritual evolution.

Statement 1 is correct: He was one of the nationalist leader of Indian freedom movement. He was **one of the first nationalist to put forward concept of complete freedom for India** in his newspaper Bande Matram.

Statement 2 is incorrect: Aurobindo has described the curriculum for different stages of education. He was **not against of teaching foreign language at primary level**. In fact, At Primary Stage he has suggested Sanskrit, Mother tongue, English, French, Literature, National History, Art, Painting, General Science, Social Studies and Arithmetic to taught.

Statement 3 is correct: When he was in the jail, he had mystical and spiritual experiences. For spiritual work, he left politics and moved to Pondicherry. At Pondicherry, **Sri Aurobindo developed a spiritual practice he called Integral Yoga**. The central theme of his vision was the evolution of human life into a divine life in divine body.

Knowledge Base:

PM release commemorative coin and postal stamp for Sri Aurobindo’s 150th birth anniversary in honour of Sri Aurobindo.

Source: <https://rashtriyashiksha.com/contributions-of-shri-aurobindo-ghosh-towards-education/>
https://www.sriurobindoashram.org/sriurobindo/life_sketch.php

Q.31) Consider the following events from the Indian history:

1. Formation of Hindustan Socialist Republican Association (HSRA).
2. Occurrence of Chittagong Armoury Raid.
3. Death of Lala Lajpat Rai.
4. Bhagat Singh, Sukhdev and Rajguru were hanged.

Which of the following is the correct chronological order of the above events starting from the earliest?

- a) 1 - 3 - 4 - 2
- b) 1 - 4 - 3 - 2
- c) 4 - 1 - 3 - 2
- d) 1 - 3 - 2 - 4

Ans) d

Exp) Option d is the correct answer.

Event 1: Hindustan Republican Association (HRA) was founded in October 1924 in Kanpur by Ram Prasad Bismil, Jogesh Chandra Chatterjee, and Sachin Sanyal. **In September 1928, Hindustan Republic Association was renamed/reorganized as Hindustan Socialist Republican Association (HSRA)** under the leadership of Chandra Shekhar Azad. Ashfaqulla Khan, Bhagat Singh, Sukhdev Thapar and Jogesh Chandra Chatterjee were also involved in its formation.

Event 3: When the Simon Commission visited Lahore on 30 October, 1928, Lala Lajpat Rai led a non-violent march in protest against it. The superintendent of police, James A. Scott, ordered the police to **lathi (baton) charge** the protesters and personally **assaulted Lajpat Rai**. He did not fully recover from his injuries and died on **17 November, 1928**.

Event 2: Surya Sen decided to organise an **armed rebellion** to show that it was possible to challenge the armed might of the mighty British Empire. They had planned to **occupy two main armouries in Chittagong** to seize and supply arms to the revolutionaries to destroy telephone and telegraph lines and to dislocate the railway link of Chittagong with the rest of Bengal. The raid was conducted in **April 1930** and involved 65 activists under the banner of **Indian Republican Army–Chittagong Branch**. The raid was quite successful; Sen hoisted the national flag, took salute and proclaimed a provisional revolutionary government. Later, they dispersed into neighbouring villages and raided government targets.

Event 4: Bhagat Singh, Sukhdev and Rajguru were tried in the Lahore conspiracy case. Bhagat Singh, Sukhdev and Rajguru were hanged **on March 23, 1931**.

Source: Spectrum: ch- Emergence of Swarajists, Socialist Ideas

<https://egyankosh.ac.in/bitstream/123456789/62822/1/Block-5.pdf>

<https://egyankosh.ac.in/bitstream/123456789/89541/3/BHIC-113%28English%29.pdf>

<https://inc.in/congress-sandesh/tribute/lala-lajpat-rai-28th-january-1865-17th-november-1928-1>

Q.32) Which among the following were the key reasons behind the decline of the Non-Cooperation Movement in 1922?

1. Khilafat issue lost relevance with the rise of Mustafa Kemal Pasha in Turkey.
2. Disappointment among the youth due to signing of the Gandhi Irwin Pact.
3. Gandhi's disappointment due to the violent incident at the Chauri Chaura.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: The central theme of the Non-Cooperation movement—the Khilafat question—dissipated soon. In November 1922, the people of **Turkey rose under Mustafa Kamal Pasha** and deprived the sultan of political power. Turkey was made a **secular state**. Thus, the **Khilafat question lost its**

relevance. A **European style of legal system** was established in Turkey and extensive rights granted to women. **Education was nationalised** and modern agriculture and industries developed. In 1924, the caliphate was abolished. Thus, this became one of the major factors behind the decline of the non-cooperation movement.

Statement 2 is incorrect: Gandhi Irwin Pact is **associated with civil disobedient movement and not the non-cooperation movement.** Gandhi Irwin Pact, also known as the Delhi Pact was signed on 5th March, 1931 which placed the Congress on an equal footing with the government. Gandhi on behalf of the Congress agreed to **suspend the civil disobedience movement.** Due to this move, youth were disappointed because they had participated enthusiastically and wanted the world to end with a bang and not with a whimper.

Statement 3 is correct: In **Chauri-Chaura** incident on February 5, 1922, where Twenty-two policemen were killed in the violence **prompted Gandhiji to withdraw the Non-cooperation movement.** Gandhi felt that people had **not learnt** or fully understood the **method of non-violence.** A violent movement could be **easily suppressed by the colonial regime** who would make the incidents of violence an excuse for using the armed might of the State against the protestors. Thus, this was one of the major reasons behind the decline of the non-cooperation movement.

Source: A brief history of Modern India- Spectrum Publication- 2020 Edition

Q.33) What was the main objective of the Public Safety Bill, introduced in 1928?

- To ensure security of high public officials engaged in handling trade.
- To ensure safety of public infrastructure like telephone lines, government buildings etc.
- To provide safety to people against the famines in wake of great depression.
- To curb the Communist movement in India by preventing contact with foreign communist organizations.

Ans) d

Exp) Option d is the correct answer.

Public Safety Bill 1928 was aimed to **stop the Communist movement in India** by cutting it off from British & foreign communist organizations. Motilal Nehru said that it was a direct attack on Indian nationalism, on the Indian National Congress' and as '**the Slavery of India, Bill No. 1**'

Before the launch of Civil Disobedience Movement, a noteworthy achievement of **Swarajist** was the **defeat of the Public Safety Bill in 1928** which was **aimed at empowering the Government to deport undesirable and subversive foreigners (because the Government was alarmed by the spread of socialist and communist ideas).** So, the Act was passed to **curb the activities of socialist and communist movements** which were influenced by outsiders and outside events.

Knowledge Base: **Bhagat Singh and Batukeshwar Dutt** threw a bomb in the Central Legislative Assembly on April 8, 1929, to protest against the passage of the Public Safety Bill.

Source: Chapter-17: Revolutionary Activities, A brief history of modern India by Rajiv Ahir

SFG 2023 | LEVEL 2 | Test #22 – Solutions | ForumIAS

Q.34) With reference to important events during British period in India and Viceroy during that period, consider the following pairs:

Key events	Corresponding Viceroy
1. Jallianwala Bagh Massacre	Lord Chelmsford
2. Publication of Simon Commission's report	Lord Irwin
3. Formation of Home Rule Leagues	Lord Reading

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) None of the pairs

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correct: Lord Chelmsford was the Viceroy of India from 1916-21. The Jallianwala Bagh Massacre took place in 1919. Other key events in his tenure were:

- 1) Lucknow session of the Congress (1916).
- 2) Lucknow pact between the Congress and Muslim League (1916).
- 3) Foundation of Sabarmati Ashram (1916) after Gandhi's return; launch of Champaran Satyagraha (1916), Kheda Satyagraha (1918), and Satyagraha at Ahmedabad (1918).
- 4) Montagu's August Declaration (1917).
- 5) Government of India Act (1919).
- 6) Jallianwala Bagh Massacre (1919).

Pair 2 is correct: Lord Irwin was The Viceroy of India during 1926-31. Key events during his tenure were:

- 1) Visit of Simon Commission to India (1928) and the boycott of the commission by the Indians. The Simon Commission published a two-volume report **in May 1930**.
- 2) An All-Parties Conference held at Lucknow (1928) for suggestions for the (future) Constitution of India, the report of which was called the Nehru Report or the Nehru Constitution.
- 3) Appointment of the Harcourt Butler Indian States Commission (1927).
- 4) Murder of Saunders, the assistant superintendent of police of Lahore; bomb blast in the Assembly Hall of Delhi (1929); the Lahore Conspiracy Case and death of Jatin Das after prolonged hunger strike (1929), and bomb accident in train in Delhi (1929).
- 5) Lahore session of the Congress (1929); Purna Swaraj Resolution.
- 6) Dandi March (March 12, 1930) by Gandhi to launch the Civil Disobedience Movement.
- 7) 'Deepavali Declaration' by Lord Irwin (1929).
- 8) Boycott of the First Round Table Conference (1930), Gandhi-Irwin Pact (1931), and suspension of the Civil Disobedience Movement.

Pair 3 is incorrect: Lord Chelmsford was the Viceroy of India (1916-21) when Home Rule Leagues by Annie Besant and Tilak were formed in 1916.

Whereas, Lord reading was the viceroy between 1921-26. Key events during Lord Reading's tenure were:

- (a) Chauri Chaura incident (February 5, 1922) and the subsequent withdrawal of Non-Cooperation Movement.
- (b) Moplah rebellion in Kerala (1921).
- (c) Repeal of the Press Act of 1910 and the Rowlatt Act of 1919.
- (d) Criminal Law Amendment Act and abolition of cotton excise.
- (e) Decision to hold simultaneous examinations for the ICS both in Delhi and London, with effect from 1923.
- Source: A brief history of Modern India- Spectrum Publication- 2020 Edition

Q.35) Consider the following pairs, with reference to places in news:

Place in news	Country
1. Sabang	Vietnam
2. Pristina	Kosovo
3. Sarajevo	Belgium
4. Lima	Peru

Which of the pairs given above is/are correct?

- a) 1 and 2 only
 b) 2 and 3 only
 c) 3 and 4 only
 d) 2 and 4 only

Ans) d

Exp) Option d is the correct answer.

Pair 1 is incorrect: Sabang is a city in Indonesia. To discuss the India-Indonesia shared vision on maritime cooperation in Indo-Pacific, an Indian team visited Sabang in Indonesia. At the same time, in a first, Indian ship INS Sumitra berthed at Sabang Port close to the Malacca Strait for operational turnaround.



Pair 2 is correct: Pristina is the capital of Kosovo. In December 2022, Kosovo has closed its border crossing with Serbia due to ethnic tension. Ethnic Serbs living in Northern Kosovo do not recognise Kosovan state institutions. They account for 5% of Kosovo's 1.8 million people, with ethnic Albanians making up about 90%.



Pair 3 is incorrect: Sarajevo is the capital of Bosnia and Herzegovina. European Union countries has agreed to grant Bosnia "candidate status" to join the union.



Pair 4 is correct: Lima is the capital of Peru. Dina Boluarte was elected as Peru's first female president in Dec-2022.



Source: <https://www.thehindu.com/news/national/india-indonesia-discuss-indo-pacific-cooperation/article24401794.ece>
<https://indianexpress.com/article/explained/explained-global/why-kosovo-and-serbia-tensions-flaring-up-2022-explained-8349755/>
<https://www.thehindu.com/news/international/european-union-agrees-to-give-bosnia-candidate-status/article66258663.ece>
<https://indianexpress.com/article/world/peru-first-female-president-dina-boluarte-8312494/>

Q.36) Consider the following statements with reference to Kanpur Bolshevik Conspiracy Case of 1924:

1. It was related to controlling the spread of communist ideas in India.
2. S. A. Dange and Nalini Gupta were jailed under this case.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Kanpur-Bolshevik conspiracy case was related to the control of the spread of communist ideas across India. The **communist groups** in cities of Calcutta, Bombay, Madras areas were **involved in organising** the workers and **educating** them with **communist ideology** and politics. Government captured the activists and they were charged “to deprive the King-Emperor of his sovereignty of British India, by complete separation of India from imperialistic Britain by a violent revolution.”

So, Kanpur-Bolshevik conspiracy case was to smash the budding communist organisation in India.

Statement 2 is correct: In 1924, many communists S.A. Dange, Muzaffar Ahmed, Shaukat Usmani, Nalini Gupta were jailed in the Kanpur Bolshevik Conspiracy Case. A “Indian Communist Defense Committee” was formed, which organized fund collections and set up the defence lawyers.

Source: Chapter 17 Emergence of Swarajists, Socialist Ideas, Revolutionary Activities and Other New Forces
<https://cpiml.org/library/communist-movement-in-india/introduction-communist-movement-in-india/peshawar-and-kanpur-conspiracy-cases/>

Q.37) Consider the following statements regarding the impact of the Home Rule League movement on India’s struggle for independence:

1. Morley- Minto reforms were influenced by the Home Rule agitation.

2. It helped in creation of organizational links between town and country.
3. It prepared the masses for politics of the Gandhian style.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Home Rule Leagues and the associated activities had some positive effects and contributed to the fresh direction that the freedom struggle was to take in the coming years. The Home Rule Movement **marked a transition between the deliberative and rather inactive nature** of the Congress till then and the Gandhian phase that was to come with its mass involvement in the struggle for freedom.

Statement 1 is incorrect: The home Rule League started in April 1916. The August 1917 declaration of **Montagu and the Montford reforms** were influenced by the Home Rule agitation. Whereas, Morley Minto reforms took place in 1909; much prior to Home rule league movement.

Statement 2 is correct: The Home Rule Leagues created **organizational links between town and country** which were to prove invaluable in later years. And further, by popularizing the idea of Home Rule or self-government, and making it a commonplace thing, it generated a widespread pro-nationalist atmosphere in the country.

Statement 3 is correct: The Home Rule League movement prepared the **masses for politics of the Gandhian style**. The aim of the home rule or self-government was to be achieved by promoting political education and discussion through public meetings, organizing libraries, holding conferences, etc. Thus, the method adopted resembles with Gandhian style which became popular in later era.

Source: A brief history of Modern India- Spectrum Publication- 2020 Edition

Q.38) Consider the following statements regarding the Manifesto released by Swarajists, ahead of 1923 Central and Provincial Assembly Elections:

1. They will demand the right to form trade unions and to strike.
2. They will present the nationalist demand of self-government in legislative councils.
3. They will create a deadlock in legislative councils if their demands are not met.

Which of the statements mentioned above is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

The Swarajists were the members of the Indian National Congress who formed a new party called the Swaraj Party in 1923 and they opposed the boycott of the legislative Assembly by the Congress Party.

Statement 1 is incorrect: The elections to the newly constituted Central Legislative Assembly and to provincial assemblies were to be held in November 1923. The **Swarajist were allowed to contest elections by the congress** to avoid the split between congress. The swarajist released **manifesto in October 1923**. The Manifesto undertook strong anti-imperialist stand against the Britishers. The **Swarajist Manifesto did not demand the right to form trade unions and to strike**.

Statements 2 and 3 are correct: The Swarajists manifesto provided for

- 1) The Swarajists would present the nationalist demand of self-government in councils.
- 2) The guiding motive of the British in governing India lay in selfish interests of their own country.
- 3) The so-called reforms were only a blind to further the said interests under the pretence of granting a responsible government, the real objective being to continue exploitation of the unlimited resources of the country by keeping Indians permanently in a subservient position to Britain.
- 4) If nationalist demand was rejected, they would adopt a policy of uniform, continuous and consistent deadlocking within the councils to make governance through councils impossible.

Source: Page 342, Chapter 17- Emergence of Swarajists, Socialist Ideas, Revolutionary Activities and Other New Forces of Spectrum

Q.39) Consider the following statements regarding the Lahore Conspiracy Case:

1. It is associated with the killing of police official J. P. Saunders.
2. Kalpana Dutt and Surya Sen were tried in the case.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1, nor 2

Ans) a

Exp) Option a is the correct answer.

A procession was organized by all parties against Simon Commission and **Lala Lajpat Rai was requested to lead it**. The processionists were Brutally assaulted by the police led by the superintendent of Police of Lahore. **The assault and its shock resulted in Lalaji's death.**

Statement 1 is correct: In the **Lahore Conspiracy Case** all the charges including the **killings of Saunders and Chanan Singh**, the **Assembly Bomb Case** and the **setting up of bomb factories** were **put together**. On 17th December, 1928, **Bhagat Singh, Chandrashekhar Azad and Rajguru assassinated J.P. Saunders at Lahore**. Bhagat Singh escaped the police net and reached Calcutta. Here further **plans were laid to set up bomb factories at Agra, Lahore and Saharanpur**.

Statement 2 is incorrect: The police was able to uncover the details of the Saunders assassination and **Bhagat Singh, Sukhdev, Rajguru, and several others were tried in the Lahore Conspiracy case**. The Special Tribunal found Bhagat Singh and Rajguru guilty of committing the murder of Saunders and Sukhdev as the brain behind the conspiracy.

Kalpana Dutt, Pritilata Waddedar and Surya Sen were involved in chittagaong armoury raid case. Pritilata Waddedar died while conducting a raid on the Railway Institute at Chittagong, while Kalpana datta was arrested and tried along with Surya Sen and given a life sentence.

Source: <https://egyankosh.ac.in/bitstream/123456789/20043/1/Unit-24.pdf>

<https://egyankosh.ac.in/bitstream/123456789/20636/1/Unit-10.pdf>

<https://economictimes.indiatimes.com/nation-world/remembering-the-men-who-shook-up-the-british-raj/shaheed-diwis/slideshow/57793855.cms>

Q.40) With reference to Tripura's Unakoti temple, consider the following:

1. Unakoti temple is a Vaishnav pilgrimage site.
2. The rock-cut sculptures in temple represents the distinct mongoloid features.
3. The Unakoti temple is also famous for its mural paintings.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Tripura's Unakoti temple famously known as Angkor Wat of the North-East. It is a sculptural emblem and ancient Shaivite place that hosts rock carvings figures and images of gods and goddesses. Unakoti literally means "one less one crore". The images found at Unakoti are of two types, namely rock-carved figures and stone images.

Statement 1 is incorrect: It is 'Shaiba' or Saivite pilgrimage site. It has been built around 7th – 9th centuries. It is a place of worship with huge rock reliefs celebrating Shiva. The central Shiva head known as 'Unakotiswara Kal Bhairava' is about 30 feet high including an embroidered head-dress which itself is 10 feet high. On each side of the head-dress of the central Shiva, there are two full size female figures one of Durga standing on a lion and another female figure on the other side.

Statement 2 is correct: The structures of the rock-cut sculptures in Unakoti temple are gigantic and **have distinct mongoloid features**. That's why it is also called as the Angkor Wat of North-East.

Statement 3 is correct: The marvelous rock carvings in Unakoti temple has murals with their primitive beauty. The place is famous for not just stunningly picturesque but also great mythological significance.

Source: <https://indianexpress.com/article/lifestyle/destination-of-the-week/tripura-unakoti-angkor-wat-north-east-unesco-world-heritage-tag-8319590/>

<https://unakoti.nic.in/tourist-place/unakoti-heritage-site/>

Q.41) Which among the following factors can be considered as responsible for the decline of the Home Rule League Movement?

1. Difference of opinion between moderates and extremists
2. Tilak was not able to provide leadership in later phase of the movement
3. Report of the Simon Commission leading to the suppression of the movement.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The Home Rule League movement started in April, 1916 with the aim of home rule or self-government. Lokmanya Tilak and Annie Besant were the two prominent leaders of the movement. The Home Rule agitation proved to be short-lived. By 1919, it had petered out. The reasons for the decline were as follows:

Option 1 is correct: The **Moderates who had joined the movement** after Annie Besant's arrest **were pacified by talk of Montagu's reforms** and Besant's release. on the other hand, Extremists want to launch **passive resistance against British. This kept the Moderates away** from activities of league from September 1918 onwards. The announcement of Montagu-Chelmsford reforms, further divided the nationalist ranks. Thus, **difference of opinion is clearly seen between extremists and moderates** here.

Option 2 is correct: Also, the **absence of effective leadership in the later period** proved detrimental for the functioning of the leagues. **Tilak had to go abroad** (September 1918) in connection with a libel case

against Valentine Chirol whose book, Indian Unrest, had featured Tilak as responsible for the agitational politics that had developed in India. With **Besant unable to give a positive lead and Tilak away in England, the movement was left leaderless.**

Option 3 is incorrect: Appointment of the **Simon commission is much later development.** It was appointed in November **1927** by the British Conservative government under Stanley Baldwin to report on the working of the Indian constitution established by the Government of India Act of 1919. Thus, the report of the Simon Commission had **no impact on the Home Rule League** Movement.

Source: A brief history of Modern India- Spectrum Publication- 2020 Edition

<https://www.britannica.com/topic/Simon-Commission>

<https://www.tandfonline.com/doi/full/10.1080/19472498.2021.1878789#:~:text=The%20Shahabad%20riots%20in%20Bihar,instances%2C%20led%20to%20local%20violence.>

Q.42) Consider the following statements with reference to activities of Jugantar Party in Bengal:

1. Bagha Jatin was an important leader of Jugantar party.
2. Some of the leaders of the party were involved in the 'German Plot' to bring about a revolt in India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Jugantar Party was the leading revolutionary group in colonial Bengal. An inner circle within the Calcutta Anushilan samiti under Barindrakumar Ghosh and Bhupendranath Datta with the advice of Aurobindo Ghosh started the weekly Jugantar (New Era) in April 1906. The group is named after the Jugantar, the mouthpiece of the advocates of revolutionary nationalism.

Statement 1 is correct. Jatindranath Mukherjee also known as **Bagha Jatin** came in contact with Aurobindo Ghosh, who openly supported the achievement of Swaraj through violent means. Aurobindo Ghosh made Jatin the leader of a secret society known as Jugantar whose main objective was to recruit young revolutionaries and trained them for conducting raids, robbery, etc.

Statement 2 is correct. The Jugantar Party was linked up with the Bolshevik revolutionary Manabendra Nath Roy alias Narendra Nath Bhattacharya, in Berlin. **He took prominent part in the German plot organised by the Jugantar Party during the war.** After the World War 1, the Soviet Government supplied him funds for the purpose of instigating revolution in India. Unfortunately for the revolutionaries, the German plot was leaked out by a traitor. Police came to know that Bagha Jatin was in Balasore waiting for the delivery of German arms. Jatin and his associates were located by the police. Jatin Mukherjee was shot and died a hero's death in Balasore on the Orissa coast in September 1915.

Source: A brief History of India spectrum

Q.43) Consider the following statements about Rash Behari Bose:

1. He was associated with the Ghadar Movement.
2. He performed a key role in establishing the Indian Independence League.
3. He made an attempt to assassinate Lord Hardinge by throwing a bomb at his parade.

Which of the above given statements are correct?

- a) 1 and 3 only
- b) 1 and 2 only
- c) 1, 2 and 3
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Rash Behari Bose was born in Bardhawan, West Bengal. Although he was more interested in revolutionary activities, he earned a degree in medical science and engineering. Bose learned the tricks of making crude bombs even before he had passed matriculation. His sacrifices and organisational skills formed a big part in India's struggle for independence.

Statements 1 and 2 are correct: He was one of the key organisers of Ghadar revolution that aimed to attack the British army from the inside. It helped in activating an uprising in India. He also played a crucial role in organising the Indian National Army (Azad Hind Fauj). To activate the Indian independence struggle in abroad, he, along with A M Nair, persuaded the Japanese authorities to support and stand by the Indian nationalists. **He performed a key role in establishing the Indian Independence League.**

Statement 3 is correct: He attempted to assassinate Lord Hardinge by throwing a bomb at his parade in Delhi on December 23, 1912. He escaped the arrest but several of his confidants were arrested and hanged for the famous **Lahore Conspiracy Case**. Rash Behari Bose escaped from India in 1915 and lived in Japan as an escapee. In 1943, he handed over the charge of Azad Hind Fauj to Subhas Chandra Bose. The Japanese government had honoured him with the 'Order of the Rising Sun'

Source: <https://www.indiatoday.in/education-today/gk-current-affairs/story/rash-behari-bose-325390-2016-05-25>

Q.44) Which of the following statements regarding Gandhi and Ambedkar's ideologies are correct?

1. Both believed in Parliamentary democracy as the best form of government.
2. Gandhi believed that India had always been a nation.
3. Ambedkar believed that nationalistic identities were a by-product of colonial legal system.
4. Both believed that education and persuasion would result in lasting social reforms.

Select the correct option using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: In 1909, Gandhi wrote in the Hind Swaraj: Parliamentary democracy as “a costly toy of the nation”. **Gandhi's unequivocal belief that the parliamentary form of democracy was ill-suited for India** was clearly evident when he wrote in the Hind Swaraj, “I pray to God that India may never be in that plight”.

He preferred governance through the **old system of village panchayats**.

Ambedkar had **modern political ideas** and believed that parliamentary democracy involving the masses would **put pressure on those in power** to act for the **welfare** of the people.

Statement 2 and 3 is correct: Gandhi was very **proud of Ancient India's heritage** and felt that Indians always had a **sense of brotherhood** and unity and saw themselves as a distinct identity, a distinct nation. Ambedkar was more rational in this matter, and **did not regard the similarities in culture or existence of ancient pan Indian empires** as proof of nationalistic identities in the modern political sense. He believed that **oppressive British policies**, and **uniform legal and administrative system** had helped create united **national identity against this foreign tyranny**.

Statement 4 is correct: Both did **not believe** in **using force** to create social changes. Both felt that changing **social attitudes** slowly by **persuasion and education** was the only way to ensure lasting and **sustainable social reforms**.

Knowledge Base)

Other points of similarities:

- 1) Use of symbolism for demonstration - e.g., Foreign Cloth burning by Gandhi & Manusmriti burning by Ambedkar; Salt satyagraha by Gandhi & Water satyagraha by Ambedkar.
- 2) Freedom of religion
- 3) Centrality of religion as an agent of social change
- 4) Limited sovereign power of state
- 5) No violent revolution; social change by peaceful and democratic means

Other points of difference:

- 1) Gandhi accepted Varnashrama dharma and denounced untouchability as a perversion. Ambedkar was against both.
- 2) Ambedkar advocated separation of state and religion.
- 3) Ambedkar believed in non-violence as an end and felt a little violence in the means was fine. Gandhi believed in non-violence as both and means was uncompromising on this issue.
- 4) Ambedkar believed machinery and industries were the future of the economy. Gandhi did not believe in displacement of human labour by machines.
- 5) Gandhi believed untouchability was merely a social stigma, whereas Ambedkar believed that untouchability was both a social and political issue, which needed Constitutional redress.

Source: A Brief History of Modern India – Spectrum.

Q.45) With reference to the National Commission for Protection of Child Rights (NCPCR), consider the following statements:

1. It was established under the Juvenile Justice (Care and Protection of Children) Act.
2. Its role includes monitoring the implementations of the provisions mentioned in the United Nations Convention on the Rights of the Child.
3. Its definition of ‘child’ includes all children below the age of eighteen years
4. It developed a GHAR portal to monitor the restoration and repatriation of children.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 4 only
- d) 2, 3 and 4 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: The National Commission for Protection of Child Rights (NCPCR) was set up as a **statutory body in March 2007 under the Commissions for Protection of Child Rights (CPCR) Act, 2005.**

Statement 2 is correct: The Commission is mandated under section 13 of CPCR Act, 2005 to ensure that all Laws, Policies, Programmes, and Administrative Mechanisms are in consonance with the Child Rights perspective as **enshrined in the Constitution of India and the United Nations Convention on the Rights of the Child.**

Statement 3 is correct: As per the definition of **children by the commission it includes all children below the age of 18.** It looks after the matters related to deprivation and violation of child rights, non-implementation of laws providing for protection and development of children etc,

Statement 4 is correct: The NCPCR has developed and **launched The GHAR (GO Home and Re-Unite) portal to digitally monitor and track the restoration and repatriation of children.** One of the features of this scheme is digital tracking and monitoring of children who are in the Juvenile Justice system and have to be repatriated to another Country/State/District.

Source: <https://www.ncpcr.gov.in/Report>

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1882217>

Q.46) With reference to Gandhi's response to World War I, which of the following statements is/are correct?

- He believed that justice was on the side of Britain but was against the participation of Indians.
- He supported the recruitment of Indians by Britishers for participation in war.
- He decided to utilise the opportunity to wage a war on British rule and liberate the country.
- He launched the Non-Cooperation Movement against the Britishers to divert their attention from war.

Ans) b

Exp) Option b is the correct answer.

Option a is incorrect - In the Second World War, Jawaharlal Nehru was not ready to accept the opinion of either Gandhi or of the socialists. He was clear in his mind about the difference between democratic values and fascism. He believed that justice was on the side of Britain, France and Poland, but he also believed that Britain and France were imperialist powers, and that "the war was the result of the inner contradictions of capitalism maturing since the end of World War I". **He, therefore, advocated no Indian participation till India itself was free.** However, at the same time, no advantage was to be taken of Britain's difficulty by starting an immediate civil disobedience movement.

Option b is correct - In the spring of 1917 Germany had inflicted crushing defeats on both the British and French troops in France. Russia's war effort had broken down and the Revolution was threatening its Government. Though America had entered the war, no American troops had yet reached the battle front. The Viceroy of India Lord Chelmsford, invited various Indian leaders to attend a War conference. Gandhi was also invited. He accepted the invitation and went to Delhi. The Viceroy was very keen that Gandhi should support the resolution on recruiting. **Gandhi had supported the government's resolution on recruiting soldiers from India.**

Option c is incorrect - The revolutionaries decided to utilise the opportunity to wage a war on British rule and liberate the country.

Option d is incorrect - Gandhi stuck to the belief he held at that time that 'absolutely unconditional and whole-hearted co-operation with the government' on the part of educated India will bring us within sight of our goal of Swaraj as nothing else will'. He launched the Non-Cooperation Movement after the first world war and not during the war.

Source: Modern India – Spectrum

Q.47) Which of the following are the conditions laid by Gandhiji for accepting the office of President of the All-India Home Rule League?

- It will accept Hindustani as the national lingua franca.
- It will be a non-party organization, auxiliary to the congress.
- It must follow him in his civil-disobedience methods.
- It will denounce untouchability in all its forms and promote integration of Dalits.

Choose the correct answer using the options given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 4 only
- d) 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

The home rule movement was the Indian response to the First World War in a less charged but in a more effective way. Gandhiji was made the president of the Home Rule League.

Conditions laid by Gandhiji for being the president were as follows:

- 1) He would engage the league, if he can carry the members with him, in activities such as the promotion of Swadeshi, Hindu-Moslem unity, with special reference to Khilafat,
- 2) Acceptance of Hindustani as the national “lingua franca” and linguistic redistribution of provinces. **(Statement 1 is correct)**
- 3) He proposes to treat the Home Rule League as a non-party organisation and considers the Congress of which the League is an auxiliary as a national organisation providing a platform for all parties. **(Statement 2 is correct)**
- 4) While he will not expect the League to follow him in civil disobedience methods, he expects the principles of uncompromising truth and honesty in political life accepted and acted upon by the All-India Home Rule League. **(Statement 3 is incorrect)**

Statement 4 is incorrect – Gandhiji launched the campaign against untouchability in 1933 first from jail and then outside the jail. While in jail, he set up the All-India Anti-Untouchability League in September 1932 and started the weekly *Harijan* in January 1933. After his release, he shifted to the Satyagraha Ashram in Wardha as he had vowed in 1930 not to return to Sabarmati Ashram unless swaraj was won. It was not in the picture during the times of Home Rule League. Hence, that couldn't be the condition for getting the presidentship of league.

Source: <https://www.thehindu.com/archives/from-the-archives-april-29-1920all-indian-home-rule-league/article31456283.ece>

Q.48) With reference to the communists during British rule in India, consider the following statements:

1. The Communist Party of India (CPI) was formed in 1918 at Moscow.
2. In 1925, the Indian Communist Conference at Kanpur formalized the foundation of the Communist Party of India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. The Communist Party of India (CPI) was formed in 1920 in Tashkent (now, the capital of Uzbekistan) by M.N. Roy, Abani Mukherji and others after the second Congress of Comintern. M.N. Roy was also the first to be elected to the leadership of Comintern.

Statement 2 is correct. In 1925, the Indian Communist Conference at Kanpur formalised the foundation of the Communist Party of India.

Source: A Brief History of Modern India by Rajiv Ahir - Emergence of Swarajists, Socialist Ideas, Revolutionary Activities and Other New Forces

Q.49) After coming from South Africa, Mahatma Gandhi toured India before taking any political work on the advice of:

- Rajkumar Shukla
- Gopal Krishna Gokhale
- Bal Gangaadhar Tilak
- Lala Lajpat Ray

Ans) b

Exp) Option b is the correct answer.

Mohandas Karamchand Gandhi was already a well-known political activist when he had returned to India, after starting two settlements for Indians in South Africa, and launching a successful satyagraha against unfair laws and taxes on the Indian community there.

In India, however, Gandhi was **advised by his mentor Gopalkrishna Gokhale** to tour India for a year before embarking upon any political work. Gokhale's instructions suited Gandhi well, as he realised that there was much about the country that he had not seen, or knew about. In South Africa, differences of religion, caste and language were often elided over, as the community of Indians stood as one against the imperial powers. **In India**, however, **the differences were wide and various**, and Gandhi **needed time to understand** them. He started his travel, attending meetings, and talking about indentured labour, an issue that he had fought against in South Africa.

Source: <https://www.hindustantimes.com/india-news/1915-16-a-tour-of-the-homeland/story-NcyhMn8NEZiAp5m6OQplfL.html#:~:text=In%20India%2C%20however%2C%20Gandhi%20was,embarking%20upon%20any%20political%20work.>

Q.50) With reference to Methanol, consider the following statements:

- It is produced naturally in the human body through the process of metabolism.
- It is used in the manufacturing of many industrial products.
- Blending of Methanol with conventional fuels might lead to reduction of crude oil imports of India.
- Renewable methanol, when used as a fuel, can lead to reduction in the carbon dioxide and Nitrogen oxide emissions.

Which of the statements given above are correct?

- 1, 2 and 3 only
- 1 and 2 only
- 3 and 4 only
- 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Methanol is a toxic alcohol that is **used industrially as a solvent, pesticide, and alternative fuel source.**

Statement 1 is correct: Methanol is a normal part of the human diet (via low levels in **fresh fruits and vegetables**) and is **produced in the body by metabolic breakdown of other products.** Food is the primary source of human methanol exposure.

Statement 2 is correct: Methanol is a clear liquid chemical used in manufacturing of thousands of everyday products, including plastics, paints, cosmetics, and fuels. Methanol is also an energy resource used in the marine, automotive, and electricity sectors and an emerging renewable energy resource.

Statement 3 is correct: Blending of **15% methanol in gasoline can result in at least 15% reduction in the import of crude oil.** In addition, this would bring down **GHG emissions by 20%** in terms of particulate matter, **Nitrogen oxides (NOx) and Sulphur oxides (SOx)** thereby improving the **urban air quality.**

Statement 4 is correct: Compared to Conventional fuels, renewable methanol **cuts carbon dioxide emissions** by up to **95%**, reduces **nitrogen oxide emissions** by up to **80%**, and **completely eliminates sulphur oxide and particulate matter emissions**. Renewable methanol is a **low carbon and net carbon neutral liquid chemical** and fuel produced **from bio-methanol, or from captured carbon dioxide and hydrogen produced from renewable electricity**.

Source: <https://www.methanol.org/renewable/>

<https://www.niti.gov.in/methanol-economy>

[https://www.sciencedirect.com/topics/medicine-and-dentistry/methanol#:~:text=Methanol%20is%20a%20normal%20part%20of%20the%20human%20diet%20\(via%20low%20levels%20in%20fresh%20fruits%20and%20vegetables\)%20and%20is%20produced%20in%20the%20body%20by%20metabolic%20breakdown%20of%20other%20products.](https://www.sciencedirect.com/topics/medicine-and-dentistry/methanol#:~:text=Methanol%20is%20a%20normal%20part%20of%20the%20human%20diet%20(via%20low%20levels%20in%20fresh%20fruits%20and%20vegetables)%20and%20is%20produced%20in%20the%20body%20by%20metabolic%20breakdown%20of%20other%20products.)

https://www.cdc.gov/niosh/ersbdb/emergencyresponsecard_29750029.html#:~:text=DESCRIPTION%3A%20Methanol%20is%20a%20toxic,humans%2C%20animals%2C%20and%20plants.

https://www.cdc.gov/niosh/ersbdb/emergencyresponsecard_29750029.html#:~:text=DESCRIPTION%3A%20Methanol%20is%20a%20toxic,humans%2C%20animals%2C%20and%20plants.

SFG 2023 | LEVEL 2 | Test #23 – Solutions | 

Q.1) Consider the following statements regarding the 1927 Madras Session of the Indian National Congress:

1. S. Srinivas Iyengar was the president of this Congress session.
2. At this session, Congress decided to boycott the Simon Commission.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

In response to the appointment of the Simon Commission, the congress held a session in Madras in December 1927.

Statement 1 is incorrect: Dr. M. A. Ansari was the president of the 1927 congress session. Whereas S. Srinivas Iyengar presided over the Gauhati session of the Indian National Congress in December 1926 and during his tenure of presidency, congress tried for a **rapprochement between the leaders of the Hindu and Muslim communities**, and his efforts were crowned with success at the Madras Congress in December 1927 where the **resolution on Hindu Muslim unity was passed** with general all - round support.

Statement 2 is correct: In Madras Session, 1927, congress decided to boycott the Simon commission “at every stage and in every form”. Because, appointment of an all-white Simon commission was seen as a violation of the principle of self-determination, and as a deliberate insult to the self-respect of Indians.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition

Q.2) Dr B.R. Ambedkar was associated with which of the following organisations/movements?

1. All-India Depressed Classes League
2. Training School for Entrance to Politics
3. Independent Labour Party
4. Samaj Samta Sangh
5. Parvati Temple Satyagraha

Select the correct answer using the code given below.

- a) 1, 3 and 4 only
- b) 3, 4 and 5 only
- c) 2, 3, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) c

Exp) Option c is the correct answer.

B.R. Ambedkar was an Indian jurist, economist, politician and social reformer who campaigned against social discrimination towards the untouchables (Dalits) and worked towards the upliftment of their rights. He was the architect of the Indian Constitution and is widely regarded as the father of the Indian Constitution.

Statement 1 is incorrect: Jagjivan Ram (not Ambedkar) played a role in the founding (1935) of the All-India Depressed Classes League, an organization dedicated to attaining equality for Dalits. Dr B.R. Ambedkar established the All-India Depressed Classes Association to make sure that fair representation was given to the Scheduled Castes in the decision-making bodies of India. This association was established in 1930.

Statement 2 is correct: Ambedkar started a school for politics training. The training school was established in July 1956 in Mumbai and was named as the **“Training School for Entrance to Politics”**.

Statement 3 is correct: In August 1936, Dr. Babasaheb Ambedkar established **the Independent Labor Party**. The main objective of the party was the welfare of the laborers. So, it was deemed as a labour organization. In order to bring the depressed classes with the purview of the labour class, they proposed that they be referred to as the labour class instead of the Depressed Class.

Statement 4 is correct: With the same objective of educating the people of the causes of their slavery, on 4 September 1927, Ambedkar established the Samaj Samta Sangh (Social Equality Association) and in 1929 launched a newspaper titled Samta. The members of the Samta Sangh included G.N. Sahastrabudhe, R.D. Kavli, P.P. Tamhane, D.V. Naik, N.V. Khandke, G.R. Pradhan, B.V. Pradhan, R.N. Bhaindarker, D.V. Pradhan and B.R Pradhan.

Statement 5 is correct: The Parvati Satyagraha was a peaceful protest organised in 1929 by Dr Bhimrao Ramji Ambedkar to allow access to lower castes to a Parvati temple in the southern part of Pune.

Source: Chapter 19: Civil Disobedience Movement and Round Table Conferences (Spectrum)

<https://velivada.com/2017/03/17/when-dr-ambedkar-had-started-training-school-for-entrance-to-politics/>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1490960#:~:text=The%20Samta%20Sainik%20Dal%2C%20an,people%20of%20the%20Indian%20society.>

[https://map.sahapedia.org/article/Parvati-](https://map.sahapedia.org/article/Parvati-Satyagraha/2572#:~:text=The%20Parvati%20Satyagraha%20was%20a,the%20southern%20part%20of%20Pune.)

[Satyagraha/2572#:~:text=The%20Parvati%20Satyagraha%20was%20a,the%20southern%20part%20of%20Pune.](https://map.sahapedia.org/article/Parvati-Satyagraha/2572#:~:text=The%20Parvati%20Satyagraha%20was%20a,the%20southern%20part%20of%20Pune.)

<https://www.britannica.com/biography/Jagjivan-Ram#ref1026779>

<https://www.brambedkar.in/the-independent-labour-party/>

<https://www.ambedkaritetoday.com/2020/05/dr-ambedkar-and-the-other-depressed-classes.html>

<https://samatasainikdalindia.org/history-of-ssd/>

Q.3) Consider the following statements regarding the Hindustani Seva Dal:

1. Jawaharlal Nehru was the first president of the Hindustani Seva Dal.
2. The Dal was to work under the supervision of the Congress party.
3. Seva dal was aimed to instil military discipline in its members.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

In 1923, Sarojini Naidu proposed the formation of a Hindustani Seva Dal at a Congress convention.

Statement 1 is correct: On January 1, 1923 the Hindustani Seva Dal was established as the Hindustan Seva Mandal with **Jawaharlal Nehru as its first president**. It was expected to function on the principles of truth and non-violence.

Statement 2 is correct: According to the resolution at Kakinada, **the Hindustani Seva Dal was to work under the supervision of the Congress party's working committee**.

Statement 3 is correct: Idea behind the Hindustani Seva Dal was to establish an **organisation to train Congress workers, instil military discipline** in them and evoke in them the passion to fight. At the 1924 Belgaum Congress session, the Seva Dal was also assigned the task of managing sanitation and security for the first time.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition

<https://inc.in/brief-history-of-congress/1915-1925>

<https://thewire.in/history/what-happened-to-the-congress-version-of-the-rss>

Q.4) Which among the following were the major recommendations of the Nehru Report?

1. Dominion status for India
2. Rejection of separate electorates
3. Federal Constitution with residual powers to provinces
4. Universal Adult Suffrage

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2 and 4 only

Ans) d

Exp) Option d is the correct answer.

As an answer to Lord Birkenhead's challenge, subcommittee under the chairmanship of Motilal Nehru was constituted in 1928 to draft a constitution. This was the first major attempt by the Indians to draft a constitutional framework for the country.

Option 1 is correct: The Nehru Report demanded Dominion status on lines of self-governing dominions as the form of government desired by Indians.

Option 2 is correct: It demanded rejection of separate electorates which had been the basis of constitutional reforms so far. Instead, report demanded **for joint electorates** with reservation of seats for Muslims at the Centre and in provinces where they were in minority.

Option 3 is incorrect: In March 1929 Jinnah gave 14 points which were to become the basis of all future propaganda of the Muslim League. **Thus, Federal Constitution with residual powers to provinces was one of the fourteen points proposed by Jinnah and not the recommendation of the Nehru Report.**

Whereas Nehru report incorporated provision of "Political structure broadly unitary, where residual powers rested with the centre". This provision too incorporated after the demand of Hindu Mahasabha.

Option 4 is correct: Nehru report also included nineteen fundamental rights including equal rights for women, right to form unions, and **universal adult suffrage.**

Source: A brief History of Modern India, Spectrum Publication, 2020 edition

Q.5) With reference to World Trade Organisation (WTO)'s New Agreement on Fisheries Subsidies, consider the following statements:

1. The agreement requires acceptance by at least two thirds of the member countries to become operational.
2. The agreement provided a twenty five-year transition period for developing countries like India to eliminate subsidies provided to illegal fishing.
3. Recently India became the first WTO member to accept this agreement.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

The World Trade Organisation (WTO) **Agreement on Fisheries Subsidies** adopted at the 12th Ministerial Conference (MC12) held in **Geneva**, Switzerland in 2022 and the agreement aims to protect ocean

sustainability by prohibiting harmful fisheries subsidies, which are a key factor in the widespread depletion of the world's fish stocks.

Statement 1 is correct: At least two-thirds of members have to deposit their instruments of acceptance with the WTO, for the **New Agreement on Fisheries Subsidies to take effect**.

Statement 2 is incorrect: As part of special and differential treatment (S&DT), **developing countries like India** have been given a **two-year transition** period for **eliminating** subsidies given to **illegal**, unreported, or unregulated (IUU) fishing and fishing of already over-exploited stocks. However, **India demands a 25-year transition period** to protect the livelihood of people depending on the fishery sector in India.

Statement 3 is incorrect: Recently, **Switzerland became the first WTO member** to formally submit its instrument of acceptance for the New Agreement of Fisheries subsidies with the WTO. India did not provide her acceptance for this agreement so far.

Source: https://www.wto.org/english/res_e/booksp_e/impfishag_part_2_e.pdf

<https://indianexpress.com/article/opinion/columns/the-wto-agreement-on-fisheries-is-flawed-but-significant-7985390/>

Q.6) Consider the following statements regarding the Independence for India League:

1. It was jointly set up by C.R. Das and Subhash Chandra Bose in 1938.
2. It aimed to carry out a socialist transformation of the economic structure of society.

Which of the statement/s given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The younger section of the Congress led by Jawaharlal Nehru and Subhas Chandra Bose were not satisfied with the Nehru Report. The younger section regarded the idea of dominion status mentioned in the report as a step backward.

Statement 1 is incorrect: As a result of the dissatisfaction with the Nehru Report, in 1928, **Jawaharlal Nehru and Subhash Chandra Bose jointly set up** the Independence for India League.

Statement 2 is correct: The main aim of the Independence for India League was to fight for complete independence and **'a socialist transformation of the economic structure of society.'** Nehru believed that India needs to adopt a full 'socialist programme' if she was 'to end her poverty and inequality.'

Source: A brief History of Modern India, Spectrum Publication, 2020 edition

India's Struggle for Independence by Bipin Chandra

Q.7) Why did Mahatma Gandhi oppose separate electorates to depressed classes?

- a) He believed that such move would undermine the efforts of abolishing untouchability.
- b) He wanted to maintain the varna system of Hindu religion.
- c) He feared that separate electorates for depressed class will reduce the seats for Hindus in the Central Legislative Assembly.
- d) He wanted to maintain the hegemony of upper castes.

Ans) a

Exp) Option a is the correct answer.

Gandhi saw the Communal Award as an attack on Indian unity and nationalism. He thought it was harmful to both Hinduism and to the depressed classes since it provided no answer to the socially degraded position of the depressed classes.

Option a is correct: Gandhi saw the Communal Award as an attack on Indian unity and nationalism. He thought separate electorates to Depressed class was harmful to both Hinduism and to the depressed classes since it provided no answer to the socially degraded position of the depressed classes. Once the depressed classes were treated as a separate political entity, he argued, the question of abolishing untouchability would get undermined, while separate electorates would ensure that the untouchables remained untouchables in perpetuity. He said that what was required was not protection of the so-called interests of the depressed classes but root and branch eradication of untouchability.

Option b is incorrect: Gandhi **did not oppose the separate electorate on the pretext of maintaining the varna system of Hinduism.**

Option c is incorrect: Gandhi wanted the depressed classes be elected through joint and if possible a wider electorate through universal franchise, while expressing no objection to the demand for a larger number of reserved seats. Through Poona Pact seats reserved for the depressed classes were increased from 71 to 147 in provincial legislatures and to 18 per cent of the total in the Central Legislature.

Option d is incorrect: Gandhi did not seek to maintain the hegemony of upper castes. Instead, he was in favour of removing untouchability and inequality from the society.

Source: Chapter 19: Civil Disobedience Movement and Round Table Conferences (Spectrum)

Q.8) Mahatma Gandhi, on behalf of the Congress, agreed on which of the following demands of British Government under the Gandhi-Irwin Pact?

1. To revoke the civil disobedience movement.
2. To participate in the Second Round Table Conference.
3. To not to make salt even for personal consumption.

Select the correct answer using the code given below.

- a) 2 only
- b) 1 and 2 only
- c) 1, 2 and 3
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

A Gandhi-Irwin pact was signed between the viceroy Irwin (representing the British Indian Government) and Gandhi (representing the Indian people) in Delhi on March 5, 1931. This Delhi Pact, also known as the Gandhi-Irwin Pact, placed the Congress on an equal footing with the government.

Statement 1 is incorrect: Gandhi agreed on to just suspend the civil disobedience movement (not on revoking the CDM).

Statement 2 is correct: Gandhi agreed on to participate in the Second Round Table Conference on the constitutional question around the three linchpins of federation, Indian responsibility, and reservations and safeguards that may be necessary in India's interests (covering such areas as defence, external affairs, position of minorities, financial credit of India, and discharge of other obligations).

Statement 3 is incorrect: Viceroy Irwin allowed on behalf of the British Government to make salt in coastal villages for personal consumption.

Source: Chapter 19: Civil Disobedience Movement and Round Table Conferences (Spectrum)

Q.9) Which of the following events/decisions were part of the Lahore Congress Session of 1929?

1. Gandhi was not in support of making Jawaharlal Nehru as president of Lahore session.
2. Congress took the decision to boycott the Round Table Conferences.
3. Dominion status was declared as the aim of the Congress.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 3 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect. Jawaharlal Nehru, who had done more than anyone else to popularize the concept of Poorna Swaraj, was **nominated the president** for the Lahore session of the Congress (dec 1929) **mainly due to Gandhiji's backing** (15 out of 18 provincial Congress committees had opposed Nehru). Nehru was chosen:

- Because of the oppositeness of the occasion (Congress's acceptance of complete independence as its goal).
- To acknowledge the upsurge of youth which had made the anti-Simon campaign a huge success.

Statement 2 is correct. One of the major decisions that was taken at the Lahore session of 1929 was to **boycott the proposed Round Table Conferences in London.**

Statement 3 is incorrect. Another major decision that was taken was **complete independence (Poorna Swaraj) and not the Dominion status** as the aim of the Congress. January 26, 1930 was fixed as the first Independence (Swarajya) Day to be celebrated everywhere. **Hence statement 3 is incorrect.**

Source: Spectrum (Page No. 378 and 379)

Q.10) With reference to the Technical Textiles, consider the following statements:

1. These are called technical textiles because they are manufactured entirely using automated technology.
2. Currently the Government allows 100% Foreign Direct Investment (FDI) under automatic route to boost technical textile growth in India.
3. The Union Ministry of Textile offers financial grants to Academic institutes to promote the introduction of degrees associated with these textiles.
4. Polyester is one of the fibres used in almost all technical textiles.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2,3 and 4 only
- c) 2 and 3 only
- d) 1 and 4 only

Ans) b

Exp) Option b is the correct answer.

Technical textile accounts for approximately 13% of India's total textile and apparel market and contributes to India's GDP at 0.7%. Technical textiles, a sunrise sector, has become even more relevant during the Covid-19 crisis as India was entirely import dependent for Personal Protective Equipment (PPE) kits.

Statement 1 is incorrect: A technical textile is a textile product manufactured for non-aesthetic purposes i.e., they are **manufactured primarily for technical properties and functional properties** rather than aesthetic purposes e.g., medical clothes, firefighting clothes and bulletproof vests etc. Hence **technical textiles are called so, not because they are manufactured entirely using automated technology.**

Statement 2 is correct: It is true that the **Government of India currently allows 100% Foreign Direct Investment under automatic route** in the technical textiles sector to boost the growth of this sector in India. International technical textile manufacturers such as Ahlstrom, Johnson & Johnson, Du Pont Procter & Gamble, 3M, SKAPS, Kimberly Clark, Terram, Maccaferri, Strata Geosystems have already initiated operations in India.

Statement 3 is correct: Recently the Ministry of Textiles issued two guidelines under the National Technical Textiles Mission (NTTM), One among them called **General Guidelines for Enabling of Academic Institutes in Technical Textiles- for Private & Public Institutes** states that financial grant of up to **20 crores** will be given to **Academic institutes** for introducing **PG course** and up to **10 Crores for introducing UG courses** associated with technical textiles.

Other guidelines named **Guidelines for Grant for Internship Support in Technical Textiles (GIST)** states that financial grant of up to **INR 20,000 per student per month shall be provided** to the empanelled companies for providing **internships to B.Tech. students** of relevant Departments/Specializations in Public/Private Institutes.

Statement 4 is correct: Polyester is a **manufactured synthetic fibre**. It is a kind of plastic and is usually derived from **petroleum** or crude oil. It is true that **Polyester** is among the very few fibres that has **applications in all 12 classes of technical textiles**.

Source: <https://texmin.nic.in/fdi-cell#:~:text=100%25%20FDI%20is%20allowed%20in%20the%20textile%20sector%20under%20the%20automatic%20route>

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1888868#:~:text=be%20upto%2020-,crores,-PG%20course%20and>

<https://textilevaluechain.in/news-insights/application-of-polyester-in-technical-textile-sector-an-overview/#:~:text=12%20classes%20of-,technical,-textiles.%20The%20different>

<https://www.investindia.gov.in/siru/technical-textiles-future-textiles>

<https://www.investindia.gov.in/siru/technical-textiles-future-textiles>

Q.11) With reference to agrarian reforms during Congress rule in provinces from 1937-39, consider the following statements:

1. In most of its provinces, Congress Ministries passed debtors' relief acts for the regulation of the moneylenders' business.
2. The Ministries succeeded in ensuring that the benefits of reforms reached sub tenants and agricultural labourers.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

There were certain basic constraints due to which the Congress ministries could not undertake a complete overhaul of the agrarian structure by completely abolishing zamindar These constraints were:

Statement 1 is correct: Except for U.P. and Assam, the Congress Government passed a series of stringent debtors' relief acts which provided for the regulation of the moneylenders' business. Provisions of the acts included measures such as the cancellation or drastic reduction of accumulated interests.

Statement 2 is incorrect: Most of the benefits due to Agri-reforms by congress ministries went to statutory and occupancy tenants while sub-tenants did not gain much. Agricultural labourers did not benefit as they had not been mobilized.

Source: Spectrum's A brief history of Modern India ch 21 pg:460-461, Bipinchandra's Struggle for Independence CHAPTER 26. TWENTY-EIGHT MONTHS OF CONGRESS RULE pg 328

Q.12) Consider the following statements regarding the impacts of appointment of the Simon Commission:

1. British government recognised the idea of Federalism for India.
2. Passage of Purna Swaraj Resolution by the Congress at Karachi Session.
3. Lord Birkenhead challenged Indian politicians to formulate constitution.
4. Provided stimulus to radical forces demanding socio-economic reforms on socialist lines.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

The Government of India Act, 1919 had a provision that a commission would be appointed 10 years from date to study the progress of the governance scheme and suggest new steps. Accordingly, the Simon Commission was set up by the British government on November 8, 1927.

Impacts of the appointment of the Simon Commission is discussed below:

Statement 1 is correct: Simon Commission **accepted the idea of federalism** but not in the near future. Thus, British government **recognised idea of Federalism for India**. Commission suggested that a Consultative Council of Greater India should be established, which should include representatives of both the British provinces as well as princely states.

Statement 2 is incorrect: As a response to the appointment of the Simon Commission, Congress held a session in **Madras (December 1927)** under the presidency of M.A. Ansari and **decided to boycott the commission** "at every stage and in every form". Meanwhile, Nehru succeeded in getting a snap resolution passed at the session, declaring complete independence as the goal of the Congress.

Whereas, the Indian National Congress, on 19 December 1929, passed the historic '**Purna Swaraj**' – **(total independence) resolution – at its Lahore session**. The declaration was passed **due to the breakdown of negotiations** between leaders of the freedom movement and the British over the question of **dominion status for India**.

Statement 3 is correct: Lord Birkenhead **challenged Indian politicians to produce** an agreed **constitution** and it was accepted by various political sections, and thus prospects for Indian unity seemed bright at that point of time.

Statement 4 is correct: It **gave a stimulus to radical forces** demanding not just complete independence but major socio-economic reforms on socialist lines. When the Simon Commission was announced, the Congress, which did not have any active programme in hand, got an issue on which it could once again forge mass action.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition

https://www.constitutionofindia.net/historical_constitutions/declaration_of_purna_swaraj__indian_national_congress__1930__26th%20January%201930

Q.13) Which of the following was the main reason for resignation of Congress Ministries in 1939?

- Unilateral decision of the British government to involve India in the World War II
- Rising corruption and indiscipline in the congress
- They were devoid of necessary financial resources.
- Viceroy's refusal to appoint an Indian as the Defence Member of his Executive Council.

Ans) a

Exp) option a is the correct answer.

In September 1939, two years after the Congress ministries assumed office, the Second World War broke out. Mahatma Gandhi and Jawaharlal Nehru had both been strongly critical of Hitler and the Nazis. Accordingly, they promised Congress support to the war effort if the British, in return, promised to grant India independence once hostilities ended. The offer was refused. In protest, the Congress ministries resigned in October 1939 in protest against the unilateral decision of the British government to draw India into the Second World War.

Source: Themes in Indian History Part III pg: 361-362

A history of modern India-Ishita banerjee-pg 372, 373

Q.14) Which of the following were issues of disagreement between Congress and other participants (British Government and other Indians) at the 2nd Round Table conference?

- British Government was against the claim of Congress that it alone represented interests of India.
- Idea that untouchables were Hindus and thus did not need a separate electorate.
- Issue of providing safeguards to minorities.

Select the correct answer using the code given below:

- 1 and 3 only
- 2 and 3 only
- 1 and 2 only
- 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The second Round Table Conference was held in London from September 7, 1931, to December 1, 1931.

The Indian National Congress nominated Gandhi as its sole representative. A. Rangaswami Iyengar and Madan Mohan Malaviya were also there. There were many Indian participants, besides the Congress.

Statement 1 is correct: At the second Round Table Conference, Mahatma Gandhi reiterated that the Congress alone represented interests of India. But because of the participation of many groups, the British government claimed that the Congress did not represent the interests of all of India. So, this was one of the points of disagreement.

Statement 2 is correct: Mahatma Gandhi pointed that untouchables were Hindus, and thus not to be treated as a minority, he discarded the idea of a separate electorate for them. But government disagreed on this by using viewpoint of other representatives of untouchables like B. R. Ambedkar.

Statement 3 is correct: The session got deadlocked on the question of the minorities. Separate electorates were being demanded by the Muslims, depressed classes, Christians and Anglo-Indians. All these came together in a 'Minorities' Pact'. Gandhi fought desperately against this concerted move to make all constitutional progress conditional on the solving of this issue. He also said there was no need for separate electorates or special safeguards for Muslims or other minorities. So, this also resulted in disagreement.

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Knowledge Base: The **princes were also not too enthusiastic about a federation**, especially after the possibility of the formation of a Congress government at the Centre had receded after the suspension of civil disobedience movement.

Source: Chapter-19 : Civil Disobedience Movement and Round Table Conferences, A brief history of modern India by Rajiv Ahir

Q.15) With reference to Aspirational Block Programme, consider the following statements:

1. The Programme has been launched by the Union Ministry of Rural Development.
2. The Programme provides States the choice to include State specific parameters to assess the performance of blocks.
3. Aspirational blocks have been selected only from the 117 identified Aspirational districts across the nation.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

Recently the Hon'ble Prime Minister of India launched the government's Aspirational Block Programme (ABP), which is aimed at improving performance of blocks lagging on various development parameters.

Statement 1 is incorrect: Aspirational Blocks Programme (ABP) was not launched by the Ministry of Rural Development, rather it was first announced in Union Budget 2022-23 (Union Finance Minister mooted the idea of launching ABP) and **was launched by the Hon'ble Prime Minister of India during the 2nd National Conference of Chief Secretaries.**

The Programme is an extension of the Aspirational District Programme (ADP) to the block level in the district as the **Prime Minister asked Chief secretaries to implement** the 'Aspirational Block Programme' in their respective states. The Aspirational District Programme was launched in 2018 and covers 112 districts across the country. At Government of India level, programme is implemented by NITI Aayog. In addition, individual Ministries have assumed responsibility to drive progress of districts.

Statement 2 is correct: The Programme aims to assess the performance of Blocks based on its performance in the 15 Key Socio-economic Indicators (KSIs) including health, nutrition, education, agriculture, water resources, financial inclusion, skill development, and basic infrastructure. **The ABP provides states the choice to include additional State-specific KSIs to address local challenges.**

Statement 3 is incorrect: Currently, the Aspirational Block Programme (ABP) **extends to cover 500 blocks across 31 states and Union Territories** (there are 36 States and UTs in India). Hence it is not the that Aspirational blocks are selected only from the 117 identified Aspirational districts.

About half of the blocks included under these programmes are in 6 states—Uttar Pradesh, Bihar, Madhya Pradesh, Jharkhand, Odisha and West Bengal (in decreasing order). Further States can add more blocks to the programme later.

Source: <https://indianexpress.com/article/cities/delhi/pm-modi-aspirational-block-programme-spurring-development-parameters-8367955/>

Q.16) Consider the following statements regarding Parallel Governments formed during the Quit India Movement:

1. Satara Prati Sarkar had its own armed wing known as Toofan Sena (typhoon army).
2. The parallel government in Balia made arrangements for carrying out the civil administration.
3. Nyayadan Mandals were organized by Tamluk Jatiya Sarkar in Bengal region.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The emergence of what became known as parallel governments in some parts of the country was a significant feature of the Quit India Movement.

Statement 1 is correct: During the Quit India movement, parallel governments were formed in different parts of the country, challenging the authority of the British Raj. One such government took shape in the Satara district of Maharashtra in 1942-43, known as Prati Sarkar. The Prati Sarkar was formed under the leadership of Krantisinha Nana Patel. The Sarkar held control over 600 villages, and functioned as a government in every possible way, having its own system of markets, law and order, and food distribution. They penalized money lenders and landlord collaborators of the Raj. Violence against women was severely punished by the Sarkar. **The Sarkar had its own armed wing known as Toofan Sena (typhoon army) to carry out guerrilla attacks against the Raj.** The Sena raided the imperial establishments to gather funds for their functioning. On 7th June 1943, they conducted an attack on a goods train carrying the salaries of British officials from Pune to Miraj and looted the money. In the same year, they raided a police station at Bhavani Nagar in the Sangli district to procure the guns needed for their fight.

Statement 2 is correct: The parallel government in Balia, led by Chittu Pandey made arrangements for carrying out the civil administration. Separate panchayats were set up for different localities. Congress workers were appointed for the defence of the city. This government came to control seven out of the ten police station areas. However, this government did not last long.

Statement 3 is incorrect: Nyayadan Mandals or people's courts were organized by Satara based Prati Sarkar and not by Jatiya Sarkar in Bengal region.

Source: Plassey to Partition by S. Bandopadhyay

<https://indianculture.gov.in/node/2807017#:~:text=The%20paralle%20government%20led%20by,the%20ten%20police%20station%20areas.>

<https://amritmahotsav.nic.in/district-repository-detail.htm?6766>

Q.17) With respect to Indian response to Simon Commission, consider the following statements:

1. Dr. B. R. Ambedkar submitted a memorandum regarding the rights and safeguards of depressed classes to the commission.
2. Unionists in Punjab and the Justice Party in the South did not boycott the commission.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. Dr. Ambedkar was appointed by the Bombay Legislative Council to work with the Simon Commission. In October 1928, Ambedkar went before the commission. He argued for '**Universal adult franchise**' for both male and female alike for provincial autonomy in the provinces and dyarchy at

centre. Dr. B. R. Ambedkar **on the behalf of Bahishkrita Hitakarini Sabha**, submitted a **memorandum on the rights and safeguards** he felt were required for **depressed classes**.

Statement 2 is correct. Unionists in Punjab and Justice Party in the south **decided not to boycott the commission**.

Source: Spectrum (Page No. – 367,368) and

<https://cmsadmin.amritmahotsav.nic.in/blogdetail.htm?54>

Q.18) The Second Round Table Conference (2nd RTC) ended with MacDonald's announcement. In this context, which of the following statements were part of this announcement?

1. The setting up of an Indian Consultative Committee.
2. Establishing of two Muslim majority provinces namely, Sindh and North-West Frontier Province (NWFP).
3. India was to be made a federation of states.
4. The setting up of three expert committees—finance, franchise, and states.

Select the correct answer using the code given below.

- a) 2 and 4 only
- b) 1, 2 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

The Second Round Table Conference (2nd RTC) was held in London from 7th September to 1st December, 1931. The conference was held in an effort to reach a compromise between the British and the Indian nationalists, and to find a way to provide a measure of self-government for India.

The 2nd RTC session ended with MacDonald's announcement of:

- 1) the setting up of an Indian Consultative Committee; **(Hence, statement 1 is correct.)**
- 2) two Muslim majority provinces—Sindh and North-West Frontier Province (NWFP); **Hence, statement 2 is correct.**
- 3) setting up of three expert committees—finance, franchise, and states; (Hence, statement 4 is correct.)
- 4) the prospect of a unilateral British Communal Award if Indians failed to agree.

It was generally agreed during **1st RTC (not 2nd RTC)** that **India was to develop into a federation. (Hence, statement 3 is incorrect.)**

Source: Chapter 19: Civil Disobedience Movement and Round Table Conferences (Spectrum)

Q.19) The Resolution on National Economic Programme was adopted during the Karachi Congress Session of 1931. Which of the following were included in the Resolution on National Economic Programme?

1. Exemption from rent for uneconomic holdings
2. Equal pay for equal work
3. Substantial reduction in rent and revenue
4. Limited hours of work

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1, 2 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

In March 1931, a special session of the Congress was held at Karachi to endorse the Gandhi-Irwin Pact. Two resolutions were adopted - one on Fundamental Rights and the other on National Economic Programme, which made the session particularly memorable.

Statement 1, 3 and 4 are correct: The Resolution on National Economic Programme included: **substantial reduction in rent and revenue, exemption from rent in case of uneconomic holdings**, and relief of agricultural indebtedness and control of usury; better conditions for workers including a living wage, **limited hours of work** and protection of women workers; the right to organize and form unions to workers and peasants; and state ownership or control of key industries, mines and means of transport.

Statement 2 is incorrect: Equal pay for equal work **is not a part** of the Resolution on National Economic Programme.

Source: India's Struggle For Independence; Chapter 23: From Karachi To Wardha: The Years From 1932-34

Q.20) With reference to the Sustainable Aquaculture in Mangrove Ecosystem (SAIME) initiative, consider the following statements:

1. The initiative has been launched by Conservation International.
2. The initiative aims to promote the wise use of the mangrove ecosystem by communities to satisfy their livelihood needs.
3. The initiative has been implemented to protect all the Mangrove ecosystems present across India.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

Mangroves are the most important and productive ecosystem on the earth. The root system of mangroves stabilizes the coastline, reduces soil erosion from storm surge and provides a favourable environment and nursery ground for fishes, crabs, and other aquatic organisms.

Statement 1 is incorrect: The Sustainable Aquaculture in Mangrove Ecosystem (SAIME) initiative is being **launched** by the Non-Governmental Organisation (NGO) **Nature Environment and Wildlife Society (NEWS)** in association with Global Nature Fund (GNF) and Naturland Bangladesh Environment and Development Society (BEDS).

Statement 2 is correct: The SAIME initiative aims to curb the practice of unsustainable aquaculture, particularly shrimp collection, after cleaning large tracts of mangrove forests in Sunderbans. Under the SAIME initiative, **farmers are planting mangrove trees around shrimp ponds** to protect both mangrove ecosystems as well as improve the productivity of shrimps. Hence this initiative promotes the wise use of the mangrove ecosystem to satisfy communities' livelihood needs, is correct.

Statement 3 is incorrect: The Sustainable Aquaculture in Mangrove Ecosystem (SAIME) initiative has been implemented **only in the state of West Bengal** to protect the Mangrove ecosystem in this area. Under SAIME initiative, farmers have taken up cultivation of shrimp at 20 hectares at Chaital in West Bengal's North 24 Parganas, and 10 hectares at Madhabpur in adjoining South 24 Parganas.

Source: <https://naturewildlife.org/saime/>

<https://www.thehindu.com/news/national/other-states/sustainable-shrimp-cultivation-provides-hope-for-mangrove-restoration-in-sundarbans/article66324538.ece>

Q.21) With reference to the work done by Congress Ministries after forming government in the majority of the provinces in the elections of 1937, consider the following statements.

1. They lifted all the restrictions on the return of political exiles to India.
2. Industrial Disputes Bill was introduced in Bombay with the aim to prevent strikes and lockouts as far as possible.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

In the provincial elections of 1937, Congress ministries were formed in Bombay, Madras, Central Provinces, Orissa, United Provinces, Bihar and later in the NWFP and Assam also. In the 28 months of Congress rule in the provinces, there were some efforts made for people's welfare. They tried to ameliorate the civil liberties by bringing in several reforms.

Statement 1 is incorrect: The Congress worked for lifting restrictions on the return to India of political exiles like Rash Behari Gosh, Prithvi Singh, Maulvi Abdullah Khan, Abani Mukerjee, etc. However, **it could not do much in this regard.**

Statement 2 is correct: In October 1937, the Labour Committee appointed by the Congress, gave a programme which was accepted by the AICC. **However, Bombay was the only province to undertake Labour Legislation. The Ministry introduced the Industrial Disputes Bill** with the aim to prevent strikes and lockouts as far as possible.

Source: Spectrum: A Brief History of Modern India, Chapter 21, Congress Rule in Provinces
<https://egyankosh.ac.in/bitstream/123456789/44320/3/Unit-17.pdf> (pg no 35 & 36)

Q.22) During the Civil Disobedience movement, Gandhi and Congress did not include which of the following as a way of protest against British Government?

- a) Picketing of foreign cloths shops
- b) Industrial strikes on a large scale.
- c) Boycott of courts by refraining from litigation.
- d) Nonpayment of taxes to the government

Ans) b

Exp) Option b is the correct answer.

It was the **start of the Civil Disobedience Movement (CDM)** which commenced as **Mahatma Gandhi broke the salt law on the coastal town of Dandi** on Gujarat's western coast. **Mahatma Gandhi's** march started in March 1930, where he along with his 78 other ashram members set off on foot **for Dandi. On April 6, 1930, they arrived in Dandi, where Gandhi violated and broke the Salt Law.**

Options a, c and d are correct: Gandhiji declared that:

- 1) 'Wherever possible, civil disobedience of salt laws should be started.
- 2) **Liquor and foreign cloth shops should be picketed. (Hence option a is correct)**
- 3) **People can refuse to pay taxes to the government. (Hence Option d is correct)**
- 4) **The lawyers can give up practice; the public can boycott the courts by refraining from litigation. (Hence option c is correct)**
- 5) Government servants can resign their posts.

He prescribed only one condition, viz., let the pledge for truth and nonviolence as the only means for the attainment of Swaraj be faithfully kept.’

Option b is incorrect: There were frequent hartals in towns, but to the relief of British officials the Congress did not include industrial or communication strikes in its programme.

Source: Chapter-19: Civil Disobedience Movement and Round Table Conferences, A brief history of modern India by Rajiv Ahir

Q.23) The congress ministries formed in 1937 somehow resulted in the widening rift between Hindus and Muslims. In this context, which of the following contributed to further widening the rift between the two communities?

1. Congress rejection to form joint government with Muslim league in United Province.
2. Presence of Strong social support for Muslim league in Bengal, the NWFP and the Punjab.
3. Failure to achieve substantial gains in the “Muslim mass contact” program launched by congress.

Select the correct answer from the options given below:

- a) 2 only
- b) 3 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: In the United Provinces, the Muslim League wanted to form a joint government with the Congress. The Congress had won an absolute majority in the province, so it rejected the offer. Some scholars argue that this rejection convinced the League that if India remained united, then Muslims would find it difficult to gain political power because they would remain a minority. This led to widening rift between Hindus and Muslims.

Statement 2 is incorrect: Though popular in the United Provinces, Bombay and Madras, social support for the League was **still fairly weak in three of the provinces** from which Pakistan was to be carved out just ten years later – **Bengal, the NWFP and the Punjab**. Even in Sind it failed to form a government.

Statement 3 is correct: Congress failed to achieve any substantial gains in the “**Muslim mass contact**” programme it launched. In the end, the secular and radical rhetoric of the Congress merely alarmed conservative Muslims and the Muslim landed elite, **without winning over the Muslim masses**.

Source: Themes in Indian History Part III pg: 385-386

Q.24) Consider the following statements regarding the provisions of the Poona pact:

1. It abandoned the idea of separate electorates for the depressed classes.
2. It increased the number of reserved seats in the Central and Provincial legislatures for the depressed classes.
3. It provided for educational grants for the members of Depressed Classes in every province.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Nationalists felt the demand for a separate electorate was a threat to national unity. **Mahatma Gandhi's fast unto death** (September 1932) led to **Poona Pact which abandoned separate electorates for depressed classes. The Poona pact was signed by B.R. Ambedkar** on behalf of the depressed classes on September 24, 1932. The Poona Pact was **accepted by the government as an amendment to the Communal Award.**

Statement 1 is correct: The Poona Pact **abandoned the idea of separate electorates for the depressed classes.** So, the election will be through a joint electorate to seats of assembly and central legislature.

Statement 2 is correct: **Under the Poona pact the seats reserved for the depressed classes were increased from 71 to 147 in provincial legislatures and to 18 percent of the total in the Central Legislature.** So, it led to a general increase in seats for depressed classes.

Statement 3 is correct: Under the Poona pact it was agreed that **in every province out of the educational grant an adequate sum will be ear-marked for providing educational facilities to the members of Depressed Classes.**

Source: Chapter-19: Civil Disobedience Movement and Round Table Conferences, A brief history of modern India by Rajiv Ahir

Q.25) With reference to Wassenaar Arrangement (WA), consider the following statements:

1. The arrangement controls the export of both conventional weapons and sensitive dual-use goods and technologies.
2. It is mandatory for member countries to share information related to the export of items mentioned in this arrangement.
3. India is one of the founding members of this arrangement.
4. Admission of new members to this arrangement requires the consensus of all members.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 2 and 3 only
- c) 1 and 4 only
- d) 2 and 4 only

Ans) c

Exp) Option c is the correct answer.

Recently, **India assumed the chairmanship of 26th annual session** of the Wassenaar Arrangement (WA), for one year. The Wassenaar Arrangement was established in **1996** to contribute to regional and international security and stability by promoting transparency and greater responsibility in transfers of conventional arms and dual-use goods and technologies.

Statement 1 is correct: Wassenaar Arrangement (WA) **controls the export of conventional weapons and dual-use goods and technologies.** It is a multilateral export control regime which aims to promote regional and international security and stability by controlling the transfers of conventional arms and dual-use goods and technologies, thus preventing destabilising accumulations.

Statement 2 is incorrect: To promote transparency, Wassenaar Arrangement calls on states to **make a series of voluntary information exchanges (arrangement does not mandate states to share information)** and notifications on their export activities related to weapons and items appearing on the arrangement's two control lists. The arrangement provides for two lists for Dual-Use Goods and Technologies, and they are Basic list and Sensitive lists.

Statement 3 is incorrect: **India is not a founding member of Wassenaar Arrangement (WA).** The Wassenaar Arrangement was **established in 1996** after 33 countries had given its approval and **India became a member of WA in 2017 only.**

Statement 4 is correct: It is true that **admission of new members requires the consensus of all members.** India was the latest country to be included in this arrangement as the 42nd participating 2017. India's membership was supported by Russia, USA, France and Germany.

Source: https://1997-2001.state.gov/global/arms/np/mtr/000322_wassenaar.html

<https://www.armscontrol.org/factsheets/wassenaar#:~:text=a%20series%20of-,voluntary,-information%20exchanges%20and>

https://www.business-standard.com/article/news-ians/india-becomes-member-of-key-export-control-regime-117120800044_1.html

Q.26) Which of the following promises were made by the Congress in their 1937 election manifesto?

1. Removal of untouchability.
2. Fight against the implementation of the Government of India Act, 1935.
3. Encouraging the Khadi and Village industries.
4. Provide Right to form Trade Unions for industrial workers.

Select the correct option from the codes given below.

- a) 1, 2 and 3 only
- b) 1, 3 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

In February 1937, elections to the provincial assemblies were held. Elections were held in eleven provinces—Madras, Central Provinces, Bihar, Orissa, United Provinces, Bombay Presidency, Assam, NWFP, Bengal, Punjab and Sindh. In its earlier sessions at Lucknow in early 1936 and Faizpur in late 1937, the Congress decided to fight these elections.

Congress Manifesto had following key provisions:

Statement 1 is correct: On the social issues, the 1937 election manifesto of the congress has made several promises which include **removal of the untouchability**, providing equal status to women and finding a satisfactory solution to the communal problems.

Statement 2 is correct: The Manifesto made it clear that the purpose of sending Congressmen to the legislatures was **not to cooperate with the Government, but to combat the Act of 1935** and to end it. British imperialism was to be resisted in its "attempts to strengthen its hold on India".

Statement 3 is correct: **The manifesto promised to encourage the Khadi and village industries**, to ensure economic development in the rural areas.

Statement 4 is correct: In relation to the industrial workers the policy of Congress was to secure for them a decent standard of living and regular work hours. **It promised to realise this by allowing access to cheap credits and right to form trade unions.**

Source: Spectrum: A Brief History of Modern India, Chapter 20, Debates on the Future Strategy after CDM
<https://egyankosh.ac.in/bitstream/123456789/20073/1/Unit-30.pdf>

Q.27) After the Lahore Session of Congress in 1929, Gandhi presented 11 demands to the British government and gave an ultimatum of January 31, 1930, to accept or reject these demands. Consider the following statements with reference to these demands:

1. There was demand for Dominion Status for India.
2. There was a demand for abolition of the salt tax and government's monopoly over salt production.
3. There was a demand for reducing the land revenue by 50 percent.
4. There was a demand for reserving coastal shipping for Indians.

Which of the statements given above are correct?

- a) 1, 3 and 4 only
- b) 1, 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect: Gandhi's 11-point ultimatum to Irwin for 31 January, 1930 seemed to many a sad climb-down from the Purna Swaraj resolution, **since no demand was made for any change in the political structure, not even Dominion Status was demanded for India.**

Statement 2, 3 and 4 are correct: The letter from Gandhi to Irwin combined:

1) Issues of general interest:

50% cuts in army expenses and civil service salaries, total prohibition, release of political prisoners, reform of the C.I.D., and changes in the Arms Act allowing popular control of issue of firearms Licenses)

2) Three specific bourgeois demands (Lowering of the rupee sterling exchange ratio to 1s 4d, textile protection, and **reservation of coastal shipping for Indians**) (Hence Statement 4 is correct)

3) two basically peasant themes-50% reduction in land revenue, and abolition of the salt tax and government salt monopoly. (Hence statement 2 and 3 are correct).

Source: Modern India by Sumit Sarkar PAGE 284

Q.28) With reference to social welfare reforms under Congress Ministries during 1937-39, consider the following statements:

1. All political prisoners were released in Congress ruled provinces.
2. Due to Congress' education policy, the number of educational institutions increased in most of the provinces.
3. Efforts were made to increase the participation of harijans in government services.

Which of the given above statements is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Congress ministries implemented various social welfare reforms aimed at improving the lives of ordinary people. These included land reforms, labor laws, education and health reforms, and measures aimed at improving the status of women.

Statement 1 is incorrect: It is not accurate to say that all political prisoners were released during the Congress rule. As even in the provinces where Congress did come to power, not all political prisoners were released.

Statement 2 is correct: In all the Congress ruled provinces efforts were made to introduce prohibition; encourage education and to give an impetus to village industries. As a result of congress significant progress in provinces. **Due to Congress education policy students as well as educational institutions increased.** For example, in Bombay the number of educational institutions was 14,609 in 1936-37 and increased to 18,729. Similarly, the number of pupils which was 1,335,889 in 1936-37 increased to 1,556,441 by 1939-40.

Statement 3 is correct: Measures for welfare of Harijans taken-temple entry, use of public facilities, scholarships, their numbers in government service and police, etc. an increase in their numbers in government service and police etc.

Source: <https://egyankosh.ac.in/bitstream/123456789/20073/1/Unit-30.pdf> Spectrum's A brief history of Modern India ch 21 pg:462

Q.29) Consider the following statements regarding the Cunningham Circular:

1. It mandated for parents, guardians and students to furnish assurances of good behaviour.
2. It banned strikes by labours in tea plantations owned by Britishers.
3. It was issued during the Quit India Movement.
4. It was issued by the Governor of Assam at that time.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1, 2 and 3 only
- d) 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

To discourage and stop students to participate in the Civil Disobedience Movement, J.R. Cunningham issued the Cunningham circular in 1930.

Statement 1 is correct: It forced parents, guardians and students to furnish assurances of good behaviour and asked them to sign an undertaking that they would have to quit their schools and colleges if they participated in anti-government demonstrations or movements.

Statement 2 is incorrect: It imposed a blanket ban on any anti-British and pro-swadeshi activity by students. The circular was not related to the strikes by labourers in tea plantations.

Statement 3 is incorrect: It was issued during the Civil Disobedience Movement and not during Quit India movement.

Statement 4 is incorrect: J. R. Cunningham was the Director of Public Information of Assam and not the Governor of Assam.

Source: TMH Book by Sonali Bansal

Q.30) What are 'Local Bubbles' sometimes mentioned in the news?

- a) Network of stratospheric balloons to provide internet connectivity.
- b) A great cavity in the interstellar gas around the solar system.
- c) A technology to stop plastic from entering the Yamuna River.
- d) A programming language that enables non-technical people to build web applications.

Ans) b

Exp) Option b is the correct answer.

Researchers from the **Center for Astrophysics (CfA) Harvard & Smithsonian** have generated a **3D magnetic map of the cavity** called **Local Bubble**. The Local Bubble is a **cavity at least 1,000 light-years wide** in the interstellar gas around the solar system – a 'super bubble' in interstellar space. The Local Bubble was blown out by a series of supernovas between 10 million and 20 million years ago and is one of many such bubbles in the interstellar medium that riddle our Milky Way galaxy and others like the cavities in Swiss cheese.

Option a is incorrect: Project loon is a **network of stratospheric balloons** that helps to connect rural and remote regions of the world to **Internet connectivity** via wireless communication technology. Project Loon is a research and development project being developed by Google.

Option b is correct: The Local Bubble is a **great cavity in the interstellar medium** (ISM), about 1,000 light-years wide, within which the Sun and many nearby stars reside. The Local Bubble has a neutral hydrogen density of only about 0.07 atoms per cm³ – at least 10 times lower than the average ISM in the Galaxy and contains a thin gruel of million-degree X-ray-emitting plasma.

Option c is incorrect: A technology used to stop plastic from entering the Yamuna River is a **bubble curtain Technology**, which is a non-invasive solution to stop plastic from entering the oceans. Ships and fish can pass through the air bubbles, but plastics will be stopped. The bubble screen is created by a specially designed air tube which is placed diagonally on the bed of the canal or river. It brings waste to the surface, channels the plastic onto the banks where it can be extracted.

Option d is incorrect: Bubble is a **visual programming language**, a no-code development platform and an application platform as a service, developed by Bubble Group, that enables non-technical people to build web applications without needing to type code.

Source: <https://www.downtoearth.org.in/news/world/bubble-of-secrets-here-s-what-the-new-3d-map-of-a-gigantic-cosmic-cavity-tells-us-about-the-universe-87090> <https://www.space.com/local-bubble-first-3d-magnetic-field-map> <https://www.livemint.com/news/india/yamuna-to-get-bubble-curtain-to-stop-plastic-from-entering-the-river-11621354904056.html>

Q.31) Which of the following women leaders played an active role in the Civil Disobedience Movement that was launched in 1930?

1. Matangini Hazra.
2. Kamla Nehru.
3. Sarojini Naidu

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Women have played a significant role in the civil disobedience movement in India. Women from all walks of life, including students, farmers, laborers, and political leaders, joined the march to protest the British Salt Tax.

Option 1 is correct: Matangini Hazra was an Indian revolutionary who was devoted to the cause of the country's freedom from British rule. **She participated in the civil disobedience movement and was arrested for her role in the Salt Satyagraha movement. Though** she was quickly released, she persisted with the demand that the Salt Tax be repealed.

Option 2 is correct: **Kamla Nehru got involved to protest the British's monopoly on salt as a part of the 'Civil Disobedience Movement.** Kamla Nehru was believed as one of the first leaders who sold contraband salts during salt Satyagraha.

Option 3 is correct: On May 21, 1930, **Sarojini Naidu**, Imam Sahib and Manilal (Gandhi's son) took up the unfinished task of leading a raid on the Dharasana Salt Works. The unarmed and peaceful crowd was met with a brutal lathicharge which left 2 dead and 320 injured.

Source: <https://indianculture.gov.in/node/2827993>

<https://indianculture.gov.in/node/2801049>

<https://www.indiatoday.in/education-today/gk-current-affairs/story/kamala-nehru-119th-birth-anniversary-1302267-2018-08-01>

Q.32) Consider the following statements with reference to Rani Gaidinliu and her contribution to the Indian freedom struggle:

1. During the Quit India Movement, she undertook many armed raids on the British offices in Assam.
2. She was associated with the socio-religious movement known as Heraka Movement.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Rani Gaidinliu was a Naga spiritual and political leader who fought against British colonial rule in India.

Statement 1 is incorrect: Due to her activities during the Civil-Disobedience movement, she was arrested in 1932 by the British and sentenced to life imprisonment. She then served prison time from 1933 to 1947 in various jails. After India achieved independence, Rani Gaidinliu was released from prison. She was resolved to work for the development of the Zeliangrong people. Therefore, she was in jail during the time period of quit-India movement. Hence statement 1 is incorrect.

Statement 2 is correct: In 1927, at the age of 13, **Gaidinliu**, along with her cousin Haipou Jadonang, **joined the Heraka movement**, which aimed at the revival of the Naga tribal religion and establish self-rule of the Nagas (Naga Raj).

Source: A Brief History of Modern India by Rajiv Ahir (Spectrum), 6th Edition

<https://amritmahotsav.nic.in/unsung-heroes-detail.htm?98>

<https://indianculture.gov.in/node/2797802>

Q.33) An All-Parties Conference in 1928 appointed a sub-committee under the chairmanship of Motilal Nehru to draft a constitution. Which of the following personalities were part of this sub-committee?

1. Sir Ali Imam
2. Subash Chandra Bose
3. Tej Bahadur Sapru

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

In December 1927, at its Madras session, the Indian National Congress took two major decisions in response to the setting up the Simon Commission: first, it decided to not cooperate with the Commission; second, it set up an All-Parties Conference to draft a Constitution for India.

An All-Parties Conference met in February 1928 and appointed a sub- committee under the chairmanship of Motilal Nehru to draft a constitution. The All-Parties Conference included the All-India Liberal Federation, All India Muslim League, Sikh Central League and others.

Option 1, 2, and 3 are correct: Some of the notable members of this Committee were: Motilal Nehru (Chairman), Sir Ali Imam, Tej Bahadur Sapru and Subash Chandra Bose, M.S. Aney, Mangal Singh, Shuab Qureshi and G.R. Pradhan.

M.R. Jayakar and Annie Besant joined the Committee later. Jawaharlal Nehru was appointed the secretary to the Committee.

Source: Spectrum Modern India 2019–20 Edition CH-18

Q.34) Consider the following statements with reference to the features of the Government of India Act of 1935:

1. As per the act, members of federal assembly were to be elected through indirect elections.
2. It abolished dyarchy at the Provincial level and introduced it at the Centre.
3. It provided for the separate electorate for women.

Which of the statements given above is/are correct?

- a) 1, 2 and 3
- b) 1 and 3 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

The Government of India Act was passed by the British Parliament in August 1935.

Statement 1 is correct: Under the Government of India Act, 1935, the Central Legislature was bicameral, consisting of the Federal Assembly and Council of States. **The Federal Assembly was the lower house with a tenure of five years.** It was to be made of 375 members, out of which 250 were to be representatives of British India and not more than 125 members from the princely states. **As per the act, members of the Council of States were to be directly elected and members of Federal Assembly were to be indirectly elected.**

Statement 2 is correct: The Act of 1935 abolished dyarchy at the Provincial level and introduced it at the Centre. There were two categories of federal subjects: Reserved and Transferred. Religious affairs, defence, administration of tribal areas and external affairs were included in the reserved subjects. The Governor-General remained overall in charge of both the Reserved and Transferred subjects.

Statement 3 is correct: It further extended the principle of communal representation. Even the workers and women got separate representation although they had not asked for it. **Separate electorates for women** were beneficial to women's advancement in the decision-making process. Workers had their own representation as well, which aided in the progress of the working class.

Source: A Brief History of Modern India by Rajiv Ahir (Spectrum), 6th Edition

Statement 3: https://www.legislation.gov.uk/ukpga/1935/2/pdfs/ukpga_19350002_en.pdf (Pg:215)

Q.35) With reference to “Neuromorphic computers”, consider the following statements:

1. Unlike traditional computers, Neuromorphic computers mimic the working of human brains and nervous system.
2. Unlike traditional computers which use silicon chips to store data, human DNA is used to store data in the Neuromorphic computers.
3. Neuromorphic computers consume more energy as compared to traditional computers.

Which of the statements given above is/are correct?

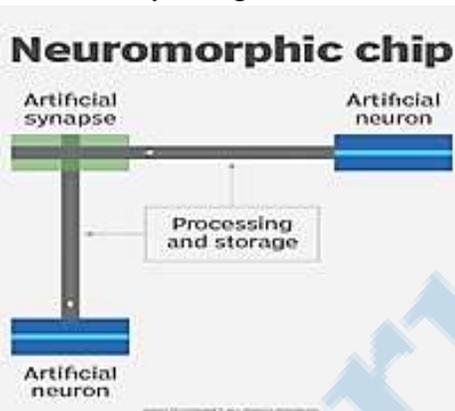
- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Neuromorphic computers mimic the neuro-biological networks in the human brain and perform tasks efficiently and effectively, such as visual recognition and data interpretations. Compared to traditional computers, neuromorphic computers are built to work like a human brain and so their processing is highly rapid.

Statement 1 is correct: It is true that **Neuromorphic computers are modelled after systems in the human brain and nervous system**. Traditional computers have **physically separated memory storage and processing units**, and the human brain is a supreme **biological computer** that is smaller and more efficient due to the presence of a **synapse** (the connection between two neurons) that plays the role of both **processor and memory storage unit**.



Statement 2 is incorrect: Neuromorphic computing uses hardware based on the structures and processes of neurons and synapses in **biological brains (not DNA of humans)**. The most common form of neuromorphic hardware is the **spiking neural network (SNN)**.

Statement 3 is incorrect: Neurons use chemical and electronic impulses to send information between different regions of the brain and the rest of the nervous system. Neuromorphic computers by using this process, will make it **function faster and conserve more energy** as compared to traditional computers. Statement is incorrect as **Neuromorphic computers consume less energy than traditional computers**.

Source: https://blog.forumias.com/artificial-synapse-developed-for-brain-like-computing-with-industry-compatible-nitride-semiconductors/#Why_Neuromorphic_computing

Q.36) Consider the following statements with reference to the Indian National Liberal Federation, established during Indian freedom struggle:

1. It was founded by Jawaharlal Nehru and Subash Chandra Bose.
2. It was established immediately after the withdrawal of the Civil Disobedience movement.

Which of the above given statement is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: Indian National Liberal Federation (INLF) was founded by Surendra Nath Banaerja in 1919 and some of its prominent leaders were Tej Bahadur Sapru, S. Srinivasa Sastri and M. R. Jayakar.

Statement 2 is incorrect: When the Montagu report of 1918 was made public, there was a divide in the Congress over it. The moderates welcomed it while the extremists opposed it. This led to a schism in the Congress with moderate leaders **forming the "Indian National Liberal Federation" in 1919 (not after Civil Disobedience movement).**

Source: A Brief History of Modern India by Rajiv Ahir (Spectrum), 6th Edition

Q.37) With reference to Gandhi's campaign against untouchability in India, consider the following statements.

1. He set up the All-India Anti Untouchability League for campaigning against the practice of untouchability.
2. He pleaded to throw open temples for the untouchables.
3. He advocated for the complete annihilation of the Varna system, which he considered as the source of untouchability in India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Gandhi was determined to undo the divisive intentions of the government's divide and rule policy; hence, he gave up all his other preoccupations and launched a whirlwind campaign against untouchability.

Statement 1 is correct: He set up the All-India Anti-Untouchability League in September 1932 and started the weekly Harijan in January 1933. Starting from Wardha, he conducted a Harijan tour of the country in the period from November 1933 to July 1934, covering 20,000 km, collecting money for his newly set up Harijan Sevak Sangh, and propagating removal of untouchability in all its forms.

Statement 2 is correct: He called for total eradication of untouchability by making pleas to the upper caste Hindus to allow temple entry for the untouchables. He also stressed the need for caste Hindus to do 'penance' for untold miseries inflicted on Harijans.

Statement 3 is incorrect: According to Gandhi untouchability was a sin, which needs to be eradicated. Where Gandhiji believed that untouchability could be eradicated by the change of heart of the upper castes, **however he didn't oppose to the varna system.** For Gandhi, the reinvigorated socio-religious whole would be structured by **an ideal notion of varna in which there would be no enmity among the interdependent units.** At the same time, Ambedkar believed that the roots of untouchability lie in the Varna system, so to end untouchability, the eradication of Varna system is necessary. As there is no scope for reform in Varna system, it is appropriate to eradicate it completely. Therefore, the upliftment of Dalits is only possible when their rights are protected, grievance redressal system, and political powers are also conferred to them.

Source: Spectrum: A Brief History of Modern India, Chapter 19, CDM and Round Table Conferences

<https://journals.sagepub.com/doi/full/10.1177/0971685818805328>

Q.38) After the withdrawal of Non-Cooperation Movement, which among the following leaders supported an end to the boycott of legislative councils?

1. M A Ansari
2. C Rajagopalachari
3. Motilal Nehru
4. C R Das
5. Ajmal Khan

Select the correct answer using the code given below:

- a) 2, 3 and 4 only
- b) 1, 4 and 5 only
- c) 1, 3 and 5 only
- d) 3, 4 and 5 only

Ans) d

Exp) Option d is the correct answer.

After Gandhi's arrest (March 1922), there was disintegration, disorganisation, and demoralisation among nationalist ranks. A debate started among Congressmen on what to do during the transition period, i.e., the passive phase of the movement.

One section led by **C.R. Das, Motilal Nehru, and Ajmal Khan** wanted **an end to the boycott of legislative councils so that the nationalists could enter them to expose the basic weaknesses of these assemblies and use these councils as an arena of political struggle to arouse popular enthusiasm**. They wanted, in other words, to 'end or mend' these councils, i.e., if the government did not respond to the nationalists' demands, then they would obstruct the working of these councils. Those advocating entry into legislative councils came to be known as **the 'Swarajists'**. The **other group with C. Rajagopalachari, Vallabhbhai Patel, Rajendra Prasad, and M.A. Ansari** came to be known as the **'No- changers'**. The 'No-Changers' opposed council entry, advocated concentration on constructive work and continuation of boycott and non-cooperation, and quiet preparation for resumption of the suspended civil disobedience programme.

Source: A Brief History of Modern India by Rajiv Ahir (Spectrum), 6th Edition

Q.39) With reference to the events related to Indian National Congress, consider the following statements:

1. British Government declared Congress as illegal in 1930 after the Congress adopted the aim of Purna Swaraj in Lahore Session.
2. M. K. Gandhi resigned from Congress in 1934 and never joined back.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

There was a marked change in the Government attitude towards the Civil Disobedience Movement in its 2nd phase compared to 1st phase and it decided to suppress the movement strongly.

Statement 1 is incorrect: There was no such ban on the Congress in the first phase of CDM in 1930. Viceroy Irwin in fact had signed Gandhi Irwin pact (Delhi Pact) on an equal footing with the Congress and thus raised the prestige of Congress. But a marked change was noticed in the Government attitude after Gandhi returned from 2nd Round Table Conference. **On January 4, 1932, Gandhi was arrested, Congress organisations at all levels were declared to be illegal soon after.**

Statement 2 is correct: In October 1934, Gandhi announced his resignation from the Congress to serve it better in thought, word, and deed. He never joined Congress again even though he did accept the Congress's offer to lead the Quit India struggle after being urged by the Congress Working Committee. He continued to focus on constructive work after resigning in 1930s. He also clarified that he didn't resign from the Congress in disgust and retained highest regard for the party.

Source: The Years that Changed the World by Ramachandra Guha

<https://www.newdelhitimes.com/when-gandhiji-resigned-from-the-congress/>

Q.40) With reference to “Hybrid immunity”, sometimes seen in news, which of the following statement is correct?

1. It is an immunity offered by the combination of primary doses and booster shots of vaccines.
2. It has higher degree of immunity as compared to infection induced immunity.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

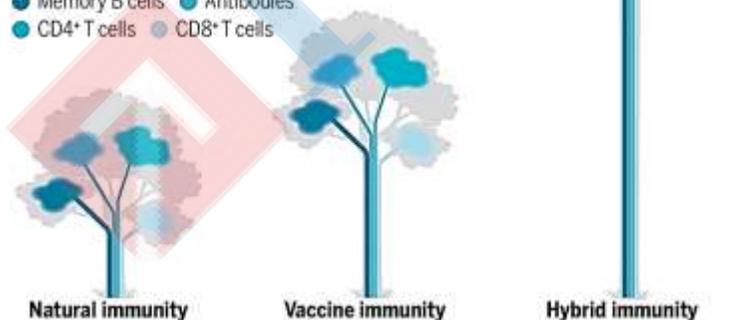
A recent study by The Lancet Infectious Diseases held that **hybrid immunity provides better protection against severe Covid-19**, while all immunity against a re-infection wane within a few months.

Statement 1 is incorrect: Hybrid immunity is a combination of natural protection of the human body against diseases along with the immunity provided by the vaccine. The statement is incorrect as it is not a combination of primary and booster shots of vaccines. It appears to result in stronger protection than just infection or vaccination alone.

Hybrid vigor immunity with COVID-19 vaccines

Hybrid vigor can occur when different plant lines are bred together and the hybrid is a much stronger plant. Something similar happens when natural immunity is combined with vaccine-generated immunity, resulting in 25 to 100 times higher antibody responses, driven by memory B cells and CD4⁺ T cells and broader cross-protection from variants.

- Memory B cells ● Antibodies
- CD4⁺ T cells ● CD8⁺ T cells



Statement 2 is correct: Hybrid immunity is gained from a previous infection plus vaccines (either the primary doses or both primary and booster doses.) A hybrid immunity offers a “higher magnitude and durability” of protection as compared to infection alone, emphasising the need for vaccination.

Source: <https://indianexpress.com/article/explained/explained-health/hybrid-immunity-most-effective-against-severe-covid-study-8392858/>

Q.41) In the context of the performance of the Indian National Congress in the elections to eleven provincial assemblies in 1937, consider the following statements.

1. The party had won more than half of the seats it contested in total.
2. It had got a majority in Bengal and Assam Provinces.
3. Congress failed to form government in Punjab.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

In February 1937, elections to the provincial assemblies were held. Elections were held in eleven provinces Madras, Central Provinces, Bihar, Orissa, United Provinces, Bombay Presidency, Assam, NWFP, Bengal, Punjab and Sindh.

Statement 1 is correct: The Congress won 716 out of 1,161 seats it contested (there were 1,585 seats in the legislative assemblies of the eleven provinces). Hence, the party had won more than half of the total seats it contested in the elections of all the 11 provinces.

Statement 2 is incorrect: The party got a majority in some provinces (Madras, Central Provinces, Bihar, Orissa, United Provinces and Bombay Presidency), **except in Bengal, Assam, Punjab, Sindh and the NWFP.**

Statement 3 is correct: It emerged as the largest party in Bengal, Assam and the NWFP. Though Congress was the single largest party in these provinces **but it failed to form a government. In Punjab, Unionist Party formed the government.**

Source: Spectrum: A Brief History of Modern India, Chapter 20, Debates on the Future Strategy after CDM

Q.42) Consider the following statements regarding the Hindu Mahasabha's response to 'Delhi Proposals' of 1927 of Muslim League:

1. The Hindu Mahasabha was opposed to the proposal for creating new Muslim majority provinces.
2. It opposed the reservation of seats for Muslims in Punjab and Bengal.
3. It demanded that there should be no constitutional amendment without concurrence of the states constituting the Indian federation.

Which of the statements given above is/are correct?

- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

During the preparation of Nehru Report, there were differences between different groups regarding the proposals. Later large number of Muslim leaders had met at Delhi at the Muslim League session and evolved four proposals for their demands to be incorporated into the draft constitution. These came to be known as the '**Delhi Proposals**'.

Statement 1 is correct. After the Delhi proposals, the Hindu Mahasabha was vehemently **opposed to the proposals of creating new Muslim majority provinces** whereas the Muslim League proposed joint electorates in place of separate electorates with reserve seats for Muslims. This became the bone of contention between in the finalization of the Nehru Report.

Statement 2 is correct. The Hindu Mahasabha strongly **opposed the reservation of seats for Muslim majorities in Punjab and Bengal**, since according to the Hindu Mahasabha this would ensure Muslim control over legislatures in both the provinces.

Statement 3 is incorrect. **Jinnah's Fourteen Points (and not Hindu Mahasabha)** proposed that there should be no **constitutional amendment** by the centre **without the concurrence of the states** constituting the Indian federation.

Source: Spectrum (Page No. 372-373)

Q.43) Which of the following reason may be given to justify the stand that Gandhi-Irwin Pact (1931) was not a retreat from the Movement?

1. Capacity of the masses to make sacrifices, unlike that of the activists, is limited.
2. Mass movements are generally short-lived.
3. The shopkeepers and merchants who participated in the movement were exhausted.

Choose the correct answer using the codes given below:

- a) 2 Only
- b) 2 and 3 Only
- c) 1 and 3 Only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Gandhi's decision to suspend the civil disobedience movement as agreed under the **Gandhi-Irwin Pact (1931) was not a retreat**, as:

- (1) **mass movements are necessarily short-lived; (Hence statement 2 is correct.)**
- (2) **capacity of the masses** to make sacrifices, unlike that of the activists, **is limited;** and **(Hence statement 1 is correct.)**
- (3) there were **signs of exhaustion** after September 1930, especially among shopkeepers and merchants, who had participated so enthusiastically. **(Hence statement 3 is correct.)**

Source: Spectrum, Unit-7, Chapter-19 Civil Disobedience Movement and Round Table Conferences, pg no. 399

Q.44) Consider the following statements with reference to the spread of Salt Satyagraha:

1. C. Rajagopalachari organized a march on Tanjore coast to break the salt law.
2. K. Kelappan led a Salt march in Malabar.
3. Imam Sahib and Manilal were the main leaders in the Dharasana salt march.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: In April 1930, **C. Rajagopalachari organized a march from Tiruchirappalli (Trichinopoly as it was called by the British) to Vedaranniyam on the Tanjore (or Thanjavur) coast to break the salt law.** The event was followed by widespread picketing of foreign cloth shops. The anti-liquor campaign gathered forceful support in interior regions of Coimbatore, Madura, Vidyanagar, etc. Although,

Rajaji tried to keep the movement non-violent, violent eruptions of masses and the violent repressions of the police began.

Statement 2 is correct: In Malabar, K. Kelappan led a march from Calicut to Poyannur. K. Kelappan led a procession of 33 satyagrahis from Kozhikode to Payyannur.

Statement 3 is correct: British Journalist Web Miller writes: In my whole career, I have never seen this kind of dastardly act On May 21, 1930, Sarojini Naidu, Imam Sahib and Manilal (Gandhi's son) took up the unfinished task of leading a raid on the Dharasana Salt Works. The unarmed and peaceful crowd was met with a brutal lathi charge which left 2 dead and 320 injured. This new form of salt satyagraha was eagerly adopted by people in Wadala (Bombay), Karnataka (Sanikatta Salt Works), Andhra, Midnapore, Balasore, Puri and Cuttack.

Source: A brief history of modern India pdf. Chapter name- Civil Disobedience Movement and Round Table Conferences. Page no- 373 to 375.

<https://www.egyankosh.ac.in/bitstream/123456789/44322/3/Unit-15.pdf>

Q.45) With reference to Global Risks Report 2023, consider the following statements:

1. In addition to environmental risks, the report also captures geopolitical and technological risks faced by the world.
2. It was published by the United Nations Environment Programme (UNEP).
3. Global risks report 2023 ranked “Biodiversity loss and ecosystem collapse” as the top risks over the ten years by 2033.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The Global Risks Report 2023 tries to explore some of the most severe risks that the world may face over the next decade. The world is facing a set of risks that feel both wholly new and already familiar, this report explores the various risks faced by the countries across the world.

Statement 1 is correct: It is true that the Global risk report 2023, in addition to **environmental risks**, also captures **geopolitical, technological, economic and societal risks** faced by the world.

Global Risks Report 2023

Top 10 Risks

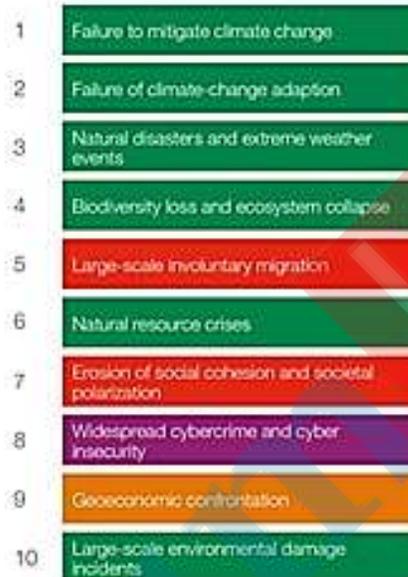


"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period"

2 years



10 years



Risk categories

 Economic
  Environmental
  Geopolitical
  Societal
  Technological

Statement 2 is incorrect: Global risks report 2023 was published by the **World Economic Forum (WEF)** (not UNEP). Global risks report 2023 is an 18th edition of WEF and the report **use three-time frames** for understanding global risks - **current crisis, long term crisis (10 years) and Poly crisis** (how various risk will combine to have a compound effect on the world e.g., how the risk of reducing **global cooperation climate change, food security, peace will aggravate the global risks**)

Statement 3 is incorrect: Global risks report 2023 ranked **Failure to Mitigate Climate Change** as top risks followed by 'Failure of Climate Change Adaptation'. 'Natural disasters and extreme weather events" and '**Biodiversity loss and ecosystem collapse**' (which is ranked as **4th most severe facing the world by 2033**). Source: <https://www.downtoearth.org.in/news/climate-change/davos-2023-natural-disasters-extreme-weather-second-most-severe-global-risk-in-short-term-says-wef-report-87140>

Q.46) With reference to British India, which among the following women participated in Third Round Table Conference?

1. Begum Jahanara Shahnawaz
2. Sarojini Naidu
3. Annie Besant
4. Vijay Laxmi Pandit

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Select the correct answer using the codes given below:

- a) 1 only
- b) 2 and 3 only
- c) 1 and 4 only
- d) 2 and 4 only

Ans) a

Exp) Option a is the correct answer.

The **Third Round Table Conference**, held between November 17, 1932, and December 24, 1932, was not attended by the Indian National Congress and Gandhi. It was ignored by most other Indian leaders. **Only forty-six delegates attended** since most of the main political figures of India were not present. The Labour Party from Britain and the Indian National Congress refused to attend.

Option 1 is correct. British-Indian Representatives: Aga Khan III, B. R. Ambedkar (Depressed Classes separate Electorate), Ramakrishna Ranga Rao of Bobbili, Sir Hubert Carr (Europeans), Nanak Chand Pandit, A. H. Ghuznavi, Henry Gidney (Anglo-Indians), Hafiz Hidayat Hussain, Muhammad Iqbal, M. R. Jayakar, Cowasji Jehangir, N. M. Joshi (Labour), **Narasimha Chintaman Kelkar, Arcot Ramasamy Mudaliar, Begum Jahanara Shahnawaz (Women).**

Option 2, 3 and 4 are incorrect.

- 1) **Sarojini Naidu participated in Second Round Table Conference and not in Third Round Table Conference.** The Gandhi–Irwin Pact opened the way for Congress' participation in this conference. **Gandhi was invited from India and attended as the sole official Congress representative accompanied by Sarojini Naidu** and also Madan Mohan Malaviya, Ghanshyam Das Birla.
- 2) **Annie Besant did not attend any of the Round Table Conference.** Besant died on 20 September 1933, at age 85, in Adyar, Madras Presidency, British India.
- 3) **Vijay Laxmi Pandit** was the first Indian woman to **hold a cabinet post** in pre-independent India. In 1937, she was elected to the provincial legislature of the United Provinces and was designated minister of local self-government and public health. **She also did not participate in any of the Round Table Conference.**

Source: A Brief History of Modern India (Revised and Enlarged Edition 2019) Pg no 384

Q.47) Consider the following statements with reference to Zakir Hussain Committee set up during Indian Freedom Struggle:

1. It formulated a detailed national scheme for promoting basic education.
2. It recommended the inclusion of knowledge of handicrafts in the curriculum.
3. It proposed that teaching must be in vernacular languages from class II to VII and in English only after class VIII.

Which of the above statements is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 2 and 3
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Statements 1 and 3 are correct. The Congress had organized a National Conference on Education in October 1937 in Wardha. In the light of the resolutions passed there, **Zakir Hussain committee** formulated

a detailed **national scheme for basic education**. The main principle behind this scheme was ‘**learning through activity**’.

It was **based on Gandhi’s ideas** published in a series of articles in the weekly Harijan. Gandhi thought that Western education had created a gulf between the educated few and the masses and had also made the educated elite ineffective.

The scheme had the following provisions:

- (1) Inclusion of a **basic handicraft in the syllabus**.
- (2) **First seven years of schooling to be an integral part of a free and compulsory nationwide education system** (through mother tongue).
- (3) Teaching to be in **vernacular languages from class II to VII and in English only after class VIII**.
- (4) Ways to be devised to establish contact with the community around schools through service.
- (5) A suitable technique to be devised with a view to implementing the main idea of basic education – **educating the child through the medium of productive activity of a suitable handicraft**.

The system, rather than being a methodology for education, was **an expression of an idea for a new life and a new society**. The basic premise was that only through such a scheme could India be an independent and non-violent society. This scheme was **child-centred and cooperative**.

Statement 2 is correct: The most important **point according to the committee was the economic goals of the basic education** which would develop by the manual handicraft of the children for a period of 7 years according to the regional/local needs.

Source: **A Brief History of Modern India: SPECTRUM**

Q.48) Consider the following pairs regarding different sessions of Indian National Congress and their important events during the Freedom Struggle of India:

Congress session/ meeting	Important event
1. Ramgarh, 1940	Congress demanded complete independence
2. Wardha, 1939	Formation of All India Youth Congress
3. Faizpur, 1936	Congress session held in a village for the first time

Which of the pairs given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Pair 1 is correct. The **Ramgarh session** of the Congress was held in March 1940 with Maulana Abul Kalam Azad in the president’s chair. In Ramgarh session Congress **demand complete independence**. All members agreed that a battle must be waged but there was disagreement over the form. **Jawaharlal Nehru reiterated that complete independence for India must be a precondition for Congress support to the British war effort**. The Congress finally declared at the session that the people of India would accept nothing short of **complete independence**. Indian freedom could not be in the form of dominion or any other status within the imperial structure.

Pair 2 is incorrect. Formation of **All India Youth Congress** was held at **Calcutta session** of congress in 1928 presided by Motilal Nehru. At Wardha, the Congress Working Committee passed a resolution which condemned Fascist aggression. It said that India could not be party to a war being fought, on the face of it, for democratic freedom, while that freedom was being denied to India.

Pair 3 is correct. Faizpur session was **held in a village for the first time in India**. The Fiftieth (50th) Session of the Indian National Congress was held on 27 and 28 December 1936 at Faizpur, a village on the outskirts of Yawal Taluka of Jalgaon District of Bombay Presidency (Maharashtra). A large number of peasants participated in the session. The Faizpur Session was important for the Congress which had been raising demands for the **welfare of the peasants** and struggled for them. The Faizpur Session was also important because it was **presided over by Jawaharlal Nehru** who was at his peak of influence in the Congress.

Source: Spectrum modern history

<https://indianculture.gov.in/archives/proceedings-session-held-congress-faizpur-december-1936>

Q.49) With reference to the views of Mahatma Gandhi and Subhash Chandra Bose, consider the following statements:

1. Unlike Gandhi, Bose was in favour of large-scale industrialization.
2. Gandhi emphasized on vocational training whereas Bose emphasized on technical and scientific education.

Which of the statements given above are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. Gandhi favored a **decentralized economy** while Bose was in favour of an **industrialized economy**. Gandhi's concept of Swaraj had its own brand of economic vision. He wanted a decentralized economy **without state control**. Gandhi dismissed both capitalism and Western socialism—the former for its exploitative excesses and the latter for its connection to industrialization. Bose considered economic freedom to be the essence of social and political freedom. He was all in **favour of modernisation** which was necessarily to be brought about by industrialization.

Statement 2 is correct. Gandhi wanted to make Indian villages self-sufficient units; he emphasized on **vocational education**. He wanted education to be in the vernacular. He advocated free and compulsory education for all boys and girls between 7 and 14 years. Subhash Bose was up for **higher education**, especially in the technical and scientific fields, as he wanted an industrial India. He said, "National Reconstruction will be possible only with the aid of science and our scientists'.

Knowledge Base: Other views -

Both Gandhi and Bose were religious men and **disliked communism**. Bose was non-communist when he supported empowerment of women, secularism and other liberal ideas. Gandhi was primarily a man of religion. He had a steadfast view on religion, and his religion was the **basis of all his other ideas**. Subhash Bose believed in **Upanishadic teachings**. He revered the Bhagavad Gita and was inspired by Vivekananda. He was also inspired by the India of the past as reinterpreted by thinkers.

Source: Spectrum modern history chapter 22

Q.50) With reference to the ‘Wildlife Conservation bond’, which of the statements given below are correct?

1. The Bond was offered by the International Bank for Reconstruction and Development (IBRD).
2. The Bond aims to mobilise private capital for conservation efforts of endangered species.
3. The interest rate paid on the bond is inflation indexed to protect the interest of investors.
4. Recently, the bond was used to mobilise funds for the conservation effort of India’s one horned Rhinoceros.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 4 only
- c) 3 and 4 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Wildlife Conservation Bond aims to Protect the umbrella species like the rhino and their habitats. Further the bond aims to provide environmental and social benefits to people and communities.

Statement 1 is correct: It is true that the **Wildlife conservation bond was offered by** the International Bank for Reconstruction and Development (**IBRD**), **an arm of the World Bank**.

Statement 2 is correct: Wildlife conservation bond is a first of its kind **outcome-based bond that channels private capital to finance conservation activities**. It is an Outcome based bond in the sense the bond **allots funds** to conservation effort **based on the performance i.e., increase in the population of protected species**.

Statement 3 is incorrect: **Wildlife conservation bond will not pay out any interest rate (coupon payments) to its investors**, thus this statement is incorrect. The bond **issuer will make payment to investors on maturity period** based on the increase in number of the endangered species (Black rhinos).

Statement 4 is incorrect: It is **not true that the bond was used by India** but used by **South Africa** to mobilise private investment to conserve their **Rhino species**. In fact, Wildlife conservation bond is also known as **Rhino Bond**, this bond aims at protecting and increasing **black rhino populations in two protected areas in South Africa**, the Addo Elephant National Park (AENP) and the Great Fish River Nature Reserve (GFRNR).

Source: <https://www.worldbank.org/en/news/press-release/2022/03/23/wildlife-conservation-bond-boosts-south-africa-s-efforts-to-protect-black-rhinos-and-support-local-communities>

<https://treasury.worldbank.org/en/about/unit/treasury/ibrd/wildlife-conservation-bond#:~:text=risk%20from%20donors%20to%20investors>

Q.1) A series of events unfolded after British Government of India declared India's support for the World War 2 without consulting Indian opinion. In this context, arrange the following events in the correct chronological order:

1. Japan occupies Rangoon
2. August Offer proposed by the British government
3. Resignation of Congress Ministeries
4. Launch of Individual Satyagraha

Select the correct answer using the codes given below:

- a) 1-3-2-4
- b) 3-2-4-1
- c) 1-2-3-4
- d) 3-2-1-4

Ans) b

Exp) Option b is the correct answer.

On September 1, 1939, Germany attacked Poland—the action that led to the Second World War. On September 3, 1939, Britain declared war against Germany and the British Government of India declared India's support for the war without consulting Indian opinion. This culminated into the events given below. The chronology of these historical events are as follows:

Statements 3. The Congress Ministries resigned office in **November 1939** on the ground that the Viceroy on its own had made India a participant in the imperialist war without consulting the Congress.

Statement 2. August Offer (1940): The August Offer was a proposal made by the British government on **August 8, 1940**, during World War II, to give India greater self-governance, including the right to draft its own constitution, in exchange for Indian support for the war effort.

Statement 4. Individual Satyagraha: Towards the end of 1940, the Congress once again asked Gandhi to take command. Gandhiji decided to **initiate a limited satyagraha on an individual basis by a few selected individuals in every locality**. The movement **started on 17th October 1940**. The first Satyagrahi selected was Acharya Vinoba Bhave, who was sent to jail when he spoke against the war.

Statement 1: In 1942, Japan invaded Rangoon (Burma) and nominally declared the colony independent as the State of Burma on 17 May 1942.

Source) Spectrum

Q.2) Which of the following can be said to be the correct reasons for the failure of Cripps Proposal of 1942?

1. The proposal made it mandatory for independent India to join the organization of Commonwealth.
2. There was no representation of the princely states in the constituent assembly to be formed.
3. The provision of the right to provinces to secede was against national unity.
4. There was no plan for immediate transfer of power into Indian hands.

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 3 and 4 only
- c) 1 and 4 only
- d) 2, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

In March 1942, a mission headed by Stafford Cripps was sent to India with constitutional proposals to seek Indian support for the war. Stafford Cripps was a left-wing Labourite, the leader of the House of Commons, and a member of the British War Cabinet who had actively supported the Indian national movement.

Statement 1 is incorrect: Cripps Mission proposed that Indian Union with a dominion status would be set up; it would be **free to decide its relations with the Commonwealth** and free to participate in the United Nations and other international bodies. Hence, Free India could withdraw from the Commonwealth. Therefore, it was not the reason for the failure of Cripps Mission.

Statement 2 is incorrect: The Congress objected to the proposal of **representation of the princely states by nominees** and not by elected representatives.

Statement 3 is correct: The **provision of the right to provinces to secede went against the principle of national unity**, which was an important demand of the Indian National Congress. Therefore, this can also be considered a reason for the failure of the Cripps proposal.

Statement 4 is correct: The **immediate transfer of power into Indian hands was not explicitly mentioned in the Cripps proposal**. However, it was implied that the transfer of power would be gradual, which was not acceptable to the Indian National Congress.

Knowledge Base:

The main proposals of the Crips mission were as follows:

- 1) An **Indian Union with a dominion status would be set up**; it would be free to decide its relations with the Commonwealth and free to participate in the United Nations and other international bodies.
- 2) After the end of the war, a **constituent assembly** would be convened to frame a new constitution. **Members of this assembly would be partly elected by the provincial assemblies through proportional representation and partly nominated by the princes.**
- 3) The British government **would accept the new constitution subject to two conditions:**
 - (a) any province not willing to join the Union could have a separate constitution and form a separate Union, and
 - (b) the new constitution-making body and the British government would negotiate a treaty to affect the transfer of power and to safeguard racial and religious minorities.
- 4) In the meantime, **defence of India would remain in British hands** and the governor general's powers would remain intact.

Source: Spectrum - Nationalist Response in the Wake of World War II

Q.3) What were the conditions laid down by Indian National Congress to cooperate with the British government, to defend Indian territory in the midst of Japan's aggressive actions in 1941?

1. Establishment of rule of people in the princely states
2. Full independence to be given after the war
3. No bifurcation of Indian Union in any scenario
4. Substance of power be transferred immediately.

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 1, 3 and 4 only
- c) 2 and 4 only
- d) 2, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Option 2 and 4 are correct: The Congress leaders, released in December 1941, in the midst of Japan's aggressive actions, were anxious to defend Indian territory and go to the aid of the Allies. The **Congress Working Committee passed a resolution** offering to cooperate with the government in the defence of India, if:

- (a) full independence was given after the war, and

(b) substance of power was transferred immediately.

Option 1 and 3 are incorrect: Establishment of the rule of people in the princely states and no bifurcation of Indian Union in any scenario **were not explicitly mentioned as one of the conditions by the Indian National Congress during World War II.**

Source: Spectrum

Q.4) With reference to 'August Offer', consider the following statements:

1. It provided for expansion of viceroy's executive council with majority of Indians.
2. It proposed that no future constitution to be adopted without the consent of minorities.
3. Indian National Congress rejected the offer as it did not offer complete independence to India.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The August Offer was a proposal made by the British government in August 1940, during World War II, as a response to the growing demands for Indian independence. The offer was made by the British Prime Minister, Winston Churchill, in a speech broadcasted to the Indian people.

Statement 1 is correct: The **August Offer proposed to expand the Viceroy's Executive Council and to include more Indians in the council**, with a majority of Indians. This was seen as a significant step towards Indian participation in the governance of the country.

Statement 2 is correct: The August Offer proposed a constitution to be framed mainly by Indians. Also, it proposed that no future **constitution to be adopted without the consent of minorities**. The Muslim League welcomed the veto assurance given to the League, and reiterated its position that partition was the only solution to the deadlock.

Statement 3 is correct: The Indian National Congress **rejected the August Offer as it did not offer complete independence to India**. The Congress demanded that India be granted complete independence immediately and that there should be no delay in the transfer of power from the British to the Indian people.

Source: Spectrum- Nationalist Response in the Wake of World War II

Q.5) With reference to the Wildlife Protection Amendment Act, 2022, consider the following statements:

1. It introduced a new Schedule to include the flora and fauna listed under CITES agreement, into the Wildlife Protection Act.
2. It provides compensation for the person who voluntarily surrenders his/her captive animals to the Chief Wildlife Warden.
3. It prohibits the usage of any animals mentioned in the schedule I of this act for any religious purposes.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

The Wildlife (Protection) Amendment Act 2022 amends the Wildlife Protection Act (WLPA), 1972 to incorporate more species protected under the law. This amendment act raised serious concerns and objections among wildlife activists. The Act will come into force from April 1, 2023.

Statement 1 is correct: It is true that Wildlife Protection Amendment Act, 2022 introduces a **new schedule for species listed in the Appendices** under CITES. Under CITES, plant and animal specimens are classified into three categories (Appendices) based on the threat to extinction.

Statement 2 is incorrect: The Amendment act provides for **any person to voluntarily surrender any captive animals** or animal products to the Chief Wildlife Warden, but **no compensation will be paid to the person** for surrendering such items. The surrendered items become property of the state government.

Statement 3 is incorrect: The Wildlife Protection **Amendment act, 2022 permits elephants (Schedule I animal) to be used for 'religious or any other purpose**. The new act amended Section 43 which permitted the use of elephants for religious or any other purposes. The act allows for the transfer or transport of captive elephants for religious or other purposes by individuals possessing valid ownership certificates,
Source: <https://www.thehindu.com/sci-tech/energy-and-environment/explained-indias-wild-life-protection-act-features-shortcomings-recommended-changes/article65579474.ece>

<https://prsindia.org/billtrack/the-wild-life-protection-amendment-bill-2021>

Q.6) With reference to 'Forward Bloc', consider the following statements:

1. It was established in 1939 within the framework of Indian National Congress.
2. H. V Kamath became the first general secretary of the bloc.
3. The ideology of the bloc was influenced by socialism and anti-imperialism.
4. The bloc was dismantled after the passage of Indian Independence Act of 1947.

Which of the statements given above are correct?

- a) 1 and 4 only
- b) 1, 2 and 3 only
- c) 2 and 3 only
- d) 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

The Forward Bloc was a political party formed within the Indian National Congress in 1939 by Subhas Chandra Bose, who was then the President of the Congress. Bose formed the Forward Bloc in protest against the policies of the Congress leadership, particularly their opposition to direct action to achieve Indian independence.

Statement 1 is correct: The Forward Bloc was **established within the framework of the Indian National Congress in 1939 by Subhas Chandra Bose**. Bose formed the Forward Bloc in protest against the policies of the Congress leadership, particularly their opposition to direct action to achieve Indian independence.

Statement 2 is correct: H. V. Kamath, a prominent journalist and politician, was one of the founding members of the Forward Bloc and became its first general secretary. Bose was elected as its first president.

Statement 3 is correct: Bose, after resigning from the post of Congress president in April 1939, had decided to form a bloc within the party to **consolidate Left and socialist-minded leaders** under one platform. The ideology of the Forward Bloc was based on **socialism and anti-imperialism**. The party aimed to achieve complete independence for India through revolutionary means, including mass mobilization and civil disobedience. The party also advocated for the rights of workers, peasants, and other marginalized sections of society.

Statement 4 is incorrect: The Forward Bloc was not dismantled after the passage of the Indian Independence Act of 1947. Although the party faced many challenges, including the arrest and

imprisonment of many of its leaders, it continued to exist as a separate political entity even after India's independence in 1947. The party was later renamed as **All India Forward Bloc (AIFB)** – a socialist, political organisation. Over the years, the **AIFB became a constituent of the CPI(M)**-led Left Front, losing its independent identity. Currently, the AIFB has just a handful of panchayat members in some of the pockets of West Bengal.

Source: Spectrum

<https://indianexpress.com/article/india/netaji-subhas-chandra-bose-forward-bloc-financial-woes-dip-vote-share-7737848/>

<https://forwardbloc.org/>

Q.7) The Plan of Cripps Mission was different from other constitutional schemes proposed under British rule because:

- for the first time, the mission explicitly mentioned that the goal of the British is to establish a responsible government in India.
- the mission recognised Pakistan as a Separate nation.
- the mission promised Indians the sole right to make their own Constitution.
- the mission promised complete independence for India in return for its support in World War II.

Ans) c

Exp) Option c is the correct answer.

The British Government in **1942** sent a **mission headed by Stafford Cripps** (known as Cripps Mission) to India with constitutional proposals **to seek Indian support for the war**. Stafford Cripps was a left-wing Labourite, the leader of the House of Commons and a member of the British War Cabinet who had actively supported the Indian national movement.

Option a is incorrect: Even before the Cripps Mission, 1942, the **August Declaration of 1917** for the **first time** explicitly stated that the goal of the British is to establish a **responsible government in India**. The declaration was announced by the Secretary of State for India, Edwin Samuel Montagu in **August 1917**. **The declaration stated that an** increasing participation of Indians in every branch of administration and gradual development of self-governing institutions for progressive realisation of responsible government in India as an integral part of the British Empire.

Option b is incorrect: **The Cripps Mission did not recognise Pakistan as a separate nation**. The Muslim League rejected the Cripps Mission 1942 because the mission did not recognize Pakistan and presented the idea of a single Indian Union. However, the mission provided an **option to Provinces to have a separate constitution which was considered a blueprint for India's partition**

Option c is correct: It is true that the Cripps Mission promised Indians the sole right to make their own constitution. Although the British acknowledged India's demand for a Constituent Assembly in 1940 (August offer) itself, it was the Cripps mission which granted Indians the sole right to frame their own constitution **by promising party elected and partly nominated (by Princely states) Constitutional Assembly for India**. Hence it is correct to say that the Cripps Mission granted Indians the sole right to frame their own constitution.

Option d is incorrect: The Cripps Mission **did not promise complete Independence** for India after World War II, rather it **promised dominion status to India**. The **Congress rejected Cripps Mission** because of the offer of dominion status by the British Government, instead of a provision for complete independence.

Source: Spectrum - Nationalist Response in the Wake of World War II

Q.8) Which of the following statements is/are correct with respect to the “Quit India Resolution”?

1. The resolution was first proposed by Yusuf Meherally, a socialist and trade unionist.
2. The resolution stated that the Quit India Movement was a ‘Leaderless Movement’.
3. The resolution proposed to form a provisional Government of India after British withdrawal.

Select the correct answer using the codes given below:

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

After the failure of the Cripps Mission, the advances of the Japanese in South-East Asia and the general frustration with the British in India, Gandhiji decided to utilise this opportunity to launch a national movement which called for a voluntary British withdrawal from India. The movement is known famously as Quit India movement.

Statement 1 is incorrect: The Quit India resolution was **proposed by Jawaharlal Nehru and seconded by Sardar Patel** and was ratified at the **Congress meeting at Gowalia Tank, Bombay, on August 8, 1942.**

Yusuf Meherally, a socialist and trade unionist and Mayor of Mumbai, coined the **slogan Quit India.**

Statement 2 is incorrect: The Quit India resolution accepted **Gandhi as the leader of the struggle**, thus the resolution proposed the Quit India movement as leaderless movement is not correct. On **9 August 1942**, **Gandhi**, members of the Congress Working Committee and other Congress leaders were **arrested by the British Government under the Defence of India Rules.** People took their movement in their own hands and devised a freedom struggle in their own ways.

Statement 3 is correct: It is true that the Quit India resolution proposed to form a **Provisional Government of India after British withdrawal.** Further the resolution declared a commitment of free India to defend itself against all types of fascism and imperialism.

Source: Spectrum - Nationalist Response in the Wake of World War II

<https://www.indiatimes.com/explainers/news/explained-revisiting-the-resilience-and-defiance-of-quit-india-movement-576923.html>

Q.9) With reference Krishak Praja Party (KPP), consider the following statements:

1. The party was founded by Fazlul Huq.
2. The party tried to defend the rights of landless peasants in Bengal Province.
3. The party formed a coalition Government with Indian National Congress in Bengal after the 1937 elections.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Krishak Praja Party (KPP) was a major political party with considerable influence during the late 1930s and early 1940s in Bengal province (modern West Bengal & Bangladesh). **KPP was founded in 1936** as a separate party by disassociating itself from **Nikhil Banga Praja Samiti (All Bengal Tenants’ Association).**

Statement 1 is correct: The **Nikhil Banga Praja Samiti** was formed in 1929 with **Sir Abdur Rahim** as its president and **Ak Fazlul Huq** as one of the vice presidents. Following the rivalries between West Bengal group led by Khan Bahadur and East Bengal group led by Fazlul Huq in Nikhil Banga Praja party, **Fazlul Huq established the Krishak Praja Party (KPP) at Dhaka in 1936.**

Statement 2 is correct: The **Krishak Praja Party (KPP) tried to defend the rights of landless peasants against landholders in Bengal province.** Further the KPP programme included abolition of the zamindari system, making peasants the absolute proprietors of land, reduction of rent rate etc. Due to the non-communal approach of Fazlul Huq, he commanded support from the scheduled caste Hindu peasantry as well in Bengal province.

Statement 3 is incorrect: The Krishak Praja Party election manifesto for Bengal legislative election in 1937 was Dal-Bhat (pulse and rice) for all. KPP emerged as the third biggest party after Congress and Muslim league. **The KPP formed a coalition ministry** with the support and participation of the **Muslim League (not Indian National Congress)** and some other smaller groups and independent members.

Source: https://en.banglapedia.org/index.php/Krishak_Praja_Party

Q.10) With reference to Fly Ash, consider the following statements:

1. The Supreme Court has recently directed the Central Government to constitute a 'Fly Ash Management and Utilisation Mission'.
2. The Fly ash notification, 2021 has introduced penalty for non-compliance with fly ash rules by thermal power plants.
3. The Union Government recently mandated 100% fly ash utilisation by all the existing Thermal Power Plants in India.
4. The Fly ash notification, 2021 provides for mandatory usage of fly ash in the construction of public as well as private buildings within 300 km radius of thermal power plants.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 4 only
- c) 4 only
- d) 1, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Fly ash is the fine powder resulting from the combustion of coal and is transported from the combustion chamber by exhaust gases. It consists of the non-combustible carbon that remains from incomplete combustion. Recently the Union Ministry of Environment, Forests and Climate Change (MoEFCC) has released notification on fly ash utilisation.



Statement 1 is incorrect: To streamline the monitoring and coordination of all issues regarding the handling and disposal of fly ash in Uttar Pradesh and Madhya Pradesh, the **National Green Tribunal (and not the Supreme Court) tribunal directed the Centre to constitute a 'Fly Ash Management and Utilisation**

Mission' comprising of secretaries from the ministries of environment, coal and power and the chief secretaries of the two states. The Mission's primary goal will be to 'coordinate and monitor issues relating to the handling and disposal of fly ash and associated issues.' However, the jurisdiction of the mission is currently limited to Madhya Pradesh and Uttar Pradesh – it should be expanded to states like Odisha, Chhattisgarh and Tamil Nadu as well, which have reported the most incidents of ash pond failure.

Statement 2 is correct: It is true that the new **Fly Ash utilisation notification,2021** was released under the **Environment Protection Act,1986**. The new notification **introduced a penalty regime for non-compliance for the first time**. The penalty regime was based on the Polluter Pay principle. Under new rules, the non-compliant power plants will be imposed with an environmental compensation of Rs 1,000 per tonne for unutilized ash during the end of every financial year.

Statement 3 is incorrect: The New Fly Ash notification released in 2021 **mandated 100% fly ash utilisation target for only new Thermal Power Plants (TPPs)** (established on or after the publication of fly ash rules,2021). These new TPPs are given a transition time period of 4 years to achieve 100 percent fly ash utilisation target.

Statement 4 is correct: The New Fly Ash utilisation **rules 2021 provides for mandatory usage of fly ash-based construction material for both public and private constructions** lying within a radius of 300 Kms from coal or lignite based TPPs.



Source:

https://www.researchgate.net/publication/250303481_Use_of_Flyash_in_Agriculture_A_Way_to_Improve_Soil_Fertility_and_its_Productivity#:~:text=great%20potentiality%20in-,agriculture,-due%20to%20its

<https://timesofindia.indiatimes.com/india/new-fly-ash-utilisation-rule-for-thermal-power-plants/articleshow/82267046.cms#:~:text=NEW%20DELHI%3A%20Seeking%20to%20deal,within%20thre%20to%20five%20years.>

<https://www.downtoearth.org.in/news/pollution/fly-ash-management-and-utilisation-mission-will-it-boost-handling-disposal-of-by-product-81296>

<https://www.downtoearth.org.in/news/pollution/fly-ash-management-and-utilisation-mission-will-it-boost-handling-disposal-of-by-product-81296>

Q.11) During the Quit India Movement, a parallel government was established in Satara region of Maharashtra. In this context, which of the following statements are correct?

1. Nana Patil played an instrumental role in establishing a parallel government in Satara.
2. This government conducted “Gandhi marriages” to which untouchables were invited.

Which of the statements given above are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

During the course of the Quit India Movement many parallel governments were launched by Indian nationalist to administer their own affairs. In following places, the parallel governments had been set up, Satara in Maharashtra, Midnapore in Bengal, Bhagalpur in Bihar, Ballia in Uttar Pradesh and Basudevpur in Odisha.

Statement 1 is correct: Satara parallel government was established in the name of **Prati Sarkar** and was active from **1943 to 1945**. Some of the prominent **leaders** associated with the Satara Parallel Government are **Nana Patil, and Y.B. Chavan**.

Statement 2 is correct: The Satara Government conducted **Gandhi marriages which was a frugal style of marriage, and to which so called untouchables were invited**. **Nana Patil**, the important leader of Satara Parallel Government, was influenced by Mahatma Phule's Satyashodhak ideology. He worked towards social reform through various means like establishing the frugal style of marriage ceremonies in Satara.

Source: https://peoplesdemocracy.in/2016/0807_pd/memories-historic-satara-parallel-govt-against-british-rule-revisited-massive-gathering
https://eslm.lpude.in/arts/ba/year_2/DHIS204_DHIS205_INDIAN_FREEDOM_STRUGGLE_ENGLISH/files/basic-html/page157.html#:~:text=was%20enforced%2C%20and%0A%E2%80%98-, Gandhi,-marriages%E2%80%99%20celebrated%20to

Q.12) Which of the following were the proposals of the Wavell Plan?

1. It provided for the Executive Council in which all the members, except Governor General and Commander in Chief, were to be Indians.
2. It made the Central Executive Council responsible to the Central Legislative Assembly.
3. The Governor General's Executive Council was to function within the framework of the 1935 Act.
4. It provided for equal representation of caste Hindus and Muslims in the Governor General's Executive Council.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1, 3 and 4 only
- c) 2 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

The **Wavell Plan** was initially introduced in 1945 at the Shimla Conference. The Shimla Conference was held in order to reach an agreement on the Wavell Plan for Indian self-government. However, the plan failed to take effect because of a disagreement between the Muslim League and the Indian National Congress to reach an agreement.

Statement 1 is correct: The Wavell plan intended to reconstruct the governor-general's executive council till the establishment of a new constitution. The plan provided for an **executive council in which all members except the governor-general and the commander-in-chief, were to be Indians**.

Statement 2 is incorrect: The Wavell plan **did not recommend for making the Central executive council responsible to the Central legislative assembly**. Further the Plan placed **defence of India** in the hands of a British authority till Power was transferred to the Indian hands.

Statement 3 is correct: The reconstructed council was to function as an interim government within the framework of the 1935 Act.

Statement 4 is correct: It is true that the Wavell plan provided for **equal representation of caste Hindus and Muslims in the Governor General's executive council**. Further other minorities represented in the Council include depressed classes, Sikhs, Christians.

Source: Spectrum - Quit India Movement, Demand for Pakistan and the INA

Q.13) Consider the following statements with reference to the Freedom Army (Mukti Sena):

1. The Freedom Army was formed with the help of Hitler.
2. It consisted of Prisoners of War of Indian origin captured by Germany and Italy.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Subhash Chandra Bose was an Indian nationalist leader who fought against British colonial rule in India during the 1930s and 1940s. He was born on January 23, 1897, in Cuttack, Odisha, India. He was also known as Netaji ("Respected Leader") and was one of the most prominent leaders of the Indian independence movement.

Statement 1 is correct: Subhash Chandra Bose had left India "to supplement from outside the struggle going on at home". He was reported to have approached Russia for help in the Indian struggle for freedom from Britain. But, in June 1941, Russia joined the Allies in the war, which disappointed Bose. He then went to Germany. Bose met Hitler under the pseudo name, Orlando Mazzotta. **With the help of Hitler, the 'Freedom Army' (Mukti Sena) was formed.**

Statements 2 is correct: The Freedom Army consisted of **all the prisoners of war of Indian origin captured by Germany and Italy. Dresden, Germany was made the office of the Freedom Army.** Bose came to be called 'Netaji' by the people of Germany. Subhash Chandra Bose gave the famous slogan, 'Jai Hind' from the Free India Centre, Germany. SC Bose began regular broadcasts from Berlin radio in January 1942, which enthused Indians.

Source: Page no.457, Chapter 23 Quit India Movement, Demand for Pakistan and the INA - Spectrum

Q.14) Consider the following statements with reference to the objections raised over C. Rajagopalachari (CR) Formula:

1. Mahatma Gandhi strongly condemned the Plan as it demanded for partition of India.
2. Mohammed Ali Jinnah condemned the plan as it provided for all sections of people to vote in plebiscite in North-West and North-East India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

During Indian national Movement (INM), Various efforts were made to solve the constitutional crisis. In fact, some individuals also tried to come up with constitutional proposals. For example, C. Rajagopalachari

(CR), the veteran Congress leader, prepared a formula for Congress-League cooperation in 1944. The main objections raised against it included as follows:

Statement 1 is incorrect: Mahatma Gandhi supported the C. Rajagopalachari formula. However, some sections of nationalist leaders opposed it. For example, Vir Savarkar, a Hindu leader condemned the CR Plan.

Statement 2 is correct: Mohammed Ali Jinnah opposed the plan as he **wanted the Congress to accept the Two Nation Theory**. Secondly, he **wanted only the Muslims of North-West and North-East to vote in the plebiscite** and not the entire population. Thirdly, he also opposed the idea of a common Centre.

Knowledge Base:

C. Rajagopalachari (CR) Plan:

- 1) Muslim League to endorse Congress demand for Independence
- 2) League to cooperate with Congress in forming a provisional government at centre.
- 3) After the end of the war, the entire population of Muslim majority areas in the North-West and North-East India to decide by a plebiscite, whether or not to form a separate sovereign state.
- 4) In case of acceptance of partition, agreement to be made jointly for safeguarding defence, commerce, communications, etc.
- 5) The above terms to be operative only if England transferred full powers to India

Source: Page 454, Chapter 23 Quit India Movement, Demand for Pakistan and the INA - Spectrum

Q.15) Which of the following can be considered as the causes of land subsidence in Joshi-Math town in Uttarakhand?

1. Overexploitation of Groundwater in the region.
2. Overexploitation of minerals in Joshimath region.
3. Location of town on the transformative plate boundary.
4. Lack of stormwater drainage system in the region.
5. Geological base of Joshimath is composed majorly of heavy rocks.

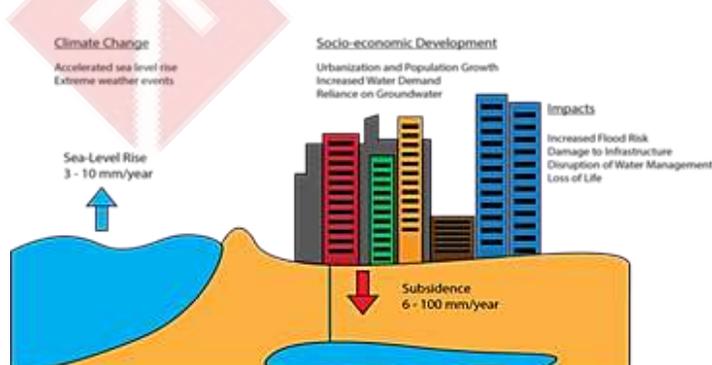
Select the correct answer using the code given below:

- a) 1, 2, 3 and 4 only
- b) 1, 3 and 5 only
- c) 1, 2 and 4 only
- d) 1, 2, 4 and 5 only

Ans) c

Exp) Option c is the correct answer.

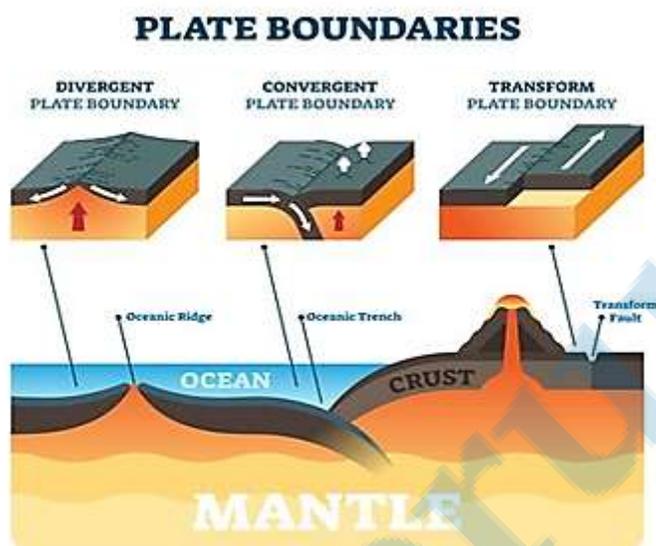
Land subsidence is a gradual settling or **sudden sinking of the Earth's surface** due to removal or displacement of subsurface earth materials. Recently **Joshimath town in Chamoli district in Uttarakhand** has been declared as a landslide and subsidence-hit zone.



Option 1 is correct: Overexploitation of groundwater in Joshimath town is one of the **causes of Land subsidence** in this region. The US geological survey states that more than 80% of land subsidence across the world is caused due to excessive extraction of groundwater and it is one of the reasons attributed to land subsidence in Joshimath. For instance, the **Tapovan Vishnugad Hydro Power Project** which punctured aquifer led to the drying of water resources in the area and resulted in land subsidence in Joshimath.

Option 2 is correct: Land subsidence has also been caused due to the **extraction of natural resources** such as oil, natural gas, or other mineral resources **out of the Earth's ground** by pumping, fracking, or mining activities. River-bed sandmining is considered as one of the reasons for land subsidence in Joshimath region.

Option 3 is incorrect: Location of town on the convergent plate boundary, not transformative plate (convergence of India - Eurasia plate near Himalayan region) is attributed as one of the reasons for land subsidence in Joshimath. Location of Joshimath town along the convergent plate boundary make this region prone to **seismic activity**, which induces landslides and land subsidence in the region.



Option 4 is correct: Lack of storm water drainage is considered one of the reasons for land subsidence in Joshi math. Due to the lack of drainage system in Joshimath, natural and anthropogenic liquid waste seeps into the ground and **weakens the land** which accelerates the process of land subsidence.

Option 5 is incorrect: Geological base of the **Joshimath composed majorly of sand and stone and absence of rocks** makes the region more **vulnerable** to the event of land subsidence. Hence the geological base of region composed majorly of rocks is one of the reasons for land subsidence in Joshimath is not correct.

Source: <https://www.usgs.gov/mission-areas/water-resources/science/land-subsidence#:~:text=Land%20subsidence%20is%20a%20gradual,drainage%20of%20organic%20soils>

https://www.orfonline.org/wp-content/uploads/2023/02/ORF_IB_616_Lessons-from-Joshimath-Need-for-Himalayan-Development-Model.pdf

Q.16) Consider the following statements with reference to the Cabinet Mission Plan of 1946:

1. It provided for a common centre which would control defence, communication and external affairs.
2. It accepted the demand for a full-fledged Pakistan.
3. It proposed that all the members of Constituent Assembly were to be elected directly by the people on the basis of Universal Adult Franchise.
4. Under the plan, the residuary powers were to be enjoyed by the Provincial Governments.

Which of the statements given above are correct?

- a) 1, 2 and 4 only
- b) 1 and 4 only
- c) 2, 3 and 4 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

The Attlee government announced in February 1946 the decision to send a high-powered mission of three British cabinet members (**Pethick Lawrence**, Secretary of State for India; **Stafford Cripps**, and **A.V. Alexander**) to India to find out ways and means for a negotiated, peaceful transfer of power to India. **Pethick Lawrence was the chairman** of the mission. The important recommendations of the Cabinet Mission Plan were as follows:

Statement 1 is correct: The Cabinet Mission **recommended a common centre to control defence, communication and external affairs**. A federal structure was envisaged for India.

Statement 2 is incorrect: Cabinet mission had rejected the demand for a full-fledged Pakistan, because
 1) the Pakistan so formed would include a large non-Muslim population of 38 per cent in the North-West and 48 per cent in the North-East.

2) deep-seated regional ties would be disturbed if Bengal and Punjab were partitioned.

3) partition would entail economic and administrative problems, for instance, the problem of communication between the western and eastern parts of Pakistan.

The division of the armed forces would be dangerous.

Statement 3 is incorrect: It proposed a constituent assembly to be elected by provincial assemblies by proportional representation (voting in three groups—General, Muslims, Sikhs). This **constituent assembly would be a 389-member body** with provincial assemblies sending 292, chief commissioner's provinces sending 4, and Princely states sending 93 members through nomination.

Statement 4 is correct: Under the Cabinet Mission Plan, the **residuary powers were to be enjoyed by Provincial Governments**.

Knowledge Base:

Other Provisions of Cabinet Mission Plan are as follows:

Grouping of existing provincial assemblies into three sections:

(a) Section-A: Madras, Bombay, Central Provinces, United Provinces, Bihar and Orissa (Hindu-majority provinces)

(b) Section-B: Punjab, North-West Frontier Province and Sindh (Muslim-majority provinces)

(c) Section-C: Bengal and Assam (Muslim-majority provinces).

1) In the constituent assembly, members from groups A, B and C were to sit separately to decide the constitution for provinces and if possible, for the groups also. Then, the whole constituent assembly (all three sections A, B and C combined) would sit together to formulate the union constitution

2) Three-tier executive and legislature at provincial, section and union levels.

3) Communal questions in the central legislature were to be decided by a simple majority of both communities present and voting.

4) Princely states were no longer to be under paramountcy of the British government. They would be free to enter into an arrangement with successor governments or the British government.

5) After the first general elections, a province was to be free to come out of a group and after 10 years, a province was to be free to call for a reconsideration of the group or the union constitution.

6) Meanwhile, an interim government was to be formed from the constituent assembly.

Source: page 474- chapter 24 - Post-War National Scenario of Spectrum

Q.17) With reference to the Indian Nation Congress Sessions, consider the following events:

1. Haripura Session
2. Tripuri Session
3. Belgaum Session
4. Faizpur Session

What is the correct chronological sequence of the occurrence of the above-mentioned Sessions of Congress?

- a) 3-2-1-4
- b) 3-1-2-4
- c) 3-4-1-2
- d) 4-3-2-1

Ans) c

Exp) Option c is the correct answer.

The Indian National Congress was founded at Bombay in December 1885. W.C. Bannerjee Was the first President. In an effort to reach all regions, it was decided to rotate the Congress session among different parts of the country. The President belonged to a region other than where the Congress session was being held.

3- The Belgaum Session took place in **1924** and was presided by Mahatma Gandhi. It is the **only INC Session presided over by Mahatma Gandhi.**

4- Faizpur Session took place in **1936** and presided by Jawaharlal Nehru. It was the **first INC Session to be held in a village.**

1- Haripura Session took place in **1938** and was presided by Subhash Chandra Bose. Bose also talked of economic development of the country through planning and was instrumental in setting up a **National Planning Committee** later (set up under Jawahar Lal Nehru). The session adopted a resolution that the Congress would give **moral support** to those who were **agitating against the governance in the princely states.**

2- Tripuri Session took place in **1939** and was presided by Subhash Chandra Bose. In this Session, **Subash Chandra Bose** was re-elected but had to **resign**. Later, **Rajendra Prasad** was appointed in his place.

Knowledge Base: Tripuri Session

In January 1939, Subhash Bose decided to stand again for the president's post in the Congress. Gandhi was not happy with Bose's candidature. Sardar Patel, Rajendra Prasad, J.B. Kripalani favoured the candidate supported by Gandhi, namely, Pattabhi Sitaramayya. Subhash Bose won the election.

In May 1939, Bose and his followers formed the Forward Bloc (at Makur, Unnao) as a new party within the Congress. But when he gave a call for an all-India protest on July 9 against an AICC resolution, the Congress Working Committee took disciplinary action against Bose. He was debarred from holding any elective office in the Congress for a period of three years.

Source: A Brief History of Modern India by Rajiv Ahir 2019 Edition - Chapter 17 Emergence of Swarajists, Socialist Ideas, Revolutionary Activities and Other New Forces P 343, Chapter 20 Debates on the Future Strategy after Civil Disobedience Movement P 409, Chapter 22 Nationalist Response in the Wake of World War II P 417-420.

Q.18) With reference to Indian National Army (INA), consider the following statements:

1. It was placed under the 'Indian Independence League'.
2. INA formed the Provisional Government for Free India at Rangoon, Myanmar.
3. Shah Nawaz commanded the INA battalion in the Imphal campaign.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) c

Exp) Option c is the correct answer.

The idea of creating an army out of the Indian prisoners of war (POWs) was originally that of Mohan Singh, an Indian army officer who had decided not to join the retreating British army in Malaya. He decided to turn to the Japanese for help. The Japanese had till then encouraged Indian civilians to form anti-British organisations. Mohan Singh asked for Indian prisoners of war.

Statement 1 is correct: After being founded, and before being commanded by Bose, the INA was placed under an organisation called the Indian Independence League, founded by Rash Behari Bose, an Indian revolutionary living in exile in Japan. He was also working towards recruiting Indian PoW soldiers for fighting for Indian independence.

Statement 2 is incorrect: On October 21, 1943, Subhash Bose formed the Provisional Government for Free India at Singapore with H.C. Chatterjee (Finance portfolio), M.A. Aiyar (Broadcasting), Lakshmi Swaminathan (Women Department), etc. The famous slogan “Give me blood, I will give you freedom” was given in Malaya. This provisional government declared war on Britain and the United States and was recognised by the Axis powers.

Statement 3 is correct: One INA battalion commanded by Shah Nawaz was allowed to accompany the Japanese Army to the Indo-Burma front and participate in the Imphal campaign. However, the Indians received discriminatory treatment from the Japanese, which included being denied rations and arms and being made to do menial work for the Japanese units, and this disgusted and demoralised the INA units.

Source: Page 459, chapter 23- Quit India Movement, Demand for Pakistan of spectrum

Q.19) Consider the following statements regarding the ‘Pakistan Resolution’ of 1940:

1. It was passed in the Lahore Session of the Muslim League.
2. This resolution provided for creation of a separate Nation consisting of Muslim majority provinces to be called as ‘Pakistan’.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The ‘Pakistan Resolution’ passed on March 24, 1940 by the All-India Muslim League. The Resolution was moved in the session by the then Chief Minister of undivided Bengal A.K. Fazl ul Huq.

Statement 1 is correct: The Pakistan Resolution of 1940 was passed in a three-day session of Muslim League in Lahore. It is formally known as the ‘Lahore Resolution’ (1940). Mohammad Ali Jinnah explained how Hindus and Muslims cannot co-exist peacefully. The resolution stated that no constitutional plan will be accepted by the Muslims until geographical units are demarcated, so as to constitute independent states.

Statement 2 is incorrect: The resolution rejected the proposal of a ‘United India’ and recommended the creation of a separate state for the Muslims. According to the resolution, the new state should comprise

of Muslims from regions like North-West Frontier Province, Punjab, Bengal, Assam, Sindh, and Baluchistan. **However, this resolution has no mention of ‘Pakistan’.** In other words, the word ‘Pakistan’ was not mentioned in this resolution. Media and some Hindu Leaders started calling it as ‘Pakistan Resolution’. The resolution called for **“grouping of all geographically contiguous Muslim majority areas (mainly north-western and eastern India) into independent states in which the constituent units shall be autonomous and sovereign, and adequate safeguards to Muslims in other areas where they are in a minority”.** This led to **varied interpretations of Lahore Resolution/ Pakistan Resolution.** Some interpreted the resolution as a demand for two distinctive countries, whereas others argued that the words ‘independent states’ referred to the liberation of Muslim-dominated provinces, such as Punjab and Sindh, which would be autonomous and sovereign.

Knowledge Base: The ‘Pakistan Resolution’ holds great significance in Pakistan’s history. In 1941, the resolution was **made a part of the constitution, framed by ‘All India Muslim League’.** It was said that the resolution was a decisive step towards finding cultural, economic, social, and political future for the Muslim populace in British India. **A monument called ‘Minar-e-Pakistan’ stands at Lahore to commemorate the famous resolution. March 23 is observed as a national holiday in Pakistan to celebrate their Republic Day and to commemorate the ‘Lahore Resolution’,** often called as Pakistan Resolution.

Source: <https://old.amu.ac.in/newdata/depttmom/15896.pdf>

Spectrum’s a Brief History of Modern India (Page 507, Chapter 24)

Q.20) Which of the following statements are correct regarding “Galathea National Park” recently seen in the news?

1. The park is spread over the region of Great Rann of Kutch.
2. The park is the nesting site for the world’s largest turtle called leatherback turtle.
3. Recently the National Board for Wildlife (NBWL) chose this park as an ideal place to introduce Asiatic lions.

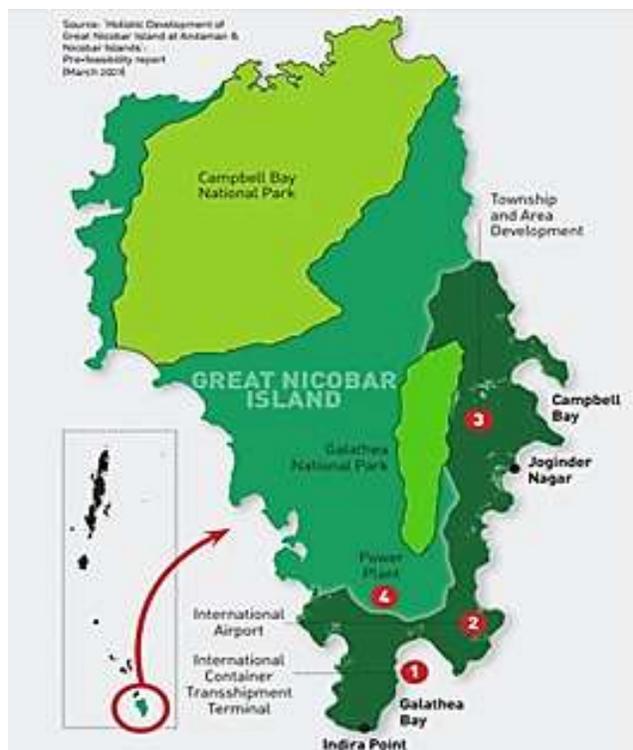
Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect: Galathea National Park is located in the Union Territory of Andaman and Nicobar Islands. It is located on the island of **Great Nicobar** in the Nicobar Islands in the Bay of Bengal, whereas Rann of Kutch is located in the state of Gujarat, in the Arabian Sea.



Statement 2 is correct: It is true that Galathea National Park is the **nesting site for the world's largest turtle called leatherback turtle**. Further the notable animal species found in the park are giant robber crab, megapode and Nicobar pigeon.



Statement 3 is incorrect: Recently **Galathea Bay** (an area surrounding Galathea NP) was in news due to National Board for Wildlife (NBWL)'s decision to **de-notify entire Galathea Bay** for implementing the Ministry of Ports, Shipping, and Waterways project called **International Container Trans-shipment Port (ICTP)** at Great Nicobar Islands. The National Park has not been chosen for the introducing Asiatic lion.
Source: <https://www.hindustantimes.com/environment/denotify-turtle-nesting-site-in-andaman-for-shipment-project-wildlife-board-101611807608329.html>

Q.21) Who among the following has founded the Indian Club of Tokyo?

- Mohan Singh
- Subhash Chandra Bose
- Shah Nawaz
- Rashbehari Bose

Ans) d

Exp) Option d is the correct answer.

Rashbehari Bose founded the Indian Club of Tokyo and gave lectures on the **evils of Western imperialism**. He had also founded **Indian Independence League** in Tokyo in 1942 of which he was an elected President. Rashbehari Bose was a revolutionary activist. Rashbehari Bose (and Sachin Sanyal) staged a **bomb attack on Viceroy Hardinge** in 1912 while he was making his official entry into the new capital of Delhi in a procession through Chandni Chowk. However, he evaded the arrest. Rashbehari Bose was also involved in the **Ghadr Revolution**. As the plan for revolution did not succeed, Rashbehari Bose **escaped to Japan in 1915 and was living in Japan since then as a fugitive**. He made a lot of effort in getting the Japanese interested in the Indian independence movement.

Source: Spectrum's a Brief History of Modern India (Page 477, Chapter 23)

Q.22) Consider the following statements regarding the Indian National Army (INA):

1. It was first formed in 1942 by Subhash Chandra Bose.
2. It had different regiments named after Gandhi, Nehru and Maulana Azad.
3. It had an all women regiment headed by Rani Lakshmibai Rajwade.
4. It had participated in Operation U-Go against the British.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

The Indian National Army (INA), **also known as Azad Hind Fauj**, was an armed force formed by Indian nationalists. It had patronage of Imperial Japanese Army. It's more important objective was to secure India's independence. **The army was declared as the army of Arzi Hukumat-e-Azad Hind which is the provisional government of free India.**

Statement 1 is incorrect: INA was originally formed in 1942 by Captain Mohan Singh in Singapore in **September 1942** with Japan's Indian Prisoners of War (POWs). Rashbehari Bose also supported the formation of INA. But disagreements between Mohan Singh and Japanese army command regarding the autonomy of the Indian National Army led to the disbandment of the first INA in December 1942. **Mohan Singh recommended Subhas Chandra Bose as the leader of the INA. Hence, in 1943 INA was revived by Subhash Chandra Bose.**

Statement 2 is correct: Netaji Subhash Chandra Bose had named **brigades/ regiments after Gandhi, Nehru, Maulana Azad, and himself**. There was also an all-women regiment named after **Rani of Jhansi, Lakshmibai**.

Statement 3 is incorrect: Bose had a very progressive approach for women. In 1943, he called on women to serve in INA. He formed a women's regiment and named it as Rani of Jhansi Regiment. It was commanded by Captain Lakshmi Sehgal. Bose insisted that there should be a separate Planning Commission for women when he set up the Planning Commission in 1938. This commission was chaired by Rani Lakshmi Bai Rajawade and was to deal with the role of women in planned economy in future India.

Statement 4 is correct: Operation U-Go (1944) was launched by Japan against the British India. INA, under the leadership of Bose, had supported and participated the Japanese campaign (Operation U-Go) against the British forces in the Indian regions.

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Source : <https://www.hindustantimes.com/india-news/on-parakram-diwasa-a-look-at-bose-s-indian-national-army-101611393163491.html>

<https://amritmahotsav.nic.in/event-detail.htm?109858>

Q.23) Consider the following statements regarding the National Planning Committee (NPC), established in 1938:

1. Subhash Chandra Bose was appointed as the first Chairman of this Committee.
2. N.M. Joshi was one of the members of the Committee.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

In 1938, **Subhash Chandra Bose was appointed as the Chairperson of Congress' Haripura session** of Indian National Congress (INC). His chairmanship marks important events like establishing of National Planning Committee.

Statement 1 is incorrect: Jawaharlal Nehru was appointed as the first Chairman of this Committee in 1938. Other important members were Sir M. Visveswaraya, Sir Puruhottamdas Thakurdas, Dr. Megh Nad Saha etc.

Statement 2 is correct: The committee was represented by various industrialists- **Sir Purshottamdas Thakurdas, A.D. Shroff, Walchand Hirachand and Ambalal Sarabhai**. Trade union leader **N.M. Joshi** was also a member of this Committee.

Source: <https://indianculture.gov.in/reports-proceedings/report-national-planning-committee-1938>

<https://thewire.in/history/subhas-chandra-bose-meghnad-saha-and-the-birth-of-the-national-planning-commission>

Q.24) Consider the following statements regarding Punnapra-Vayalar Uprising of 1946:

1. It was a tribal revolt against the settlement of outsiders in the tribal areas.
2. The Dewan of Travancore supported this movement.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The Punnapra-Vayalar revolt is named after two of the places involved in Kerala. **It started under the leadership of undivided Communist Party of India (CPI) in a place called Punnapra on 23 October and lasted for 10 days until it culminated in Vayalar.**

Statement 1 is incorrect: It was a **revolt of organized working class in India**. It was **against the exploitative policies of the then ruler C.P. Ramaswamy Aiyer** (Dewan of Travancore). As former Kerala Chief Minister had said, "For instance, half of the produce of fishermen would go into the hands of the landlord. Half of the rest would go to the Church (in memory of the soul of the dead landord). It was called Valla-karam and Palli-karam."

Statement 2 is incorrect: It was primarily against the Government of Travancore and the exploitative policies of Dewan, C.P. Ramaswamy Aiyer. The Dewan had full backing of the British Government. Hence it is incorrect that Dewan supported the movement instead he tries to suppress it.

Source : <https://www.livemint.com/Politics/Gbimy6vm42wFeDe851AOEN/A-veteran-recounts-the-1946-PunnapraVayalar-uprising-70-ye.html>

Q.25) With reference to Global Overturning Circulation (GOC), consider the following statements:

1. It is a circulation of deep ocean water driven mainly by the temperature and salinity difference.
2. It is responsible for transportation of carbon between oceans and atmosphere.
3. The Atlantic Meridional Overturning Circulation (AMOC) is circulation between the Atlantic Ocean and the Indian Ocean.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The global ocean conveyor belt is a constantly moving system of **deep-ocean circulation driven by temperature and salinity**. Cold, salty water is dense and sinks to the bottom of the ocean while warm water is less dense and remains on the surface.



Statement 1 is correct: Global Overturning Circulation (GOC) is the **transport of cold, deep waters** towards the equator and **transport of warm, near-surface waters** towards poleward. The circulation process begins as warm water near the surface moves toward the poles where it cools and forms sea ice. As this ice forms, **salt is left behind** in the ocean water and due to the large amount of salt in the water, it becomes **denser, sinks down**, and is **carried equator wards** in the depths below. Eventually, the water gets pulled back up towards the surface and warms up in a process called upwelling, completing the cycle in global climate.

Statement 2 is correct: The Global Overturning Circulation (GOC) is **responsible for the transport of carbon and heat** between the ocean and the atmosphere and among the ocean basins. There is a loss of heat to the atmosphere when the warm water flowing towards poles, heats the ocean water in poles.

Statement 3 is incorrect: The Global Overturning Circulation is a system of two interconnected ocean circulation. The first one is Atlantic Meridional Overturning Circulation (AMOC) circulation of **ocean waters between North and South Atlantic Ocean (not between the Atlantic and Indian Ocean)**. AMOC carries warm surface waters from the tropics towards the **Northern Hemisphere (North Atlantic)**, where it cools and sinks and then returns to the tropics and then to the **South Atlantic** as a bottom current.

The second one is **Southern Ocean Meridional Overturning Circulation** occurs in the Pacific Ocean. Currently the **Indian Ocean does not have GOC of its own and it acts only as a host for both GOC components.**

Source: <https://www.thehindu.com/sci-tech/reconstructing-past-deep-water-circulations-of-indian-ocean/article66377125.ece>

<https://oceanservice.noaa.gov/facts/conveyor.html>

<https://oceanservice.noaa.gov/facts/amoc.html#:~:text=The%20circulation%20process-,begins,-as%20warm%20water>

Q.26) Clement Attlee, the then British Prime minister, made an announcement about the future of British government in India on February 20, 1947. In this context, consider the following statements.

1. A clear deadline was fixed for transfer of power even if there was no consensus on the new constitution.
2. After the transfer of power, princely states would still be under the obligation and paramountcy of the British.
3. Attlee's statement clearly ruled out the partition or bifurcation of India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

Clement Attlee, the British prime minister, sensing the trouble all around, made an announcement on February 20, 1947. The British House of Commons declared the British intention of leaving the Indian subcontinent.

Statement 1 is correct: A deadline of June 30, 1948, was fixed for transfer of power even if the Indian politicians had not agreed by that time on the constitution.

Statement 2 is incorrect: British powers and obligations vis-a-vis the princely states would lapse with transfer of power, but these would not be transferred to any successor government in British India. Hence, princely states won't be under any obligations of the British government after the transfer of power.

Statement 3 is incorrect: The British would relinquish power either to some form of central government or in some areas to the existing provincial governments if the constituent assembly was not fully representative, i.e., if the Muslim majority provinces did not join. This statement contained **clear hints of partition and even Balkanisation of the country into numerous states** and was, in essence, a reversion of the Cripps Offer. Hence, Attlee's statement didn't infer an idea of a Single Indian Union, rather hinted at a balkanised state.

Source: Spectrum, A Brief History of Modern India, Chapter 25, Independence with partition

Q.27) Consider the following statements regarding the provisions of the Indian Independence Act, 1947:

1. It empowered the constituent assemblies of the two dominions to frame and adopt constitution for their respective nations.
2. Lord Mountbatten was to be appointed as a common Governor-General of India and Pakistan.
3. The existing Central Legislative Assembly and the Council of States were to continue and exercise the powers in respective dominion.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

On July 5, 1947 the British Parliament passed the Indian Independence Act which was based on the Mountbatten Plan, and the Act got royal assent on June 18, 1947. The Act was implemented on August 15, 1947. The Act provided for the creation of two independent dominions of India and Pakistan with effect from August 15, 1947.

Statement 1 is correct: It empowered the constituent assemblies of the two dominions to frame and adopt any constitution for their respective nations and to repeal any act of the British parliament, including the independence act itself.

Statement 2 is incorrect: Each dominion was to have a governor-general to be responsible for the effective operation of the Act. Jinnah became the first Governor-General of Pakistan. India, however, decided to request Lord Mountbatten to continue as the Governor-General of India. On the other hand, Mountbatten had hoped to be the common Governor-General of India and Pakistan, thus providing the necessary link, but Jinnah wanted the position for himself in Pakistan.

Statement 3 is incorrect: The existing Central Legislative Assembly and the Council of States were to be automatically dissolved and the constituent assembly of each new dominion was to exercise the powers of the legislature of that dominion.

Source: Spectrum, A Brief History of Modern India, Chapter 25, Independence with partition

Q.28) With reference to integration of states into the Union of India after the independence, consider the following statements:

1. All India State People's Conference declared that the states refusing to join the Constituent Assembly are free to form their own constitution.
2. States which signed an instrument of accession with the Indian government acknowledged central authority over defence, external affairs, and communication.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Nehru presided over the All-India State People's Conference sessions in Udaipur (1945) and Gwalior (April 1947). Under this it was declared that **the states refusing to join the Constituent Assembly would be treated as hostile.** There was **no provision for the princely states to form their own constitution.**

Statement 2 is correct: By August 15, 1947, all states except Kashmir, Hyderabad and Junagarh had signed an **instrument of accession with the Indian government,** acknowledging central **authority over defence, external affairs and communication.** However, in course of time the remaining 3 states were also

integrated with the union. Hyderabad by means of police action, Junagarh by means of referendum and Kashmir by the Instrument of Accession.

Source: Spectrum, A Brief History of Modern India, Chapter 25, Independence with partition

Q.29) Which of the following is/are considered as reason for Punjab Massacre in 1947?

1. Absence of transitional institutional structures to tackle the problems of partition.
2. Delay in the announcement of the Boundary Commission award.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The Indian Independence Act of 1947 had provided for the creation of the two independent dominions of the India and Pakistan with effect from August 15, 1947. In the meantime, the breakneck speed of events under Mountbatten caused anomalies in arranging the details of partition and totally failed to prevent the Punjab massacre, because,

Statement 1 is correct: The early withdrawal announced by Mountbatten was one of the reasons for Punjab massacre. **There were no transitional institutional structures within which partition problems could be tackled.** Hence, the void in this respect of mediating in the issue of partition by British, led to a chaos between the two new borne dominions.

Statement 2 is correct: There was a delay in announcing the Boundary Commission Award (under Radcliffe); though the award was ready by August 12, 1947, **Mountbatten decided to make it public after August 15 so that the British could escape all responsibility of disturbances. Thus, delay in announcing Boundary Commission Award became one of the reasons of Punjab Massacre.**

Source: Spectrum, A Brief History of Modern India, Chapter 25, Independence with partition

Q.30) In the context of Indian polity, which of the following statements is correct with respect to the doctrine of proportionality?

- a) This doctrine was first adopted by the Supreme Court of India in K.S. Puttaswamy case, 2017.
- b) This doctrine prohibits legislature to enact laws on any subjects that falls outside its jurisdiction.
- c) This doctrine empowers the court to strike down a punishment awarded to a person in excess of the crime s/he committed.
- d) This doctrine allows an executive action which might not be mandated by the laws.

Ans) c

Exp) Option c is the correct answer.

Doctrine of Proportionality or proportionality test is a **Judicial innovation to examine the constitutional validity of laws/executive actions.**

Option a is incorrect: Doctrine of Proportionality was adopted by the **Supreme court in Om Kumar v. Union of India case (2000) even before K.S. Puttaswamy case (2017).** The Supreme Court in the Om Kumar case observed that the proportionality test was used by the Court since 1950 to determine the constitutional validity of legislation in the context of laws violating Article 19 (1) of the constitution.

Option b is incorrect: Doctrine of colourable legislation (not doctrine of proportionality) prohibits legislature to make laws on subjects that falls outsides its jurisdiction. Doctrine of colourable legislation

states that when a legislature does not have the power to make laws on a particular subject directly, it cannot make laws on it indirectly.

Option c is correct: It is true that **doctrine of proportionality** empowers supreme court to **strike down a punishment awarded to person in excess of the crime he/she committed**. According to this doctrine, the punishment awarded should be in proportion to the crime one committed.

Option d is incorrect: **This doctrine does not allow an executive action, if such actions were not mandated by laws.** In The **Puttaswamy case**, the court laid down a few tests to determine the constitutional validity of the state's actions.

- 1) State action must have a **legislative mandate**.
- 2) The action must show that the objective of its law is founded on a **legitimate governmental aim**.
- 3) State action must be **proportionate** and such action must have **no alternative and less intrusive measures** available to achieve the same objective.

Source: <https://blog.forumias.com/what-is-doctrine-of-proportionality/>
<https://blog.ipleaders.in/all-about-judicial-review/#:~:text=Proportionality%20means%20that%20the%20administrative,to%20balance%20means%20with%20ends.>

Q.31) Why did the Congress agree for dominion status when India was heading up to Independence in 1947?

1. Dominion status would provide time to establish the legal and infrastructural basis for the Indian republic.
2. Granting of dominion status did not require a complicated process of constitution-writing.
3. Dominion status would allow for some much-needed continuity in the bureaucracy and the army.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Countries with Dominion status were autonomous communities within the British Empire which were “equal in status” but had an “allegiance to the Crown”. **What it meant was that King George VI continued to reign as the Emperor of India and Lord Mountbatten was the first Governor-General of the country.** The Congress was willing to accept dominion status in 1947 despite its being against the Lahore Congress (1929) spirit because of many circumstances.

Statement 1 is correct: When India was leading up to Independence, the Congress did agree for dominion status. The reason for the reversal in their stance is that **it bought them time to establish the legal and infrastructural basis for the Indian republic**. It also bought them time to integrate the over 500 princely territories into the national framework.

Statement 2 is correct: According to the congress, constitution-making process would take longer than anticipated. **Dominion status could be granted by Act of Parliament and did not require a complicated process of constitution-writing.** The grant of Dominion status was speedy and able to accommodate a variety of transnational arrangements.

Statement 3 is correct: The Congress also agreed for dominion status because:

- 1) it would ensure a peaceful and quick transfer of power;
- 2) it was more important for the Congress to assume authority to check the explosive situation; and
- 3) it would allow for some **much-needed continuity in the bureaucracy and the army.**

Source: Chapter 25: Independence with Partition (Spectrum)

<https://indianexpress.com/article/research/independence-day-dominion-status-august-15-1947-6555454/#:~:text=Yet%2C%20in%20months%20leading%20up,basis%20for%20the%20Indian%20republic.>

Q.32) Sardar Vallabhbhai Patel was initially opposed to the partition of India, but eventually he supported the partition of India. What may be the possible reasons behind this change in his position?

1. Partition would remove Muslim League's capacity to obstruct in decision making.
2. He wanted to avoid the threat of Civil war in the country.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Vallabhbhai Patel was India's first home minister and also the first deputy prime minister. He is known as the "Iron Man" of India and was instrumental in uniting the country through merger of small princely states.

Statement 1 is correct: Partition would provide two separate countries. India can take decision for the protection and welfare of its citizens. Partition would remove Muslim League's capacity to obstruct in deciding the fate of India.

Statement 2 is correct: Patel thought if partition were not accepted, there was bound to be a **civil war** like situation like **long-drawn-out communal strife in cities**, in some rural areas and even regiments and police forces would be torn by communal dissensions. If therefore, such conflict was inevitable, the Hindus, being more disorganized and less fanatic, might go under for want of a compact organization.

Source : Chapter 25: Independence with Partition (Spectrum)

<https://indianexpress.com/article/opinion/columns/sardar-patel-india-pakistan-partition-7598056/>
<https://www.nationalheraldindia.com/india/sardar-patel-was-strongly-for-partition>

Q.33) Consider the following statements:

1. Subhash Chandra Bose resigned from the Indian Civil Services in 1921 to join the struggle for freedom by becoming a member of the Congress.
2. The political guru of Subhash Chandra Bose was Rashbehari Bose.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Subhas Chandra Bose made significant contributions in Indian freedom struggle.

Statement 1 is correct: Subhash Chandra Bose was an intrepid man. He had always shown a militant streak and reacted violently to any insult of Indians by the Europeans. He passed the Indian Civil Services examination securing fourth position but **resigned from the service in 1921** to join the **struggle for freedom** by becoming a **member of the Congress**.

Statement 2 is incorrect: The political guru of Subhash Chandra Bose was Chittaranjan Das. (And not Rashbehari Bose).

Source: A brief History of India. Spectrum Revised and enlarged edition of 2019. Chapter no.23 Quit India Movement, Demand for Pakistan and the INA. Page no. 456.

Q.34) Which of the following is **incorrect** with regard to the aims/demands of the Individual Satyagraha?

- To show that nationalist patience was not due to weakness.
- To start a mass struggle immediately after satyagraha.
- To give another opportunity to the government to accept Congress' demands peacefully.
- To have freedom of speech against war.

Ans) b

Exp) Option b is the correct answer.

Individual Satyagraha (1940) was the resultant of August offer. It was started by Mahatma Gandhi. He decided to initiate a **limited satyagraha on an individual basis** by a few selected individuals in every locality.

Option a is correct: One of the aims for launching the **Individual Satyagraha** was to show that **nationalist patience was not due to weakness**. It also wanted to express people's feeling that they were not interested in the war and that they made no distinction between Nazism and the double autocracy that ruled India.

Option b is incorrect: Towards the end of 1940, the Congress once again asked Gandhi to take command. Gandhi now began taking steps which **would lead to a mass struggle** within his broad strategic perspective. Individual Satyagraha was one such step. It did not want to start a mass struggle immediately.

Option c is correct: Mahatma Gandhi wanted to give another **opportunity to the government** to accept Congress' demands peacefully.

Option d is correct: The **demand of satyagrahi** would be the **freedom of speech against the war through an anti-war declaration**. If the government did not arrest the satyagrahi, he or she would not only repeat it but move into villages and start a march towards Delhi, thus precipitating a movement which came to be known as the 'Delhi Chalo Movement'.

Knowledge Base: Vinoba Bhave was the first to offer the satyagraha and Nehru, the second.

Source: A Brief History of Modern India by Rajiv Ahir 2019 Edition - Chapter 22

Nationalist Response in the Wake of World War II P 440, 441.

Q.35) With reference to recently announced "Endorsement Guidelines for Celebrities and Social Media Influencers", consider the following statements:

- These guidelines were issued by the Union government under the Information Technology Act, 2000.
- The guidelines prohibit social media influencers to endorse any products/services that are not personally used/experienced by them.
- Social media influencer can be imprisoned up to three years in case of repeated offences.

Which of the statement/s given above is/are correct?

- 1 and 3 only
- 2 only
- 3 only
- 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Social media influencers are individuals or groups with access to an audience and have the power to affect their purchasing decisions. Regulating social media influencers became necessary as there are more than 100,000 social-media influencers and their market is likely to reach Rs 2,800 crore by 2025.

Statement 1 is incorrect: The guidelines were issued by the Union government **under Consumer Protection Act, 2019**. The Department of Consumer Affairs under the **Ministry of Consumer Affairs, Food and Public Distribution** has released guidelines 'Endorsement Guidelines for Celebrities and Social Media Influencers' on social media platforms.

Statement 2 is correct: The guidelines state that **social media influencers should not endorse any product or service** that they have **not personally used or experienced** or in which due diligence has been done by them.

Statement 3 is incorrect: For violations of guidelines, **the penalty prescribed for misleading advertisements** by the social media influencers is a penalty of up to ₹10 lakhs for first time offence and **up to ₹ 50 lakhs in case of repeated offences (not imprisonment).**

Source: <https://blog.forumias.com/centre-releases-endorsement-guidelines-for-celebs-and-social-media-influencers/>

Q.36) With reference to Magazines/Newspapers during pre-Independence period, consider the following pairs:

Magazines/ Newspapers Started by

1. Amrita Bazar Patrika N.N. Sen
2. Sudharak Gopal Krishna Gokhale
3. Hindustan and Advocate G.P. Verma

How many pairs given above is/are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) None of the pairs

Ans) a

Exp) Option a is the correct answer.

Magazines/Newspapers	Started by	
1) Amrita Bazar Patrika	Sisir Kumar Ghosh and Motilal Ghosh (Indian Mirror - N.N. Sen)	Hence, pair 1 is incorrect.
2) Sudharak	Gopal Ganesh Agarkar (Not Gopal Krishna Gokhale)	Hence, pair 2 is incorrect.
3) Hindustan and Advocate	G.P. Verma	Hence, pair 3 is correct.

Source: Chapter 29: Development of Indian Press (Spectrum)

Q.37) What was the main reason behind the occurrence of the Warli Adivasi Revolt of 1945?

- a) Demand made for better wages and working conditions by the tribal people.
- b) Extending the Quit India movement to the rural areas.
- c) Protest against the intervention of outsiders in the cultural matters of the tribal people.
- d) Protesting against the British government's policies about the shifting cultivation.

Ans) a

Exp) Option a is the correct answer.

In 1945, Warli Adivasi Revolt began in Zari village, Talasari taluka (Maharashtra). Affected from the exploitation from the landlords and money-lenders, **nearly 5,000 indentured tribals gathered and refused to work on landlords' fields until they received 12 annas a day in wages.** Their resistance sowed the first seeds of rights-based movements among the region's indigenous communities. Women played an important role in the revolt and helped the men in all possible aspects. The involvement of the women was supported by the Kisan Sabha leader, Godaveri Parulekar, also known as Godutai (elder sister) by the

Adivasis. Women followed her and spoke at meetings about the oppression they faced and encouraged other women to join the struggle.

Source: <https://frontline.thehindu.com/social-issues/social-justice/article31833047.ece>

Q.38) Who among the following took charge of the INA prisoners' legal defense during the trial at the Red Fort in 1945?

1. Bhulabhai Desai
2. Sardar Vallabhbhai Patel
3. Asaf Ali
4. Tej Bahadur Sapru

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

The INA fought alongside the Japanese during the Burma campaign and were able to capture some parts of India's north-eastern region. However, the INA's advance was ultimately halted, and they were forced to retreat. Many of the INA soldiers were captured and held as prisoners of war by the British.

During this time, the British government accused the INA soldiers of treason and mutiny. The INA Defence Committee, later the INA Defence and Relief Committee, was a committee established by the Indian National Congress in 1945 to defend those officers of the Indian National Army who were to be charged during the INA trials. The committee declared the formation of the Congress' defence team for the INA and included famous lawyers of the time like **Bhulabhai Desai, Jawaharlal Nehru, Tej Bahadur Sapru, Kailash Nath Katju, and Asaf Ali**. The Congress organised an INA Relief and Enquiry Committee, which provided small sums of money and food to the men on their release, and attempted, though with marginal success, to secure employment for these men. The trials garnered widespread attention in India and became a turning point in India's struggle for independence.

Source: Spectrum's A brief History of Modern India ch 24 pg 521

Q.39) In the context of Quit India Movement, the term "Karnataka Method" denotes:

- a) a tactic where part-time peasant squads engaged in farming during the day and revolutionary activities at night.
- b) a method adopted by the British administrators to suppress the movement.
- c) crowd funding initiative, where funds were gathered to support the Quit India Movement throughout India.
- d) a framework developed by the students' unions for carrying out underground activities in urban areas of Karnataka.

Ans) a

Exp) Option a is the correct answer.

The hallmark of the second phase of Quit India Movement was the widespread underground terrorist activities carried out by different groups of revolutionaries all over India. Such activities involved attempts to sabotage War efforts by dislocating communication, disseminating messages inspiring 'subversive' acts through slogans, pamphlets, leaflets, handbills and other 'incendiary' underground publications. Acts of sabotage were carried out not just by students and revolutionaries, ordinary peasants too participated

willingly. **Practiced and popularized in Karnataka, where part-time peasant squads engaged in farming by day and sabotage activities by night, this tactic came to be known as the ‘Karnataka method’.**

Source: Chapter-29: Development of Indian Press, A brief history of modern India by Rajiv Ahir

Q.40) Which one of the following statements best reflects the term “spear phishing” recently seen in the news?

- It involves sending the text message to persons through offline mode to access their bank accounts.
- It involves gaining control over individuals’ devices without human interaction.
- It is a highly advanced phishing method used exclusively to steal crypto assets such as Non-Fungible Tokens (NFTs).
- It involves stealing personal details of a person over the internet usually by sending malicious email.

Ans) d

Exp) Option d is the correct answer.

Phishing attacks are social engineering attacks, and they can have a great range of targets depending on the attacker.

Option a is incorrect: Smishing involves **sending text messages to steal individuals’ personal information such as their bank accounts.** On the other hand, **Phishing** involves contacting individuals over the **internet or emails,**

Option b is incorrect: A **Zero-Click attack** involves gaining control over individuals’ devices without human interaction. For instance, spyware like **Pegasus gain control over a device without human interaction.** In contrast spear phishing involves human interaction over the internet or email.

Option c is incorrect: **Spear phishing is not exclusively related to stealing individuals’ crypto assets** such as Non-Fungible Tokens (**NFTs**). NFTs are unique cryptographic tokens that exist on a blockchain and cannot be replicated, and the report shows that more than **\$100m worth of NFTs have been stolen** using various phishing methods.

Option d is correct: Spear phishing is an attempt to **trick a particular person** or group into **giving private information over the internet or by email,** especially by sending emails that seem to be from someone they know. Criminals who do this will already have some or all of the following information about the victim: their name, place of employment, Job title, Email address and Specific information about their job role.

Source: <https://indianexpress.com/article/india/mha-issues-cyber-alert-for-g20-summit-shares-threat-target-details-with-ministries-8354483/>

<https://www.itgovernance.eu/blog/en/the-5-most-common-types-of-phishing-attack>

<https://blog.forumias.com/explained-what-are-zero-click-attacks-and-how-do-you-get-the-better-of-them/#:~:text=A-,Zero%2DClick%20attack,-helps%20spyware%20like>

Q.41) The British India experienced three violent upsurges during winter of 1945-46 in Calcutta and Bombay, one is by sailors of Royal Indian Navy and two are against the INA trials. In this context, consider the following statements:

- Indian National Congress officially extended its support to these upsurges.
- These upsurges prompted the government to announce that only those INA members who conspired with axis powers would be brought to trial.
- Withdrawal of Indian soldiers from Indonesia was one of the implications of these upsurges.

Which of the above given statements is/are correct?

- 3 only
- 1 and 3 only
- 2 and 3 only
- 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The nationalist sentiment which reached a crescendo around the INA trials developed into violent confrontations with authority in the winter of 1945-46. There were three major upsurges-

- 1) November 21, 1945-in Calcutta over the INA trials
- 2) February 11, 1946-in Calcutta against the seven-year sentence to INA officer Rashid Ali.
- 3) February 18, 1946-in Bombay, strike by the Royal Indian Navy ratings.

Statement 1 is incorrect: The Congress did not officially support these upsurges because of their tactics and timing. However, some individual Congress leaders, such as Jawaharlal Nehru, did express sympathy with the demands of the striking sailors during the RIN mutiny.

Statement 2 is incorrect: The government did not announce that only those INA members who conspired with Axis powers would be brought to trial. **On December 1, 1946, the government announce that only those INA members accused of murder or brutal treatment of fellow prisoners would be brought to trial.** In fact, the British government wanted to bring all INA members to trial, which led to widespread protests and demands for their release.

Statement 3 is correct: Indian soldiers were withdrawn from Indochina and Indonesia after the end of World War II in February 1947, which was one of the demands raised by the Naval ratings of RIN during their strike.

Source: Spectrum's A brief History of Modern India ch 24 pg 522-525; India's Struggle for Independence by Bipin Chandra ch:36 post war national upsurge.

Q.42) Consider the following statements about 'Library Movements' in India:

1. The movement was confined only to some urban pockets of Bengal and Maharashtra.
2. Balshastri Jambhekar founded the Bombay Native General Library.
3. These libraries acted as a forum for discussions and debates about the government policies.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Library Movement aimed at instilling national spirit among the masses. Through the Library Movement, people were able to spread the message of nationalism and arouse feelings against wrongdoings of the government with the help of the newspapers, books and periodical magazines.

Statement 1 is incorrect: The influence of the press extended far beyond its literate subscribers. Also, it was **not confined to cities and large towns only**. A newspaper **would reach remote villages** and would then be read by a reader to tens of others. Gradually **library movements sprung up all over the country (and was not confined to the urban pockets of Bengal and Maharashtra only)**. So, statement 1 is incorrect.

Statement 2 is correct: Balshastri Jambhekar founded the Bombay Native General Library and started the Native Improvement Society of which an offshoot was the Students Literary and Scientific Library. (He was also the **first professor of Hindi at the Elphinstone College**, besides being a **director of the Colaba Observatory**).

Statement 3 is correct: Under the library movement a **local library would be organized around a single newspaper**. A table, a bench or two or a charpoy would constitute the capital equipment. **Every piece of news or editorial comment would be read or heard and thoroughly discussed**. The newspaper not only

became a **political educator** reading or discussing it became a **form of political participation**. In this way, these libraries served the purpose of not only **political education but also of political participation**. In these newspapers, **government Acts and policies were put to critical scrutiny**. They acted as an institution of opposition to the government.

Source: Chapter-29: Development of Indian Press, A brief history of modern India by Rajiv Ahir

Q.43) Consider the following statements regarding the Licensing Regulations, 1823:

1. It was enacted by Warren Hastings to suppress the freedom of press in India.
2. According to these regulations, starting or using a press without licence would be a penal offence.
3. The Act also covered journals, pamphlets and books under its ambit.
4. These regulations were repealed by William Bentinck.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 2 and 3 only
- d) 2, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

John Adam became Acting Governor General of India on Lord Hastings's departure in January 1823. His rule lasted for seven months. He enacted Licensing Regulations, 1823 which led to the **suppression of the freedom of the press in India**.

Statement 1 is incorrect: In 1823, the then acting governor-general, **John Adams (and not by Warren Hastings)**, who had reactionary views for the press, enacted the Licensing Regulations, 1823. So statement 1 is incorrect.

Statement 2 is correct: According to Licensing Regulations, 1823, **starting or using a press without licence was made a penal offence**. It curbed the freedom enjoyed by the press to a greater extent.

Statement 3 is correct: The Licensing Regulations, 1823 was also **extended to cover journals, pamphlets and books apart from newspapers**. These restrictions were directed **chiefly against Indian language newspapers or those edited by Indians**. **Rammohan Roy's Mirat-ul-Akbar had to stop publication due to this act**.

Statement 4 is incorrect: **The Press Act of 1835** came to be known as the **liberator of the press**. **The act revoked the License Regulations of 1823. It was revoked by Charles Metcalfe (and not by William Bentinck)**. It enabled the press to be more liberal, which contributed to the development of the press in India to a great extent. So, statement 4 is incorrect.

Source: Chapter-29: Development of Indian Press, A brief history of modern India by Rajiv Ahir

Q.44) "He was one of the main architects of the Indian National Conference. Later, as a moderate leader he provided leadership during the anti-partition movement in Bengal. In 1883, he became the first Indian journalist to be imprisoned. He also founded the Indian National Liberal Federation. He was elected as Congress President twice. Only the second Indian to qualify the Indian Civil Service examinations, he was also associated with the newspaper Bengalee."

The above description is related to which of the following nationalist leaders?

- a) Romesh Chandra Dutt
- b) Chittaranjan Das
- c) Surendranath Banerjee
- d) Gopal Krishan Gokhale

Ans) c

Exp) Option c is the correct answer.

Surendranath Banerjee (1848-1925), often known as **Rashtraguru** was born in Calcutta. **Surendranath Banerjee and Ananda Mohan Bose were the main architects of the organisation Indian National Conference/Association** to bring Hindu and Muslims together for political action. He provided the crucial leadership to Moderate-led **anti-partition movement (1903-05)**. In 1883, **Surendranath Banerjee became the first Indian journalist to be imprisoned**. In an **editorial in The Bengalee (of which he was editor for many years)**, Banerjee had criticised a judge of Calcutta High Court for being insensitive to the religious sentiments of Bengalis in one of his judgements. He also founded the **Indian National Liberal Federation in 1919**. He was **only the second Indian to qualify the Indian Civil Service examinations** in 1869. Later he was dismissed for a minor and apparently inadvertent procedural error, but he again cleared the exam in 1871. He was widely known as the **Father of Indian Nationalism** due to his significant contribution in early years. He was elected the **Congress President in 1895 at Poona and in 1902 at Ahmedabad**. He had also written **A Nation in the Making** in the last years of his life.

Source: Chapter-29: Development of Indian Press, A brief history of modern India by Rajiv Ahir

Q.45) With reference to Broadcasting Infrastructure and Network Development (BIND) scheme, consider the following statements:

1. The Ministry of Communication is a nodal agency for this scheme.
2. The scheme provides financial assistance to public broadcasting organisations to improve their outreach in border areas of India.
3. The scheme aims to provide free Wi-Fi facilities in tribal areas to improve internet infrastructure in the country.
4. Funds required to implement this scheme will be sourced from Universal Service Obligation Fund (USOF)

Which of the statements given above is/are correct?

- a) 1,2 and 4 only
- b) 2 only
- c) 2 and 3 only
- d) 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Broadcasting Infrastructure and Network Development (**BIND**) scheme aims to bring modernisation to the **public broadcaster** Prasar Bharati i.e. All India Radio (AIR) and Doordarshan (DD).

Statement 1 is incorrect: The **Ministry of Information and Broadcasting is a nodal agency for this scheme**. Broadcasting Infrastructure and Network Development (BIND) is a **central sector scheme administered** by the Ministry of Information and Broadcasting with financial outlay of ₹2,539.61 crore.

Statement 2 is correct: The **BIND scheme provides financial assistance to public broadcasting organisations** such as All India Radio, Doordarshan to improve their **outreach in border areas of India**. BIND scheme provides financial support to Prasar Bharati for expenses related to the expansion and upgradation of its broadcasting infrastructure, content development and civil work related to the organisation.

Statement 3 is incorrect: BIND scheme **does not provide free Wi-Fi facilities** in tribal areas. However, the scheme provides over **8 lakh Doordarshan (DD) Free Dish** to people living in **remote, tribal, LWE and border areas**.

Statement 4 is incorrect: **Fund required to implement BIND scheme is not sourced from the USOF**. The Universal Service Obligation Fund (**USOF**) is under the administrative control of the **Department of**

telecommunication, Ministry of Communications. USOF provides funding support to implementation of the **BharatNet project** which aims to provide broadband connectivity to 2.5 lakhs Gram Panchayats in the country.

Source:

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1888540#:~:text=The%20%E2%80%9CBroadcasting%20Infrastructure%20and%20Network,work%20related%20to%20the%20organization.>

[https://usof.gov.in/genesis#:~:text=Department%20of%20Telecommunications%20\(DoT\)%2C](https://usof.gov.in/genesis#:~:text=Department%20of%20Telecommunications%20(DoT)%2C)

Q.46) Which of the following statements is/are correct about the Royal Indian Navy Mutiny, 1946?

1. The mutiny was first started at the Calcutta Harbour.
2. The mutineers demanded the release of INA prisoners.
3. The mutiny was outrightly supported by Mahatma Gandhi.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

In February 1946, 1100 Royal Indian Navy (RIN) ratings of HMIS Talwar went on strike to protest against racial discrimination, unpalatable food, abuse by superior officers, arrest of a rating for scrawling 'Quit India' on HMIS Talwar, INA trials, and use of Indian troops in Indonesia, demanding their withdrawal. The rebellious ratings hoisted the tricolor, crescent, and the hammer and sickle flags on the mast of the rebel fleet. They went around Bombay in lorries holding Congress flags threatening Europeans and policemen, and crowds brought them food and offered them help.

Statement 1 is incorrect: The Royal Indian Navy Mutiny began on February 18, 1946, in Bombay. It quickly spread to other naval bases in India, including Karachi, Madras, and Calcutta.

Statement 2 is correct: The ratings of the Royal Indian Navy demanded the release of all political prisoners, including those who were held for their involvement in the Indian independence movement, as well as the release of the INA prisoners who were being held by the British authorities.

Statement 3 is incorrect: Gandhi, criticised the strikers for mutinying without the call of a 'prepared revolutionary party' and without the 'guidance and intervention' of 'political leaders of their choice'. Newly formed Naval Central Strike Committee (NCSC), Bombay Students' Union and the CPI had called for a general strike in support of the mutiny and the NCSC had asked people to make it a success. **In contrast, Gandhi was clearly unsupportive of the unplanned uprising and Sardar Patel even asked people to 'go about their work as usual'.** For once, the people rejected the great leaders. The strike was 'total' and processions rolled across the city.

Source: Spectrum's A brief History of Modern India ch 24 pg 522-525

Q.47) Which of the following statements is/are **incorrect** regarding the Tebhaga Movement?

1. The nerve centre of the movement was Bardoli region of Gujarat.
2. Implementation of the Adhiary Pratha Sytem of cultivation was one of the main demands of the movement.
3. Flood Commission, which was appointed as a result of this movement, accepted the demands of the peasants.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

In September 1946, the Bengal Provincial Kisan Sabha gave a call to start a mass struggle for the implementation of the recommendations of **Bengal Land Revenue Commission**. It aimed at ensuring the bargadars their due share in crop (The **bargadars used to work on lands rented from the jotedars**). The communist cadres, including many urban students, went to the countryside to organise the bargadars. The central slogan was **nij khamare dhan tolo** i.e., sharecroppers taking the paddy to their own threshing floor and not to the jotedar's house, as before, to **enforce tebhaga**.

Statement 1 is incorrect: Farmers from the remote areas of **Sundarbans to various parts of North Bengal (and not Bardoli region of Gujarat)** raised their demand for Tebhaga. Also, the storm centre of the movement was north Bengal, **principally among Rajbanshi**, a low caste of tribal origin. **Muslims also participated in large numbers**. So, statement 2 is incorrect.

Statement 2 is incorrect: In Bengal Jotedars fixed the total yield from land, to be shared equally between the cultivator and the owner of the land i.e. jotedar. **This system of cultivation of land was commonly known as Adhiary Pratha (half-half system), mostly prevalent in north Bengal. Tebhaga movement opposed this system and demanded for two thirds share to the cultivator instead of the half share under the Adhiary Pratha system.**

Statement 3 is incorrect: The **Bengal Land Revenue Commission or the Flood/Floud Commission** gave recommendations of **tebhaga means two-thirds' share to the bargardars or the sharecroppers** also known as bagchasi or adhyar, instead of the one-half share. **The Bengal Provincial Kisan Sabha's call to implement Commission's recommendation through mass struggle led to start of the movement. Hence, the movement was started as a result of the Flood Commission's recommendations.**

Source: Chapter-29: Development of Indian Press, A brief history of modern India by Rajiv Ahir

Q.48) Which of the following statements about the campaign against the trial of Indian National Army (INA) Prisoners is/are correct?

1. The central theme of the Campaign was questioning the Britain's right to decide a matter concerning Indians.
2. All India Women's Conference supported the INA cause and demanded the release of INA prisoners.
3. Various political parties including Muslim league and Hindu Mahasabha supported INA cause.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Indian National Army (INA) agitation was a significant movement during the Indian independence struggle against British colonial rule.

Statement 1 is correct: The central theme of the INA agitation was questioning the Britain's right to decide a matter concerning Indians.

statement 2 is correct: During the campaign for the release of INA prisoners, women participated actively in protests and demonstrations. They organized rallies and satyagraha's, and many of them were arrested and jailed. Women's organizations such as **the All-India Women's Conference and the Women's Indian Association supported the INA cause and demanded the release of INA prisoners.**

Statement 3 is correct: There was a near unanimous support to the INA cause. Apart from the congress, parties which extended support for INA include **the Muslim League, Communist Party, Unionists, Akalis, Justice Party, Ahrars in Rawalpindi, Rashtriya Swayamsevak Sangh, Hindu Mahasabha and the Sikh League.**

Source: Spectrum's A brief History of Modern India ch 24 pg 521-522

Q.49) In March 1940, an Anti-Compromise Conference at Ramgarh was organized under the leadership of which one of the following personalities?

- Mahatma Gandhi
- Subhash Chandra Bose
- JL Nehru
- JP Narayan

Ans) b

Exp) Option b is the correct answer.

In March 1940, **Subhash Chandra Bose** convened an Anti-Compromise Conference at Ramgarh. It was a joint effort of the **Forward Bloc** and **the Kisan Sabha**. At the conference, it was resolved that a world-wide struggle should be launched on April 6, the first day of the National Week. It was proposed that people of India should be called **not to help the Imperialist War with any type of resource** viz. men, money or materials. Subhash Chandra Bose called the people to offer resistance to all forms of exploitation of the Indian resources that are used for the imperial cause. There was enthusiastic participation by the people in the struggle launched on April 6.

Source: A Brief History of India 2019-20, Spectrum, Quit India Movement, Demand for Pakistan, Page 475

Q.50) With reference to Asian Waterbird Census, consider the following statements:

- The census is conducted in Asia as part of the Convention on Migratory Species (CMS).
- In India, the census was coordinated by the Zoological Survey of India (ZSI).
- The census can be used to generate awareness about the importance of wetland conservation in a nation.

Which of the statement/s given above is/are **incorrect**?

- 2 only
- 2 and 3 only
- 1 and 2 only
- 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Every year, thousands of volunteers participate in the Asian Waterbird (AWS) census to count the number of waterbirds in a place. AWC is part of the International Waterbird census coordinated by the non-governmental organisation **Wetland International**.

Statement 1 is incorrect: Asian Waterbird census (AWC) is part of the global International Waterbird Census (IWC) coordinated by Wetlands International (not part of the Convention on Migratory Species).

AWC runs in parallel with other regional programmes of the IWC in Africa, Europe, West Asia, the Neotropics and the Caribbean countries.

Statement 2 is incorrect: In India, AWC is jointly coordinated by the **Bombay Natural History Society (BNHS)** and **Wetlands International**. Zoological society of India (ZSI) does not coordinate AWC in India.

Statement 3 is correct: AWC gives an idea of the birds at the wetlands which in turn indicate the health of the wetland i.e., more **waterbirds, the healthier the wetland is**. Thus, **AWC can be used to generate awareness about the conservation of wetlands in India**. Wetlands act as important habitats for waterbirds.

Source: <https://south-asia.wetlands.org/our-approach/healthy-wetland-nature/asian-waterbird-census/>

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Q.1) With reference to the British rule in India, consider the following pairs regarding various educational institutions and their founders:

Educational Institution	Founder
1. The Calcutta Madrasah	Warren Hastings
2. The Sanskrit College	Jonathan Duncan
3. Fort William College	Sir John Shore

How many pairs given above are correctly matched?

- Only one pair
- Only two pairs
- Only three pairs
- None of the pairs

Ans) b

Exp) Option b is the correct answer.

For the first 60 years of its dominion in India, the East India Company, a trading and profit-making concern, took no interest in the promotion of education. Some minor exceptions were efforts by individuals such as:

Pair 1 is correctly matched: The **Calcutta Madrasah** was established by **Warren Hastings** in 1781 for the study of **Muslim law** and related subjects. The main object was to promote the study of Arabic and Persian Language and of Mohammedan laws with a view to qualify the sons of Muslim gentlemen for responsible and lucrative offices and to produce competent officers for the courts of justice.

Pair 2 is correctly matched: The **Sanskrit College** was established by **Jonathan Duncan**, the resident, at **Benaras in 1791** for the study of Hindu law and philosophy.

Pair 3 is incorrectly matched: **Fort William College** was set up by **Wellesley** in 1800 for **training of civil servants** of the Company in languages and customs of Indians (closed in 1802). Wellesley envisioned ruling British India efficiently with the help of an enlightened and trained bureaucracy. He felt that **both academic and moral training** were necessary to make the new arrivals capable of facing the challenge of governing an alien people. Whereas, **Sir John Shore was Governor General of India from 1793-98**. The reforms in the revenue administration in 1786 and 1790 were mostly initiated and executed according to the ideas of Shore.

Source:
<https://school.banglarshiksha.gov.in/ws/website/index/19170106513#:~:text=Calcutta%20Madrasah%20is%20first%20Education,and%20learner%20Musalman%20of%20Calcutta.>

https://en.banglapedia.org/index.php/Fort_William_College

https://en.banglapedia.org/index.php/Shore,_Sir_John

A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.2) With reference to the education during British rule in India, consider the following statements regarding Orientalist- Anglicist Controversy:

- The Anglicists argued that government spending on education should be exclusively for modern studies.
- The orientalists completely opposed the inclusion of western sciences in the education system.
- The controversy was settled in favor of Anglicists with Lord Macaulay's Minute.

Which of the statements given above is/are correct?

- 1 only
- 1 and 3 only
- 2 and 3 only
- 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

When East India Company took educational administration into their hands, a conflict of opinion arose eventually that whether the company should promote western education or Indian education. The medium of instruction between English or Indian languages was also a concern. This controversy is known as Orientalist-Anglicist Controversy.

Statement 1 is correct: Within the General Committee on Public Instruction, the **Anglicists** argued that the **government spending on education should be exclusively for modern studies**.

Statement 2 is incorrect: The Orientalists said while Western sciences and literature should be taught to prepare students to take up jobs, emphasis should be placed on **expansion of traditional Indian learning**.

Statement 3 is correct: The famous **Lord Macaulay's Minute settled the row in favour of Anglicists**. It said that the limited government resources were to be devoted to teaching of Western sciences and literature through the medium of English language alone.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.3) Consider the following statements regarding the Deccan Riots of 1870s:

1. It was against the heavy taxation on ryots under the Ryotwari system.
2. It included a social boycott movement against the moneylenders.
3. The Deccan Agriculturists Relief Act of 1879 was passed to pacify the unsatisfied farmers during the movement.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct. The Deccan peasants uprising (1875) was directed mainly against the excesses of the Marwari and Gujarati money lenders. The **ryots suffered heavy taxation under the Ryotwari system**. The land revenue was also **raised by 50%** in 1867.

Statement 2 is correct. The growing tension between the moneylenders and the peasants **resulted in a social boycott movement**, organized by the ryots against the moneylenders. The ryots **refused to buy from their shops**. No peasant would cultivate their fields. The barbers, washermen, shoemakers would **not serve them**. Soon the social boycott was transformed into agrarian riots with systematic attacks on moneylenders' houses and shops.

Statement 3 is correct. The British government succeeded in repressing the movement. As a conciliatory measure, The **Deccan Agriculturists Relief Act was passed** in 1879 in an effort to quell the movement and safeguard the peasants from moneylender. This **Act ensured** that the **farmers could not be arrested** and imprisoned if they were **unable to pay** their debts. The modern nationalist intelligentsia of Maharashtra supported the peasants' cause.

Source: Spectrum (Page no. 601-602)

Q.4) With reference to the moderate nationalists during the 19th and the early 20th century and their efforts on working class movement, consider the following statements:

1. Most of the Moderates supported the Factory Act of 1881 and 1891.
2. They differentiated between the labour in the Indian and British owned factories.
3. Sorabjee Shapoorji Bengalee made efforts to pass a bill in Bombay Legislative Council on the working conditions of workers.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Indian working class suffered from the same kind of exploitation witnessed during the industrialisation of Europe and the rest of the West, such as low wages, long working hours, unhygienic and hazardous working conditions, employment of child labour and the absence of basic amenities.

Statement 1 is incorrect: The early nationalists, especially the Moderates did not want a division in the movement on the basis of classes. They **did not support the Factory Acts of 1881 and 1891**. They believed that labour legislations would affect the competitive edge enjoyed by the Indian-owned Industries.

Statement 2 is correct: The early nationalists, especially the Moderates, were indifferent to the labour's cause. **They differentiated between the labour in the Indian owned factories and those in the British-owned factories.**

Statement 3 is correct: **Sorabjee Shapoorji Bengalee tried to get a bill, providing better working conditions to labour, passed in the Bombay Legislative Council.**

Source: Page 585, Chapter 32 - The Movement of the Working Class of spectrum

Q.5) With reference to the 'Himalayan Griffon', consider the following statements:

1. It is endemic to the Himalayan region.
2. They are the only vulture not susceptible to toxicity induced by diclofenac drug.
3. They are categorized as 'Critically Endangered' under IUCN Red list.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) None of the above

Ans) d

Exp) Option d is the correct answer.

Recently, once nearly extinct species of Himalayan Griffon spotted in Dudhwa & Banbasa and seen nesting in Terai.

Statement 1 is incorrect: Himalayan Griffon is an Old-World vulture in the **family Accipitridae**. It is one of the two largest Old-World vultures and true raptors. This species is found along the Himalayas and the adjoining Tibetan. This species is distributed from western China, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Afghanistan and Pakistan, east through the Himalayan Mountain range in India, Nepal and Bhutan, to central China and Mongolia.



Himalayan Griffon

Statement 2 is incorrect: Himalayan vultures are **susceptible to toxicity induced by diclofenac**, a drug whose residues are in domestic animal carcasses. But their population have however not shown signs of rapid decline as witnessed in populations of other Gyps vultures across Asia.

Statement 3 is incorrect: According to the International Union for Conservation of Nature (IUCN), the Himalayan Griffon (*Gyps himalayensis*) is classified as "**Near Threatened**" on the **IUCN Red List** of Threatened Species. This means that the species is at risk of becoming threatened with extinction in the near future if the current conservation efforts are not maintained.

Knowledge Base: Old World vultures are a group of vultures that are found in Europe, Africa, and Asia. They belong to the family Accipitridae, which also includes eagles, hawks, and kites. Old World vultures are different from New World vultures, which are found in the Americas, in that they have a hooked beak, rather than a straight one, and their nostrils are not divided by a septum.

Source: <https://timesofindia.indiatimes.com/city/dehradun/almost-extinct-vulture-spotted-in-terai/articleshow/98221968.cms?from=mdr>

Q.6) Consider the following statements regarding the Hunter Commission:

1. It was appointed to review the development of education since the Wood's Despatch of 1854.
2. It recommended transfer of control of primary education to district and municipal boards.
3. It recommended that there should be vocational training in high schools for commercial careers.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

When education was shifted to provinces in 1870, primary and secondary education suffered because the provinces already had limited resources at their disposal. In 1882, the government appointed a commission under the chairmanship of W.W. Hunter to review the progress of education in the country since the Despatch of 1854. The Hunter Commission mostly confined its recommendations to primary and secondary education.

Statement 1 is correct: The government appointed the **W.W. Hunter Commission to review the progress of education in the country since the Wood's Despatch of 1854.**

Statement 2 is correct: Hunter Commission recommended **transfer of control of primary education to newly set up district and municipal boards.** The Hunter Commission held that **State should make special efforts for extension and improvement of vernacular education.** Mass education was to be seen as instructing masses through vernaculars.

Statement 3 is correct: The Hunter Commission also recommended that **secondary (high school) education** should have two divisions:

- 1) literary—leading up to university
- 2) vocational—for commercial careers

Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.7) Consider the following statements with reference to Narendra Mandal of 1920–21:

1. It provided a forum for giving expression to the needs and aspirations of the rulers of the princely states.
2. It was set up on the recommendations of Montford Reforms.
3. It was given a wide mandate with powers to regulate the internal affairs of the states.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Post-1905, a policy of cordial cooperation began to counter progressive and revolutionary developments in face of large-scale political unrests.

Both statements 1 and 2 are correct: The **Chamber of Princes or Narendra Mandal** was an institution established in 1920 to provide a forum for giving the voice to needs and aspirations of the rulers of the princely states of India. It was set up on the basis of the recommendations of Montford Reforms.

Statement 3 is incorrect: It was formed as a consultative and advisory body having no say in the internal affairs of individual states and having no powers to discuss matters concerning existing rights and freedoms. The Indian states were divided into three categories for the purpose of the chamber:

- 1) Directly represented–109
- 2) Represented through representatives–127
- 3) Recognised as feudal holdings or jagirs

Source: Page 605, Chapter 34 -The Indian State of spectrum.

Q.8) Which of the following personalities are associated with All India State Peoples Conference (AISPC)?

- 1. Baiwantrai Mehta
- 2. Vijay Singh Pathik
- 3. Manikial Kothari
- 4. Jawaharlal Nehru
- 5. G.R. Abhayankar

Select the correct answer using the code given below:

- a) 1, 2, 3 and 5 only
- b) 1, 3 and 4 only
- c) 1, 3 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

All India States' People's Conference (AISPC) was convened in December 1927 which was attended by 700 political workers from the States. The men chiefly responsible for this initiative were **Baiwantrai Mehta, Manikial Kothari and G.R. Abhayankar**.

In 1939, the AISPC elected **Jawaharlal Nehru as its President for the Ludhiana session**, thus setting the seal on the fusion of the movements in Princely India and British India.

Vijay Singh Pathik was an Indian revolutionary who led Bijolia peasant movement or the Bijolia kisan satyagraha. He gave a definite ideological and sharp political edge to the struggle of peasants and broader segments of people in princely states against feudalism and British imperialism. He was the **vice-president and chief publicist of the All-India States Peoples' Conference (AISPC) or Praja Mandal, an organisation of people from all princely states of India**.

Knowledge Base: Vijay Singh Pathik, whose original name was Bhoop Singh came in contact with the young revolutionary Sachindranath Sanyal in Indore. Bhoop along with Bhai Balmukund also organised and

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expanded the revolutionary movement in Rajasthan. In 1916, Vijay Singh Pathik entered the Bijolia estate and gave a definitive turn to the peasant movement.

Source: India struggle for Independence Bipin Chandra Chapter-28 page-356

<https://thewire.in/history/bijolia-peasants-movement-vijay-singh-pathik>

<https://www.rajras.in/vijay-singh-pathik/>

Q.9) In the context of working-class movements in India, consider the following pairs:

Leader	Contribution
1. Sasipada Banerjea	Started newspaper 'Bharat Shramjeevi'
2. Pheroza Shah Mehta	Set up Bombay Mills and Millhands Association
3. Narayan Meghaji Lokhande	Editor of newspaper 'Deenbandhu'

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) All three pairs
- d) None of the pairs

Ans) b

Exp) Option b is the correct answer.

The Indian working class during the second half of 19th Century was facing the same kind of exploitation witnessed during the industrialization of Europe. They suffered with low wages, long working hours, hazardous working conditions etc. Newspapers and journals became one of the instruments for arousing consciousness against labor exploitation.

Pair 1 is correct: The newspaper 'Bharat Shramjeevi' was started by Sasipada Banerjea in 1870. The Bharat Shramjeevi was one of the first publications for the cause of working class. Sasipada Banerjea was associated with Brahmo Samaj. He also started a Working Men's Club in 1870, which is described as one of the first labor organization in India.

Pair 2 is incorrect: Bombay Mill and Millhands Association was set up by Narayan Meghaji Lokhande in 1880s. Its objective was to give a platform to workers to voice their opinions.

Pair 3 is correct: The newspaper 'Deenbandhu' was edited by Narayan Meghaji Lokhande during 1880s. It was a weekly Marathi newspaper. Besides labour and social issues, he also wrote influential editorial notes for Hindu-Muslim unity.

Source: Spectrum's A Brief History of Modern India (Page 623, Chapter 32)

Q.10) 'KamLAND Project', recently seen in news, is related to-

- a) Low-cost space tourism
- b) Observation of Gravitational waves
- c) Detection of Neutrinos
- d) Human settlement on Mars

Ans) c

Exp) Option c is the correct answer.

Recently, the Kamioka Liquid Scintillator Antineutrino Detector (KamLAND) experiment in Japan has **found no evidence that neutrinos are their antiparticles.**

The Kamioka Liquid Scintillator Antineutrino Detector (KamLAND) is a **neutrino and antineutrino detector located in the Kamioka Observatory in Japan**. It is designed to study the properties of neutrinos and antineutrinos, which are subatomic particles that have very little mass and interact very weakly with matter. KamLAND is an important tool for studying neutrinos and antineutrinos because it can detect neutrinos from various sources, including the sun, nuclear reactors, and the Earth's mantle.

Knowledge Base: **Antiparticle**: In quantum theory, every type of particle is associated with an antiparticle with the same mass but with opposite physical charges. For example, the antiparticle of the electron is the positron.

Q.11) Consider the following pairs:

- Wetlands - States**
1. Kole Wetland - Andhra Pradesh
 2. Harike Wetland - Punjab
 3. Kheda Wetland - Maharashtra

How many pairs given above are correctly matched?

- a) None of the pairs
- b) Only one pair
- c) Only two pairs
- d) All three pairs

Ans) b

Exp) Option b is the correct answer.

Pair 1 is incorrectly matched: Kole wetland is the largest brackish, humid tropical wetland ecosystem located in the state of Kerala. It extends from the northern bank of Chalakudy River in the south to the southern bank of Bharathapuzha River in the north. It is situated in the central Asian Flyway of migratory birds. Recently, researchers from Kerala has been discovered a new species of cuckoo bee from the Kole wetlands and named it Thyreus narendrani.

Pair 2 is correctly matched: Harike Wetland is a man-made wetland located in the Tarn Taran district of Punjab. The wetland was created in 1953 by constructing a barrage on the Sutlej River, and it covers an area of approximately 86 square kilometers. Harike Wetland is an important habitat for migratory birds, fish, and other wildlife. It has been designated as one of the Ramsar sites in India. According to the recent water bird census, the Harike wetland witnessed a decline in migratory birds' arrival this year.

Pair 3 is incorrectly matched: The wetlands of Kheda is located between two major rivers in Gujarat: Mahisagar on the eastern side and Vatrak, a tributary of River Sabarmati on the western side. This site is selected as an IBA mainly because it has good, breeding population of the globally threatened Sarus Crane in India.

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/migratory-bird-arrivals-at-punjab-harike-wetland-decline-this-season-latest-census-shows/article66528115.ece>

<https://indianexpress.com/article/cities/ahmedabad/conservation-drive-pays-off-sarus-crane-count-nearly-doubles-in-kheda-wetland-in-7-years-8453193/>

<https://www.thehindu.com/news/national/kerala/researchers-discover-new-cuckoo-bee-in-kerala/article66512781.ece>
<https://www.thehindu.com/news/national/kerala/researchers-discover-new-cuckoo-bee-in-kerala/article66512781.ece>

Q.12) Which of the following was the main cause of the Bardoli Satyagraha launched in 1928?

- Demand of increased land revenue by the British Government.
- Inhumane treatment of plantation workers by the European plantation owners.
- The British Government's indifferent attitude towards exploitation of peasants by landowners.
- Salt tax imposed by the British government.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: The Bardoli Satyagraha was launched in 1928 in Gujarat to oppose Bombay Presidency's Government decision to **impose an exorbitant 30% increase in land revenue assessment**. The British Government refused to cancel this hike in land revenue despite petitions by peasants and eventually Peasants of this area approached **Vallbahai Patel to guide this non-violent non-cooperation movement** against the British, which is famously called as Bardoli Satyagraha.

Options b and c are incorrect: Main causes of Bardoli Satyagraha is neither inhumane treatment of plantation workers by the European plantation owners nor the exploitation of peasant by landowners using fraudulent contracts.

Option d is incorrect: Bardoli Satyagraha is not related to showing protest against British Salt tax law. The **Dharasana Satyagraha** was a protest against the British salt tax law in colonial India in 1930. Mahatma Gandhi chose a **non-violent raid of the Dharasana Salt Works in Gujarat as the next protest against British rule** following his Dandi March in 1930. In this movement **hundreds of satyagrahis were beaten by soldiers** under British command at Dharasana. The ensuing publicity attracted **world attention to the Indian independence movement** and brought into question the legitimacy of British rule in India.

Source: Spectrum - Peasant Movements 1857-1947 (Bardoli Satyagraha)

Q.13) Consider the following revolts and the leaders associated with them:

List I (Revolts)	List II (Leaders associated)
1. Eka Movement	Madari Pasi
2. Santhal Rebellion	Ishan Chandra Roy
3. Pagal Panthis Movement	Karam Shah and Tipu Shah
4. Pabna Agrarian Uprising	Siddhu and Kanhu

Which of the pairs given above are correctly matched?

- 1 and 2 only
- 1 and 3 only
- 3 and 4 only
- 1 and 4 only

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correct. **Eka Movement** – This movement was **against the hike in rents**. This movement was led by **Madari Pasi** near the region of Hardoi, barabanki, Sitapur and Bahraich districts of Uttar Pradesh (then United Province) between 1921-1922.

Pair 2 is incorrect. **Santhal Rebellion** – Santhals, were the agricultural people, who had fled to settle in the plains of the **Rajmahal Hills (Bihar)** to lead the Santhal rebellion against the zamindars. The zamindars use to subject the peasants to oppressive exactions and dispossession of lands. The rebellion turned into an

anti-British movement under Siddhu and Kanhu. The Santhals proclaimed an end to Company Rule and declared the area between Bhagalpur and Rajmahal as autonomous. The rebellion was suppressed by 1856. Whereas, Ishan Chandra Roy was related to Pabna Peasant Uprisings.

Pair 3 is correct. Pagal Panthi Movement – Pagal Panthis movement of the **Hajong and Gar tribes** was under the leadership of **Karam Shah and Tipu Shah** against the hike in rents (1825-1835; Mymensingh district, earlier in Bengal). The movement was violently suppressed.

Pair 4 is incorrect. Pabna Agrarian revolt- This revolt was led by **Ishan Chandra Roy, Shambhu Pal, Khoodi Mullah and supported by B.C. Chatterjee and R.C. Dutt** (1873, Pabna District, East Bengal, now in Bangladesh). The revolt was against policies of zamindars to prevent occupants from acquiring occupancy rights; the **Bengal tenancy Act of 1885** was passed as a result to this uprising.

Source: Spectrum (Page No. 160, 840-841)

Q.14) “In 1917, the Government of India set up a commission to study and report on problems of Calcutta University. This commission held the view that for the improvement of university education, improvement of secondary education was a necessary precondition. Most importantly, it recommended less rigidity in framing university regulations.”

The above passage is referring to which of the following commissions/committees?

- Hartog Committee
- Raleigh Commission
- Sargent Plan of Education
- Sadler Commission

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: An increase in the number of schools and colleges had led to deterioration of education standards. The **Hartog Committee was set up in 1929** by the Simon Commission as an auxiliary committee under the chairmanship of Phillip Hartog to prepare a report on education.

Option b is incorrect: In **1902, Raleigh Commission was set up** to go into conditions and prospects of universities in India and to suggest measures for improvement in their constitution and working. The commission precluded from reporting on primary or secondary education. Based on its recommendations, the Indian Universities Act was passed in 1904.

Option c is incorrect: The **Sargent Plan of Education** analysed the prevailing situation in education and provided a **long-term plan for educational development** in India. It gave details of programmes and schemes directed towards reconstructing the education system. The aim of the plan was to bring about universal literacy in India within 40 years of its introduction.

Option d is correct: In 1917, the Government of India appointed the **Calcutta University Commission**, commonly called the **Sadler Commission** after its chairman, Michael Sadler. The commission was set up to study and report on **problems of Calcutta University**, but its recommendations were applicable more or less to other universities also. It reviewed the entire field from school education to university education. It held the view that for the **improvement of university education, improvement of secondary education was a necessary precondition**. Its key observations were as follows:

- School** course should cover **12 years**. Students should enter university after an intermediate stage (rather than matric) for a three-year degree course in university.
- There should be **less rigidity** in framing university regulations.
- A **university** should function as a **centralised, unitary** residential-teaching autonomous body, rather than as scattered, affiliated colleges.

4) **Female education**, applied scientific and technological education, teachers' training, including those for professional and vocational colleges, should be extended.

Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.15) Urban Infrastructure Development Fund, proposed in the Union Budget 2023-24, will be managed by which of the following institutions?

- Ministry of Housing and Urban Affairs
- NITI Aayog
- Reserve Bank of India
- National Housing Bank

Ans) d

Exp) Option d is the correct answer.

Finance Minister in her Union Budget speech 2023-24 proposed to establish Urban Infrastructure Development Fund on the lines of Rural Infrastructure Development Fund through use of priority sector lending shortfall. This will be managed by the National Housing Bank, and will be used by public agencies to create urban infrastructure in **Tier 2 and Tier 3 cities**.

States will be encouraged to leverage resources from the grants of the 15th Finance Commission, as well as existing schemes, to adopt appropriate user charges while accessing the UIDF. Central government expects to make available Rs 10,000 crore per annum for this purpose.

Knowledge Base: National Housing Bank is a statutory organization set up on July 9, 1988 under the National Housing Bank Act, 1987. NHB is a government-owned entity. The government took over the NHB from the RBI in 2019 after buying entire stake of Rs. 1,450 crores. NHB regulates the housing finance system of the country, extends refinance to different primary lenders and lends directly in respect of projects undertaken by public housing agencies for housing construction and development of housing related infrastructure.

Source: Union Budget Speech 2023-24

Q.16) Consider the following differences between the nature of peasant movements in 19th and those in the 20th century:

- The movements of 19th century were generally centered on economic issues whereas movements of 20th century were generally centered on anti-colonialism consciousness among peasants.
- The leadership in the 19th century revolts were from among the peasants itself whereas in the 20th century movements were led by the Congress and the communist leaders.
- Unlike the movements of 19th century there was emergence of formal organizations in 20th century movements.
- Unlike the movements of 19th century, the movement of 20th century were limited to particular region.

Which of the statements given above are correct?

- 1, 2 and 3 only
- 2, 3 and 4 only
- 1 and 4 only
- 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. The 19th century peasant movements were not focused to end the system of subordination or exploitation of the peasants. Their demands were almost centered wholly on economic issues whereas the peasant movement of 20th century became the part of Indian National Movement and were mainly anti-colonial in nature (Champaran, Kheda etc).

Statement 2 is correct. The leadership in the 19th century peasant revolts was from the peasantry itself (Indigo revolt 1859-60) whereas in 20th century the peasant movements were mainly led by the Congress and the communist leaders (the Tehbhaga Movement, Telangana Movement etc).

Statement 3 is correct. The 19th century peasant movements lacked any sort of formal organization, this lack caused the movement to be a short-term phenomenon whereas in the movements of 20th century there was an emergence of class-conscious organizations which later led to the formation of Kisan Sabhas.

Statement 4 is incorrect. The peasant movements of 19th century were limited to a particular local region whereas with the coming of National parties the peasant movements of 20th century became all India movements.

Source: Spectrum (Page No. 599-610)

Q.17) Consider the following statements regarding the Wood's Despatch:

1. It was considered as “Magna Carta” of English Education in British India.
2. It asked the government to assume the responsibility for education of the masses.
3. It recommended a system of grants-in-aid to encourage private enterprise.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: In 1854, Charles Wood prepared a despatch on an educational system for India. Considered the “**Magna Carta of English Education in India**”, this document was the first comprehensive plan for the spread of education in India.

Statement 2 is correct: It asked the government of India to assume responsibility for education of the masses, thus repudiating the ‘downward filtration theory’, at least on paper. It systematized the hierarchy from vernacular primary schools in villages at bottom, followed by Anglo-Vernacular High Schools and an affiliated college at the district level, and affiliating universities in the presidency towns of Calcutta, Bombay, and Madras.

Statement 3 is correct: It recommended a system of grants-in-aid to encourage private enterprise. In addition to this, the Despatch also laid stress on female and vocational education, and on teachers’ training.
Source: A brief History of Modern India, Spectrum Publication, 2020 edition.

Q.18) “He served as a foreign secretary to the government of India from 1842 to 1843. he was also the lieutenant governor of the North-Western Provinces. He had established a system of 897 locally supported elementary schools in centrally located villages. through the medium of vernacular languages. He improved communications, police protection, and social services in North-Western Provinces.”

Which of the following personalities is the above paragraph referring to?

- a) Charles Wood
- b) Sir John Philip Sargent
- c) James Thomson
- d) Jonathan Duncan.

Ans) c

Exp) Option c is the correct answer.

James Thomson served as magistrate-collector and settlement officer in Azamgarh (1832–37) and **foreign secretary** to the government of India (1842–43). In 1843 he was named **lieutenant governor of the North-Western Provinces**, and for the next 10 years he served in that post. He developed a **comprehensive scheme of village education** through the medium of **vernacular languages**. He had established 897 **locally supported elementary schools** in centrally located villages. In these village schools, useful subjects such as mensuration and agriculture sciences were taught. The purpose was to train personnel for the newly set up Revenue and Public Works Department.

Source: Spectrum Revised edition 2019 chapter-30 page-565

<https://www.britannica.com/biography/James-Thomason>

Q.19) Consider the following statements regarding the Kisan Sabha Movement:

1. Home Rule League members helped in formation of Kisan Sabhas in the United province.
2. The movement remained non-violent in nature throughout its course of existence.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The nationalist struggle against the colonial rule also gave inspiration to peasants and their leaders in several regions to express their grievances more openly. In the Awadh region of UP, a powerful peasant movement developed under the leadership of Baba Ramachandra.

Statement 1 is correct: Mainly due to the **efforts of the Home Rule activists, kisan sabhas were organised in** United Provinces. The United Provinces Kisan Sabha was set up in February 1918 by Gauri Shankar Mishra and Indra Narayan Dwivedi. Madan Mohan Malaviya supported their efforts.

Statement 2 is incorrect: In 1921, in some of UP districts, there were significant peasant agitations in which the crops of the **landlords were burnt**, the landlords' strongmen and the **police were attacked**, and some **markets were looted. The movement thus did not remain non-violent, and the peasants attacked the landlords and the government properties.**

Source: <https://egyankosh.ac.in/bitstream/123456789/44334/1/Block-6.pdf> , Sumit Sarkar

Q.20) With reference to International Relations, what is the objective of 'Fab 4 Alliance'?

- a) To support Ukraines war effort through financial and humanitarian aid
- b) To promote free trade and economic integration across the Asia-Pacific region.
- c) To enhance the security and resilience of semiconductor supply chains
- d) To oppose any totalitarian tendencies and promote democratic values around the globe.

Ans) c

Exp) Option c is the correct answer.

The **"Chip 4" or "Fab 4" alliance** includes four of the world's top producers of semiconductors: the **U.S., Japan, Taiwan, and Korea**. It represents more than 70 percent of the value of the global semiconductor industry. It was first proposed by the US in March 2022 as part of **wider plans aimed at enhancing the "security" and "resilience" of semiconductor supply chains, including by reducing the world's reliance on chips made in China**. It is intended to cooperate on policy implementation that would support sustainable semiconductor manufacturing in the member states' home countries.

Source: <https://www.reuters.com/technology/taiwan-says-fab-4-chip-group-held-first-senior-officials-meeting-2023-02-25/>

Q.21) The Maxwell-Broomfield Commission is related to which of the following movements in the history of the modern India?

- Bardoli Satyagraha
- Civil Disobedience Movement
- Quit India Movement
- Champaran Satyagraha

Ans) a

Exp) Option a is the correct answer.

Maxwell-Broomfield Commission was appointed as a response to the people's protest during **Bardoli Satyagraha**.

Bardoli Satyagraha:

- The no-tax movement that was launched in Bardoli taluq of Surat district in Gujarat in 1928.
- At the roots of the Bardoli satyagraha lay the cold truth that the principal concern of the colonial government was not to improve socio-economic conditions of the people, but to find the means of increasing tax collection.
- The protests were sparked by a report prepared by an Indian officer of the Provincial Civil Service who was directed by the governor's office to examine the extent to which the tax settlement of 1896 could be revised upward.
- Based on the report, government recommended an increase in land revenue by 30% over the existing assessment.
- Local population was angered by the recommendations of the report and the government was not in the mood to examine the situation from people's perspective.
- Thus, the resolution was passed in February 1928 under the leadership of Sardar Patel. He advised all occupants of land to refuse payment of the revised assessment until the Government appointed an independent tribunal or accepted the current amount as full payment.

As a response to the people's protest through Bardoli Satyagraha, an independent enquiry was conducted by a judicial officer, Broomfield, and a revenue officer, Maxwell. They came to the conclusion that the increase had been unjustified and reduced the enhancement to 6.03 per cent.

Source: <https://thewire.in/history/past-continuous-bardoli-satyagraha-became-turning-point-indian-nationalist-struggle>

India's Struggle for Independence by Bipin Chandra

Q.22) During the British Rule, Wagon Tragedy is associated with which of the following revolts?

- Direct Action Day
- The Travancore rebellion
- Mappila rebellion
- Royal Indian Navy Mutiny

Ans) c

Exp) Option c is the correct answer.

Recently a three-member review panel of the Indian Council of Historical Research (ICHR) proposed the removal of the martyrs of Wagon Tragedy from the compendium on martyrs of India's Freedom struggle.

Option c is correct. The **wagon tragedy** also known as wagon massacre was an incident which occurred **during the Malabar rebellion, also called Mappila Rebellion against British colonial rule in India that led to the deaths of 70 Indian prisoners.** In 1921, a rebellion against British colonial rule by Mappila Muslims broke out in the Malabar District of British India. Following the rebellion, 100 Mappila prisoners who had been taken into custody were ordered by the colonial authorities to be **transferred from the Malabar Coast**

to Podanur as the jails in the Malabar District were overcrowded. Thousands of Mappila prisoners were transported to other regions of British India during and after the rebellion via train, though they were typically transported in open-air carriages in order to prevent suffocation. However, **the 100 prisoners** (who were being transported in November of that year) were sent to Podanur **in a closed train carriage**, causing death of 70 prisoners.

Source : <https://www.thehindu.com/news/national/kerala/wagon-tragedy-victims-too-to-go-out-of-dictionary-of-freedom-struggle/article36120339.ece>

Q.23) Consider the following statements regarding the Government's Resolution on Education Policy of 1913:

1. The government decided to introduce free and compulsory primary education in a phased manner.
2. As per the policy it was decided to establish a university in each province.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

National leaders urged the Government to bring compulsory primary education like state of Baroda did in 1906. In this respect, Gokhale introduced a bill in March 1911 calling for the introduction of free and compulsory primary education in a phased manner. The bill was, however, rejected by a select committee. The government came up with its Resolution on Education Policy in 1913.

Statement 1 is incorrect: The government **refused to take up the responsibility of compulsory education** but accepted the policy of removal of illiteracy and urged provincial governments to take early steps to provide free elementary education to the poorer and more backward sections. Private efforts were to be encouraged for this and the quality of secondary schools was to be improved.

Statement 2 is correct: A **university**, was decided, to be established **in each province** and teaching activities of universities were to be encouraged.

Knowledge Base: Regarding women's education, it was suggested that there should be curriculum of practical utility for girls, and that examination of girls should not get much importance; however, there should be an increase in the number of women teachers and inspectors.

Source: Spectrum

Q.24) Consider the following statements regarding the Trade Union Act, 1926:

1. The Act explicitly defined the meaning of 'trade disputes'.
2. It provided detailed provisions for the registration of a trade union.
3. It prohibited members of trade unions from participating in any kind of political activity.

Which of the statements given above is/ are **incorrect**?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

Trade Unionism aims to collectively assert the rights of workers. The Trade Union Act, 1926 was enacted to provide recognition to trade unions as legal associations. It contains detailed rules regarding the registration and regulation of trade unions.

Statement 1 is correct: The Act defines the important terms like ‘trade disputes’, ‘trade unions’ etc. According to the Act, "trade dispute" means

“Any dispute between employers and workmen or between workmen and workmen, or between employers and employers which is connected with the employment or non-employment, or the terms of employment or the conditions of labour, of any person, and "workmen" means all persons employed in trade or industry whether or not in the employment of the employer with whom the trade dispute arises.”

Statement 2 is correct: The Act provided for detailed provisions regarding the registration of trade unions. It contains a dedicated Chapter (Chapter-II), which deals with the registration related matters like appointment of registrars, mode of registration, application for registration, cancellation of registration and so on.

Statement 3 is incorrect: The Act does not prohibit members from participating in political activities (it only provides certain regulations or restrictions). The Act even allows setting up of separate fund for political purposes. This fund can be used, for example, for the payment of expenses related to election of members to legislative bodies, local authorities, maintenance of any person who is a member of any legislative body, etc. Giving political representation to workers’ representatives has been one of the most important objectives of the trade union movement in India.

Source: <https://labour.gov.in/sites/default/files/TheTradeUnionsAct1926.pdf>

Q.25) Economic Survey 2022-23 has pointed major measurement issues in Female Labour Force Participation Rate. Which of the following statements highlight these issues?

1. Clubbing of productive work with domestic duties.
2. Periodic Labour Force Survey (PLFS) questionnaire relies mainly on a single question for measuring the labour force status of an individual.
3. It only measures work as a market product and does not include the value of women’s unpaid domestic work.

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Economic survey has pointed out that, the common narrative of Indian women’s low LFPR misses the reality of working females integral to the economy of the household and the country. Measurement of employment through the survey design and content can make a significant difference to final LFPR estimates.

Statement 1 is correct: Use of overly broad categories clubbing productive work (collection of firewood, poultry farming, etc.) with domestic duties can in one sweep shift a significant proportion of women in the labour force into the out-of- labour-force category. For example, unless the production of primary goods is identified as the main activity by the respondent, the PLFS questionnaire would categorize women who do both domestic activities and primary goods production/collection into ‘Activity Code 93,19 and thus out-of-the-labour-force.

Statement 2 is correct: No Recovery questions in the PLFS questionnaire. As, the survey design relies mainly on a single question for measuring the labour force status of an individual, which eliminates the scope to rectify any error in self-reporting, considering the large rural population and literacy levels. Contrary to ILO recommendations, there are no additional questions ('recovery questions') in the PLFS questionnaire to double-check individuals' labour force status, relying too much on how the individual self-identifies in the first instance.

Statement 3 is correct: Measurement of "Work" alongside "Employment". As, there is a need to broaden the horizon of measuring work, which constitutes the whole universe of productive activities alongside employment. According to the latest ILO standards, limiting productive work to labour force participation is narrow and only measures work as a market product. It does not include the value of women's unpaid domestic work, which can be seen as expenditure-saving work such as collecting firewood, cooking, tutoring children, etc, and contributes significantly to the household's standard of living.

Source: Economic Survey 2022-23, Chapter 6, Pg. 160.

Q.26) Consider the following statements regarding Lord Macaulay's Minute, 1835:

1. Lord Macaulay considered Indian learning as inferior to European learning especially in scientific knowledge.
 2. The minute advocated English education to be taught to masses through establishment of village schools.
- Which of the statements given above is/are correct?
- a) 1 only
 - b) 2 only
 - c) Both 1 and 2
 - d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The famous **Lord Macaulay's Minute** advocated the limited government resources were to be devoted to teaching of Western sciences and literature through the medium of English language alone.

Statement 1 is correct: Lord Macaulay held the view that "**Indian learning was inferior to European learning**"—which was true as far as physical and social sciences in the contemporary stage were concerned.

Statement 2 is incorrect: Lord Macaulay wanted the government to spend money only on imparting western education and not on oriental education. Lord Macaulay's Minute **never intended for the British government to teach English education to the masses** through village schools in India. On the contrary, he advocated that the **government try to educate only a few Indians**, who would in turn teach the rest of the masses. This is called the '**downward filtration**' policy. He also advocated the **shutting down of all colleges** where only eastern philosophy and subjects were taught.

Source: A Brief History of Modern India Revised and Enlarged Edition 2019 Chapter 30 Development of Education

Q.27) Which of the following were the objectives of All India Kisan Sabha, 1936?

1. Abolition of Zamindari.
2. Security of tenure for tenants.
3. Securing living wage for Agricultural labourers.
4. Complete abolition of land revenues.

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

In 1936, at the Lucknow session of the Congress, All India Kisan Sabha was formed with Swami Sahajanand as its first president and N.G. Ranga as its first General Secretary. The first session of All India Kisan Sabha was greeted in person by Jawaharlal Nehru.

Options 1,2 and 3 are correct: The All-India Kisan Sabha finalised a Kisan Manifesto in Bombay and formally presented it to the Congress Working committee to be incorporated into its forthcoming manifesto for the 1937 elections. The following were the items included by this manifesto,

- 1) Abolition of Zamindari
- 2) Security of tenure for Peasants
- 3) A living wage for Agricultural labourers
- 4) The recognition of Peasant Unions.

Option 4 is incorrect: Abolition of land revenue and rents is not the objective of the All India Kisan Sabha, rather the Saba demanded for 50% reduction in land revenue and rent.

Source: Bipin Chandra- Peasant Movements in the 1930s and 40s (pg no 345)

<https://egyankosh.ac.in/bitstream/123456789/44334/1/Block-6.pdf> (pg no 14 last para)

Q.28) Which among the following factors influenced the British India Government's policy regarding promotion of education in British India?

- 1. Agitation by enlightened Indians in favour of modern education.
- 2. Need of educated Indians at subordinate posts in the administration.
- 3. To expand market for British manufactures in India.

Select the correct answer using the codes given below:

- a) 2 and 3 only
- b) 1 and 2 only
- c) 1 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The measures taken by the government for the expansion of education in India were sheerly inadequate. Moreover, the steps taken by the rulers to promote education were inspired by the concerns other than philanthropic. The following factors influenced the education policy in India during British rule:

Statement 1 is correct: Agitation in favour of modern education by enlightened Indians, Christian missionaries, and humanitarian officials.

Statement 2 is correct: The need to ensure a cheap supply of educated Indians to man an increasing number of subordinate posts in administration and in British business concerns—thus there was an emphasis on English medium as the language of administration and of education.

Statement 3 is correct: The hope that educated Indians would help expand market for British manufactures in India. The British thus wanted to use modern education to strengthen the foundations of their political authority in India.

Source: Brief History of Modern India- Spectrum Publication. 2020 edition

Q.29) With reference to Santhal Rebellion, consider the following statements:

1. The primary reason behind the rebellion was the British policy of banning human sacrifice.
2. During the movement, Santhals proclaimed an end to the company rule.
3. Santhals enacted a parallel government to collect taxes and made its own laws.
4. After the rebellion, the British made it illegal for Santhals to transfer their land to non-Santhals.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 3 and 4 only
- d) 1 and 2 only

Ans) b

Exp) Option b is the correct answer.

The Santhal tribes are mostly distributed in Jharkhand, Odisha and West Bengal. The East India Company divided the **Damin-i-Koh from the Jharkhand area in 1832** and handed it to the Santhals to settle with the promise of non-interference in their country. However, the interference of Zamindar, Money lenders and British Land revenue policy made Santhals feel alienated from their lands and this led to Santhal rebellion (1855-56).

Statement 1 is incorrect: The British policy of **banning human sacrifices is not the main cause of Santhal rebellion**, instead it was the main cause of **Khond Uprisings (1837-1856)**. The main cause of Santhal rebellion are **exploitative practices of Money lenders, Zamindars and British Land revenue policy**.

Statement 2 is correct: **The Santhals explicitly declared an end to Company rule** and declared the territory between Bhagalpur and Rajmahal independent under the leadership of two brothers, **Sidhu and Kanhu Murmu**.

Statement 3 is correct: **It is true that Santhals created a Parallel government to collect taxes and to create their own laws to administer them**. This along with their resolve to overthrow company rule threatened British sovereignty in India. The result is the **ruthless suppression of the Santhal rebellion** by the British.

Statement 4 is correct: It is true that after the subsidence of Santhal rebellion, the **British made it illegal for Santhals to transfer their land to non santhals**. The British hoped that this measure would prevent the takeover of Santhal lands by the outsiders.

Also, after the Santhal Revolt (1855-56), **the British created the Santhal Pargana** by carving out 5,500 square miles from districts of Bhagalpur and Birbhum. The colonial state hoped that by creating a new territory for the Santhals and imposing some special laws within it, the Santhals could be conciliated.

Source: <https://ncert.nic.in/ncerts/l/lehs301.pdf> (pg no 272)

[http://www.indiancommunities.org/2019/08/01/santhals-rebellion-1855-](http://www.indiancommunities.org/2019/08/01/santhals-rebellion-1855-1856/#:~:text=In%20July%201855%2C%20under%20two,the%20company%20employees%20and%20officers.)

[1856/#:~:text=In%20July%201855%2C%20under%20two,the%20company%20employees%20and%20officers.](http://www.indiancommunities.org/2019/08/01/santhals-rebellion-1855-1856/#:~:text=In%20July%201855%2C%20under%20two,the%20company%20employees%20and%20officers.)

Q.30) Which of the following could be the consequences of 'Geomagnetic storm' in the Earth's magnetic field?

1. Disruption of global navigation systems
2. Creation of beautiful auroras in the skies
3. Damage to satellite electronics
4. Reversal of oceanic gyre circulation

Select the correct answer using the codes given below:

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 2 and 3 only
- d) 1, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Geomagnetic storms are disturbances in the Earth's magnetic field that are caused by the **interaction between the Earth's magnetosphere and solar wind**. The solar wind is a stream of charged particles that flows from the Sun and interacts with the Earth's magnetic field. When the solar wind encounters the Earth's magnetosphere, it can cause fluctuations and disturbances in the magnetic field, which can lead to a geomagnetic storm. The **consequences of 'Geomagnetic storm' in the Earth's magnetic field are:**

Option 1 is correct: Global navigation systems rely on precise measurements of the Earth's magnetic field to accurately determine location and orientation. Geomagnetic storms can **disrupt these systems by causing fluctuations in the magnetic field**, leading to errors in navigation and communication.

Option 2 is correct: Geomagnetic storms can cause **charged particles from the Sun to interact with the Earth's magnetic field, resulting in colorful displays of light known as auroras**. These are a natural and beautiful phenomenon that can be observed in regions near the Earth's poles.

Option 3 is correct: Geomagnetic storms can cause **damage to satellite electronics by inducing electrical currents** that can overload circuits and damage sensitive equipment. This can lead to communication disruptions, loss of data, and other issues that can impact satellite-based services and infrastructure.

Option 4 is incorrect: Oceanic gyre circulation is driven by a combination of factors, including the Earth's rotation, prevailing winds, and ocean currents. **Geomagnetic storms are not known to cause a reversal of oceanic gyre circulation**, which is a much larger and more complex process.

Source: <https://tech.hindustantimes.com/tech/news/geomagnetic-storm-hits-earth-solar-wind-sparks-red-auroras-in-us-71676635258970.html>

Q.31) With reference to Telangana movement, consider the following statements:

1. One of the reasons of the movement was subjugation of peasants into forced labour by landowners.
2. To bring peasant friendly reforms, Indian National Congress established Jagir Ryotu Sangham to pressurize the Government.
3. The movement experienced active participation of women.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The **Telangana Movement (1946-52)** of Andhra Pradesh was fought against the feudal oppression of the rulers and local landowners.

Statement 1 is correct: It is true that the **Telangana movement was largely a peasants' reaction against practise of forced labour (called Vetti)**. In addition to forced labour the illegal exaction and eviction of the poor tenants by the landowners were the major reasons behind Telangana movement.

Statement 2 is incorrect: Although the **Indian National Congress** along with Andhra Maha Sabha (AMS) raised the issue of poor condition of the peasantry of Telangana since late 1920, the active leadership role for this movement was given by AMS. It is **Andhra Mahasabha (not Congress) which established Jagir Ryotu Sangham** to pressure the Government to bring peasant friendly reforms in Telangana.

Statement 3 is correct: **Telangana movement experienced active participation of women** and exploitation of women by the upper caste landowners had become a prominent issue in these movements. **Armed women** defended themselves against the **razakar** ((state paramilitary wing of the Telangana government).
Source: <https://www.egyankosh.ac.in/bitstream/123456789/27280/1/Unit-31.pdf>
<https://www.cambridge.org/core/books/abs/telangana-peoples-struggle-and-its-lessons/women-in-the-telangana-movement/23DDD34D312DC29BA738B8E3C8E3C497#:~:text=Summary-,Women,-played%20an%20important>

Q.32) Consider the following statements with reference to the All-India Trade Union Congress (AITUC):

1. Chittaranjan Das was elected as the first president of AITUC.
2. It was influenced by social democratic ideas of the British Labour Party.
3. Its formation was supported by the Indian National Congress.

Which of the statements given above is/are correct

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

International events like the establishment of a socialist republic in the Soviet Union, formation of the Comintern and setting up of International Labour Organisation (ILO) lent a new dimension to the movement of the working class in India.

Statement 1 is incorrect: The All-India Trade Union Congress was founded on October 31, 1920. The Indian National Congress president for the year, **Lala Lajpat Rai, was elected as the first president of AITUC and Dewan Chaman Lal as the first general secretary.** The prominent Congress and swarajist leader **Chittaranjan Das (C.R. Das) presided over the third and the fourth sessions** of the AITUC.

Statements 2 and 3 are correct: The AITUC **was influenced by social democratic ideas of the British Labour Party.** The Gandhian philosophy of non-violence, trusteeship, and class-collaboration had great influence on the labour class movement aided by AITUC. **The Gaya session of the Congress (1922) welcomed the formation of the AITUC, and a committee was formed to assist it.**

Source: Page 587, Chapter 32 - The Movement of the Working Class of spectrum

Q.33) ‘The British Government, deeply worried about the rapidly growing communist influence, arrested some leaders including S.A. Dange and Ben Bradley under this case. The basic aim of the Government was to behead the trade union movement and to isolate the Communists from the national movement. The defence of the prisoners in this case was to be taken up by many nationalists including Jawaharlal Nehru.’
The above passage refers to which of the following conspiracy case?

- a) Meerut Conspiracy Case
- b) Lahore Conspiracy Case
- c) Kanpur Bolshevik Conspiracy case
- d) Delhi Conspiracy Case

Ans) a

Exp) Option a is the correct answer.

Option a is correct: The Government was deeply worried about the rapidly growing communist influence in the national and trade union movements. It decided to strike hard. In March 1929, it arrested thirty-two radical political and trade union activists of them three were Englishmen. The trial resulted in the conviction of Muzaffar Ahmed, S.A. Dange, Joglekar, Philip Spratt, Ben Bradley and others. The basic aim of the Government was to behead the trade union movement and to isolate the Communists from the national movement. The defence of the prisoners was to be taken up by many nationalists including Jawaharlal Nehru, M.A. Ansari and M.C. Chagla. Gandhiji visited the Meerut prisoners in jail to show his solidarity with them and to seek their cooperation in the coming struggle.

Option b is incorrect: In the **Lahore Conspiracy Case** all the charges including the **killings of Saunders and Chanan Singh, the Assembly Bomb Case and the setting up of bomb factories were put together**. On 17th December, 1928, **Bhagat Singh, Chandrashekhar Azad and Rajguru assassinated J.P. Saunders at Lahore**. The police was able to uncover the details of the Saunders assassination and Bhagat Singh, Sukhdev, Rajguru, and several others were tried in the Lahore Conspiracy case.

Option c is incorrect: The **communist groups** in cities of Calcutta, Bombay, Madras areas were **involved in organising the workers and educating them with communist ideology and politics**. So, **Kanpur-Bolshevik conspiracy case was master-minded to smash the budding communist organisation**. Leaders like S.A. Dange, Muzaffar Ahmed, Shaikat Usmani, Nalini Gupta—were jailed in the Kanpur Bolshevik Conspiracy.

Option d is incorrect: **Rashbehari Bose and Sachin Sanyal** staged a spectacular **bomb attack on Viceroy Hardinge** while he was making his official entry into the **new capital of Delhi** in a procession through Chandni Chowk in December **1912**. **Investigations following the assassination attempt led to the Delhi Conspiracy trial**.

Source: Bipan chandra-Indias struggle for independence—ch- The rise of the Left- Wing
<https://egyankosh.ac.in/bitstream/123456789/20636/1/Unit-10.pdf>

Q.34) The Butler Committee was established in December 1927. In this context, what was the purpose behind establishing the committee?

- To examine the recruitment process of Indian Civil Services (ICS).
- To report on the condition of provincial government and its powers.
- To report on the conditions and prospects of universities in India
- To examine the nature of relationship between the princely states and the government.

Ans) d

Exp) Option d is the correct answer.

Option d is correct: The Butler Committee (1927) was **set up to examine the nature of relationship between the princely states and government**. It was a three-member committee headed by Harcourt Butler. India's viceroy Irwin appointed the committee in December, 1927. It gave the following recommendations:

- Paramountcy must remain supreme and must fulfil its obligations, adopting and defining itself according to the shifting necessities of time and progressive development of states.
- States should not be handed over to an Indian Government in British India, responsible to an Indian legislature, without the consent of states.

Source: Page 606, Chapter 34 -The Indian State of spectrum.

Q.35) Which one of the following international organisations has recently released Services Trade Restrictiveness Index, 2022 (STRI)?

- World Trade Organisation
- Organization for Economic Co-operation and Development
- World Economic Forum
- International Monetary Fund

Ans) b

Exp) Option b is the correct answer.

Services Trade Restrictiveness Index (STRI) was launched in 2014 by Organization for Economic Co-operation and Development (OECD) and provides information on regulations affecting trade in services in 22 sectors across all member countries.

The regulatory database and indices are updated annually in December. There is also a Digital STRI that identifies, catalogues, and quantifies cross-cutting barriers that affect services traded digitally.

Scoring: This index takes values between zero and one, one representing a totally closed and zeros a fully open sector.

In the recent services trade restrictiveness index (STRI), **India's rank improved a notch to 47 from 48 among 50 countries surveyed by the Organization for Economic Co-operation and Development (OECD).**

Source: https://www.business-standard.com/article/economy-policy/india-s-rank-improves-in-oecd-services-trade-restrictiveness-index-123021601063_1.html

Q.36) Consider the following statements regarding the Indian Universities Act, 1904:

- The act gave government a veto power over universities' senate regulations.
- It had a provision of sanctioning five lakh rupees per annum for improvement of higher education and universities.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

In 1902, Raleigh Commission was set up to go into conditions and prospects of universities in India and to suggest measures for improvement in their constitution and working. The commission precluded from reporting on primary or secondary education. Based on its recommendations, the Indian Universities Act was passed in 1904. The main provisions of the act are discussed below:

Statement 1 is correct: According to the act, **government was to have powers to veto universities' senate regulations** and could amend these regulations or pass regulations on its own. The nationalists saw provisions of the act as an attempt to strengthen imperialism and to sabotage nationalist feelings.

Statement 2 is correct: According to the act, **five lakh rupees were to be sanctioned per annum for five years for improvement of higher education and universities.** Also, it made a provision that universities should give more attention to study and research.

Source: Brief History of Modern India- Spectrum Publication, 2020 edition

Q.37) In the context of modern history of India, which of the following statements is correct about the Moplah revolt, 1921?

- Forced religious conversion of Muslims is one of the major causes of this rebellion.

- b) Mahatma Gandhi initially supported this movement.
- c) The rebellion came to an end after the British passed a law to restore land rights to Muslim tenants.
- d) The movement remained largely as a nonviolent movement.

Ans) b

Exp) Option b is the correct answer.

The Moplah peasant movement was organised in 1921 among the peasants of Malabar district in Kerala. The **Moplah tenants were Muslims** and they agitated against the Hindu landlords and the British government.

Option a is incorrect: Forced **religious conversion of Muslims is not the reason** why Moplah rebellion was started. The major causes of the Moplah rebellion were,

- 1) Insecurity among tenants, due to an unfavourable land tenure system. It caused Moplahs to be ejected from their land without any appropriate notice.
- 2) High renewal of fees fixed by the Jenmis (landlords)
- 3) High rent fixed for Moplah and discriminating them against Hindu tenants

Option b is correct: It is true that **Mahatma Gandhi initially supported this movement**, however he **distanced himself** once the movement took a **violent and communal tone**. In the **early 1920s**, Mahatma Gandhi gave a call for non-cooperation and included the demand of Khilafat to achieve Hindu-Muslim unity and the Moplah rebellion gathered momentum after the launch of the Non-cooperation movement in Malabar region. The movement mainly targeted landlords (who were largely Hindus) and British officials.

Option c is incorrect: The **Moplah rebellion came to an end after the British suppression** of this movement. The British established a **special battalion called the Malabar Special Force** to suppress the riot and the British did not pass any law to restore the land holding rights to Muslim tenants.

Option d is incorrect: The Moplah rebellion was **largely a violent movement**, the rebellion's principal targets were Landlords and British officials. Some historical accounts state the uprising led to the **loss of around 10,000 lives, including 2,339 rebels**.

Source: <https://egyankosh.ac.in/bitstream/123456789/67775/1/Unit-8.pdf>

<https://indianexpress.com/article/explained/malabar-rebellion-of-1921-explained-7462838/>

Q.38) Recently, the term 'Financial Contagion' appeared in Economic Survey 2022-23. In the given context, which of the following statements best describes the term?

- a) It refers to negative impact of the banking sector issues on the overall economy
- b) It refers to the solutions provided for the recovery of economy from Recession.
- c) It is a disturbance in the banking system caused by cyber-attack.
- d) It is the spread of financial instability from one market or country to another.

Ans) d

Exp) Option d is the correct answer.

Option d is correct: A **Financial contagion is the spread of an economic crisis from one market or region to another and can occur at both a domestic or international level**. It often causes a domino effect on financial markets, financial institutions, and the broader economy.

- 1) Financial contagion can **occur due to various factors**, including the **interconnectedness of financial markets**, the **globalization of financial transactions**, the **proliferation of complex financial instruments**, and the **increased speed and volume of financial transactions**.
- 2) This may lead to a loss of confidence in the financial system and a rush to exit investments or liquidate assets.
- 3) The 1997 Asian financial markets crisis and the 2008 global financial crisis are the prime example of financial contagion.

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Source: <https://www.investopedia.com/terms/c/contagion.asp>
<https://world101.cfr.org/global-era-issues/monetary-policy-and-currencies/global-consequences-financial-contagion>
<https://www.oecd.org/economy/monetary/50556019.pdf>

Q.39) Which of the following statements is correct regarding the Policy of Subordinate Isolation?

- The Indian states surrendered all forms of external sovereignty but retained sovereignty in internal administration
- The Indian states retained external sovereignty but surrendered the rights of revenue collection
- The Indian states were forced to surrender sovereignty in the matters of external affairs as well as internal administration.
- The Indian states were allowed to retain external as well as internal sovereignty.

Ans) a

Exp) Option a is the correct answer.

Under the Policy of Subordinate Isolation of Britishers, **the Indian states were forced to surrender all forms of external sovereignty but retained sovereignty in internal administration.** The policy was **actively pursued during the period 1813-57.** This Policy marks the **emergence of the theory of 'Paramountcy'.** Under this policy, the British Residents in Indian States were elevated from diplomatic agents of a foreign power to executive and command officers of a superior government. **This was also a period of aggressive territorial expansion.** For instance, prior approval was required by the Indian States for the succession matters. In 1834, the Board of Directors of Company issued guidelines to annex states wherever and whenever possible.

Knowledge Base: Under the **Policy of Subordinate Union (1857-1935),** the Crown assumed paramount supremacy over Indian states. The British government has started to interfere in the internal affairs of the states, but abandoned the policy of annexation.

Source: Spectrum's A Brief History of Modern India (Page 641, Chapter 34)

Q.40) With reference to Raising and Accelerating MSME Performance (RAMP) scheme, consider the following statements:

- The scheme offers scope for concerned State governments to prepare their own plans to improve the growth of MSMEs.
- The World Bank provides funding support to this scheme based on the fulfilment of certain conditions by the government of India.
- At national level, Prime Minister Economic Advisory council acts as a nodal agency for this scheme.

Which of the statements given above are correct?

- 1 and 2 only
- 1 and 3 only
- 2 and 3 only
- 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The RAMP scheme aims at **improving access of MSMEs** to market and credit, technology upgradation and addressing issues of delayed payments and greening of MSMEs.

Statement 1 is correct: The RAMP scheme offers the scope for concerned State governments to prepare their own plan for the development of MSME sectors in the state. Important component of RAMP is

preparation of **Strategic Investment Plans (SIPs)**, in which **all States/UTs will be invited** to prepare their development plans for MSMEs and the funding will be based on the appraisal of this plan by the Ministry of MSME.

Statement 2 is correct: The World Bank provides funding support for this scheme. Of the total financial outlay of 6,062.45 crore, World bank provided **3750 crores as loans based on the fulfilment of following conditions** by the Government of India.

- 1) Implementing the **National MSME Reform Agenda**
- 2) Accelerating MSME Sector **Centre-State collaboration**
- 3) Enhancing effectiveness of Technology Upgradation Scheme (**CLCS-TUS**)
- 4) Strengthening Receivable **Financing Market** for MSMEs
- 5) Enhancing Effectiveness of **Credit Guarantee Trust** for Micro and Small Enterprises (**CGTMSE**) and **Greening and Gender** delivery
- 6) Reducing the incidence of **delayed payments**

Statement 3 is incorrect: At national level the **Ministry of Micro, Small and Medium enterprises (MoMSME) act as a nodal agency for this scheme, not PM Economic Advisory Council.** RAMP program will help setup a high-level **MSME Council, headed by the Minister for MSME** to enable better coordination between national and state-level programs and further it provides overall monitoring and policy overview of RAMP programme.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1811360>

Q.41) The increasing strength of trade union movements made the British Government to put legislative restrictions. In this context, consider the following statements regarding the Trade Disputes Act (TDA) of 1929:

1. It made it compulsory to appoint Conciliation Boards for settling industrial disputes.
2. It prohibited strikes in public utility services under any circumstance.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

During late 1920s, trade union movement in India was **influenced by strong communist forces.** Under the leadership of communists, there were **incidents of violence and other forms of extremism.** This compelled the British Government of India to enact the Trade Union Act (TDA), 1929.

Statement 1 is correct: The TDA made it compulsory to appoint Court of Inquiry as well as Conciliation Boards for settling industrial disputes. The objective of Conciliation Board was to resolve disputes amicably by arriving at a mutually acceptable solution. The conciliator function as a neutral third party who facilitate negotiations between the disputed parties.

Statement 2 is incorrect: Public utility services include posts, railways, water, electricity etc. The TDA made strikes in public utility services illegal. However, it was not illegal if each individual worker planning to go on a strike gave an advance notice of one month to the administration. Hence, **by giving a month's notice, even a worker in public utility service could go on a strike.**

Source: Spectrum's A Brief History of Modern India (Page 625, Chapter 32)

Q.42) Which of the following statements most appropriately describes the objective of the Policy of Ring Fence?

- To establish Paramountcy of the British Crown all over India.
- To make Indian rulers dependent on army and ammunition of the British.
- To create buffer zones to defend the Company's frontiers.
- To confiscate kingdoms where there is no specific legal heir.

Ans) c

Exp) Option c is the correct answer.

The Policy of Ring Fence was actively pursued by the Britishers in India during the period 1765-1813. It was introduced by **Warren Hastings**. The main aim of the Policy was to **create buffer zones to protect the Company's frontiers**. This was in the **backdrop of threats from Marathas and Afghans invaders**. To avoid possible invasion of Bengal and Company's stakes, the Britishers created Awadh as their buffer. The Britishers undertook to organize Awadh's defense to safeguard Bengal's security. The Policy was **further implemented by Wellesley in extended form**, where he sought to reduce states to a position of dependence on British Government in India.

Source: Spectrum's a Brief History of Modern India (Page 641, Chapter 34)

Q.43) With reference to the integration of Indian princely states, who were the 'Razakkars'?

- A paramilitary organization that was formed to oppose the idea of merger of Hyderabad with India.
- Military force of Junagarh state who fought against India.
- A tribal community in Northeast India known for their martial arts.
- Tribal militia who attacked Jammu and Kashmir opposing its integration with India.

Ans) a

Exp) Option a is the correct answer.

The Razakkars were a Muslim paramilitary organization that emerged in Hyderabad State in the late 1940s. They were formed to support the rule of the Nizam and opposed the idea of merging Hyderabad with India. The Razakkars were led by Kasim Razvi, who was also the founder of the Majlis-e-Ittehadul Muslimeen (MIM) party. The Razakkars were notorious for their violent attacks on Hindus and other minority communities in Hyderabad. After the Indian government launched a military operation in September 1948 to annex Hyderabad, the Razakkars were disbanded, and their leaders were arrested.

Source: India Since Independence by Bipin Chandra ch 6 The initial Years

Q.44) Who were Poligars, with reference to the history of India?

- Traditional landed militia in Odisha who enjoyed rent free land tenures for their military services.
- Feudal lords appointed as military chiefs and governors in Vijayanagara empire.
- Aboriginal tribesmen of the Jungle Mahal who were basically farmers and hunters.
- Low-caste peasants who followed the teachings of Aniruddhadeva.

Ans) b

Exp) Option b is the correct answer.

Polygars were a group in Southern India in the administration of various rulers who rose in revolt in the colonial period. Details are as follows:

Option a is incorrect - The Paiks of Odisha were the traditional landed militia ('foot soldiers' literally) and enjoyed rent free land tenures for their military service and policing functions on a hereditary basis. The English Company's conquest of Odisha in 1803, and the dethronement of the Raja of Khurda had greatly

reduced the power and prestige of the Paiks. The Paik Rebellion succeeded in getting large remissions of arrears, reductions in assessments, suspension of the sale of the estates of defaulters at discretion, a new settlement on fixed tenures and other adjuncts of a liberal governance.

Option b is correct - Polygars or Poligars (Palaiyakkarars) were feudal lords who were appointed as military chiefs and administrative governors from the time of the Vijayanagara Empire in parts of Southern India. (They were given the charge of a Palayam or a group of villages). It was the Polygars who collected taxes from the cultivators. But the East India Company came into conflict with the Polygars over the question of who should collect taxes, and sought to control the Polygars. The first rebellion, also called the First Polygar War broke out in September 1799 in Tirunelveli district in modern Tamil Nadu.

Option c is incorrect - Chuar aboriginal tribesmen of the Jungle Mahal of Midnapore district and also of the Bankura district (in Bengal) to take up arms. These tribes people were basically farmers and hunters. The Chuars were prominent in Manbhum and Barabhum, especially in the hills between Barabhum and Ghatsila. They held their lands under a kind of feudal tenure, but were not strongly attached to the soil, being always ready to change from farming to hunting, at the bidding of their jungle chiefs or zamindars.

Option d is incorrect - The revolt of the Moamarias in 1769 was a potent challenge to the authority of Ahom kings of Assam. **The Moamarias were low-caste peasants who followed the teachings of Aniruddhadeva (1553-1624),** and their rise was similar to that of other low-caste groups in north India. Their revolts weakened the Ahoms and opened the doors for others to attack the region, for instance, in 1792, the King of Darrang (Krishnanarayan), assisted by his band of *burkandazes* (the demobilised soldiers of the Muslim armies and zamindars) revolted.

Source: <https://www.livehistoryindia.com/story/people/the-polygar-heroes-of-tamil-nadu>

Q.45) Consider the following statements regarding Indian Antarctic Act, 2022:

1. The Act is applicable on a citizen of India as well a citizen of any other country.
2. According to the act, no permit is required to collect sample of mineral resources from Antarctic for the purposes of scientific research.
3. Commercial fishing in Antarctica is allowed only after obtaining permit from the appropriate authority.

Which of the statement(s) given above is/ are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 only
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

Recently, Indian Antarctic Act, 2022 has been passed. Its key objectives include having India's **own national measures** for protecting Antarctic environment, ensuring **de-militarization** of the region, getting rid of **mining** or illegal activities, management of growing Antarctic **tourism** and sustainable development of **fisheries**.

Statement 1 is correct: The Indian Antarctic Act, 2022 is applicable on **Indian citizens, citizens of foreign countries** and a **vessel or aircraft** registered in India or outside India. It is also applicable on a company, body corporate, corporation, partnership firm, joint venture, an association of persons or any other **entity incorporated, established or registered as such under any law in force in India.**

Statement 2 is incorrect: In general, drilling, dredging, excavating, collecting samples etc. of mineral resources is **not allowed**. However, **permission can be granted** for these activities for the purposes of **scientific research or construction, repair and maintenance of an Indian station or any other structure.** Hence, permit is required.

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Statement 3 is correct: Any person who intends to go to Antarctica for the purpose of **commercial fishing shall apply for a permit** to the appropriate authority.

Other regulated and prohibited activities:

Regulated Activities- 'Permit' is required	Absolute Prohibition
1) Indian expedition to Antarctica	1) Nuclear explosion or disposal of radioactive waste material
2) Indian station in Antarctica	2) Introducing non-sterile soil
3) Permit for vessel and aircraft entering Antarctica	3) Damage, destroy or remove any historic site or monument or any of its part
4) Permit for mineral resource activities.	4) Discharge of certain specified products or substances.
5) Permit for introducing non-native animals and plants into Antarctica.	5) Other specified activities
6) Permit for introducing microscopic organisms.	
7) Permit for discharge into sea.	
8) Permit for waste disposal.	
9) Permit to enter protected areas.	
10) Special permit for commercial fishing in Antarctica	
11) Other specified activities	

Knowledge Base:

Other important provisions of the Act:

- 1) **Background:** To give effect to the provisions of **Antarctic Treaty**, the **Protocol on Environment Protection (Madrid Protocol)** to the Antarctic Treaty and to the **Convention on the Conservation of Antarctic Marine Living Resources**. **India acceded to Antarctic Treaty system in 1983.**
- 2) Central Government shall establish a **Committee on Antarctic Governance and Environmental Protection**. This committee shall be chaired by the **Secretary, Ministry of Earth Sciences**.
- 3) This committee shall establish a **waste classification system and waste management plans**.

Important Facts about Antarctica

- 1) It is the southernmost continent, fifth largest in area and contains the geographic South Pole.
- 2) It is mostly uninhabited, except approximately 40 permanent stations established by several countries. **Maitri and Bharti are India's research stations** on the continent.
- 3) Native species of animals include **mites, nematodes, penguins, seals and tardigrades** etc. Vegetation occurs, mostly, in the form of **lichens and moss**.

Source:

https://prsindia.org/files/bills_acts/acts_parliament/2022/The%20Indian%20Antarctic%20Act,%202022.pdf

<https://pib.gov.in/PressReleasePage.aspx?PRID=1847047>

Q.46) Consider the following statements regarding the Bhil Uprisings of 19th century in colonial India:

1. The Bhil revolt was a series of uprisings that took place in present-day Bihar.
2. The Bhil rebels revolted against the British rule because of famine, economic distress and misgovernment.
3. The British used both force and conciliatory efforts to control the uprising.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Bhils were a tribal community that had traditionally relied on the forest for their livelihoods. However, with the arrival of the British colonial authorities, their access to forest resources was restricted, leading to resentment among the Bhil community.

Statement 1 is incorrect: The Bhil revolt was a series of uprisings that took place in the 19th century (in 1817-19, 1825, 1831 and 1846) in present-day Gujarat, Maharashtra and Rajasthan.

Statement 2 is correct: The Bhil rebels were led by tribal leaders who fought against the British colonial authorities for the rights of their communities, including the control over land and forests. They revolted against Company rule in 1817-19, as they had to face famine, economic distress and misgovernment.

Statement 3 is correct: The British government did respond to the Bhil revolt by increasing its military presence in the region, but it did not suppress the rebellion with only force. Instead, the British authorities negotiated with the Bhil leaders and offered them some concessions. Thus, they used both force and conciliatory measures to control the revolt.

Source: Spectrum's A brief History of Modern India Ch 6 pg 173

Q.47) With reference to Curzon's approach towards Princely states, consider the following statements:

1. He adopted the policy of patronage and intrusive surveillance towards princely states.
2. He thought that the relations between the states and the government were neither feudal nor federal.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Curzon stretched the interpretation of old treaties to mean that the princes, in their capacity as servants of people, were supposed to work side-by-side with the governor-general in the scheme of Indian government.

Statement 1 is correct: Curzon's policy towards Indian princes was characterized by a stretching of old treaties, which he interpreted to mean that the princes were to serve as allies to the governor-general in governing India. This approach involved patronage and intrusive surveillance by the British government.

Statement 2 is correct: He thought that the relations between the states and government were neither feudal nor federal, but a type not based on a treaty but consisting of a series of relationships having grown under different historical conditions that, in the course of time, gradually conformed to a single line.

Source: Spectrum's A brief History of Modern India Ch 25 pg 682

Q.48) With reference to Tribal Movements during British rule in India, consider the following pairs:

Movements : Leaders Associated

1. Khasi rebellion : Tirath Singh
2. Koya revolt : Alluri Sitarama Raju
3. Ramosi uprising : Bhima Nayak
4. Khond Uprisings : Chakra Bisoi

How many of the above given pairs are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All the four pairs

Ans) b

Exp) Option b is the correct answer

- 1) Khasi rebellion : Tirath Singh
- 2) Koya revolt : Tomma sora
- 3) Ramosi uprising : Chittur Singh
- 4) Khond Uprisings : Chakra Bisoi

Pair 1 is correctly matched: The Khasi people in present-day Meghalaya revolted against British rule from 1829 to 1833, led by their chief Tirath Singh. They opposed the British imposition of taxes and interference in their social and cultural practices. The British eventually defeated the Khasi rebels and established their authority over the region.

Pair 2 is incorrectly matched: The Koyas of the eastern Godavari track (modern Andhra), joined by Khonda Sara chiefs, rebelled in 1803, 1840, 1845, 1858, 1861 and 1862. They rose once again in 1879-80 under Tomma Sora.

Pair 3 is incorrectly matched: The Ramosis, a hill tribe of the Western Ghats, did not accept British rule and resented their policies. They revolted under Chittur Singh in 1822 after losing their means of livelihood with the annexation of Maratha territories.

Pair 4 is correctly matched: The Khond uprisings took place from 1837 to 1856 in the hilly tracts extending from Odisha to the Srikakulam and Visakhapatnam districts of Andhra Pradesh against the British Company rule. The uprising was led by a young raja named Chakra Bisoi and the Khonds were joined by others in their revolt.

Source: Spectrum's A brief History of Modern India Ch 6 pg 170-177

Q.49) With regard to Jungle Mahal Revolt, which of the following statements is/are correct?

1. Those participated in the revolt included farmers and hunters.
2. Durjan Singh was the leader of the revolt.
3. This revolt primarily occurred in the Chota Nagpur region.

Select the correct answer using the codes given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

The Chuar uprising was also known as the Revolt of Jungle Mahal. This uprising was a series of revolts that took place between 1771 and 1809.

Statement 1 is correct: The Chuars were Bhumij tribes descended from the Mundari mainstream. After leaving the Chotanagpur plateau, they settled in considerable numbers in the Bengal districts of Midnapur, Bankura, and Purulia. These people were **primarily farmers and hunters**, with some working for local zamindars. The individuals involved in the uprisings were all connected to the land in some way: **zamindars, paiks, and common Chuars**.

Statement 2 is correct: **Leader of the Chuar revolt was Durjan Singh**, a displaced Zamindar who along with his 1500 followers created havoc.

He established his rule over 30 villages and attacked the East India Company establishments. The British was able to suppress the rebellion with utmost cruelty and deceit with the help of local landlords. Around 200 rebels were executed in the process.

Statement 3 is incorrect: The Chuars lived in Jungle Mahal of **north-western Midnapur**. The revolt covered **Midnapur, Bankura, Birbhum and Dhalbhum**.

Source: <https://imp.center/i/tribal-revolts-india-2743/>
Spectrum Revised edition 2019 chapter-6 page-155, 156

Q.50) The Union Budget 2023-24 aims to make India a global hub for 'Shree Anna'. In this context, which of the following groups of crops contain only items referred to as 'Shree Anna'?

- Kodo, Proso and Foxtail
- Lentils, Chickpeas and Vetches
- Chickpea, Sorghum and Kodo
- Vetches, Foxtail and Proso

Ans) a

Exp) Option a is the correct answer.

In Budget 2023-24, millets have been referred to as 'shree anna'. India is the leading producer and consumer of the millets. Consumption of millets leads to food and nutritional security, in addition to the welfare of the farmers. **The Budget aims to make India a global hub of millets.** On India's initiative, United Nations has declared the year **2023 as the 'International Year of Millets'**.

Option a is correct: All the three items- Kodo, Proso and Foxtail are the different varieties of millets.

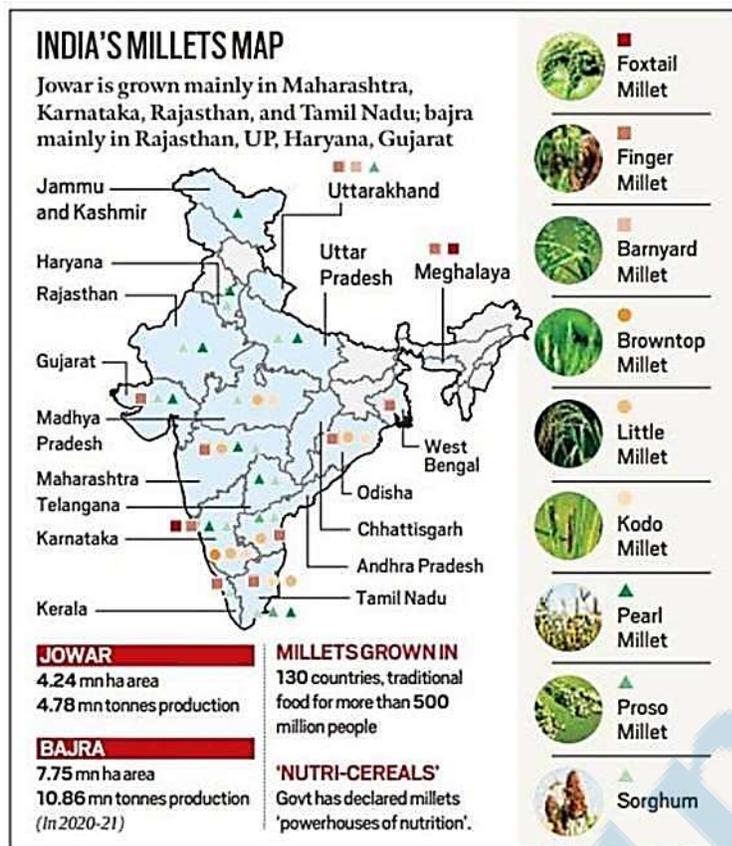
Option b is incorrect: All the three items- lentils, chickpeas and vetches are the different varieties of pulses.

Option c is incorrect: Sorghum and Kodo are the millet varieties, but chickpea is a variety of pulses.

Option d is incorrect: Foxtail and Proso are the millet varieties, but vetches are a variety of pulses.

A brief account on millets:

Earliest evidence of millets is **found in Indus Valley Civilization (3000 BC)**. Millets are a group of **small seeded grass that are grown for their grains**, which are used as both for humans and animals. Millets are good source of **proteins, fiber and essential nutrients**. They are also used as staple food in various parts of the world where other grains are scarce. They are called as **famine reserves** as they can grow in very little rainfall. Millets are **environmentally sustainable crops** as they require less water and are resistant to pests and diseases. Different types of millets are:



(Source: Indian Express)

Source: <https://krishijagran.com/agripedia/know-about-different-types-of-millet/>

https://www.indiabudget.gov.in/doc/budget_speech.pdf

<https://blog.forumias.com/millet-production-in-india/>

Q.1) Which of the following were the recommendations of the Royal Commission on Decentralisation (1908)?

1. Village panchayats should be entrusted with more powers and adequate sources of income.
2. Withdrawal of existing restrictions on the taxation powers of local bodies.
3. The municipalities should undertake the responsibility for higher education.

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The Royal Commission upon Decentralization in India was appointed on 12 September 1907 to inquire into the relations now existing for financial and administrative purposes between the Government of India and the various Provincial Governments in India, and between the Provincial Governments and the authorities subordinate to them and to report whether, by measures of decentralization or otherwise, those relations can be simplified and improved.

Statement 1 is correct: It emphasized that village panchayats should be entrusted with more powers like judicial jurisdiction in petty cases, incurring expenditure on minor village works, village schools, small fuel and fodder reserves, etc. The panchayats should be given adequate sources of income.

Statement 2 is correct: It urged the withdrawal of existing restrictions on local bodies powers of taxation. It also recommended the stoppage of regular grants-in-aid from provincial governments except for undertaking large projects.

Statement 3 is incorrect: The municipalities might undertake the responsibility for primary education and, if willing, for middle vernacular schools (but not higher education). If it could not be done then the government should relieve them of any charges in regard to secondary education, hospitals, relief, police, veterinary works, etc.

Source: Chapter 26: Constitutional, Administrative, and Judicial Developments (Spectrum)

Q.2) In the context of the economic impact of the British rule in India, consider the following statements:

1. India became a net importer of finished goods and an exporter of raw materials.
2. The development of railways in India led to an industrial revolution in India which led to the growth of Indian manufacturing industries.
3. Initially, the railway was developed in India to allow easier access of markets and raw materials to the British.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

British rule in India caused a transformation of India's economy into a colonial economy, i.e., the structure and operation of Indian economy were determined by the interests of the British economy. The capital development led by Britishers in India was seen from separate spectacles by the analyst and economists from India and Britain.

Statement 1 is correct: The Nationalists like Dadabhai Naoroji, R. C. Dutt and others exposed the force of British arguments that the growth of foreign trade and railways implied development for India. **They pointed out that the pattern of foreign trade was unfavourable to India. It relegated India to a position of importer of finished goods and exporter of raw materials and foodstuffs.**

Statement 2 is incorrect: These nationalists argued that **the development of railways was not coordinated with India's industrial needs, and it ushered in a commercial rather than an industrial revolution.** The net effect of the railways was to enable foreign goods to outsell indigenous products. Further, the benefits from impetus to steel, machinery and capital investment in railways accrued to the British. G.V. Joshi remarked, "Expenditure on railways should be seen as an Indian subsidy to British industries."

Statement 3 is correct: The initial advocates for developing railways in India were the mercantile interests in London and Manchester. The expectation was railways would lower transport costs and allow English merchants easier access to raw cotton from India. Simultaneously railways would open Indian markets to British manufactured products such as cotton textiles. Neither the railway promoters nor the East India Company envisioned much of a demand for passenger traffic at that time. **Hence, initially the British envisaged railways in India to get better and easier access to local market rather than cater to the local passenger demands.**

Source: Spectrum: A Brief History of Modern India, Chapter 29, Economic Impact of British Rule in India.

Q.3) Consider the following statements regarding the evolution of civil services under the British Rule:

1. Lord Cornwallis tried to check corruption in administration by raising the civil servants' salary.
2. The Pitts' India Act of 1784 provided for the formation of a Federal Public Service Commission and Provincial Public Service Commissions.
3. The Charter Act of 1853 provided recruitment of civil servants through an open competition.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The civil service system introduced in India by the East India Company for the benefit of its commercial affairs got transformed into a well-structured machinery to look after the administrative affairs of the acquired territories in India. Gradually, the civil servants were bestowed with other responsibilities and authority. Some of the major reforms in the domain of civil service are discussed below:

Statement 1 is correct: Cornwallis (governor general, 1786–93) was the first to bring into existence and organise the civil services. He tried to check corruption through:

- 1) raising the civil servants' salary;
- 2) strict enforcement of rules against private trade;
- 3) debarring civil servants from taking presents, bribes etc.

Statement 2 is incorrect: The 1935 Act proposed the formation of a Federal Public Service Commission and a Provincial Public Service Commission within their respective spheres. However, positions of control and authority remained in British hands, and the process of Indianisation of the civil service did not provide Indians with effective political power because Indian bureaucrats acted as agents of colonial rule.

Statement 3 is correct: The 1853 Charter Act ended the Company's patronage, enjoining **recruitment to be through an open competition henceforth.** Although the Charter Act of 1833 theoretically threw open the services to the Indians, the relevant provisions were never really implemented.

Source: A brief history of modern India- Spectrum Publication- 2020 Edition

Q.4) The British imperialism and colonisation of Indian economy led to deindustrialisation in India. In this context, consider the following statements.

1. In 1813, British prohibited ships above 350 tonnes from sailing between India and Britain to restrict Indian exports to British market.
2. The Indian steel industry was not allowed to produce a higher standard steel.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The British imperialism and colonisation of Indian economy led to destruction of local industries, and also delayed the development of modern industries in India. It led to a lopsided industrial development which neglected core and heavy industries and was focussed on strategic destruction of the local industry for colonial benefits.

Statement 1 is incorrect: A thriving ship-building industry in India was crushed by the British. The British ships contracted by the Company were given a monopoly over trade routes, while even the Indian merchant ships plying along the coast were made to face heavy duties. **In 1813, a law by the British parliament prohibited ships below (not above) 350 tonnes from sailing between India to Britain;** this effectively put a large proportion of Bengal built ships out of commission on the Indo-British trade routes.

Statement 2 is incorrect: The Indian steel industry was also decisively destroyed by the British by putting stringent restrictions. **The Indian industries like Tata and others had received permission with the forced restriction of producing a higher standard of steel for British use.** Hence, at the same time the firms were unable to produce the lower standard of steel, to meet the demands of the local market for lower quality steel.

Source: Spectrum: A Brief History of Modern India, Chapter 29, Economic Impact of British Rule in India.

Q.5) India is an active member of the Financial Stability Board having three seats in its Plenary represented by which of the following?

1. Finance Minister of India
2. Secretary of Department of Economic Affairs
3. Deputy Governor of Reserve Bank of India
4. Chairman of Securities and Exchange Board of India
5. Chief Executive Officer of Niti Aayog

Select the correct answer using the codes given below:

- a) 1, 2 and 4 only
- b) 1, 3 and 5 only
- c) 2, 3 and 4 only
- d) 2, 4 and 5 only

Ans) c

Exp) Option c is the correct answer.

Financial Stability Board (FSB) is an international body that monitors and makes recommendations about the global financial system. It was **established in April 2009 after the G20 Summit in London as the successor to the Financial Stability Forum.**

Option 2, 3 and 4 are correct. The Plenary serves as the sole decision-making body. India is an active Member of the FSB, having **three seats in its Plenary represented by Secretary (Dept of Economic Affairs), Deputy Governor-RBI, and Chairman-SEBI.**

The board includes all G20 major economies. The FSB consists of 68 member institutions. It comprises several central banks, ministries of finance, and supervisory and regulatory authorities from 25 jurisdictions, as well as 10 international organizations and six Regional Consultative Groups (RCGs). The FSB's decisions are **not legally binding on its members.**

Source: <https://www.livemint.com/news/india/india-asks-imf-fsb-to-prepare-technical-paper-on-regulating-crypto-11677321328384.html>

<https://dea.gov.in/sites/default/files/NoteFSB.pdf><https://dea.gov.in/sites/default/files/NoteFSB.pdf>

Q.6) Which of the following were the important items of export from British India during the latter half of the nineteenth century?

1. Opium
2. Indigo
3. Sugar
4. Jute

Select the correct option for the codes given below.

- a) 1, 2 and 3 only
- b) 1, 3 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

In the latter half of the nineteenth century, the British rule led commercialisation of the Indian agriculture. Prior to this, agriculture was seen as a mean of subsistence and not as a business enterprise. However, now it was influenced by commercial market forces. Certain specialised crops began to be grown not for consumption in the village but for sale in the national and even international markets.

During this period Opium, Indigo, Sugar, raw cotton and jute were the major commodities exported by India.

Option 1 is correct: Opium was traded by the British East India company which even established a monopoly on opium cultivation in the Indian province of Bengal, where they developed a method of growing opium poppies cheaply and abundantly.

Option 2 is correct: Indigo was one of the major items of exports during British era. In 1788 only about 30 per cent of the indigo imported into Britain was from India. By 1810, the proportion had gone up to 95 per cent. As the indigo trade grew, commercial agents and officials of the Company began investing in indigo production. In the year 1895-96, the export of indigo from India was recorded 9366 tonnes.

Option 3 is correct: Sugar was seen as an important commodity of export from India. Since, the tropical climate of the Indian subcontinent aided sugarcane cultivation, it was promoted as a plantation crop in India.

Option 4 is correct: Both raw jute and jute products constituted a significant portion of India's export economy during the nineteenth century. **In the 1850s roughly £250,000 of jute products were exported annually. Jute was an export material demanded by Southeast Asia which was fulfilled by Indian exports.**

Source: Spectrum: A Brief History of Modern India, Chapter 29, Economic Impact of British Rule in India.

Q.7) Which of the following personalities was/were associated with the Women's Indian Association?

1. Margaret Cousins
2. Sarojini Naidu
3. Kamaladevi Chattopadhyay
4. Annie Besant
5. Muthulakshmi Reddy

Select the correct answer using the code given below:

- a) 1, 2 and 5 only
- b) 2, 3 and 4 only
- c) 1, 3, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

Women's Indian Association was formed on 8th May **1917** at Adyar, Chennai. It was one of the first Women's Association, which brought all Indian women together for mutual assistance. The main aim of the organization was to obtain women's franchise to represent in the local state and central legislatures and achieved it in the year 1930.

Margaret Cousins, Kamaladevi Chattopadhyay, Annie Besant, Sarojini Naidu, Muthulakshmi Reddy, and others, set up the Women's Indian Association (WIA) at Adyar, Madras. On May 8, 1917 the Women's Indian Association(WIA) was established by Dorothy Jinarājadāsa, with **Annie Besant** as President and **Margaret Cousins as the Honorable General Secretary**.

On 18 December 1917, the WIA sent a **delegation led by Sarojini Naidu** (1879–1949) to Edwin Montagu, secretary of state for India. Representing themselves as Indian women who had awakened to their civic responsibilities, they requested female suffrage on a par with men in the expanded provincial legislatures as a part of the forthcoming Government of India Act of 1919.

Muthulakshmi Reddy became the president of Women's India Association in 1931 and President of the All-India Women's Conference in 1933.

Source: <https://clpr.org.in/blog/the-womens-indian-association-and-india-constitutional-thought-part-i/>

<https://mmhapu.ac.in/doc/eContent/Education/RinkiKumari/Sep2020/Sarojini%20Naidu's%20Contribution%20to%20Women's%20Empowerment.PDF>

Q.8) With reference to evolution of police system in modern India, consider the following statements:

1. Cornwallis relieved the zamindars of their police duties.
2. A Department of Criminal Intelligence (DCI) was introduced during the tenure of Lord William Bentinck.
3. The Police Commission 1902–03 recommended the appointment of Indians at the officer level.

Which of the statements given above is/are correct?

- a) 1 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

An account of steady developments in the police system under the British have been given below:

Statement 1 is correct: Cornwallis organised a regular police force to maintain law and order by going back to and modernising the old Indian system of thanas (circles) in a district under a daroga (an Indian) and a superintendent of police (SP) at the head of a district. **He relieved the zamindars of their police duties.**

Statement 2 is incorrect: Lord Curzon set up the **Police Commission under Sir Andrew Frazer** which recommended some far-reaching police reforms. It suggested for creating a Criminal Intelligence Department at the Centre. Following the recommendations, the Department of Criminal Intelligence (DCI) was attached to the Government of India, and it became the central domestic and foreign intelligence agency. **Hence, DCI was introduced during the period of Lord Curzon in 1902 (not during the tenure of Lord William Bentinck).**

Statement 3 is correct: Police commission 1902-03 under Sir Andrew Frazer, provided for the appointment of educated Indians to the position of officers in the police force; but they “stopped in rank where the European officer began”.

He said, **“We require Englishmen as well as Indians in the higher ranks of the police in the interests of good administration;** and we require from both classes of men the same qualifications, intelligence and capacity for work, knowledge of and sympathy with the people, self-reliance and resourcefulness, sober judgement and promptitude.” We all honestly desire to combine European discipline and methods of work with the Indian's intimate knowledge of the habits and manners of his own people; and this object can be **secured only by the selection of an adequate number both of Europeans and Indians in the higher police service.**

Source: Chapter 26: Constitutional, Administrative, and Judicial Developments (Spectrum)

<https://13angle.com/police-reforms-and-their-top-13-interesting-facts/>

<https://police.py.gov.in/Police%20Commission%20reports/THE%20INDIAN%20POLICE%20COMMISSION%201902-03.pdf>

Q.9) To prevent the recurrence of another 1857 like revolt, which of the following measures had been taken by the British?

1. Strict European monopoly over key geographical locations and departments was maintained.
2. An ideology of ‘martial races’ and ‘non-martial races’ was introduced in military recruitments.
3. Indian soldiers were prevented from reading newspapers and journals.

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The military was the backbone of the Company's rule in India. Prior to the revolt of 1857, there were two separate sets of military forces under the British control, which operated in India. The first set of units known as the Queen's army, were the serving troops on duty in India. The other was the Company's troops – a mixture of European regiments of Britons and Native regiments recruited locally from India but with British officers.

Statement 1 is correct: Strict European monopoly over key geographical locations and departments, such as artillery, tanks, and armed corps, was maintained. Even the rifles given to Indians were of an inferior quality till 1900, and Indians were not allowed in these high-tech departments till the Second World War.

Statement 2 is correct: An ideology of ‘martial races’ and ‘non-martial races’ was introduced. It assumed that good soldiers could come only from some specific communities. It was used to justify a discriminatory recruitment policy directed towards Sikhs, Gurkhas, and Pathans (**martial races**) who had assisted in the

suppression of the revolt and were relatively marginal social groups. Therefore, less likely to be affected by nationalism. The soldiers from Awadh, Bihar, Central India, and South India who had participated in the revolt were declared to be **non-martial**.

Statement 3 is correct: Conscious efforts were made to isolate the Indian soldiers from life and thoughts of rest of the population **through measures such as preventing newspapers, journals, and nationalist publications from reaching them.**

Source: Chapter 26: Constitutional, Administrative, and Judicial Developments (Spectrum)

Q.10) Which one of the following options is **incorrect** about Mahila Samman Saving Certificate, proposed in Union Budget 2023-24?

- Savings can be done only in the name of a girl child or women.
- There is no maximum deposit limit under the Mahila Samman Saving Certificates.
- It is a one-time scheme with a tenure of two years.
- A partial withdrawal of funds can be done before the maturity of the scheme.

Ans) b

Exp) Option b is the correct answer.

Mahila Samman Savings Certificate scheme is a small savings scheme backed by the government. Scheme will give a **fixed interest rate of 7.5%**, much higher than most bank Fixed Deposits (FDs) and other popular small savings schemes.

Option a is correct: The Mahila Samman Savings Certificate can be **done only in the name of a girl child or woman**, unlike other small saving schemes like Public Provident Fund (PPF), National Savings Certificate (NSC), Senior Citizens Small Savings Scheme (SCSS) and Sukanya Samridhi Yojana (SSY)

Option b is incorrect: The maximum deposit amount under the Mahila Samman Savings Certificate is Rs.2 lakh. The minimum amount is yet to be specified.

Option c is correct: This scheme is a one-time scheme with a tenure of two years. This scheme will be available for two years, i.e., from 2023 to 2025.

Option d is correct: A partial withdrawal facility is provided under the Mahila Samman Saving Certificate scheme. Hence, it allows for premature withdrawal of the deposits.

Source: <https://cleartax.in/s/mahila-samman-saving-certificate>
Union Budget Speech 2023-24

Q.11) Consider the following statements regarding the development of Civil Services in India under British Rule:

- Lord Cornwallis tried to reform civil services through strict enforcement of rules against private trade by civil servants.
- Lord Curzon set up Fort William College in 1800 for training new recruits.
- The Lee Commission (1923) was appointed to study ethnic composition of Government of India's superior public services.

Which of the statements given above is/are correct?

- 1 and 2 only
- 1 only
- 2 and 3 only
- 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

The **civil service system** introduced in India by the East India Company for the benefit of its **commercial affairs and** to look after the administrative affairs of the acquired territories in India. European supremacy was assured in the civil service as in other spheres of governance.

Statement 1 is correct: Lord Cornwallis was one of the first administrators to bring into existence and organise the civil services. He tried to check corruption through **raising the civil servants' salary, strict enforcement of rules against private trade**, debarring civil servants from taking presents, bribes etc. and enforcing promotions through seniority.

Statement 2 is incorrect: In 1800, Lord Wellesley (and not Lord Curzon) set up Fort William College for the training of new recruits. In 1806 Wellesley's college was disapproved by the Court of Directors and instead the **East India College was set up at Haileybury in England to impart two years' training to the recruits.** So, statement 2 is incorrect.

Statement 3 is correct: The Lee Commission was established in 1923 under the chairmanship of Lord Lee, with an equal number of Indian and British members, **with the goal of studying the ethnic/racial composition of the government of India's superior public service.** In 1924, it submitted its report. The commission reviewed the existing position of two groups of services, **the All-India Services and the Central Services**, as well as the recommendations of the Islington Commission report (1912). Provincial Services were not considered because they had already been taken over by provincial governments.

Knowledge Base: Although the **Charter Act of 1833** theoretically **threw open the services to the Indians**, the relevant **provisions were never really implemented.** After 1857, when the Indians claimed a share in higher services, the **Proclamation of 1858 declared the British intention of including the Indians, freely and impartially**, in offices under the civil service.

The Aitchison Committee on Public Services (1886) recommended dropping the terms covenanted and uncovenanted and **raising the age limit to 23.**

Source: Chapter-26: Constitutional Administrative and Judicial Developments, A brief history of modern India by Rajiv Ahir

Q.12) Which of the following statements most appropriately represent the impact of 'economic drain' from India by the British?

1. It deprived India of its productive capital.
 2. Domestic capital formation in India was stalled.
 3. It led to a fall of Indian handicraft industry.
- Select the correct option from the codes given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Dadabhai Naoroji, the 'Grand Old Man of India' put forward the theory of economic drain in Poverty and Un-British Rule in India. The term 'economic drain' refers to a portion of national product of India which was not available for consumption for its people but was being drained away to Britain for political reasons and India was not getting adequate economic or material returns for it.

Statement 1 is correct: The drain theory incorporated all threads of the nationalist critique that it **denuded India of its productive capital. According to nationalist estimates, the economic drain at that time was more than the total land revenue**, or half the total government revenue, or one third of the total savings (in today's terms, it amounted to 8 per cent of the national product).

Statement 2 is correct: The drain of wealth checked and retarded capital formation in India while the same portion of wealth accelerated the growth of British economy. The surplus from British economy re-entered India as finance capital, further draining India of its wealth. Now the profits earned on the same invested capital also flew out of India, rather than reinvesting the same here. This had immense effect on income and employment potential within India.

Statement 3 is correct: The nationalists claimed that one-way free trade was ruining Indian handicrafts industry, exposing it to premature, unequal and unfair competition, while tariff policy was guided by British capitalist interests. Hence, the domestic handicraft industry couldn't compete with the mechanised craft of the west and succumbed to the British drain of wealth.

Source: Spectrum: A Brief History of Modern India, Chapter 29, Economic Impact of British Rule in India.

Q.13) Consider the following statements regarding the developments after the Battle of Buxar:

1. Robert Clive introduced the dual system of government in Bengal.
2. East India Company got diwani rights of Bengal, Bihar and Orissa.
3. British completely annexed Awadh by defeating its ruler Siraj-Ud-Daulah.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Robert Clive concluded two important treaties at Allahabad in August 1765—one with the Nawab of Awadh and the other with the Mughal Emperor, Shah Alam II. The combined armies of Mir Kasim, the Nawab of Awadh and Shah Alam II were defeated by the English forces under Major Hector Munro at Buxar on October 22, 1764, in a closely contested battle. The importance of this battle lay in the fact that not only the Nawab of Bengal but also the Mughal Emperor of India was defeated by the English. Buxar is a city located on the banks of river Ganga in the state of Bihar.

Also, the British government decided to regulate the Company to bring some order into its business.

Statement 1 is correct: After the battle of Buxar, the East India Company became the real power center in Bengal. **Robert Clive introduced the dual system of government, i.e., the rule of the two—the Company and the Nawab—in Bengal.**

Statement 2 is correct: Under the Treaty of Allahabad emperor Shah Alam-II had to issue a Farman granting the Diwani of Bengal, Bihar and Orissa to the East India Company in lieu of an annual payment of Rs 26 lakh.

Statement 3 is incorrect: After the Battle of Buxar, English did not annex Awadh even after Shuja-Ud-Daulah was defeated because it would have placed the Company under an obligation to protect an extensive land frontier from the Afghan and the Maratha invasions. So, statement 3 is incorrect.

Knowledge Base: The dual system **led to an administrative breakdown** and proved disastrous for the people of Bengal. Neither the Company nor the Nawab cared for administration and public welfare. **Warren Hastings did away with the dual system in 1772.**

Source: Chapter-26: Constitutional Administrative and Judicial Developments, A brief history of modern India by Rajiv Ahir

Q.14) Which of the following statements are correct regarding the Regulating Act of 1773?

1. It recognized the East India Company's role in administrative and political fields in India.
2. It took away all the legislative powers of the Governors of Madras and Bombay.
3. The Supreme Court was established in Bengal under this Act.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

East India Company officials had become super-rich while working in India. Many people in Britain feared that they could upset the political environment of their country. Thus, the Regulating Act of 1773 was implemented to overhaul the management of the East India Company's rule in India.

Statement 1 is correct: The 1773 Regulating Act recognized that the Company's role in India extended beyond mere trade to administrative and political fields, and introduced the element of centralized administration as it empowered the Governor-General-in Council to frame regulations for the Provincial Courts and Councils. The governor-general could exercise some powers over Bombay and Madras. The first such Governor General was Lord Warren Hastings.

Statement 2 is incorrect: Under the Charter Act of 1833, Bengal, Madras, Bombay and all other territories were placed under complete control of the governor-general. The Governments of **Madras and Bombay were deprived of their legislative powers** and left with a right to propose to the governor-general the projects of law which they thought to be expedient. It was not done under the Regulation Act of 1773. So, statement 2 is incorrect.

Statement 3 is correct: A Supreme Court of judicature (comprising one chief justice and three other judges) was to be established in Bengal with original and appellate jurisdictions where all subjects could seek redressal. In practice, however, the Supreme Court had a debatable jurisdiction vis-a-vis the council which created various problems.

Source: Chapter-26: Constitutional Administrative and Judicial Developments, A brief history of modern India by Rajiv Ahir

Q.15) Consider the following statements:

1. It is a traditional folk-dance form popular in Coastal Karnataka.
2. Traditionally, men used to portray all roles, including the roles of females, though women are now part of the troupes.
3. Each performance typically focuses on a small sub-story from ancient Hindu epics of Ramayana or Mahabharata.

Which one of the following art-forms is correctly described in the above given statements?

- a) Villu Paatu
- b) Bayalata
- c) Yakshagana
- d) Theyyam

Ans) c

Exp) Option c is the correct answer.

Recently, the Prime Minister of India has expressed deep grief over the demise of noted Yakshagana playback singer, Shri Balipa Narayana Bhagawatha.

Yakshagana is a **traditional folk-dance form popular in Coastal Karnataka**. It is a rare combination of dance, music, song, scholarly dialogues and colourful costumes. Traditionally, **men portray all roles, including the female ones, though women are now part of Yakshagana troupes**. A typical troupe consists of 15 to 20 actors and a Bhagawatha, who is the master of ceremonies and the main storyteller.



Yakshagana

- 1) Each performance typically focuses on a small sub-story (known as 'Prasanga') from ancient Hindu epics of Ramayana or Mahabharata. The show consists of both stage performances by talented artists and commentary (performed by the lead singer or Bhagawatha) accompanied by traditional music.
- 2) Musical instruments used in Yakshagana include **Chande (drums), Harmonium, Maddale, Taala (mini metal clappers) and flute** among others.
- 3) Costumes used in Yakshagana are very unique and elaborate. Large size **headgear**, coloured faces, elaborate costumes all over the body and musical beads on the legs (Gejje).

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1900033>

Nitin Sighania

Q.16) Consider the following statements:

1. She became the first woman to receive the 'Padmaboti Swarnapodok', the gold medal from Calcutta University.
2. She founded the Bharat Stree Mahamandal in 1910.
3. She was associated with the newspaper 'Hindusthan' as editor and publisher.

Which one of the following personalities is being described in the above given statements?

- a) Sarojini Naidu
- b) Suniti Chaudhari
- c) Sarala Devi Chaudhurani
- d) Sumati Morarjee

Ans) c

Exp) Option c is the correct answer.

The personality being described in the given statements is Sarala Devi Chaudhurani.

- 1) Sarala Devi Chaudharani, daughter of Janakinath Ghoshal, was Rabindranath Tagore's niece.
- 2) She pursued higher education at Bethune College under Calcutta University to become the first woman to achieve the highest marks in that university and receive the 'Padmaboti Swarnapodok', the gold medal.
- 3) She wrote a book, Ahitagnika, to generate awareness concerning the freedom struggle among school children and also launched an underground revolutionary group as she believed aggression and violence to be the only way to get freedom from the British.
- 4) Sarla Devi founded the Bharat Stree Mahamandal, the All India Women's Organisation, a pioneering venture; it was a semi-revolutionary group in Allahabad, Lahore, Amritsar, Delhi, Karachi, Hyderabad, Kanpur, and Calcutta.
- 5) She was associated with the newspaper Hindusthan as editor and publisher. Towards the end of her life, she was involved in writing her biography, Jiboner Jhora Pata (the 'Scattered Leaves of My Life')

Source: Spectrum- Appendices

<https://indianexpress.com/article/lifestyle/sarala-devi-tagore-family-swadeshi-movement-bengali-revolutionary-6302759/>

Q.17) Which of the following statements are **incorrect** regarding the Indian Civil Service Act of 1861?

1. The Act was passed during the Viceroyalty of Lord Ripon.
2. As per the act, civil services examination was to be held simultaneously in England and India.
3. According to the Act, knowledge of vernacular was not necessary for district appointments.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The civil services act 1861 laid down that any person, whether Indian or European, could be appointed to any of the offices provided that he had resided for a minimum of 7 years in India. It contained provisions related to appointments to be filled only by the members of the covenanted Civil Service.

All appointments were now to be reported to the Secretary of State and unless the Secretary of State approves within twelve months, were declared void.

Statement 1 is incorrect: The Indian Civil Service Act was passed in 1861 with the support of Viceroy Lord Canning (and not Lord Ripon). According to the Indian Civil Service Act of 1861, any person, **regardless of his nationality as an Indian or European**, could assume any public office with the **condition that he had stayed in India for a minimum period of 7 years**. So, statement 1 is incorrect.

Statement 2 is incorrect: The Indian Civil Service Act, 1861 reserved certain offices for covenanted civil servants but the **examination was held in London, England in English medium only**, based on classical learning of Greek and Latin.

Statement 3 is incorrect: The appointments made under the **Indian Civil Service Act of 1861** required the candidates to go through **some departmental tests, meet specific requirements, and also clear an exam in the vernacular language** of the district they were supposed to work in. So, knowledge of vernacular was necessary. So, statement 3 is incorrect.

Source: Chapter-26: Constitutional Administrative and Judicial Developments, A brief history of modern India by Rajiv Ahir

Q.18) The Government's Resolution of May 1918 is related to which among the following?

- a) Jallianwala Bagh massacre
- b) Rowlatt Act
- c) Revolutionary Activities in Punjab
- d) Local Self Government

Ans) d

Exp) Option d is the correct answer.

The Resolution of May 1918 reviewed the entire question of local self-government in the light of the announcement of August 20, 1917, which had declared that the future direction of constitutional advance was towards grant of responsible government to the people of India, and the first step towards the progressive realisation of that ideal was to be in the sphere of local self-government. **The resolution suggested that the local bodies be made as representative as possible of the people with real and not nominal authority vested in them.**

Source: Chapter 26: Constitutional, Administrative, and Judicial Developments (Spectrum)

Q.19) Which among the following actions regarding the judiciary were undertaken by the Lord Cornwallis during his tenure as Governor-General of India?

1. Abolition of District Fauzdari courts.
2. Establishment of Supreme Court of Calcutta
3. Appointment of Law Commission under Macaulay

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

With the Company's transformation from a trading company into a ruling power, new elements of judicial system replaced the existing Mughal legal system.

Option 1 is correct: During the time of Lord Cornwallis (1786–93), District Fauzdari Courts were abolished and, instead, circuit courts were established at Calcutta, Dacca, Murshidabad, and Patna. These circuit courts had European judges and were to act as courts of appeal for both civil and criminal cases.

Option 2 is incorrect: Under the Regulating Act of 1773, a Supreme Court was established at Calcutta, which was competent to try all British subjects within Calcutta and the subordinate factories, including Indians and Europeans. It had original and appellate jurisdictions. Often, the jurisdiction of the Supreme Court clashed with that of other courts. This development occurred **during the tenure of Warren Hastings (1772–85)** and not under Lord Cornwallis.

Option 3 is incorrect: A Law Commission was set up in 1833 under Macaulay for codification of Indian laws. As a result, a Civil Procedure Code (1859), an Indian Penal Code (1860), and a Criminal Procedure Code (1861) were prepared. **William Bentinck (1828–33)** was Governor General of India at this time and not Lord Cornwallis.

Source: A brief history of modern India- Spectrum Publication- 2020 Edition

Q.20) With reference to pharmaceutical sector of India, consider the following statements:

1. India is the third largest producer of pharma products in the world in terms of volume.
2. Pharma industry is one of the eight-core industries of the Indian economy.
3. Among Indian industries, pharmaceutical industries had received the largest share of private investment in 2022-23.
4. The value of India's pharmaceutical exports has drastically reduced in the last couple of years.

Which of the statements given above is/are correct?

- a) 1, 2 and 3 only
- b) 1 only
- c) 3 and 4 only
- d) 1, 3 and 4 only

Ans) b

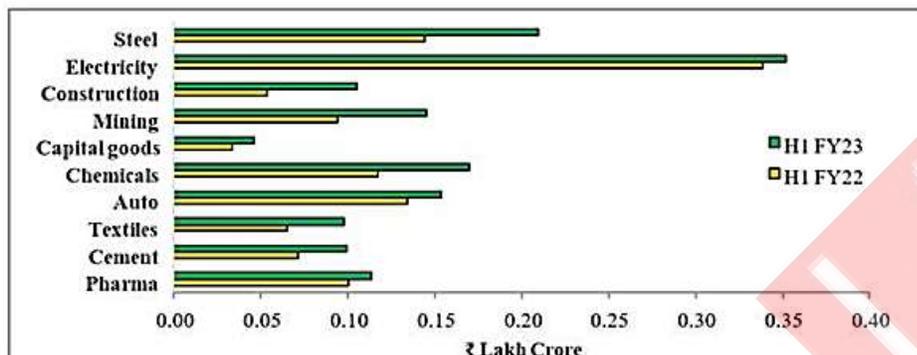
Exp) Option b is the correct answer.

The Indian Pharmaceuticals industry plays a prominent role in the global pharmaceuticals Industry. India is the **largest provider of generic medicines** globally, accounting for 20% of global supply by volume.

Statement 1 is correct: It is true that **India is ranked 3rd worldwide in the production of pharma products by volume and 14th by value.** Furthermore, India is the leading vaccine manufacturer globally with a market share of 60 per cent.

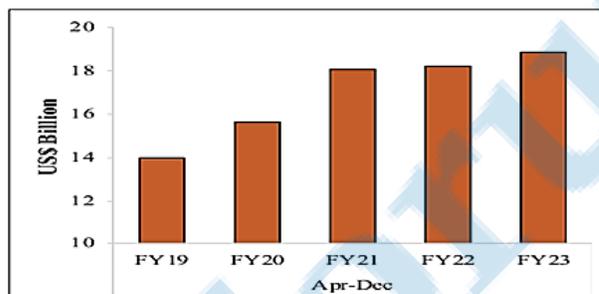
Statement 2 is incorrect: Pharmaceutical industry is not one of the eight core industries of the Indian economy. The main or the key industries constitute the core sectors of an economy. The eight-core industries of the Indian economy are **electricity, steel, refinery products, crude oil, coal, cement, natural gas and fertilisers.**

Statement 3 is incorrect: Electricity attracted the largest share of private investment in India, followed by Steel, Chemicals, Automobile, Mining and Pharmaceutical industry. Hence the pharmaceutical industry **ranked fifth** in terms of its share of total private investments in the country.



Statement 4 is incorrect: The value of pharmaceutical exports has increased in the last five years. Indian Pharmaceutical exports received a growth of 24 per cent in 2021 due to Covid 19 pandemic induced demand for drugs and even after the waning of covid 19 the sector witnessed the steady increase in exports.

Figure IX.19: Strong growth in pharmaceutical exports



Source: DGCI&S

Source: Economic Survey 2022-23 : Pg no 281

<https://pib.gov.in/PressReleasePage.aspx?PRID=1894918#:~:text=warned%20that%20export-,growth,-may%20slow%20further>

Q.21) In the context of criticism by the nationalists about the colonial economy in India, consider the following statements:

1. Dadabhai Naoroji in his work 'The Economic History of India' gave the theory of Economic Drain.
2. The economic analysts like Naoroji advocated complete cut-off of India's economic dependence on Britain.
3. The Indian nationalists argued that industrialisation in India needs to be based on Indian capital and not on foreign capital.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The early intellectuals of the first half of the nineteenth century supported British rule under the impression that it would modernise the country based on latest technology and capitalist economic organisation. After the 1860s, disillusionment started to set in among the politically conscious and they began to probe into the reality of British rule in India.

Statement 1 is incorrect: Dadabhai Naoroji, the ‘Grand old man of India’ did a brilliant analysis of Indian economy and put forth the theory of ‘Economic Drain’, in his work **Poverty and Un British Rule in India**. **The Economic History of India was a critical analysis of Indian economy by Romesh Chandra Dutt.** The term ‘economic drain’ refers to a portion of national product of India which was not available for consumption of its peoples but was being drained away to Britain for political reasons and India was not getting adequate economic or material returns for it.

Statement 2 is correct: The economic analysts like Dadabhai Naoroji, Justice Mahadeo Govind Ranade, Romesh Chandra Dutt (The Economic History of India), Gopal Krishna Gokhale, G. Subramaniya Iyer and Prithwishchandra Ray **organised intellectual agitations and advocated a complete severance (cut-off) of India’s economic subservience to Britain and the development of an independent economy based on modern industries.**

Statement 3 is correct: The nationalists argued that the colonialism led to the transformation of India into a supplier of foodstuffs and raw materials to the metropolis, a market for metropolitan manufacturers and a field for investment of British capital. However, **they advocated that industrialisation in India needs to be based on Indian and not foreign capital because**, the foreign capital had replaced and suppressed the Indian capital. This suppression led to economic drain, further strengthening British hold over India. The political consequences of foreign capital investments were equally harmful as they caused political subjugation and created vested interests which sought security for investors, thus perpetuating the foreign rule.

Source: Spectrum: A Brief History of Modern India, Chapter 29, Economic Impact of British Rule in India.

Q.22) Which of the following administrative changes was/were brought by the British Government immediately after 1857 revolt?

1. Dual System of Administration, introduced by Pitt’s India Act of 1784, was abolished.
2. Powers of Secretary of State for India were drastically reduced.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The British were quick to learn from their experience of 1857—an organised mass action could pose a serious challenge to the existence of British rule in India. The ruler-subject gap was sought to be narrowed so as to reduce, if not eliminate altogether, the alienation of the masses from the administration. Some of the major changes in the administration in the post 1857 era are discussed below:

Statement 1 is correct: The Act for Better Government of India, 1858 transferred the power to govern from the East India Company to the British Crown. **The power to govern was to be wielded through a secretary of state** (earlier this power was exercised by Directors of the Company and the Board of Control). The secretary of state was to be a member of the British cabinet and was to be assisted by a council of 15. He

was answerable to the British Parliament. All initiatives and final decisions rested with the secretary and the council was only advisory in nature. Thus, **the dual system introduced by Pitt's India Act, 1784 came to an end**. Also, the ultimate power over India remained with Parliament.

Statement 2 is incorrect: As per the 1858 Act, the Secretary of State was the supreme authority and had a free hand in the administration of India and was responsible only to the British parliament. The concentration of the main authority in the hands of the secretary of state based in London gradually reduced the viceroy to a subordinate status and further alienated the Indian public opinion from the government policymaking.

Source: A brief history of modern India- Spectrum Publication- 2020 Edition

Q.23) Consider the following statements regarding the Ripon's Resolution of 1882:

1. The resolution was based on the recommendations of the Royal Commission on Decentralization.
2. According to provisions of the resolution, non-officials were to be in majority in the local bodies.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The Government of Ripon desired to apply the principle of financial decentralisation in the local bodies in the same manner as applied by Lord Mayo in the provincial Governments. For his contributions, Lord Ripon is called father of local self-government in India.

Statement 1 is incorrect: In the year 1907, the Royal Commission on Decentralization was constituted by the British Government. Its main objective was to investigate the financial and administrative relations of the Central and provincial governments. The only Indian member of this commission was R.C. Dutt. So, Rippon's resolution was issued in 1882 a way before the establishment of the Royal commission on Decentralization.

Statement 2 is correct: According to provisions of the resolution, **non-officials were to be in majority in local bodies** who could be elected if the officials thought that it was possible to introduce elections.

Source: A brief history of modern India- Spectrum Publication- 2020 Edition

Q.24) Consider the following statements regarding the different Factories Acts under the British rule:

1. Under the Factories Act of 1881, employment of children under 9 years of age was prohibited.
2. The Factories Act of 1891 introduced the provisions for maternity leave for the first time in India.
3. The Factory Acts of 1881 and 1891 were not applicable to indigo factories.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 3 only
- c) 2 and 3 only
- d) 2 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. The Factories Act 1881 prohibited the employment of children under the age of 7 years (not under 9 years) in any factory.

The Factories Act of 1891, on the other hand, prohibited the employment of children under the age of 9 years (not under 9 years) in any factory.

Statement 2 is incorrect. Factories Act of 1891 did not introduced any provisions regarding maternity leave and maternity benefit. The Bombay maternity Benefit Bill was introduced in 1929 in the Bombay legislative council. **It was the first law established for working women in India.**

Statement 3 is correct. The Indian Factories Acts of 1881 and 1891, did not apply to the premises of Indigo Factories and tea and coffee plantations.

Source: Spectrum (Page No. 534)

file:///C:/Users/Admin/Downloads/scientificcommittee,+pp.+1-10+[1965]%20(1).pdf

https://www.indiacode.nic.in/repealed-act/repealed_act_documents/A1891-11.pdf

https://www.indiacode.nic.in/repealed-act/repealed_act_documents/A1881-15.pdf

<https://dspace.gipe.ac.in/xmlui/bitstream/handle/10973/27028/GIPE-034926.pdf?sequence=3&isAllowed=y>

Q.25) Economic survey 2022-23 talks about the Guidotti–Greenspan IMF rule. In this context, select the option which best describes the rule?

- According to the rule, the adequacy of foreign exchange can be determined by Ratio of reserves to imports, to money aggregates and measure of external debt.
- It states that a country's foreign exchange reserves should be equal to short-term external debt.
- The rules state that the Gross Fixed capital formation increases with an increase in investment.
- The rule provides for the precautionary measures to be taken by the economy in economic crisis.

Ans) b

Exp) Option b is the correct answer.

Foreign exchange reserves are **required** for various purposes, such as to **maintain the exchange rate** within a certain range, or to maintain a certain level of exchange rate if the country follows a fixed exchange rate system; **maintain liquidity** and allow time to **absorb shocks**.

Option a is incorrect: The **optimal level** of reserves empowers the government to **maximise the welfare** of the representative consumer, given the constraint of sudden stops in terms of debt rollover crisis. Therefore, adequacy of reserves comes in picture. **Conventionally**, there are **three measures** of adequacy of reserves, **viz. ratios of reserves to imports, to monetary aggregates, and measures of external debt**.

Option b is correct: **Guidotti–Greenspan IMF rule** states that a **country's reserves should be equal to short-term external debt** (one-year or less maturity), suggesting a ratio of reserves-to-short term debt of one. The **traditional approach** determines the adequacy of reserves by **three months of imports or full cover of short-term debt**. **This approach is based on Guidotti–Greenspan IMF rule.**

Option c and d are incorrect: Guidotti–Greenspan IMF rule does not talk about Gross Fixed capital formation nor it talks about the precautionary measures to be taken by the economy in economic crisis.

Source: Page 331, chapter 11: External Sector: Watchful and Hopeful of Economic survey 2022-23.

Q.26) Consider the following statements regarding the Mahalwari System of land revenue:

- It was a land revenue system devised by Hector Munro in 1822.
- The local zamindars were responsible for the collection of land revenue in this system.
- The revenue demand was to be revised periodically and was not fixed permanently under this system.

Which of the statements given above is/are correct?

- 1 and 2 only
- 3 only
- 2 and 3 only
- 1 and 3 only

Ans) b

Exp) Option b the correct answer.

Statement 1 is incorrect. In 1822, Englishman Holt Mackenzie (and not Hector Munro) devised a new system known as the Mahalwari System in the North-western Provinces of the Bengal Presidency. It was not devised by Hector Munro. Hence this statement is incorrect.

Statement 2 is incorrect. Under the Mahalwari system, the land revenue was collected from farmers by the village headmen on behalf of the whole village (and not the zamindar).

Statement 3 is correct. The entire village was converted into one bigger unit called 'Mahal' and was treated as one unit for the payment of land revenue. The revenue under this system was to be revised periodically and not fixed permanently.

Source: <https://ncert.nic.in/ncerts/l/hess103.pdf>

http://www.govtgirlsekalpur.com/Study_Materials/History/CC12_MOD4A_PART2.pdf

Q.27) The period between 1813-1860s is considered as period of the Colonialism of Free Trade in Indian History. Consider the following statements regarding the dominant features of this period:

1. All import duties in India were either totally removed or drastically reduced to nominal rates
2. Traditional agrarian structure was being transformed into a capitalist one.
3. Administration was made more comprehensive and included villages and outlying areas of the country.
4. Personal laws of Hindus and Muslims were reformed on a large scale as it affected colonial transformation of the economy.

Which of the statements given above are correct?

- a) 1, 2 and 4 only
- b) 2 and 3 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

The period between 1813-1860s is considered as period of the Colonialism of Free Trade in Indian History. Owing to its mode of exploitation being trade, this stage is also termed as Colonialism of Free Trade.

statement 1 is correct: India's colonial economy was integrated with the British and the world capitalist economy. This was made possible with the introduction of free trade. All import duties in India were either totally removed or drastically reduced to nominal rates.

statement 2 is correct: The Permanent Settlement and the Ryotwari system in agriculture were introduced to transform traditional agrarian structure into a capitalist one.

Statement 3 is correct : Administration was made more comprehensive and included villages and outlying areas of the country. These changes were brought about to make British goods reach, and agricultural products drawn from, interior villages and remotest parts.

Statement 4 is incorrect: Personal law was largely left untouched since it did not affect colonial transformation of the economy. However, the changes related to criminal law, law of contract and legal procedures were overhauled to promote capitalist commercial relations and maintain law and order.

Knowledge Base: Instead of constituting a new law modulating religious sentiments of both communities, Governor-General of India, Warren Hastings nurtured the personal laws of Hindus and Muslims. Under the Charter Act of 1753, Indians were explicitly spared from trying their suits and disputes in the Mayor's court (highest court during the British rule) and were directed to resolve their disputes themselves, unless both the parties of the case subjected themselves to the jurisdiction of the court. **Hastings Rule** specifically demarcating the personal laws of Hindus and Muslims was rephrased in Cornwallis Code of 1793 and it is by this rule that personal laws found a firm ground in the 17th century and continues to be what it is today.

Source: Spectrum ch- Economic Impact of British Rule in India

Q.28) Which of the following recommendations was/were made by the Police Commission of 1860?

1. Creation of post of inspector general in a province.
2. Abolition of office of Superintendent of Police.

Select the correct answer using the codes given below.

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Option 1 is correct: The Police Commission of 1860 led to the Indian Police Act, 1861. It **recommended inspector-general as the head in a province**, deputy inspector-general as the head in a range, and **Superintendent of Police (SP) as the head in a district**. The commission also recommended a system of civil constabulary—maintaining the village set-up in the present form (a village watchman maintained by the village) but in direct relationship with the rest of the constabulary.

Option 2 is incorrect: William Bentinck (governor-general, 1828-35) **abolished the office of the SP**. Thus, it was not recommended by the Police Commission of 1860. The collector/magistrate was now to head the police force in his jurisdiction and the commissioner in each division was to act as the SP. This arrangement resulted in a badly organised police force, putting a heavy burden on the collector/magistrate.

Source: Modern History, Spectrum, 6th Edition, Chapter-26, Constitutional, Administrative and Judicial Developments, Pg. 518

Q.29) Consider the following statements regarding economic impact of the British rule in India:

1. The economic policies of British government gave rise to absentee landlordism.
2. It led to the loss of traditional livelihoods, accompanied by a process of deindustrialization.
3. It led to decline of many cities and led to a process of ruralisation of India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The major difference between the British colonists in India and earlier invaders was that none of the earlier invaders made any structural changes in Indian economy or drained away India's wealth as tribute.

Statement 1 is correct: Land was passed into new hands—merchants, moneylenders and other moneyed classes living in towns. The new zamindars, with increased powers but with little or no avenues for new investments, resorted to land grabbing and sub-infeudation. Increase in number of intermediaries to be paid gave rise to absentee landlordism and increased the burden on the peasant. Thus, the economic policies of British gave rise to absentee landlordism.

Statement 2 is correct: The artisans were reduced step by step to the position of bonded labourers by the denial of free access to the market, by the use of coercion, and by laws and regulations made by the Company's government. This loss of traditional livelihoods was not accompanied by a process of industrialization in India, as had happened in other rapidly industrializing countries of the time. This resulted in deindustrialization of India at a time when Europe was witnessing a reintensified Industrial Revolution.

Statement 3 is correct: Another feature of deindustrialisation was the decline of many cities and a process of ruralisation of India. Many artisans, faced with diminishing returns and repressive policies abandoned their professions, moved to villages, and took to agriculture.

Source: IGNOU, - UNIT 11 ECONOMIC IMPACT OF THE COLONIAL RULE

<https://egyankosh.ac.in/bitstream/123456789/20320/1/Unit-18.pdf>

Q.30) Investments in infrastructure and productive capacity have a large multiplier effect on growth and employment. In this regard, the Union Budget 2023-24 has proposed to:

1. establish 'Urban Infrastructure Development Fund (UIDF)' to be managed by the Ministry of Housing and Urban Affairs.
2. create a 'Harmonized Master List of Infrastructure' for the first time in India.
3. increase capital investment outlay to more than 3% of the Gross Domestic Product (GDP).

Which of the statements given above is/ are correct?

- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: On the lines of Rural Infrastructure Development Fund (RIDF), the government aims to establish Urban Infrastructure Development Fund (UIDF) **through use of priority sector lending shortfall**. The Fund **will be managed by the National Housing Bank**. It will be used by public agencies to create urban **infrastructure in Tier-2 and Tier-3 cities**.

Statement 2 is incorrect: India has a Harmonized Master List of Infrastructure **already in existence and has been updated from time to time**. The list is notified by the **Ministry of Finance** and includes sub-sectors like transport and logistics, energy, water and sanitation etc. **Inclusion in the list** implies access to **concessional funds, promotion of projects and continuity of construction for the specified sub-sectors**. The **Union Budget 2023-24** proposes to conduct a review of the List by an **expert committee** for recommending the classification and financing framework suitable for 'Amrit Kaal'.

Statement 3 is correct: **Capital investment outlay** has been proposed to be increased **to 3.3% of GDP**. This has been **increased for the third time in a row by 33%**. It is expected to help in government's efforts to enhance growth potential and job creation, crowd-in private investments, and provide a cushion against global headwinds.

Knowledge Base: **National Housing Bank comes under Department of Financial Services, Ministry of Finance.**

Source: https://www.indiabudget.gov.in/doc/budget_speech.pdf

Q.31) Consider the following statements with reference to Sarojani Naidu and her contributions:

1. Foundation of All India Women's Conference (AIWC)
2. Leading a raid on the Dharasana Salt Works during Civil Disobedience Movement
3. Representing women in Second Round Table Conference
4. Became India's first woman Governor

Which of the above-given options are correct?

- a) 2 and 3 only
- b) 1, 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Sarojini Naidu was a prominent Indian nationalist, poet, and political activist who played a leading role in the Indian independence movement.

Option 1 is correct: The All-India Women's Conference (AIWC) was founded in 1927 by a group of leading women social reformers and activists in India, including **Margaret Cousins, Kamaladevi Chattopadhyay, Annie Besant, and Sarojini Naidu, among others.** The AIWC is one of the oldest and most prominent women's organizations in India, and it has played a significant role in advancing the rights and welfare of women in the country.

Option 2 is correct: Gandhiji's arrest came on May 4, 1930, during Civil Disobedience Movement when he had announced that he would lead a raid on Dharasana Salt Works on the west coast. **On May 21, 1930, Sarojini Naidu, Imam Sahib, and Manilal (Gandhi's son) took up the unfinished task of leading a raid on the Dharasana Salt Works.** The unarmed and peaceful crowd was met with a brutal lathi-charge.

Option 3 is correct: Sarojini Naidu played a crucial role in representing the interests of women at the Second Round Table Conference held in London in 1931. Sarojini Naidu used this platform to bring attention to the issues faced by women in India, including their lack of political representation and the need for greater participation in the decision-making process. She also advocated for greater social and economic rights for women, including access to education, healthcare, and employment opportunities.

Option 4 is correct: India's first woman Governor was Sarojini Naidu. She was appointed as the Governor of the United Provinces (now known as Uttar Pradesh) in 1947, making her the first woman to hold this position in India.

Source: A Brief History of Modern India by Rajiv Ahir, Spectrum, 6th Edition

Q.32) Consider the following statements regarding the Ryotwari System:

1. Thomas Munro introduced Ryotwari Settlement with the intention of preserving India's village communities.
2. The peasants had full rights regarding the sale, transfer, and leasing of their land.
3. The revenue to be paid by each village and by each ryot was fixed.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Munro advocated rents be kept suitably low and be fixed for 30 years, a measure that would protect peasant-farmers from mounting and arbitrary exactions by 'intermediaries' who had caused much damage to peasant property rights.

statement 1 is correct: Sir Thomas Munro, governor of Madras, thought that the Cornwallis permanent settlement system did not heed Indian tradition and experience. He thought such reforms had to be modified to suit the Indian context and so he introduces the Ryotwari Settlement to preserve India's village communities and emphasize the protective role of the company's government. But ultimately, he aimed to consolidate the Company's state in the south by expanding its revenue base, where land taxes would be collected directly from the peasants by a large number of British officers.

Statement 2 is correct: The ownership rights were handed over to the peasants, who had full rights regarding the sale, transfer, and leasing of the land. The British Government collected taxes directly from the peasants.

Statement 3 is correct: The Ryotwari System defined the state itself as the supreme zamindar and vested a ryot with individual proprietary rights in land in return for annual cash payment or revenue assessments to the government. The revenue to be paid by each village was fixed, as well as the rent or the revenue to be paid by each ryot. Ryots were given pattas, annual receipts that constituted a title to land. The state retained its claim over wastelands.

Source: plasey to partition chapter 2 page 70, ishita banerjee chapter 2 page 73

Q.33) Promotha Mitter, Barindrakumar Ghosh and Jatindranath Bannerji are known for founding which of the following organizations?

- Anushilan Samiti in Calcutta
- Calcutta Unitarian Committee
- Indian Association of Calcutta
- Bengal British India Society

Ans) a

Exp) Option a is the correct answer.

Option a is correct: Promotha Mitter, Barindrakumar Ghosh, Jatindranath Bannerji founded the **Anushilan Samiti in Calcutta**. It was physical exercise group, which was actually used as an underground society for anti-British revolutionaries.

Option b is incorrect: The **Calcutta Unitarian Committee, jointly founded by William Adam and Rammohun Roy** in September 1821, sought to bring together prominent Brahmins who were friends of Roy's and supporters of his agenda for the promotion of religious monotheism and social reform.

Option c is incorrect: The **Indian Association of Calcutta was founded by Surendranath Banerjee and Ananda Mohan Bose in 1876**. By 1886, this association was merged with the Indian National Congress.

Option d is incorrect: The **Bengal British India Society was founded in 1843 by the combined efforts of George Thompson, Dwarkanath Tagore, Chandra Mohan Chatterjee, and Parmananda Maitra**. It was founded on the advice of George Thompson. He was brought to India from England by Dwarkanath Tagore. George Thomas was the Secretary of the British Indian Society.

Source: A Brief History of Modern India by Rajiv Ahir, Spectrum, 6th Edition

Q.34) With reference to the period after 1860s in India's colonial history, consider the following statements:

- Large scale investment in Railways
- Huge investments made in training Indian people for self-government.
- Reactionary imperialist policies got replaced with Liberal imperialist policies

Which of the statements given above is/are correct?

- 1 and 3 only
- 1 only
- 2 and 3 only
- 1 and 2 only

Ans) b

Exp) Option b is the correct answer.

The Period after 1860s in Indian history is considered as the Era of Foreign Investments and International Competition for Colonies. During this stage, Britain made strenuous efforts to consolidate its control over India.

Statement 1 is correct: The strengthening of colonial rule over India was meant to keep out the rivals as well as to attract British capital to India and provide it security. As a result, a **very large amount of British**

capital got invested in railways, loans (to the Government of India), trade and, to a lesser extent, in plantations, coal mining, jute mills, shipping and banking in India.

Statement 2 is incorrect: The notion of training the Indian people for self-government vanished (revived only after 1918 because of pressure exerted by the Indian national movement). Now, the aim of British rule was declared as permanent 'trusteeship' over the Indians. The Indians were declared to be permanently immature—a 'child' people—needing British control and trusteeship. Geography, climate, race, history, religion, culture and social organisation were all cited as factors in making the Indians unfit for self-government or democracy. The British thus tried to justify their rule over Indians for centuries to come—all in the name of civilising a barbaric people—"the White Man's burden

Statement 3 is incorrect: Liberal imperialist policies got replaced with reactionary imperialist policies, which were reflected in the viceroalties of Lytton, Dufferin, Lansdowne and Curzon. The strengthening of colonial rule over India was meant to keep out the rivals as well as to attract British capital to India and provide it security.

Source: Plassey to Partition chapter 2 page 122 and Spectrum

Q.35) NASA has been tracking a giant asteroid named '199145 (2005 YY128)'. Which one of the following is the most appropriate reasons for this?

- It is believed to be remnants from the early solar system.
- It contains valuable resources such as rare earth metals.
- It can help us in understanding the origins of life on Earth.
- It is classified as a potentially hazardous asteroid for our planet.

Ans) d

Exp) Option d is the correct answer.

Experts at NASA are tracking a giant asteroid named 199145 (2005 YY128) which is just days away from entering Earth's orbit. The asteroid is **classified as a potentially hazardous asteroid (PHA)** because its orbit brings it within 0.05 astronomical units (AU) of Earth's orbit. Tracking and studying asteroids like 199145 (2005 YY128) is important for identifying potential threats to Earth.

199145 (2005 YY128): It is an asteroid whose **orbit crosses the orbit of Earth**. It orbits the sun every 774 days (2.12 years) in an elliptical orbit. 2005 YY128 is probably between 566 to 1.265 kilometers in diameter. Its orbit is 0.03 astronomical unit from Earth's orbit at its closest point.

Source: <https://economictimes.indiatimes.com/news/new-updates/giant-asteroid-to-hit-earths-atmosphere-find-out-when-will-it-happen/articleshow/97797292.cms>

<https://www.virtualtelescope.eu/2023/02/10/potentially-hazardous-asteroid-199145-2005-yy128-close-encounter-a-image-09-feb-2023/>

Q.36) Which one of the following statements correctly explains the 'Paternalistic Imperialists' School of thought during British rule in India?

- This school respected Indian culture and advocated introduction of as few changes as possible.
- This school was sharply critical of Indian society and used to justify economic and political enslavement of India.
- This school wanted to make India a part of the modern and progressive world of science and humanism.
- This school wanted that the modernisation of India had to occur thorough social reformation.

Ans) b

Exp) Option b is the correct answer.

The new currents of thought based on rationalism, humanism and doctrine of progress caused conflicts among administrators and produced different schools of thought during British rule in India.

Option a is incorrect: The **Conservatives school of thought** advocated **introduction of as few changes as possible**. Indian civilisation, they felt, was different from the European one but not necessarily inferior to it. Many of these thinkers respected Indian philosophy and culture. If at all, Western ideas and practices were to be introduced gradually and cautiously. Early representatives of this school of thought were Warren Hastings and Edmund Burke and later ones included Munro, Metcalfe, and Elphinstone

Option b is correct: The **Paternalistic Imperialists** became influential, especially after 1800. They were **sharply critical of Indian society and culture and used to justify economic and political enslavement of India**.

Option c is incorrect: The **Radicals** applied advanced humanistic and rational thought to the Indian situation. They thought that India had the capacity to improve and that they must help the country do that. They **wanted to make India a part of the modern progressive world of science and humanism** and therefore advocated the introduction of modern western science, philosophy, and literature.

Option d is incorrect: Predominantly, the **ruling elements in the British Indian administration continued to be imperialistic and exploitative**. They thought that the modernisation of India had to occur within broad limits imposed by the needs of an easier and more thorough exploitation of its resources.

Source: Spectrum- ch-Survey of British Policies in India

Q.37) Which of the following were the major aims of British foreign policy in Asia and Africa during colonial era?

1. Protection of the invaluable Indian empire
2. Gradual transfer of power to the Indigenous people
3. Expansion of British commercial interests
4. Prevent other European powers from expanding their influence in the region
5. Ensure freedom of navigation for unhindered global trade

Select the correct answer using the codes given below:

- a) 1 and 3 only
- b) 2, 3 and 5 only
- c) 1, 3 and 4 only
- d) 1, 2, 3, 4 and 5

Ans) c

Exp) Option c is the correct answer.

The pursuance of a foreign policy, guided by interest of British imperialism, often led to India's conflicts with neighbouring countries. During the colonial era, the major aims of British foreign policy in Asia and Africa were as follows:

Statement 1 is correct: Protection of the invaluable Indian empire- The British aimed to protect their valuable Indian empire, which was the jewel in the crown of the British Empire.

Statement 2 is incorrect: Although the British did eventually transfer power to the indigenous people, this was **not a major aim of their foreign policy during the colonial era**. The transfer of power was more a result of pressure from nationalist movements and the changing geopolitical landscape.

Statement 3 is correct: Expansion of British commercial interests- The British were interested in expanding their commercial interests in Asia and Africa. They established trade networks, invested in infrastructure, and exploited the natural resources of the regions.

Statement 4 is correct: Keeping other European imperialist powers at an arm's length- The British aimed to maintain their dominance in Asia and Africa and prevent other European powers from expanding their influence in the region. This was a major factor in the partition of Africa and the Scramble for Asia.

Statement 5 is incorrect: While the British supported trade and navigation, this was not a major aim of their foreign policy in Asia and Africa. Rather, their **focus was on expanding their own commercial interests and protecting their empire.**

Source: Spectrum- CH-Survey of British Policies in India

Q.38) With reference to 'British Policy towards Princely States after 1857', consider the following statements:

1. Britishers decided to pursue the policy of annexation of princely states through constitutional means.
2. The British made clear that the princes ruled their states merely as agents of the British Crown.
3. After 1857, the British government abandon their right to interfere in the internal affairs of states.
4. British helped these states adopt modern administrative institutions.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1, 2 and 4 only
- d) 2 and 4 only

Ans) d

Exp) Option d is the correct answer.

After the Indian revolt of 1857, the British government adopted a new policy towards the princely states in India. This policy was based on the doctrine of paramountcy, which asserted the sovereignty of the British Crown over the entire Indian subcontinent, including the princely states.

Statement 1 is incorrect: After the revolt of 1857, **Britishers decided to abandon the policy of annexation.** The new policy was to depose or punish but not annex. Also, territorial integrity of states was guaranteed, and it was announced that their right to adopt an heir would be respected.

Statement 2 is correct: The subordination of princely states to British authority was completed when the fiction of Indian states standing in a status of equality with the Crown as independent, sovereign states ended with the Queen adopting the title of Kaiser-i-Hind (Queen Empress of India) in 1876, to emphasise British sovereignty over entire India. It was **later made clear by Lord Curzon that the princes ruled their states merely as agents of the British Crown.**

Statement 3 is incorrect: With paramountcy, the British Government **exercised the right to interfere in the internal affairs of states through their residents** or by appointing and dismissing ministers and officials.

Statement 4 is correct: British encouraged the princely states to modernize and reform their administrations. They **provided financial and technical assistance for infrastructure development, such as railways, roads, and telegraphs**, and also established educational institutions in the princely states. By doing so, the British aimed to create a modern, efficient, and loyal administrative class in the princely states that would support British rule.

Source: Spectrum-Survey of British Policies in India

Q.39) With reference to the contribution of 'Chidambaram Pillai' in National Freedom Struggle, consider the following statements:

1. He helped in spreading of Swadeshi movement in the Madras region of southern India.
2. He headed the 'Mylapore' group in the Madras Presidency in 1918.
3. He founded a navigation company to challenge the trade monopoly of the British India Steam Navigation Company.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

V.O. Chidambaram Pillai (also known as V.O.C. Pillai) was an Indian freedom fighter and politician who played a significant role in India's struggle for independence from British colonial rule. He was born on 5 September 1872 in Ottapidaram, a town in present-day Tamil Nadu.

Statement 1 is correct: Chidambaram Pillai was responsible for **spreading the Swadeshi movement in the Madras region of southern India**. He was actively involved in promoting the use of Indian-made goods and boycotting British goods as part of the Swadeshi movement. He organised the strike of the Tuticorin Coral Mill to protest against the working conditions in the mills.

Statement 2 is incorrect: Chidambaram Pillai did not head the Mylapore group in the Madras Presidency in 1918. **V. Krishnaswami Iyer headed the 'Mylapore' group in the Madras Presidency**. The Mylapore group was a political group formed in 1916 by a group of Indian nationalists in the Madras Presidency (now Tamil Nadu) of British India. The Mylapore group was known for its moderate approach and believed in using constitutional means to achieve their goals. They sought to work within the colonial system and gain concessions from the British authorities rather than advocating for outright independence.

Statement 3 is correct: Chidambaram Pillai founded the Swadeshi Steam Navigation Company in 1906, which aimed to challenge the monopoly of British shipping companies on coastal trade in India. He founded the Swadeshi Steam Navigation Company in Tuticorin on the east coast of the Madras Province to **break the trade monopoly of the British India Steam Navigation Company**. He bought the SS Lavo and SS Galia from France and started regular services between Tuticorin and Colombo (Sri Lanka) though the British tried their best to suppress his efforts. His **ships flew flags emblazoned with 'Vande Mataram'**.

Source: Spectrum- APPENDICES

Q.40) With reference to 'Sickle Cell Anemia', consider the following statements:

1. It is an inherited blood disorder that affects the production of hemoglobin.
2. A person can develop the disease only if they inherit two copies of the abnormal gene, one from each parent.
3. It can be prevented through appropriate vaccination at the early stage of its onset.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Union Finance Minister recently announced the Central Government's plan to launch a mission to eliminate sickle cell anemia by 2047.

Statement 1 is correct: Sickle cell anemia is an **inherited blood disorder that affects the production of hemoglobin**, a protein in red blood cells that carries oxygen throughout the body. In individuals with sickle cell anemia, the hemoglobin protein is abnormal, causing red blood cells to become rigid, sticky, and

crescent-shaped (resembling a sickle) instead of the normal round shape. These abnormal red blood cells can get stuck in small blood vessels, reducing blood flow and causing various complications.

Statement 2 is correct: Sickle cell disease is an autosomal recessive genetic disorder, which means that a **person needs to inherit two copies of the abnormal hemoglobin gene (one from each parent) in order to develop the disease.**

If both parents have the sickle cell trait (one copy of the abnormal gene and one normal gene), there is a 25% chance that each of their children will inherit two copies of the abnormal gene and develop sickle cell disease, a 50% chance that each child will inherit one copy of the abnormal gene and be a carrier of the trait, and a 25% chance that each child will inherit two normal genes and neither have the disease nor be carriers of the trait.

Statement 3 is incorrect: Sickle cell anemia **cannot be prevented through vaccination as it is a genetic disorder.** The only cure for this disease is **bone marrow or stem cell transplantation.**

However, there are treatments that can help relieve symptoms, lessen complications, and prolong life.

Source: <https://economictimes.indiatimes.com/industry/healthcare/biotech/healthcare/health-ministrys-fight-against-sickle-cell-anaemia-to-follow-gujarat-playbook/articleshow/97531998.cms>
[https://pib.gov.in/PressReleasePage.aspx?PRID=1896039#:~:text=Sickle%20cell%20disease%20\(SCD\)%20is,significant%20reduction%20in%20life%20expectancy.](https://pib.gov.in/PressReleasePage.aspx?PRID=1896039#:~:text=Sickle%20cell%20disease%20(SCD)%20is,significant%20reduction%20in%20life%20expectancy.)

<https://www.pib.gov.in/PressReleaseDetailm.aspx?PRID=1902841>

Q.41) “This legislation restricted the company’s monopoly over trade with India. It gave the company, the right to collect revenue for 20 more years from British territories in India. It provided for the spread of western education among the inhabitants of the British territories in India. It allowed the Christian missionaries to come to India to preach their religion. The constitutional position of the British territories in India was explicitly defined for the first time in this Act.”

Identify the Act to which the above description is related to:

- Pitt’s India Act of 1784
- The Charter Act of 1793
- The Charter Act of 1813
- The Charter Act of 1833

Ans) c

Exp) Option c is the correct answer.

In England, the **business interests were pressing for an end to the Company’s monopoly** over trade in India because of a **spirit of laissez-faire** (the policy of allowing private businesses to develop without government control) **and the continental system by Napoleon** by which the European ports were closed for Britain. **The Charter Act of 1813 Act** sought to redress these grievances. The powers of the Board of Control were further enlarged. **It asserted the sovereignty of the British Crown over the Company’s territories in India.** It has following provisions: -

- 1) It abolished the trade monopoly of the company in India i.e., the Indian trade was thrown open to all British merchants. However, it continued the monopoly of the company over trade in tea and trade with China (abolished under Charter Act of 1833).
- 2) The Company’s shareholders were given a 10.5 per cent dividend on the revenue of India.
- 3) The Company was to retain the possession of territories and the revenue for 20 years more, without prejudice to the sovereignty of the Crown. Thus, the constitutional position of the British territories in India was defined explicitly for the first time.
- 4) A sum of one lakh rupees was to be set aside for the revival, promotion and encouragement of literature, learning and science among the natives of India, every year.

5) The regulations made by the Councils of Madras, Bombay and Calcutta were now required to be laid before the British Parliament. The constitutional position of the British territories in India was thus explicitly defined for the first time.

6) Separate accounts were to be kept regarding commercial transactions and territorial revenues. The power of superintendence and direction of the Board of Control was not only defined but also enlarged considerably.

7) It allowed the Christian missionaries to come to India to preach their religion.

Source: Chapter-26: Constitutional Administrative and Judicial Developments, A brief history of modern India by Rajiv Ahir

Q.42) Prabhat Kusum Roy Chaudhuri, Athanasius Apurbakumar Ghosh and Premtosh Bose were prominent leaders related to which of the following during the Indian National Movement?

- Social reformers from Atmiya Sabha
- Revolutionaries who were hanged in Delhi conspiracy case
- Labour leaders who helped in organising labour
- Indian Industrialist who funded national movement

Ans) c

Exp) Option c is the correct answer.

Prabhat Kusum Roy Chaudhuri, Athanasius Apurbakumar Ghosh, and Premtosh Bose were lawyers (Labour leaders) who helped in organizing labor.

Prabhat Kusum Roy Chaudhuri (1878–1921), son of Debi Prasanna, the well-known Brahmo editor of NabyaBharat, was closely associated with the work of organizing an Indian mill-hands' union among the jute employees.

Athanasius Apurbakumar Ghosh was a barrister in Calcutta. He was a pioneer labor leader during the early decades of the twentieth century in the British Empire in India.

Premtosh Bose was a proprietor of a Printing Press in Calcutta. He was a pioneer labor leader in the Bengal Province of the British Empire in India. He played an active role in organising a Railwaymen's Union in East Indian Railway in 1906 when Bengal was agitating against the partition of Bengal.

Source: A Brief History of Modern India by Rajiv Ahir, Spectrum, 6th Edition

http://ccnet.vidyasagar.ac.in:8450/pluginfile.php/6118/mod_resource/content/1/sumit_sarkar_the_swadeshi_movement_in_bengal_1903%281%29%281%29.pdf

Q.43) Consider the following statements with reference to Ambikagiri Roy Chaudhuri, a leader during Indian National Movement:

- He was a prominent writer and poet.
- He, along with some others, formed a British Opposition Anarchist team during Swadeshi movement.
- He established Assam Jatiya Mahasabha to protect Assamese people from encroachment of infiltrators.

Which of the above given statements is/are correct?

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Ambikagiri Roy Chaudhuri joined the Swadeshi Movement and social development work from 1904–05.

Statement 1 is correct: Ambikagiri Roy Chaudhuri was an Assamese poet, lyricist, singer, powerful prose writer, news worker, magazine editor, patriotic, social worker, and the leading freedom fighter of India's freedom struggle. He was elected president of the Assam Sahitya Sabha in 1950. Raichoudhury published poetry books called 'Tumi' in 1915 and 'Beena' in 1916. In 1918, in collaboration with Chandranath Sharma, he came out with a monthly magazine called 'Chetana'. He discussed in the writings of 'Chetna' the freedom movement, non-cooperation, the place of violence and non-violence in politics, various problems at home and abroad, as well as the national problems of Assam, etc. He wrote a patriotic drama named Bandini Bharat.

Statement 2 is correct: He joined the Swadeshi Movement and did social development work from 1904 to 05. He joined a few other youth students and formed a British Opposition Anarchist team during this period, as a result, the British government captured Ambikagiri in Barpeta from 1908 to 1915.

Statement 3 is correct: For the protection of the future of Assam and Assamese, Raichoudhury established **'The Assamese Rights and Interests Conservation Meeting, Assam Jatiya Mahasabha, and Asam Shikha Prachar Samiti** to protect the dignity of Assamese in view of the encroachment of infiltrators on the farmland of state. Raichoudhury himself took care to show Assamese society the path of self-establishment economically by opening the 'Swadeshi Kinok Sangha' and establishing a business company called 'Mayabini Chemical Works'.

Source: <https://amritmahotsav.nic.in/unsung-heroes-detail.htm?2986>

A Brief History of Modern India by Rajiv Ahir, Spectrum, 6th Edition

Q.44) The period of 1757–1813 is considered as The Period of Merchant Capital (Mercantilism) in Indian History. Consider the following statements regarding the changes introduced during this period:

1. British traders no longer required import of Bullion from England to finance their trade in India.
2. Gomastas were replaced by Dadni merchants, which reduced the Indian merchants to commissioned brokers.
3. There was no large-scale import of British manufactured goods into India.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

In this phase there was large-scale drain of wealth from India which constituted 2–3 per cent of Britain's national income at the time. It was this wealth that played an important role in financing Britain's industrial revolution.

Statement 1 is correct: Prior to 1757 the English trade in Bengal was largely financed through import of bullion from England. But after that year not only bullion import stopped, but bullion was exported from Bengal to China and other parts of India, which gave a competitive advantage to the English Company over its European rivals.

Statement 2 is incorrect: From 1753 the English Company began to replace the independent dadni merchants with gomastas who were agents of the English and dependent on commission paid by the English as a percentage on value of cloth collected by these agents. After the battle of Plassey the increasing political power in the hands of the English enabled them to swith over to this new gomasta system which reduced the Indian merchants to commissioned brokers. In 1775 a variant of this system, known as the 'contract system', consolidated the position of the English in relation to the Indian brokers. Finally, in 1789 the system of 'direct agency' was introduced, dispensing with Indian middlemen altogether Thus step by

step Indian businessmen were reduced to a subordinate position (e.g. in salt, saltpeter business) or virtually excluded (e.g. in raw silk, cotton cloth) by the end of the 18th century.

Statement 3 is correct: In this stage, there was no large-scale import of British manufactures into India, rather, the reverse occurred—there was an increase in export of Indian textiles, etc. The weavers were, however, ruined at this stage by the Company's monopoly and exploitation. They were forced to produce for the Company under uneconomic compulsions.

Source: Spectrum and Plassey to Partition Chapter 1 page 61

Q.45) Which one of the following statements correctly explains 'Vostro Account'?

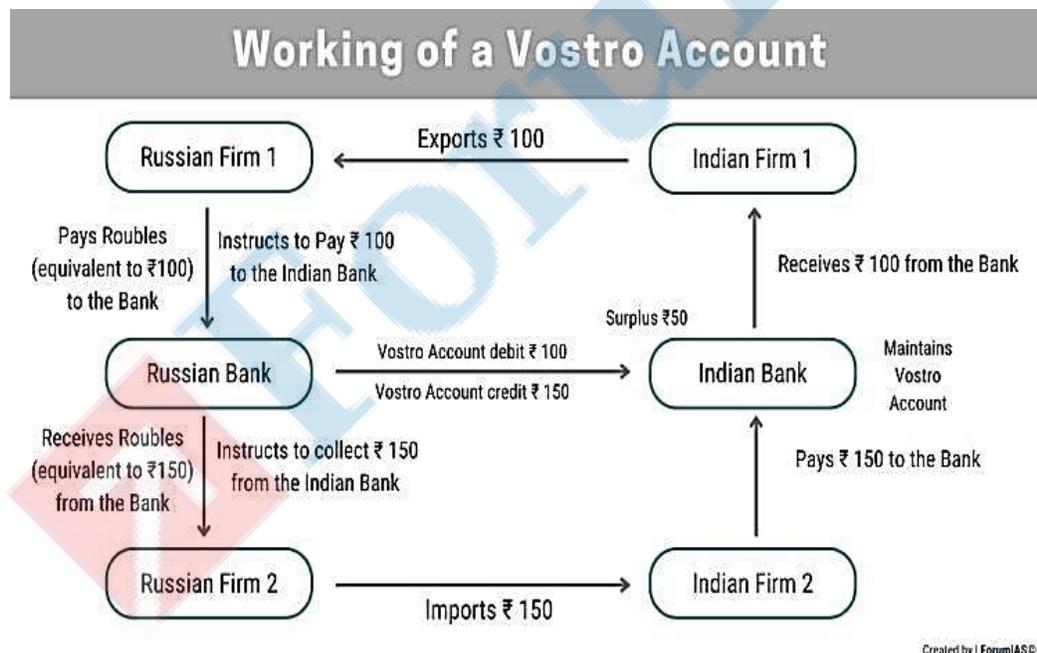
- It is similar to a savings bank account, but usually offers a higher interest rate.
- It is an account that domestic banks hold for foreign banks in the former's domestic currency.
- It is a bank account held in foreign country by domestic banks, denominated in foreign currency.
- It is an account designed for businesses and offers features such as payroll processing, online banking, and merchant services.

Ans) b

Exp) Option b is the correct answer.

Government officials informed that 20 Russian banks have opened Special Rupee Vostro Accounts (SRVA) with partner banks in India.

A **vostro account is an account that domestic banks hold for foreign banks in the former's domestic currency**, in this case, the rupee. Domestic banks use it to provide international banking services to their clients who have global banking needs. It is an integral offshoot of correspondent banking that entails a bank to facilitate wire transfers, conduct business transactions, accept deposits and gather documents on behalf of the other bank.



Source: <https://blog.forumias.com/explained-vostro-accounts-and-how-they-facilitate-trade/>
<https://www.thehindu.com/business/Economy/explained-vostro-accounts-and-how-they-facilitate-trade/article66537848.ece#:~:text=A%20vostro%20account%20is%20an,who%20have%20global%20banking%20needs.>

Q.46) Consider the following statements regarding the Permanent Settlement Act of 1793:

1. The Permanent Settlement Act was introduced during the reign of Cornwallis.
2. The share of the government in the revenue collected in a particular year was fixed as 10/11th of the total revenue collected in that year.
3. Under this law, land of the zamindars was liable to be sold by government if they failed to pay the revenue by due date.

Which of the statements given above are correct?

- a) 1 and 3 Only
- b) 1 and 2 Only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is Correct: The Permanent settlement system of land revenue collection or the zamindari system in Bengal was introduced through Permanent Settlement Act 1793 during the reign of then Governor general of Bengal **Lord Cornwallis**.

Statement 2 is incorrect. The amount to be paid was fixed permanently, that is, it was not to be increased (or decreased) ever in future. The governments share in revenue was not the 10/11th of revenue collected in that particular year, but the amount was fixed as the **10/11th of the revenue collected in the assessment year 1789-90. This amount was fixed at 26.8 million rupees.**

It was felt that this would ensure a regular flow of revenue into the Company's coffers and at the same time encourage the zamindars to invest in improving the land. Since the revenue demand of the state would not be increased, the zamindar would benefit from increased production from the land.

Statement 3 is Correct: The Permanent settlement law also came to be known as Sunset Law. Under this law, land of the zamindars was liable to be sold if they failed to pay government revenue by due date. Under the operation of the Sunset Law, greater part of the zamindari lands of Bengal were sold through auction sales and their lands were transferred to new hands.

Source: S Bandyopadhyay "From Plassey to Partition and After", chapter 2

Q.47) Consider the following statements with reference to Aurobindo Ghosh:

1. He was imprisoned by British in Alipore Conspiracy Case.
2. He gave a new philosophical doctrine called the Integral Humanism.
3. His one of the most famous literary works is a book titled 'The Life Divine.'
4. In his famous essay 'The Demand of the Mother', Aurobindo compared the Nation to the Mother Goddess.

Which of the above given statements is/are correct?

- a) 2 and 3 only
- b) 1, 3 and 4 only
- c) 2, 3 and 4 only
- d) 1 and 4 only

Ans) b

Exp) Option b is the correct answer.

Aurobindo Ghosh was an Indian revolutionary who became yogi, seer, philosopher, poet, and propounded a philosophy of divine life on earth through spiritual evolution.

Statement 1 is correct: From 1902 to 1910 Aurobindo Ghosh partook in the struggle to free India from the British. The partition of Bengal in 1905 provoked Aurobindo to leave his job in Baroda and plunge into the nationalist movement. He started the patriotic journal Bande Mataram to propagate radical methods and

revolutionary tactics instead of supplication. **In 1908, he was arrested in the Alipore Bomb Conspiracy Case and was acquitted in 1909 after a long trial.**

Statement 2 is incorrect: Integral humanism was a set of concepts drafted by Deendayal Upadhyaya and not Aurobindo Ghosh. Sri Aurobindo had begun the practice of Yoga in 1905 in Baroda. In 1908 he had the first of several fundamental spiritual realisations. In 1910 he withdrew from politics and went to Pondicherry in order to devote himself entirely to his inner spiritual life and work. **During his forty years in Pondicherry, he evolved a new method of spiritual practice, which he called Integral Yoga.** Its aim is a spiritual realization that not only liberates man's consciousness but also transforms his nature.

Statement 3 is correct: The Life Divine is a major philosophical work of Sri Aurobindo. Sri Aurobindo presents a theory of evolution, which will culminate in the transformation of the human being and the advent of a divine life upon earth. The Life Divine first appeared serially in the monthly review Arya. The first edition and the first Volume of this monumental work was published in 1939.

Statement 4 is correct: In April 1908, Aurobindo published his famous essay 'The Demand of the Mother' in the same journal. In this piece, Aurobindo compared the Nation to the Mother Goddess, and asserted that the masses of Bengal must be willing to dedicate themselves wholly to the cause of her liberation.

Source: A Brief History of Modern India by Rajiv Ahir, Spectrum, 6th Edition

<https://www.sriurobindoashram.org/sriurobindo/>

<https://amritmahotsav.nic.in/district-repository-detail.htm?11696>

<https://indianexpress.com/article/opinion/columns/sri-aurobindos-150th-birth-anniversary-spiritual-icon-india-vishwa-guru-8091916/>

<https://academic.oup.com/ia/article-abstract/40/1/161/2664851?redirectedFrom=fulltext>

Q.48) Consider the following statements regarding Izaredari System of land revenue during British India:

1. It was introduced in 1773 by Warren Hastings in Bengal presidency.
2. In this system, the right to collect revenue was auctioned to the highest bidder.
3. There was a fixed revenue generation for the Company in the Izaredari system.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. After the battle of Plassey 1757, British got Diwani Rights (right to collect revenue) in Bengal. When Roberts Clive obtained the Diwani of Bengal, there used to be annual settlements of Land revenue. Izaredari system was introduced in 1773 by Warren Hastings in Bengal whereby he assumed that all the land belongs to State. This was the first land tenure system implemented in India by British.

Statement 2 is correct. Under this system, right of collecting revenue of a particular area was auctioned to the highest bidder. The peasants, shopkeepers and merchants had to pay their taxes to the Izaredars who eventually was also the highest bidder to the company. The Izaredar was essentially a contractor who collected the revenue from the poor peasants and then paid to the company saving his profits without any interest in peasants' welfare.

Statement 3 is incorrect. From the Company's point of view, the Izaredari system was not good because there was a frequent change in the assessment period and no fix revenue generation. The Izaredari system ended when Lord Cornwallis introduced the Permanent settlement in Bengal, Bihar, Orissa etc.

Source) Spectrum

Q.49) Indian Sandhurst Committee is related to which of the following subjects?

- State interference in event of famines
- Development of irrigation facilities
- Indianisation of army
- Indian Currency and coinage

Ans) c

Exp) Option c is the correct answer.

Option c is correct: In June 1925, a new committee called **Indian Sandhurst Committee or Skeen Committee** was appointed to **suggest reforms for Indianisation of the army**. This committee recommended that the number of **vacancies at Sandhurst be increased from 10 to 20**, Indians be made eligible as Kings' Commissioned Officers in Artillery, Signals and Engineers too and that a military college be opened in India. As late as 1926, the Indian Sandhurst Committee was visualising a 50% Indianised officer cadre for 1952. The government **did not accept the recommendations** of the Skeen Committee in full but agreed to increase the **vacancies reserved for Indians at Sandhurst from 10 to 20 per year**.

Source: <https://www.tribuneindia.com/news/features/how-indians-rose-up-to-be-officers-10124>

Q.50) The Union Budget 2023-24 has proposed to launch Pradhan Mantri PVTG (Particularly Vulnerable Tribal Group) Development Mission. In this context, consider the following statements about the PVTGs:

- At present, 75 PVTGs have been identified in India.
- As per Census 2011, PVTGs make up for around 8% of the total population.
- Great Andamanese and Sentinelese tribes of the Andaman and Nicobar Islands have been identified as PVTGs.

Which of the statements given above is/ are correct?

- 1 only
- 1 and 2 only
- 1 and 3 only
- 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

The Union Budget 2023-24 proposed for launching Pradhan Mantri PVTG (Particularly Vulnerable Tribal Groups) Development Mission. The aim is to improve the socio-economic conditions of the PVTGs. To achieve this, the Mission shall aim at safe housing, clean drinking water and sanitation, improved access to health, nutrition, education, road and telecom connectivity and sustainable livelihood opportunities.

Statement 1 is correct: In 1975, The Government of India initiated to identify the most vulnerable tribal groups as a separate category and identified 52 such groups, while in 1993, 23 more such groups have been added to this category. **So, at present, there are 75 PVTGs out of around 705 Scheduled Tribes (STs).** Government follows the following **criteria to identify PVTGs:**

- Pre-agricultural technology
- Low level of literacy
- Economic backwardness
- A declining or stagnant population.

Statement 2 is incorrect: As per Census 2011, **the total population of all the Scheduled Tribes (STs) is 8.6%** of the country's total population. Approximately, 10.42 crore Indians (Census 2011) have been notified as the Scheduled Tribes. **PVTGs constitute a very small proportion of the total tribal population.** As per the

Census, PVTG population comprised of **only around 17 lakh people**. The PVTG of **Sahariyas has the highest population**. Only around 12 PVTGs have population of more than 50,000.

Statement 3 is correct: The Great Andamanese and the Sentinelese have been identified as PVTGs in the Andaman and Nicobar (A&N) Islands by the government. Other PVTGs in the A&N Islands are **Jarawa, Onge and Shom Pen**. As per the website of South Andaman District, the population of **the Great Andamanese and the Sentinelese has been reduced to only 43 and 39 individuals respectively**.

Source: <https://vikaspedia.in/social-welfare/scheduled-tribes-welfare/particularly-vulnerable-tribal-groups>

<https://ruralindiaonline.org/en/library/resource/scheduled-tribes-in-india-as-revealed-in-census-2011/#:~:text=10.42%20crore%20Indians%20are%20notified,of%20the%20total%20rural%20population.>

<http://164.100.24.220/loksabhaquestions/annex/172/AU2096.pdf>

https://southandaman.nic.in/people_culture/#:~:text=GREAT%20ANDAMANESE,-

[The%20Great%20Andamanese&text=took%20large%20toll%20and%20the,no%20longer%20a%20nomadic%20tribe.](#)

Q.1) The average number of visitors to a Museum every Monday is 96, whereas it is 156 on other days of the month. What will be the average number of visitors for the entire month if it has 30 days and begins on Monday?

- a) 144
- b) 145
- c) 146
- d) 147

Ans) c

Exp) Option c is the correct answer.

Since the Month begins on Monday, there will be 5 Mondays in the month.

There are 30 days so 5 Mondays and 25 would be the rest of the days.

The average number of visitors on Monday = 96

The average number of visitors on the rest of the days = 156

Thus, visitors on Monday = $96 \times 5 = 480$

Visitor on rest of the days = $25 \times 156 = 3900$

Total visitors in a month = 4380

Average visitors in the month = $4380/30 = 146$

Q.2) Ayush had three books in which Book A had 120 pages. Book B had 10% more pages than Book A and Book C had 10% less pages than Book A. If she tore roughly 5%, 10% and 15% of pages in A, B and C respectively, then approximately what percent of pages did she tear out?

- a) 5%
- b) 10%
- c) 11%
- d) 15%

Ans) b

Exp) Option b is the correct answer.

Given,

Total No. of pages in book A = 120

Total No. of pages in book B

= 10% of 120 + 120

= 12 + 120

= 132

Total No. of pages in book C

= 120 - 10% of 120

= 120 - 12

= 108

No. of pages torn from book A = 5% of Total No. of pages in book A = $(5/100) \times 120 = 6$

No. of pages torn from book B = 10% of 132 = 13.2

No. of pages torn from book C = 15% of 108 = 16.2

Total No. of pages torn out from books A, B, and C = $6 + 13.2 + 16.2 = 35.4$

Now, Total No. of pages in books A, B, and C earlier = $120 + 132 + 108 = 360$

Required Percentage = $(\text{Total No. of pages torn out} / \text{Total No. of pages in books A, B and C earlier}) \times 100$

= $(35.4/360) \times 100$

= 9.83% (i.e. approximately 10%)

Q.3) In a bag, there are 12 pens which are divided into 7 green and 5 black pens. In how many ways can we remove 8 pens so that at least 1 green pen and 1 black pen remain in the bag?

- a) 445
- b) 455
- c) 566
- d) 636

Ans) b

Exp) Option b is the correct answer.

Total No of Pens = 12

Total No of Green Pens = 7

Total No of Black Pens = 5

Given Condition: Number of Possible ways to draw 8 pens from the bag which contains at least 1 green and 1 black

No of Possible ways are = (6,2) (5,3) (4,4)

Case 1:

$${}^7C_6 \times {}^5C_2$$

$$\Rightarrow 7 \times 10$$

$$\Rightarrow 70$$

Case 2:

$$\Rightarrow {}^7C_5 \times {}^5C_3$$

$$\Rightarrow 7 \times 3 \times 5 \times 2$$

$$\Rightarrow 21 \times 10$$

$$\Rightarrow 210$$

Case 3:

$$\Rightarrow {}^7C_4 \times {}^5C_4$$

$$\Rightarrow 35 \times 5$$

$$\Rightarrow 175$$

Total Ways = 70 + 210 + 175

$$\Rightarrow 455.$$

Q.4) The price of wheat increases by 40 paise every year, while the price of rice increases by 15 paise every year. If in 2013, the price of wheat was Rs. 4.20 and that of rice was Rs. 6.30, in which year wheat will cost 40 paise more than the rice?

- a) 2020
- b) 2021
- c) 2022
- d) 2023

Ans) d

Exp) Option d is the correct answer.

Price of wheat increases by 40 paise every year, while the price of rice increases by 15 paise every year.

In 2013, price of wheat = Rs. 4.20 = 420 paise

Price of rice = Rs. 6.30 = 630 paise

Let number of years = x

According to question,

$$420 + 40x = 40 + 630 + 15x$$

$$25x = 250, x = 10 \text{ years}$$

So, it will take 10 years for the price of wheat to be 40 paise above the price of rice.

$$2013 + 10 = 2023$$

Q.5) There is a 117-digit number which is formed by linear arrangement of first 63 natural numbers. If this number is divided by 8, what remainder it leaves?

- a) 5
- b) 6
- c) 7
- d) 8

Ans) c

Exp) Option c is the correct answer.

To find the remainder by 8,

We only divide the number formed by the last 3 digit by 8.

The last six of the 117 digit would be = (.....616263)

The last 3 digits of the number is 263

After dividing by 8 the remainder will be 7

Q.6) There are 21 bottles inside a refrigerator which is numbered from 1 to 21. Two bottles are drawn one after one without replacement. What is the probability that both bottles are even numbered?

- a) $2/7$
- b) $3/14$
- c) $8/21$
- d) $5/21$

Ans) b

Exp) Option b is the correct answer.

There are 10 even numbers in the group 1-21.

The probability that the first bottle is even numbered = $10/21$

Since that the bottle is not replaced there are twenty bottles left, of which 9 are even numbered.

The probability that the second bottle is even numbered = $9/20$

Thus, required probability = $10/21 \times 9/20$

= $3/14$

Q.7) How many 4 digit numbers are there such that the product of the digits is less than 8?

- a) 13
- b) 15
- c) 19
- d) 21

Ans) c

Exp) Option c is the correct answer.

For the product of a 4-digit number to be lesser than 8, it should comprise of either 1, 2, 3, 4, 5, 6 or 7 in a certain way.

Let's start with

Product 1 => Possible in only one way (1111).

Product 2 => Possible in 4 ways (2111, 1211, 1121 and 1112).

Product 3=> Possible in 4 ways (3111, 1311, 1131 and 1113).

Product 4 => Possible in 10 ways (4111, 1411, 1141, 1114, 2211, 2121, 2112, 1212 and 1221).

Total = $1 + 4 + 4 + 10 = 19$ numbers.

Q.8) A second-hand motorbike was bought on marked at Rs. 25000 with successive discounts of 20% and 10%. If the buyer spends Rs. 3000 for its repair and sells it for Rs. 28000, what would be the profit or loss percentage?

- a) 21.22%
- b) 26.66%
- c) 33.33%
- d) 42.22%

Ans) c

Exp) Option c is the correct answer.

Marked price = Rs. 25000 Formula for successive discounts is

Total Discount = $D1 + D2 - \frac{D1 \times D2}{100}$

$$= 20 + 10 - \frac{20 \times 10}{100}$$

$$= 30 - 2$$

$$= 28\%$$

Since 100% = 25000

After applying 28% discount, 72% of 25000 = 18000.

Amount spent on repair = 3000.

Total cost price is = 18000 + 3000 = 21000.

Given that selling price is 28000.

Since $SP > CP$ it is profit.

Profit = $SP - CP = 28000 - 21000 = \text{Rs } 7000$

Profit% = $\frac{\text{Profit}}{CP} \times 100$

$$= \frac{7000}{21000} \times 100$$

$$= 33.33\%$$

Q.9) What will be the sum of the digits of the smallest five-digits number which when divided by 9, 12, 15 and 24 leaves remainders 1, 4, 7 and 16 respectively?

- a) 10
- b) 12
- c) 8
- d) 11

Ans) a

Exp) Option a is the correct answer.

Given:

The smallest 5-digit number divided by 9, 12, 15, and 24 and the remainder is 1, 4, 7, and 16 respectively.

The least number which when divided by a, b, c and leaves the remainder p, q, and r respectively, is calculated by, LCM of (a, b, and c) - N where $N = (a - p) = (b - q) = (c - r)$

LCM of 9, 12, 15, and 24,

$$\Rightarrow 9 = 3 \times 3$$

$$\Rightarrow 12 = 2 \times 2 \times 3$$

$$\Rightarrow 15 = 3 \times 5$$

$$\Rightarrow 24 = 2 \times 2 \times 2 \times 3$$

$$\Rightarrow \text{LCM} = 2 \times 2 \times 2 \times 3 \times 3 \times 5 = 360$$

We know that the smallest number of five digit = 10,000

When 10000 divided by 360 then remainder is 280.

So, smallest five-digit number which is divided.

$$\begin{aligned} \text{by } 360 &= 10000 + (360 - 280) \\ &= 10080 \end{aligned}$$

Now we calculated the N

$$\begin{aligned} N &= (9 - 1) = (12 - 4) = (15 - 7) = (24 - 16) \\ &= N = 8 \end{aligned}$$

$$\begin{aligned} \text{Hence Required number} &= \text{smallest five-digit number which is divided by } 360 - N \\ &= 10080 - 8 \\ &= 10072 \end{aligned}$$

$$\begin{aligned} \text{Sum of digit of } 10072 &= 1 + 7 + 2 \\ &= 10 \end{aligned}$$

Thus, sum of the smallest five-digit number which when divided by 9, 12, 15, and 24 leaves remainders 1, 4, 7 and 16 respectively is 10.

Q.10) The profit earned by selling an article for Rs. 832 is equal to the loss incurred when the article is sold for Rs. 448. What will be the selling price of the article if it is sold at a 10% loss?

- a) 576
- b) 640
- c) 625
- d) 540

Ans) a

Exp) Option a is the correct answer.

The selling price at profit = Rs. 832

The selling price at loss = Rs. 448

Required loss = 10%

Formula used:

$$\text{S.P.} = (100 - \text{Loss\%})/100 \times \text{C.P.}$$

Where, C.P. = Cost price; S.P. = Selling price

Calculation:

Let, the profit = loss = x

$$\text{So, } 448 + x = 832 - x$$

$$= x + x = 832 - 448$$

$$= 2x = 384$$

$$= x = 384/2 = 192$$

The cost price = $(448 + 192) = (832 - 192) = \text{Rs. } 640$

So, the selling price = $(100 - 10)/100 \times 640 = \text{Rs. } 576$

The selling price of the article will be Rs. 576

Q.11) WHO's project report on 'CORONAVIRUS' consists of 30 pages each of 55 lines with 80 character on each line. In case the number of character is increased by 88 per lines but the numbers of lines is reduced to 50 per page, what is the percentage change in number of pages.

- a) 25%
- b) 12.5%
- c) 6.25%
- d) None of these

Ans) d

Exp) Option d is the correct answer.

Total character in report = $30 \times 55 \times 80$

Let the new number of pages be n . Then,

$$n \times 88 \times 50 = 30 \times 55 \times 80$$

$$\Rightarrow n = \frac{30 \times 55 \times 80}{50 \times 88} = 30$$

This means report has same number of pages as before. Therefore, no change.

Q.12) Divide Rs. 680 among A, B, and C such that A gets $\frac{2}{3}$ of what B gets and B gets $\frac{1}{4}$ of what C gets. Now, what is the share of C?

- a) 420
- b) 480
- c) 380
- d) 240

Ans) b

Exp) Option b is the correct answer.

$$A + B + C = 680$$

A gets $\frac{2}{3}$ of what B gets and B gets $\frac{1}{4}$ of C gets.

Thus,

$$A = \frac{2}{3} \text{ of } B$$

$$A : B = 2 : 3$$

$$\text{Ratio of } A : B \text{ is } 2 : 3 \text{ ----- (1)}$$

B gets $\frac{1}{4}$ of C what gets,

$$\text{Ratio of } B : C \text{ is } 1 : 4 \text{ ----- (2)}$$

Multiplying equation (2) by 3,

$$\text{Ratio of } B : C \text{ is } 3 : 12$$

$$\text{Ratio of } A : B : C \text{ is } 2 : 3 : 12$$

$$2 \text{ units} + 3 \text{ units} + 12 \text{ units} = 680$$

$$17 \text{ units} = 680$$

$$1 \text{ unit} = 680 / 17$$

$$1 \text{ unit} = 40$$

$$\text{Share of } C = 12 \text{ units}$$

$$= 12 \times 40$$

$$= 480$$

Q.13) What is the Unit's digit of the given expression?

$$78^{5562} \times 56^{256} \times 97^{1250}$$

- a) 6
- b) 5
- c) 4
- d) 3

Ans) a

Exp) Option a is the correct answer.

We need to look at the pattern followed by 78, 56, 97 when they are raised to high powers.

For 78, the unit digit for 'raised powers' are as follows:

$$78^1 = 8. \quad 78^5 = 8$$

$$78^2 = 4. \quad 78^6 = 4$$

$$78^3 = 2. \quad 78^7 = 2$$

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$$78^4 = 6.$$

$$78^8 = 6$$

$$78^{(5562)} = 78^{(4 \times 1390)} \times 78^2 = 78^{(4n+2)} = 78^{4n} \times 78^2 = 6 \times 4 = 24, \text{ hence unit digit is 4 here.} \text{---(1)}$$

Similarly, the unit digit for 'raised powers' of 56 are as follows:

$$56^1 = 6$$

$$56^2 = 6$$

$$56^3 = 6$$

Implies 56 raised to the power n will yield 6 as unit digit.-----(2)

Now, unit digit for 'raised power' of 97:

$$97^1 = 7$$

$$97^2 = 9$$

$$97^3 = 3$$

$$97^4 = 1$$

$$97^{1250} = 97^{(4 \times 312)} \times 97^2 = 97^{(4n+2)} = 97^{4n} \times 97^2 = 1 \times 9 = 9 \text{-----(3)}$$

Hence the unit digit for the given expression is , unit digit of $4 \times 6 \times 9 \rightarrow 6$

Q.14) LCM of two positive integers is thrice the smaller number. The difference of the larger number and the HCF of the two numbers is 10. The larger number is:

- a) 5
- b) 10
- c) 15
- d) 12

Ans) c

Exp) Option c is the correct answer.

Let the smaller number be 'x' and larger number be 'y'.

We know that $LCM \times HCF = x \times y$

So, $3x \times HCF = x \times y$ (Since, of two positive integers is thrice the smaller number)

$$HCF = y/3$$

And $y - y/3 = 10$ (given)

$$y = 15.$$

Q.15) Ranjit and Gaurav met at 9 AM at the Victoria Memorial. After one hour, Gaurav proceeded in the East direction while Ranjit proceeded in the North direction. Exactly at noon, they were 60KMs apart. Find the speed of the slower-moving person if the difference between Gaurav's and Ranjit's speed is 6 km/h.

- a) 13 km/h
- b) 14 km/h
- c) 18 km/h
- d) 26 km/h

Ans) c

Exp) Option c is the correct answer.

Given:

Gaurav and Ranjit Met at 9 AM and left at 10 AM. At Noon (12 PM) their distance is 60 KMs.

Their speed difference was 6 km/h

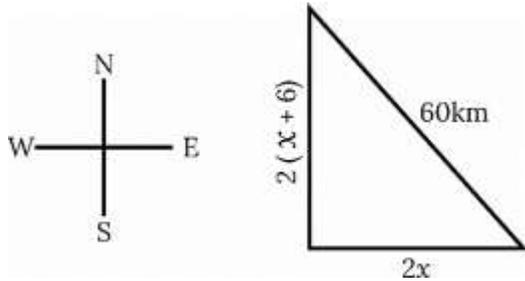
So total travel time = 2 hours

Let's assume the slower person was moving at x km/h. Hence distance traveled by slower person is 2x km

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The faster person's speed will be $(x+6)$ km/h. Hence, the distance traveled by the slower person is $2(x+6)$ km

Let's draw the diagram with help of the above data



As per Pythagoras theorem,

$$60^2 = (2x)^2 + (2x + 12)^2$$

Let's take 4 common from both sides, hence

$900 = (x)^2 + (x + 6)^2$ or $30^2 = (x)^2 + (x + 6)^2$ [Hint: For such problems, never attempt to solve the whole quadratic equation as it will be time-consuming. Just eliminate the options quickly as we have done below)

From the above equation, it's clear that x can't be more than 24 km/h (as the speed of one person will become 30). Let's see the available options,

- (a) 13 km/h : $13 + (19)^2$ can't be 900 (Hint: square of units digit will not be divisible by 10, hence eliminated without calculating complete problem.)
- (b) 14 km/h: $(14)^2 + (20)^2$ can't be 900 (Hint: square of units digit will not be divisible by 10, hence eliminated without calculating complete problem.)
- (c) 18 km/h: $(18)^2 + (24)^2$ is 900, Hence this is the correct answer.
- (d) 26 km/h : Option eliminated as speed is more than 24 km/h.

Q.16) Shakti and Rashmi are among 22 students who write an examination. Shakti scores 81. The average score of the 21 students other than Rashmi is 61. The average score of all the 22 students is one more than the average score of the 21 students if we drop Shakti. Calculate how many marks Rashmi scored in the same examination?

- a) 39
- b) 49
- c) 51
- d) 37

Ans) a

Exp) Option a is the correct answer.

It is given that, $a_1, a_2, a_3, \dots, a_{22}$ write an examination.

Also given that, Average score of the 21 students other than Rashmi = 61

So, the (Total Score - Rashmi's score) = 61×21 ----- (1)

Given that Shakti scored 81 ----- (2)

and when Shakti leaves, the average score drops down by 1 mark ("The average score of all the 22 students is one more than the average score of the 21 students if we drop Shakti").

This means that Shakti scored more than the Overall class average.

Since his departure has resulted in the decrease of the overall class average by 1, his score is 21 more than the average.

So shakti's marks = Overall Class average + 21

Using equation 2:

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Overall Class average = $81 - 21 = 60$ marks

So Total Score = 60×22 ------(3)

From equation 1,

Total Score - Rashmi's score = 61×21

Using equation 1, 2 and 3,

$60 \times 22 - 61 \times 21 = \text{Rashmi's score}$

$1320 - 1281 = \text{Rashmi's score}$

Rashmi's score = 39 marks

Q.17) Five digit numbers divisible by 9 are to be formed by using the digits 0, 1, 2, 3, 4, 7, 8 (without repetition). What is the total number of such numbers that can be formed with the above arrangement?

- a) 284
- b) 196
- c) 216
- d) 254

Ans) b

Exp) Option b is the correct answer.

Sum of all given numbers = $0 + 1 + 2 + 3 + 4 + 7 + 8 = 25$

Hence, we will select only those five numbers whose sum is 18 or 9. But no five numbers will make the sum 9.

So, we choose the five numbers which make their sum 18.

Since the sum of all the seven digits is 25, so we exclude those two digits out of the given seven digits whose sum is 7.

Thus, we exclude either 0, 7 or 3, 4 as both these have sum 7.

Hence, we have the following two sets.

(a) 1, 2, 3, 4, 8, (0, 7 excluded) Therefore, sum = 18

The number to be formed is _ _ _ _ _

They can be arranged in $5 \times 4 \times 3 \times 2 \times 1 = 120$ ways

(b) 1, 2, 7, 8, 0 (3, 4 excluded) Therefore, sum = 18

They can be arranged in $4 \times 4 \times 3 \times 2 \times 1 = 96$ ways (1st place can't be 0, hence 1st place can be arranged in 4 ways)

Thus, the total number of numbers divisible by 9 is $120 + 96 = 216$

Q.18) The Lemon Tree outlet has a pricing policy for different sets of food items which allows for different mark-ups. Chinese items are marked up at 40%, Tandoor items are marked up at 50%, Indian items are marked up at 25%, Thai items are marked up at 75%, Mexican items are marked up at 75%. Amar went to the outlet with a family of 5. He got a bill at the end. The bill had Rs 126 for Chinese items, Rs 180 for Tandoor items, Rs 300 for Indian items, Rs 245 for Thai items and Rs 210 for Mexican items.

How much profit Lemon tree earned?

- a) 49%
- b) 42%
- c) 24%
- d) 40%

Ans) a

Exp) Option a is the correct answer.

Bill of Chinese items = Rs 126, and Chinese items are marked up at 40%,

So, using formula for Cost price and sale price,

The cost price for Chinese items are = $(126 \times 100) / 140 = \text{Rs } 90$

The bill for Tandoor items are Rs 180 and the Tandoor items are marked up at 50%.

So, the cost price for the Tandoor items are = $(180 \times 100) / 150 = \text{Rs } 120$

The bill for Indian items are Rs.300 and Indian items are marked up at 25%

So, the cost price for Indian items are $(300 \times 100) / 125 = \text{Rs } 240$

The price for Thai items are marked up at 75% and the bill paid for thai item is Rs.245

So, the cost price for Thai items are $(245 \times 100) / 175 = \text{Rs } 140$

The bill paid for Mexican items are Rs.210 and the Mexican items are marked up at 75%.

So, the cost price for Mexican items are $(210 \times 100) / 175 = \text{Rs } 120$

So, now the cost price for all the items are = $\text{Rs } (90 + 120 + 240 + 140 + 120) = \text{Rs } 710$

Bill paid = $\text{Rs } (126 + 180 + 300 + 245 + 210) = \text{Rs } 1061$

Profit % = $[(1061 - 710) / 710] \times 100 = 49.43\%$

Q.19) A train of length 450 metres, moving at a speed of 90 km/hr can cross a 500 metres bridge in

- a) 38 seconds
- b) 14 seconds
- c) 36 seconds
- d) 15 seconds

Ans) a

Exp) Length of train = 450 m

Speed of train = 90 km/h = $90 \times \frac{5}{18} = 25 \text{ m/s}$

Length of bridge = 500 m

To cross the bridge, the train has to travel a distance equal to sum of the length of bridge and the length of train.

Total distance to be covered = $450 + 500 = 950 \text{ m}$

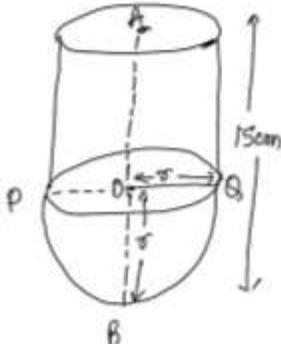
Time taken = $\frac{\text{Distance}}{\text{Speed}} = \frac{950}{25} = 38 \text{ seconds.}$

Q.20) A coffee mug is in the shape of a hollow cylinder mounted on a hemispherical bowl. The diameter of the hemispherical bowl is 14cm. The total height of the coffee mug is 15 cm. How much coffee can be filled in this coffee mug?

- a) 2056.56 cubic cm
- b) 2256.66 cubic cm
- c) 1950.66 cubic cm
- d) 2454.66 cubic cm

Ans) c

Exp) Option c is the correct answer.



Given, the diameter of the hemispherical bowl is 14cm, implies $PQ = 14\text{cm}$,

So the radius of hemispherical bowl (r) = 7 cm

Now, the volume of the hemispherical bowl = $(\frac{2}{3})\pi r^3 = (\frac{2}{3}) \times (\frac{22}{7}) \times 7 \times 7 \times 7 = 718.66$ cubic cm.---(1)

For the cylinder above,

Height of the cylindrical portion of the mug is $(15-7) = 8$ cm

Radius of the cylindrical portion is also $OQ = 7$ cm.

So volume of the cylindrical portion = $\pi r^2 h = (\frac{22}{7}) \times 7 \times 7 \times 8 = 1232$ cubic cm.-----(2)

Using equation 1 and 2,

Volume of the coffee mug is Sum of volume of cylindrical portion and that of hemispherical bowl = $1232 + 718.66 = 1950.66$ cubic cm

Q.21) A student has 60% chance of passing in English and 42% chance of passing in both English and Mathematics. What is the percentage probability that he will fail in Mathematics?

- a) 12
- b) 36
- c) 40
- d) 30

Ans) d

Exp) Option d is the correct answer.

$P(E)$ = Probability of passing in English = 0.6

$P(E \cap M)$ = Probability of passing in Maths and English = 0.42

$P(M)$ = Probability of passing in Maths

Since, $P(M)$ and $P(E)$, both are independent events.

So, $P(E \cap M) = P(E) \times P(M)$

$P(M) = P(E \cap M) / P(E) = 0.42 / 0.6 = 0.7$

Therefore, Probability of failing in Maths = $1 - 0.7 = 0.3 = 30\%$

Q.22) The State Bank of India employs Regional managers, General managers and Branch managers in the proportion of 8:5:1, and the salary of a Regional manager, a General manager and a Branch manager are in the ratio of 5:2:3. When the bank employs 20 Regional managers, the total salary of all amounts to Rs 31800. What is the salary paid to each category of managers (Regional manager, General manager and Branch manager respectively)?

- a) Rs 25000, Rs 5000, Rs 1800
- b) Rs 15000, Rs 10800, Rs 6000
- c) Rs 24000, Rs 6000, Rs 1800
- d) Rs 20000, Rs 9000, Rs 2800

Ans) c

Exp) Option c is the right answer.

Given, proportion of Regional Manager, General Manager, Branch Manager = 8:5:1----(1)

Proportion of the salary of a Regional Manager, a General Manager, a Branch Manager = 5:2:3----(2)

So, the ratio of total salaries will be obtained by multiplying the proportion for 'Number of managers' and their 'individual salary ratio'. That is $(8 \times 5) : (5 \times 2) : (1 \times 3) = 40 : 10 : 3$

Ratio of total salaries of Regional Manager, General Manager, Branch Manager = 40:10:3 ----(3)

Given, total salaries of all amounts to Rs 31800.

Let's assume the salary of Regional Manager, General Manager, Branch Manager be $40y$, $10y$, $3y$, where y is a variable.

Sum of $(40y + 10y + 3y) = \text{Rs } 31800$

Solving for variable y , we get $y = 600$

So, using equation 3, we get Salary paid to Regional managers = $\text{Rs } (40 \times 600) = \text{Rs } 24,000$

Salary paid to General Managers = $\text{Rs } (10 \times 600) = \text{Rs } 6000$

Salary paid to Branch Managers = $\text{Rs } (3 \times 600) = \text{Rs } 1800$.

Here the information 'When the bank employs 20 Regional managers' is irrelevant.

Q.23) Anil wins a lottery of certain amount at Howrah junction. He then goes to race course with that money. There he loses 32.5% of his lottery money. From there he boards a cab to orphanage. The cab driver on the way steals Rs1,00,000 from his wallet. Of the rest he donates 20% to the orphanage. Then he opens a demat account and invests Rs 7.5 lakh in the shares of LIC. Now he realises that he is left with only Rs 2.5 lakh with him. How much money he had won in the lottery?

- a) 25 lakhs
- b) 20 lakhs
- c) 28 lakhs
- d) 30 lakhs

Ans) b

Exp) Option b is the correct answer.

Let's proceed reversed way, as this type of Questions can be solved more easily in reverse manner.

1) he is left with Rs 2.5 lakhs

2) Invests Rs 7.5 lakhs in share

Implies he had $\text{Rs } (2.5 + 7.5) \text{ lakhs} = \text{Rs } 10 \text{ lakhs}$

Since he donated 20% to the orphanage, so the rest amount left with him is 80% of the amount left with him after the cab driver stole his money.

So, 80% of the amount left with him after the cab driver stole his money = $\text{Rs } 10 \text{ lakhs}$

So, the total amount left with him after the cab driver stole his money = $(10/80) \times 100 = \text{Rs } 12.5 \text{ lakhs}$

Since the cab driver stole Rs 1 lakh.

So, the amount before van driver stole money = $\text{Rs } (12.5+1) \text{ lakhs} = \text{Rs } 13.5 \text{ lakhs}$

Since he had lost 32.5% in the race course. So the amount left with him was $(100-32.5= 67.5)\%$ of the lottery money.

67.5% of the lottery money = $\text{Rs } 13.5 \text{ lakhs}$

100% of the lottery money = $\text{Rs } (13.5/67.5) \times 100 = \text{Rs } 20 \text{ lakhs}$

So, the money he had won in the lottery = $\text{Rs } 20 \text{ lakhs}$

Q.24) Two jars contain equal quantities of 40% alcohol. Rajeev changed the concentration of the first jar to 50% by adding an extra quantity of pure alcohol. Raj changed the concentration of the second jar to 50% replacing a certain quantity of the solution with pure alcohol. By what percentage is the quantity of alcohol added by Rajeev more than that replaced by Raj?

- a) 10%
- b) 20%
- c) 30%
- d) 40%

Ans) b

Exp) Option b is the correct answer.

Let solutions = 100 ml and therefore, alcohol = 40ml

For the first jar; $\frac{40+y}{100+y} = \frac{1}{2}$

$$80 + 2y = 100 + y \Rightarrow y = 100 - 80 = 20\text{ml}$$

For second jar; $\frac{40-\frac{2}{5}y+y}{60-\frac{3}{5}y} = \frac{1}{1}, y = \frac{100}{6}$

Hence, the required percentage

$$= \frac{20-\frac{100}{6}}{\frac{100}{6}} \times 100 = 20\%$$

Q.25) Ram speaks the truth in 40 percent of the cases and Shyam in 60 percent of the cases. Each of them, is asked a series of questions, for which the answer can be only yes or no. What is the probability that they will contradict each other in answering a particular question?

- a) 2/5
- b) 3/5
- c) 6/25
- d) 13/25

Ans) d

Exp) Option d is the correct answer.

Probability of Ram speaking truth, $P(r) = 40/100 = 2/5$

Probability of Ram speaking lie, $P(r1) = (100-40)/100 = 3/5$

Probability of Shyam speaking truth, $P(s) = 60/100 = 3/5$

Probability of Shyam speaking lie, $P(s1) = (100-60)/100 = 2/5$

They contradict each other when one of them lie while other speak truth

$$= P(r) \times P(s1) + P(r1) \times P(s)$$

$$\Rightarrow 2/5 \times 2/5 + 3/5 \times 3/5 = 13/25$$

Direction for (Q.26): Five players Vikram, Uttam, Ema, Danish and Peter played five overs of cricket among themselves. Each of the five players bowled exactly one over and also batted exactly for one over. The runs conceded by the five bowlers in the respective overs bowled by them are 1, 2, 3, 4 and 5, not necessarily in the same order. Vikram bowled to Danish and conceded 1 run and he scored 2 runs in Uttam's over. Ema neither scored 3 runs nor conceded 3 runs. Danish did not bowled to Ema. Uttam batted when Ema bowled, then he scored 5 runs.

Q.26) Which of the following statement **cannot** be true?

- a) Peter conceded 4 runs to Ema.
- b) Danish neither bowled to Ema nor batted in Ema's over.

- c) Peter did not score 3 runs
d) None of the above

Ans) c

Exp) Option c is the correct answer.

Peter did not score 3 runs
Vikram conceded 1 run to Danish
Uttam conceded 2 run to Vikram
Ema conceded 5 runs to Uttam
Peter conceded 4 runs to Ema
Danish conceded 3 runs to Peter
Hence option (C) is not true.

Q.27) What is the number of numbers from 1 to 100, which are not divisible by any one of 3, 7 and 5 ?

- a) 48
b) 54
c) 45
d) 50

Ans) c

Exp) Option c is the correct answer.

Step 1: First calculate the number of numbers from 1 to 100, which are divisible by 3, 6, 9, _____ 99

Either use the table of 3, which will give the number of numbers as 33
Or

Using formula for nth term of Arithmetic Progression(AP) to find 99 is which term:

$$S_n = a + (n-1)d$$

$$\text{Here } a = 3, d = 3, S_n = 99$$

$$99 = 3 + (n-1)3$$

$$\text{Solving, we get } n = 33$$

Implies there are 33 numbers from 1 to 100 which are divisible by 3.------(1)

Step 2: Now calculate the number of numbers from 1 to 100, which are divisible by 5, 10, 15, _____ 100

Either use the table of 5, which will give number of numbers as 20 or,
Same formula of AP,

$$100 = 5 + (n-1)5$$

$$n = 20$$

Implies there are 20 numbers from 1 to 100 which are divisible by 5.------(2)

But the numbers 15, 30, 45, 60, 75, 90 (total of 6) have been counted in divisibility of 3 also. So this has to be subtracted at the end.------(2a)

Step 3: Now calculate the number of numbers from 1 to 100, which are divisible by 7, 7, 14, 21, _____ 98

Either use the table of 7, which will give the number of numbers divisible by 7 as 14,
Or use formula of AP,

$$98 = 7 + (n-1)7$$

$$n = 14, \text{ Implies there are 14 numbers between 1 to 100 which are divisible by 7 } \text{---(3)}$$

Now there are numbers 21, 42, 63, 84 which are divisible by 3 also, so already counted there, so it has to be subtracted at the end. -----(3a)

Similarly, 35, 70 have been counted in divisibility of 5 also. So, all these will be subtracted at the end----
 $-(3b)$

Final step:

To get the total number of numbers from 1 to 100 which are divisible by 3, 5 and 7 are

Equation (1)+(2)+(3) - [Equation (2a)+ (3a) + (3b)]

$33+20+14- (6+4+2) = 55,$

So there are total 55 numbers which are divisible either by 3, 5 and 7

Hence the number of numbers from 1 to 100, which are not divisible by any one of 3 and 7 and 5 is $(100-55) = 45$

Q.28) A garment factory took orders for a certain piece of work. It has three employees Suman, Aman and Raman. Suman can do as much work in 2 days as Raman can do in 3 days. Raman can do as much work in 4 days as Aman can do in 5 days. Raman, Aman and Suman decide to work together. If they all work together it takes 20 days to complete a piece of work. How many days will Raman take to do all the work by himself?

- a) 44 days
- b) 50 days
- c) 82 days
- d) 66 days

Ans) d

Exp) Option d is the correct answer.

Let's assume that Suman does 100 units of work in 2 days,

So, Raman does 100 units of work in 3 days.

Implies units of work Suman does in 1 day = $100/2 = 50$ units----(1)

Units of work Raman does in 1 day = $100/3$ units -----(2)

Given, Raman can do as much work in 4 days as much Aman can do in 5 days.

So, units of work which Raman can do in 4 days = $(100/3) \times 4 = 400/3$ units = the units of work which Aman can do in 5 days.

So, Aman can do $400/3$ units in 5 days.

Hence in 1 day, Aman can do $400/15$ units = $80/3$ units -----(3)

So, now the number of units of work by all three in one day = $[(50+(100/3)+(80/3)] = 110$ units per day.

Given, it takes 20 days to complete a piece of work.

Hence the unit of work was = $110 \times 20 = 2200$ units of work

Given Speed of work of Raman from equation 2 is $100/3$ units per day.

So, using unitary method, the time taken to complete 2200 units of work $2200/(100/3) = 66$ days.

Q.29) In the mobile market, only three competitors (iPhone, Redmi and Samsung) exist. Last year the sales of Redmi mobiles were 10% more than iPhone. In this year, both the firms iPhone and Redmi increases their respective sales by 20%. This year, the sales of the firm Redmi is five times that of Samsung. How much were the sales of the firm Samsung (approx) last year, if the total sales remained constant over the two years period?

- a) 25%
- b) 32%
- c) 38%
- d) 41%

Ans) a

Exp) Option a is the correct answer.

For last year; iPhone = 100, Redmi = 110

For this year; iPhone = 120; Redmi = 132

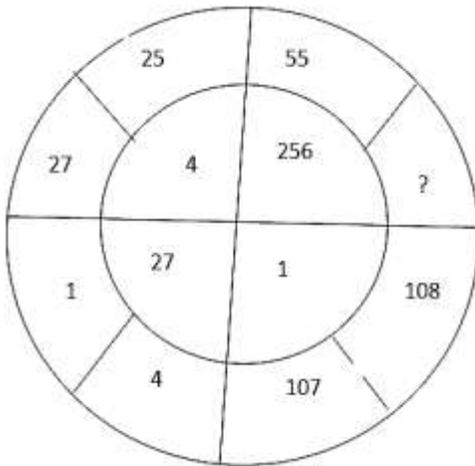
Samsung = 26.4 sales (sales of the firm Redmi is five times that of Samsung)

Last year Samsung = 68.4 sales

Required percentage = $\frac{68.4}{278.4} * 100 = 25\%$

Hence, last year the sales of Samsung mobiles were 25% of the total market for the mobiles.

Q.30) Find the missing number



- a) 201
- b) 51
- c) 100
- d) 47

Ans) b

Exp) Option b is the correct answer.

The pattern is = $(108 - 107) = 1^1$, $(4 - 1) = 3^3$, $(27 - 25) = 2^2$.

So, the missing number = $(55 - x)^{55-x} = 256 \Rightarrow (55 - x)^{55-x} = 4^4$. So, $(55 - x) = 4$, $x = 51$

Q.31) The sum of the radius and the height of a cylinder is 27m. The total surface area of the cylinder is 3564 m^2 , what is the volume of the cylinder? (in m^3)

- a) 9768
- b) 7654
- c) 9123
- d) 8316

Ans) d

Exp) Option d is the correct answer.

Let the radius of the cylinder be r and height be h .

Then, $r + h = 27$ (i)

Again, total surface area of cylinder = $(2\pi rh + 2\pi r^2)$

Now, $2\pi r(h + r) = 3564$

$$\text{or, } 2\pi r \times 27 = 3564$$

$$\text{or, } 54\pi r = 3564, \pi r = (3564/54) = 66\text{m, } r = (66 \times 7) / 22 = 21\text{m}$$

$$\text{Height} = 27 - 21 = 6\text{m}$$

$$\text{Volume of cylinder} = \pi r^2 h = (22/7) \times 21 \times 21 \times 6 = 8316\text{m}^3$$

Q.32) In a class of 138, where girls are twice that of boys, Lucky ranked thirty fifth from the top, if there are 10 girls ahead of Lucky, how many boys are after him in rank?

- a) 21
- b) 16
- c) 17
- d) 25

Ans) a

Exp) Option a is the correct answer.

No of boys = x; No of girls = 2x;

$$x+2x = 138 \Rightarrow 3x = 38$$

So, (Boys)= 46 and 2x(Girls) = 92

Number of student behind Lucky = 138 – 35 = 103

No of girls behind Lucky = 92 – 10 = 82

No of boys behind Lucky = 103 – 82 = 21

Q.33) Tom, Dick and Harry are friends, being looked after by a matron Fatima, Tom weighs 50% more than Dick and Harry weighs 25% less than Tom. Fatima weighs one third of the combined weight of the three boys. All four together weigh 232kg. The correct arrangement of the persons in the ascending order of their weights, is:

- a) Harry, Dick, Fatima, Tom
- b) Harry, Dick, Tom, Fatima
- c) Dick, Harry, Tom, Fatima
- d) Dick, Harry, Fatima, Tom

Ans) d

Exp) Let weight of Dick = x kg.

Then weight of Tom = $\frac{3x}{2}$ kg

And weight of Harry = $\left(\frac{3x}{2} - \frac{3x}{4 \times 2}\right) = \frac{9x}{8}$ kg

Hence weight of Fatima = $\frac{1}{3}\left(x + \frac{3x}{2} + \frac{9x}{8}\right) = \frac{29x}{24}$ kg

According to question $x + \frac{3x}{2} + \frac{9x}{8} + \frac{29x}{24} = 232$

$$\Rightarrow \frac{29x}{8} + \frac{29x}{24} = 232 \Rightarrow x = 48$$

Tom's weight = $\frac{3}{2}(48) = 72$ kg

Harry's weight = $\frac{3}{2}(48)\left(1 - \frac{1}{4}\right) = 54$ kg

Dick's weight = 48 kg

And Fatima's weight = $\frac{29}{24} \times 48 = 58$ kg

Therefore, Arrangement of persons in the ascending order:

Dick < Harry < Fatima < Tom.

Q.34) Amul runs at a speed of 40 metres/minute. Raina follows him after an interval of 5 minutes and runs at a speed of 50 metres/minute. Raina's dog runs at a speed of 60 metres/minute and starts along with Raina. The dog reaches Amul and then comes back to Raina and continues to do so till Raina reaches Amul. What is the total distance covered by the dog?

- a) 600 metres
- b) 750 metres
- c) 980 metres
- d) 1200 metres

Ans) d

Exp) Option d is the correct answer.

Let they meet at a distance of 'x' from start, after time 't' since Raina starts.

$$40 \times (5 + t) = 50 t$$

$$200 + 40 t = 50 t$$

$$t = \frac{200}{10} = 20 \text{ min}$$

$$\text{Total distance covered by dog} = 60 \times t = 60 \times 20 = 1200 \text{ metres}$$

Q.35) Three mugs of coffee are served to three friends A, B and C at the Cafe Coffee Day. The total amount of coffee served to them is 21.5 liters. Amount of coffee in the mugs of A and B is in the ratio of 5:4. And the amount of coffee in the mug of B and C is in the ratio of 6:8. What is the amount of coffee in the mug of that person who had the least coffee?

- a) 8
- b) 10
- c) 6
- d) 15

Ans) c

Exp) Option c is the correct answer.

Given, total amount of coffee served = 21.5 liters

Ratio of A's coffee to B's coffee = 5:4----- (1)

Ratio of B's coffee to C's coffee = 6:8----- (2)

Since B is common in both equations. So, to bring both ratios to same proportion,

We need to multiply equation 1 by 3 and equation 2 by 2:

$$A : B = 15 : 12$$

$$B : C = 12 : 16$$

$$\text{So now } A : B : C = 15 : 12 : 16$$

So, now from the ratio it's evident that B had the least coffee.

So amount of coffee had by B = $\left[\frac{\text{Ratio of B}}{\text{Sum of ratio of A+B+C}} \right] \text{Total amount of coffee} = \left(\frac{12}{43} \right) \times 21.5 = 6 \text{ liters.}$

Q.36) A, B and C have 20, x and y balls with them respectively. If B gives 10 balls to A, he is left with half as many balls as C. If together they had 30 more balls, each of them would have had 50 balls on an average. What is the ratio of x to y?

- a) 4 : 3
- b) 3 : 2
- c) 2 : 3
- d) 2 : 5

Ans) c**Exp) Option c is the correct answer.**Given, $(20 + x + y + 30)/3 = 50$ $x + y = 100$ 1 $x - 10 = y/2 \Rightarrow 2x - y = 20$ 2

Solving 1 and 2

We get $x = 40, y = 60$.Ratio of $x : y = 2 : 3$

Q.37) In Dehri, only two newspaper The Hindu and TOI are published. It is known that 25% of the city population reads The Hindu and 20% reads TOI while 8% reads both the newspaper. It is also known that 30% of those who read The Hindu but not TOI look into advertisement and 40% of those who read TOI but not The Hindu look into advertisement while 50% of those who read both the newspaper look into advertisement. What is the percentage of the population who read an advertisement?

- a) 13.9%
- b) 15.8%
- c) 17.2%
- d) 21.4%

Ans) a**Exp) Option a is the correct answer.**

Let the population of Dehri be 100. Then,

People reading The Hindu = 25

People reading TOI = 20

People reading both = 8

People reading only The Hindu = 17

People reading only TOI = 12

Therefore, required percentage of people who read an advertisement.

$$= 17 \times \frac{30}{100} + \frac{12 \times 40}{100} + \frac{8 \times 50}{100} = 13.9\%$$

Q.38) The sum of height of P and Q is more than that of R and S taken together. The sum of height of P and R is the same as Q and S taken together. Moreover, P's height is half of the sum of height of Q and S. Who is tallest?

- a) P
- b) Q
- c) R
- d) S

Ans) b**Exp) Option b is the correct answer.**

Given,

$P + Q > R + S$ (1)

$P + R = Q + S$ (2)

$P = 1/2(Q + S)$ (3)

From (2) and (3),

$R = 1/2(Q + S)$ or $P = R$ (4)

From (1) and (4), $Q > S$

As per equation (3), P (or R) is the mean of the values of Q and S. Hence, its value must fall between Q and S

So, $Q > R = P$ and $Q > S$.

Hence, Q is the tallest.

Q.39) Aman alone would take 8 hrs. more to complete a job than when both Aman and Bikram would together. If Bikram worked alone, he took 2 hrs. more than Aman and Bikram would together. In how many days Aman and Bikram together can do it?

- a) 6
- b) 10
- c) 4
- d) 15

Ans) c

Exp) Option c is the correct answer.

let Aman and Bikram work together is x.

Then, time taken by Aman, $A = x + 8$,

And time taken by Bikram, $B = x + 2$

$$\text{Then } x = \frac{(x+8)(x+2)}{(x+8)+(x+2)}$$

$$x = \frac{x^2+10x+16}{2x+10}$$

$$\Rightarrow 2x^2 + 10x = x^2 + 10x + 16$$

$$\Rightarrow x^2 = 16$$

$$\Rightarrow x = 4$$

Q.40) A person's present age is $\frac{4}{9}$ times of the age of his mother. After 4 years, he will be one-half of the age of his mother. How old is his mother at present?

- a) 32 years
- b) 36 years
- c) 40 years
- d) 48 years

Ans) b

Exp) Option b is the correct answer.

Let the mother's age be 'M' years.

$$\text{Present age of the person} = \frac{4}{9}M$$

After 4 years \rightarrow mother's age = $M + 4$

$$\text{Person's age} = \frac{4}{9}M + 4$$

$$= \frac{4}{9}M + 4 = \frac{M+4}{2} \Rightarrow 8M + 72 = 9M + 36$$

$$= M = 36.$$

Q.1) Which of the following statements best describes 'Outwash Plain'?

- These are plains mainly formed by the upliftment of a part of the seafloor or continental shelf.
- These are plains formed by deposition of sediments by glacial meltwater at the terminus of a glacier.
- These are plains formed in desert regions at the foot of a mountain or hill.
- These are plains formed by deposition at the bed of the river or lake.

Ans) b

Exp) Option b is the correct answer.

Option a is incorrect: Structural plains are mainly formed by the uplift of a part of the seafloor or continental shelf. These are located on the borders of almost all the major continents.

Option b is correct: An outwash plain is formed by glaciers. Such a plain is **formed when a glacier deposits sediments at its terminus**. As a glacier moves, it erodes the bedrock and carries the eroded sediments downstream. These sediments are deposited by the meltwater of the glacier at the snout.

Option c is incorrect: An Outwash plain is not related to desert regions.

Option d is incorrect: A Lacustrine plain is a type of depositional plain that is formed at the bed of a lake.

Source: 11th NCERT (Fundamental of Physical Geography)- Chapter 7: Landforms and their Evolution

<https://education.nationalgeographic.org/resource/flood-plain/>

<https://earthclipse.com/science/geology/plain-landform-types-location-importance.html>

Q.2) Consider the following statements regarding a geomorphological landform called Mesas:

- It is a plateau with a flat top and steep sides.
- It is usually formed in arid regions.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Mesas is an isolated, high plateau with a flat top and steep slides.

A mesa is a flat-topped mountain or hill. It is a wide, flat, elevated landform with steep sides. A mesa is a section of a plateau that has been eroded by water removing the rock so that it now has cliffs on all sides.

Statement 2 is correct: Mesas are usually found in dry regions where rock layers are horizontal. The top of the mesa is called the caprock, this upper layer is often harder and more resistant to weathering or erosion. Mesas are abundant in the southwestern states of Colorado, New Mexico, Utah, and Arizona.



Source : <https://www.mapeffects.co/tutorials/plateau-mesa-butte>

<https://www.nationalgeographic.org/encyclopedia/butte/#:~:text=Buttes%20usually%20form%20in%20arid%20regions%2C%20such%20as%20those%20in,of%20buttes%20in%20the%20world.>

<https://education.nationalgeographic.org/resource/mesa/>

Q.3) Which of the following are primarily the examples of Sedimentary Rocks?

1. Conglomerate
2. Coquina
3. Andesite
4. Dolomite
5. Gabbro

Select the correct answer using the code given below.

- a) 1, 2 and 4 only
- b) 1, 2, 4 and 5 only
- c) 2, 4 and 5 only
- d) 1, 2, 3, 4, and 5

Ans) a

Exp) Option a is the correct answer.

Sedimentary rocks are formed from pre-existing rocks or pieces of once-living organisms. They form from deposits that accumulate on the Earth's surface. Sedimentary rocks often have distinctive layering or bedding.

Option 1 is correct: Conglomerate is a clastic sedimentary rock that contains large (greater than two millimeters in diameter) rounded particles. The space between the pebbles is generally filled with smaller particles and/or a chemical cement that binds the rock together.

Option 2 is correct: Coquina is a type of limestone composed of calcium carbonate shells, shell fragments, and other sand-sized fossil debris. It forms in the shallow waters of coastal areas with a tropical or subtropical climate. The particles are weakly cemented together, and therefore coquina is a very porous material that can function as an aquifer or a reservoir for oil and natural gas.

Option 3 is incorrect: Andesite is a fine-grained, extrusive igneous rock composed mainly of plagioclase with other minerals such as hornblende, pyroxene, and biotite.

Option 4 is correct: Dolomite (also known as "dolostone" and "dolomite rock") is a chemical sedimentary rock that is very similar to limestone. It is thought to form when limestone or lime mud is modified by magnesium-rich ground water.

Option 5 is incorrect: Gabbro is a coarse-grained, dark-colored, intrusive igneous rock that contains feldspar, pyroxene, and sometimes olivine.

Source: <https://geology.com/rocks/sedimentary-rocks.shtml#:~:text=Examples%20include%3A%20breccia%2C%20conglomerate%2C,%2C%20limestones%2C%20and%20rock%20salt.>

<https://geology.com/rocks/igneous-rocks.shtml#:~:text=These%20rocks%20include%3A%20andesite%2C%20basalt,are%20shown%20on%20this%20page.>

Q.4) Consider the followings statements:

1. Rocks in cold and dry climates always experience faster rates of chemical weathering than rocks in hot and wet climates.
2. The rate of biological weathering is most rapid in the desert ecosystem under windy conditions.
3. Calcite rocks are characterised by quick weathering due to richness in calcium.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Weathering is defined as **mechanical disintegration and chemical decomposition** of rocks through the actions of various elements of weather and climate. **Weathering** occurs one of three ways: through **physical processes** or through **chemical processes** or through biological activity.

Statement 1 is incorrect: Chemical weathering typically increases as temperatures rise with rain. Thus, **rocks in hot and wet climates experience faster rates of chemical weathering than do rocks in cold, dry climates.** Wet climates accelerate the rates of chemical weathering, caused when CO₂ in dirt mixes with air and water to form a weak acid. The weak acid breaks down rocks more rapidly in wet climates compared with dry ones.

Statement 2 is incorrect: Biological weathering occurs when living organisms break up rocks. Tree roots, for example, can fracture rocks in the same way they buckle pavement. Warm, humid climates are most favourable to life. The rates of biological weathering are most **rapid in warm humid climates** like those in tropical regions and not in desert ecosystem due lack of wet conditions.

Statement 3 is correct: Certain types of rocks are more vulnerable to different types of weathering, while others are more stable. **Calcite is a type of rock that weathers quickly, due to the fact that it is rich in calcium.** Rocks containing iron and magnesium also tend to weather rapidly, while quartz is a stable type of rock.

Source: What Factors Determine the Rate of Weathering? (sciencing.com)
chapter-6 (ncert.nic.in)

Q.5) With reference to different types of Bails, consider the following pairs:

Types of Bail	Features
1. Statutory Bail	It is given when the police fail to investigate on time.
2. Anticipatory Bail	It is a Pre-arrest bail for non-bailable offence.
3. Bail for non-bailable offences	It is granted on the discretion of court or concerned police officer.

Which of the pairs given above are correctly matched?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Bail means temporary release of an accused person awaiting trial, sometimes on condition that a sum of money is lodged to guarantee their appearance in court. Everyone who is accused of an offence Civil or Criminal has a right to apply for Bail. Only exception for it is if the said or accused is a repeat offence maker or other is a dire possibility of the fleeing away from justice, intimidating the witness or the crime is grave enough.

Pair 1 is correct: Statutory bail are also known as Default bail. It is right to bail that accrues when the police fail to complete investigation within a specified period in respect of a person in judicial custody. It is enshrined in Section 167(2) of the Code of Criminal Procedure where it is not possible for the police to complete an investigation in 24 hours, the police produce the suspect in court and seek orders for either police or judicial custody. **A magistrate cannot authorise a person's judicial remand beyond the 60- or 90-day limit. At the end of this period, if the investigation is not complete, the court shall release the person if he/she applies for bail.**

Pair 2 is correct: Anticipatory bail is literally applied for 'in anticipation of arrest'. **It is a direction to release a person on bail, issued even before the person is arrested.** If the accused has a reason to believe that he or she may be arrested on accusation of having committed a non-bailable offence then he or she has the right to apply for an anticipatory bail in the Sessions Court or High Court. Certain factors need to be examined before providing for anticipatory bail.

Pair 3 is correct: When a person is accused of committing a non-bailable offence, that person loses the right to claim bail. In such offences, the grant of bail becomes a matter of the discretion of the magistrate or the police officer. For such offences, bail can only be granted in some exceptional circumstances.

Source: <https://www.legalserviceindia.com/legal/article-41-anticipatory-bail.html>

<https://indiankanoon.org/doc/848468/>

<https://districts.ecourts.gov.in/sites/default/files/6-Bail%20Anticipatory%20Bails%20-%20Sri%20M%20Sreenu.pdf>

<https://indiankanoon.org/doc/1687975/>

Q.6) Which one of the following is the most appropriate reason for the occurrence of the phenomenon of land subsidence?

- The movement of a mass of rock, debris, or earth down a slope resulting into heavy pressure on the land.
- Heavy rainfall resulting from thunderstorms or cloud burst leading to flooding of the land.
- The large amounts of groundwater have been withdrawn from the aquifers below the ground.
- Collapse of the vent or the conduit of volcano during explosive blast of the thin and fluid lava.

Ans) c

Exp) Option c is the correct answer.

Land subsidence is a **gradual settling or sudden sinking** of the Earth's surface owing to subsurface movement of earth materials. Land subsidence generally occurs when **groundwater is mined in an unplanned way and large amounts of groundwater have been withdrawn from the aquifers below ground.** The impact is more evident in rocks made of fine-grained sediments. **Decline of groundwater table** causes a vertical compression of sediments bearing the water. Sometimes, lateral compression may also take place along with this vertical compression. Lowering of the pore water pressure in a layer result in an increase of the effective stress in the soil, resulting in consolidation of the soil which manifests as land subsidence.

Option a is incorrect: The **movement of a mass of rock**, debris, or earth down a slope resulting into heavy pressure on the land results into **Landslide**. Mass movement processes are occurring continuously on all slopes; some act very slowly, others occur very suddenly and is not usually the cause of land subsidence.

Option b is incorrect: Cloudbursts usually occur in connection with a thunderstorm. During these thunderstorms, a **large amount of water may accumulate at high levels** and, if the upward currents are weakened, the accumulated water comes down at one time, causing flash floods. Mountainous areas witness cloudbursts on a regular basis. Cloudbursts cause **great devastation in hilly areas** because the water gets concentrated in gullies and valleys. The flash floods due to mountain cloudbursts are "sudden" and "destructive." It is not the cause of land subsidence.

Option d is incorrect: A volcano is a vent through which molten rock and gas escape from a magma chamber. The collapse of volcanoes results into depression such as Crater Lake. They are usually **large, steep-walled, basin-shaped depressions formed by the collapse of a large area over**, and around, a volcanic vent or vents. It is not categorized as a land subsidence.

Source: Land subsidence is serious (downtoearth.org.in)

Land Subsidence | U.S. Geological Survey (usgs.gov)

CAUSES OF LAND SUBSIDENCE (ct.gov)

The principal causes of land subsidence in India is - Search (bing.com)

Q.7) Consider the following statements:

Statement 1: Pole star enables sailors to identify the north direction.

Statement 2: Pole star is not visible from most locations south of the equator.

Which one of the following is correct in respect of the above statements?

- Both Statement 1 and Statement 2 are correct and Statement 2 is the correct explanation of Statement 1
- Both Statement 1 and Statement 2 are correct and Statement 2 is not the correct explanation of Statement 1
- Statement 1 is correct but Statement 2 is not correct
- Statement 1 is not correct but Statement 2 is correct

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: The pole star as the name suggests, is located directly over the **north pole**. As the earth rotates around its axis, the pole **star unlike other stars in the night sky, does not change its position**. So, the sailors can identify it and thereby find out the North direction.

Statement 2 is correct, but is not the correct explanation of Statement 1.

The North Star, also known as Polaris, is known to stay fixed in our sky. It marks the location of the sky's north pole, the point around which the whole sky turns. We can see the North Star from the Southern Atmosphere, but only in very specific places, at specific times, and if atmospheric conditions are optimal. Typically, this will be around 1.23 degrees south of the equator. The star is, unfortunately, not visible for most locations south of the equator.

In the Southern Hemisphere, we can use **the Southern Cross** – also known as the constellation Crux – to find celestial south.

Source: <https://www.astronomyscope.com/can-you-see-the-north-star-from-the-southern-hemisphere/>

how did sailors navigate by the stars - Lisbdnet.com

North pole star. (satsig.net)

Q.8) Which among the following can be considered as Active Volcanoes?

- Barren Island
- Mount Mauna Loa
- Mount Kilimanjaro

4. Mount Mauna Kea
5. Mount Etna

Select the correct answer using the code given below:

- a) 1, 2 and 5 only
- b) 1, 3 and 4 only
- c) 2, 4 and 5 only
- d) 2, 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

Active volcanoes are those which have a recent history of eruptions and are likely to erupt again. Dormant volcanoes have not erupted for a very long time but may erupt at a future time. Extinct volcanoes are not expected to erupt in the future.

Option 1 is correct: Barren Island is located in the Andaman Sea, about 140 kilometers (87 miles) northeast of Port Blair, the capital city of the Andaman and Nicobar Islands, which are territories of India. **Barren Island is considered an active volcano because it has erupted multiple times in the past, with the most recent eruption occurring in 2018.** Since the 1780s, Barren Island has erupted at least ten times.

Option 2 is correct: Mauna Loa is a large shield volcano located on the Big Island of Hawaii, in the United States. **It is one of the most active volcanoes on Earth, with its last eruption occurring in 1984.**

Option 3 is incorrect: Mount Kilimanjaro is the highest mountain in Africa, located in Tanzania, and it is actually a dormant stratovolcano that has three distinct cones - Kibo, Mawenzi, and Shira. The last eruption of Mount Kilimanjaro is believed to have occurred between 150,000 and 200,000 years ago, and since then, the volcano has been quiet.

Option 4 is incorrect: Mauna Kea is a shield volcano located on the Big Island of Hawaii. Shield volcanoes are characterized by their gentle slopes and large size, and they are typically formed by repeated eruptions of lava flows. Mauna Kea is one of the tallest mountains in the world. **Mauna Kea last erupted about 4,500 years ago. It is considered a dormant volcano.**

Option 5 is correct: Mount Etna is an active volcano located on the east coast of the island of Sicily in Italy. **It is one of the most active volcanoes in the world and has been erupting for millions of years,** with its most recent eruption occurring in February 2021. Mount Etna is a stratovolcano that is characterized by its frequent explosive eruptions, lava flows, and ash emissions. The volcano has a long history of eruptions, with its first well-documented eruption occurring around 1500 BCE.

Source: <https://www.andaman.gov.in/tourism/Barren>

<https://www.usgs.gov/volcanoes/mauna-loa>

<https://www.worldwildlife.org/blogs/good-nature-travel/posts/ten-interesting-facts-about-mt-kilimanjaro>

<https://www.britannica.com/place/Mount-Fuji>

<https://whc.unesco.org/en/list/1427/>

Q.9) With reference to the Pelean Eruptions, consider the following statements:

1. They are characterized by the formation of Lava Domes.
2. They are not particularly dangerous or destructive.

Which of the above given statements is/are correct?

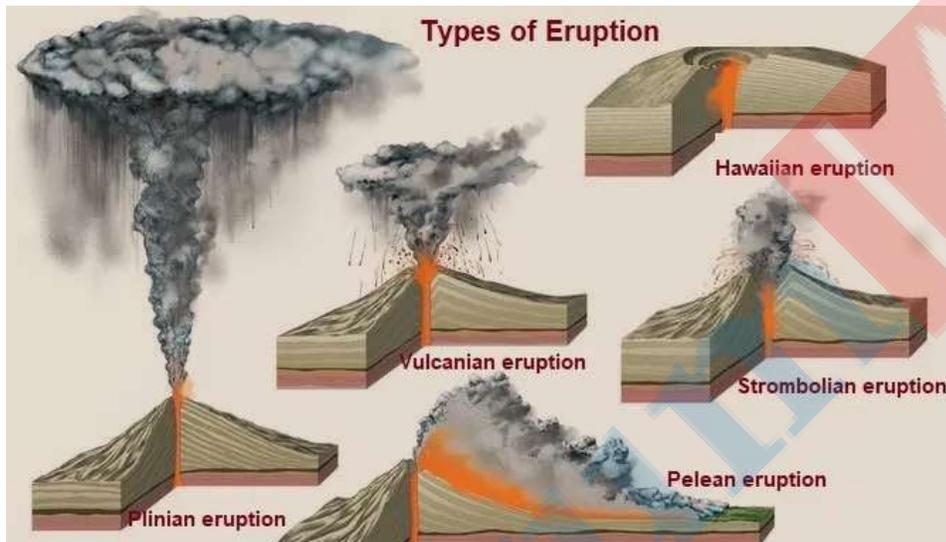
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Pelean eruptions are named after the 1902 eruption of Mount Pelée in Martinique Island, which destroyed the town of Saint-Pierre and killed more than 30,000 people.

Statement 1 is correct: Formation of lava domes is a characteristic of Pelean eruptions. A lava dome is a steep-sided mound that forms when viscous lava is extruded from a volcanic vent and piles up around the vent. The lava is too viscous to flow far, so it accumulates near the vent, forming a dome-like shape. In Pelean eruptions, the initial phases are characterized by pyroclastic flows and the tephra deposits have lower volume and range than the corresponding Plinian and Vulcanian eruptions. The viscous magma then forms a steep-sided dome or volcanic spine in the volcano's vent. The dome may later collapse, resulting in flows of ash and hot blocks.



Statement 2 is incorrect: Pelean eruptions are characterized by the collapse of a volcano's eruption column and the release of hot, fast-moving pyroclastic flows. **These pyroclastic flows can be extremely dangerous and destructive, and they are often associated with the collapse of the dome or flank of a stratovolcano.** This is because stratovolcanoes are typically made up of hardened lava, ash, and other debris that can create unstable slopes prone to collapse during an eruption.

Source: <https://www.britannica.com/science/Pelean-eruption>

<https://volcano.oregonstate.edu/volcanic-cones-and-eruptions-lesson-8>

<https://www.britannica.com/place/Mount-Pelee>

<https://courses.lumenlearning.com/geo/chapter/reading-types-of-eruptions/>

<https://pubs.usgs.gov/gip/volc/eruptions.html>

Q.10) Consider the following statements regarding the Public Accounts Committee (PAC):

1. It was first constituted in 1921.
2. Currently, the committee cannot examine the annual audit reports of the Comptroller and Auditor General of India.
3. The committee examines the appropriation and finance accounts of the Union Government.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: In 2021, the Public accounts committee completed 100 years of its formation. **Public Accounts Committee was introduced in 1921** after its first mention in the Government of India Act, 1919 also called Montford Reforms.

Statement 2 is incorrect: Former vice president V. Naidu said the PAC may be redesignated as **Public Accounts and Audit Committee given the fact that audit review is also its core function.** The function of the committee is to **examine the annual audit reports of the comptroller and Auditor General of India (CAG).** The three reports submitted by CAG are: Audit report on appropriation accounts, Audit report on finance accounts and Audit report on public undertakings.

Statement 3 is correct: The functions of Public accounts committee are **to examines the appropriation accounts and the finance accounts of the Union government and any other accounts laid before the Lok Sabha.** which are laid before the Parliament by the President. The committee examines public expenditure from a legal and formal point of view to discover technical irregularities.

Knowledge Base:

The Public accounts committee is one of three Financial Parliamentary committees, with the Estimates Committee and the Committee on Public Undertakings being the other two.

Article 105 (on Parliamentary privileges) and Article 118 (on Parliament's authority to make rules for governing its procedure and conduct of business) provide Parliamentary committees with their authority.

- 1) Public accounts committee members are elected by the Parliament every year from amongst its members according to the principle of proportional representation by means of the single transferable vote.
- 2) It presently comprises 22 members (15 members elected from the Lok Sabha and 7 members from the Rajya Sabha) with a term of one year only.
- 3) The chairman of the Public accounts committee is appointed by the Speaker from amongst its members.
- 4) A minister cannot be elected as a member of the Public accounts committee.

Source: <https://indianexpress.com/article/india/100-years-public-accounts-committee-venkaiah-naidu-freebies-om-birla-house-panels-7656550/>

Chapter 23, Parliamentary Committee, Indian Polity by M. Laxmikant

Q.11) With reference to geomorphology, which among the following statements best describes the term 'Tephra'?

- a) Sedimentary rock formed by the accumulation of river sediments.
- b) A type of rock formed by the cooling and solidification of hot molten magma.
- c) A geochronological technique in which archaeological records can be found.
- d) Solid material that is ejected out during a volcanic eruption.

Ans) d

Exp) Option d is the correct answer.

When a volcano erupts it will sometimes eject **material such as rock fragments** into the atmosphere. This material is known as **tephra**. The largest pieces of tephra are called blocks and bombs. Blocks and bombs are normally shot ballistically from the volcano.

Thus, **Tephra is a general term used to describe any solid material that is ejected during a volcanic eruption.** It includes everything from tiny particles of volcanic ash and dust to larger rocks and boulders. Tephra can be **composed of a variety of materials, including volcanic glass, pumice, and fragments of lava,** and can be ejected into the air by explosive volcanic eruptions or released as hot, flowing volcanic ash

and rock. Tephra can be dangerous and disruptive to human settlements and infrastructure, especially when volcanic eruptions occur in densely populated areas.

Source: <https://www.sciencedirect.com/topics/earth-and-planetary-sciences/tephra>

<http://www.geo.mtu.edu/volcanoes/hazards/primer/tephra.html>

Q.12) Consider the following pair:

Types of Mass Movements	Characteristic/causes
--------------------------------	------------------------------

- | | |
|----------------------|--|
| 1. Solifluction | Slow downslope flowing fine grained rock debris saturated or lubricated with water |
| 2. Debris flow | Heavy rains causing saturation of the soil and regolith with water. |
| 3. Debris avalanches | high velocity flows of large volume of rocks that result from collapse of a mountainous slope. |

Which of the pairs given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 3 only
- d) 1, 2 and 3

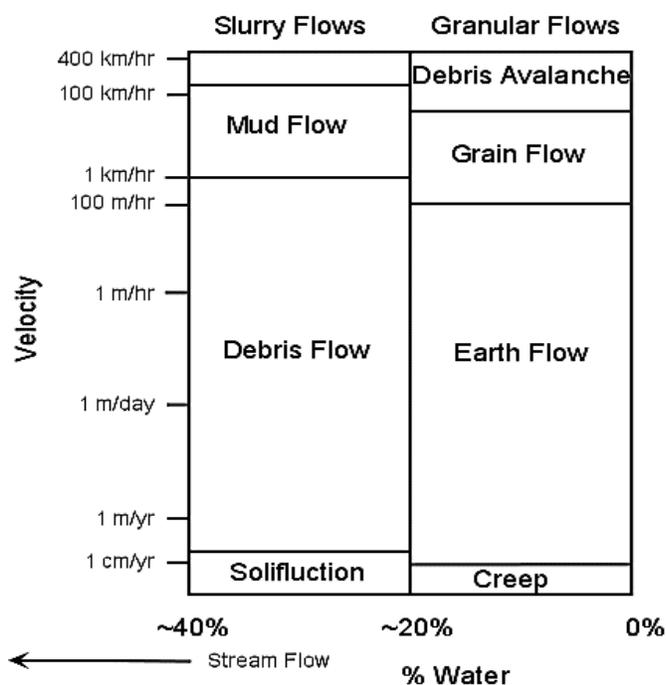
Ans) d

Exp) Option d is the correct answer.

Mass Movements involves transfer the mass of rock debris down the slopes under the direct influence of gravity. Mass movements are aided by gravity and geomorphic agent like running water, glaciers, wind, waves and currents participate in the process of mass movements.

Pair 1 is correctly matched: Solifluction - It involves slow **downslope flowing soil mass or fine-grained rock debris saturated** or lubricated with water. This process is **quite common in moist temperate areas** where surface melting of deeply frozen ground and long continued rain respectively, occur frequently. When the upper portions get saturated and when the lower parts are impervious to water percolation, flowing occurs in the upper parts.

Pair 2 is correctly matched: Debris Flows occur at higher velocities than solifluction, and often result from **heavy rains causing saturation of the soil and regolith with water**. They sometimes start with slumps and then flow downhill forming lobes with an irregular surface consisting of ridges and furrows.



Pair 3 is correctly matched: Debris Avalanches are very high velocity flows of **large volume mixtures of rock and regolith** that result from **complete collapse of a mountainous slope**. They **move down slope and then can travel for considerable distances along relatively gentle slopes**. They are often triggered by earthquakes and volcanic eruptions. Snow avalanches are similar, but usually involve only snow. **Sliding of individual rock masses down bedding, joint or fault surfaces is rockslide**.

Source: Mass Movements (tulane.edu)
chapter-6 (ncert.nic.in)

Q.13) Which of the following statements are correct regarding 'Crater'?

1. Impact Crater is a large depression mostly formed due to collision of a meteorite with the Earth's surface.
2. Craters are usually smaller than calderas.
3. Lonar Crater Lake was created by the impact of an extra-terrestrial body.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

A crater is a landform consisting of a hole or depression on a surface. It is usually caused either by an object hitting the surface, or by geological activity like volcanic explosion.

Statement 1 is correct: Craters produced by the collision of a meteorite with the Earth (or another planet or moon) are called impact craters. Whereas crater formed during volcanic eruption is known as volcanic crater.

Statement 2 is correct: A crater is not the same thing as a caldera. Craters are formed by the outward explosion of rocks and other materials from a volcano. Calderas are formed by the inward collapse of a

volcano's magma chamber. **Craters are usually much smaller features than calderas**, and calderas are sometimes considered giant craters.

Statement 3 is correct: Lakes are **formed when craters and calderas fill with water**. The crater is basically a **circular depression formed** on the land due to volcanic eruptions and activities. **Lonar lake of Maharashtra is a crater lake**. Lonar Lake lies within the only known extraterrestrial impact crater **found within the great Deccan Traps**, a huge basaltic formation in India. The lake was initially believed to be of volcanic origin, but now it is recognized as an impact crater. Lonar Lake was **created by the impact of either a comet or of an asteroid** (extra-terrestrial body).

Source: Chapter-3: Interiors of the Earth, NCERT, Class 11th

<https://education.nationalgeographic.org/resource/types-calderas/>

<https://www.definitions.net/definition/caldera#:~:text=A%20caldera%20is%20a%20cauldron,term%20cauldron%20is%20also%20used.>

Q.14) Which of the following statements is/are correct regarding the distribution of volcanoes and earthquakes around the world?

1. Volcanoes are located closely to regions that have been intensely folded or faulted.
2. In the central parts of the Atlantic Ocean, volcanoes are found almost parallel to the coastlines.
3. The Indian Ocean has been estimated to have around two-thirds of the world's volcanoes.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

A volcano is a **vent or fissure in Earth's crust** through which **lava, ash, rocks, and gases erupt**. An **active volcano is a volcano that has erupted in the recent past**. Material that flows to or reaches the ground comprises lava flows, volcanic bombs, pyroclastic debris, dust, gases etc.

Statement 1 is correct: Volcanoes are located in a fairly clearly defined pattern around the world, **closely related to regions that have been intensely folded or faulted**. They occur **along coastal mountain ranges, offshore islands and in the midst of oceans** but there are few in the **interiors of the continents**.

Statement 2 is correct: **In the central parts of the Atlantic Ocean volcanoes are found almost parallel to the coastlines**. It further extends into the Indian Ocean. It bifurcates a little south of the Indian subcontinent with one branch moving into East Africa and the other meeting a similar line from Myanmar to New Guiana. **Also, their presence coincides with the mid- oceanic ridges**.

Statement 3 is incorrect: The greatest **concentration is probably that in the Circum-Pacific region (and not in Indian ocean region)**, popularly termed the '**Pacific Ring of Fire**', which has been estimated to include two-thirds of the world's volcanoes.

Source: Chapter-4: DISTRIBUTION OF OCEANS AND CONTINENTS, NCERT, Class 11th

G C Leong book

<https://blog.forumias.com/answered-what-are-various-types-of-volcanoes-discuss-various-landforms-associated-with-it/>

Q.15) During the 2nd National Conference of Chief Secretaries, the Aspirational Blocks Programme (ABP) was launched. In this context, consider the following statements with reference to ABP:

1. The Programme will cover only 100 districts across India.
2. It aims to address the inequalities by improving governance at the block level.
3. Convergence, Collaboration and Competition are three broad contours of the programme.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 3 only
- c) 2 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

On 7th January 2023, during the Second National Conference of Chief Secretaries, Prime Minister Narendra Modi launched the Aspirational Blocks Programme (ABP).

Statement 1 is incorrect: The Aspirational Blocks Programme (ABP) will cover 500 districts across 31 states and Union Territories initially. Over half of these blocks are in 6 states—Uttar Pradesh (68 blocks), Bihar (61), Madhya Pradesh (42), Jharkhand (34), Odisha (29) and West Bengal (29).

Statement 2 is correct: The Aspirational Blocks Programme (ABP) is on the lines of the Aspirational District Programme that was launched in 2018. The programme will **improve the quality of life of citizens** in the most backward districts of the country. **It will also address inequalities by improving governance at the block level.**

Statement 3 is correct: The **Aspirational Blocks Programme (ABP)** strives to protect the rights and uphold the dignity of every single citizen. It will achieve it by increasing their awareness and enhancing access to government schemes. This forward-looking programme will **leverage the three Cs of convergence, collaboration, and competition to achieve this vision.**

Source: <https://indianexpress.com/article/opinion/columns/aspirational-blocks-programme-building-blocks-of-viksit-bharat-8398073/>

<https://indianexpress.com/article/cities/delhi/pm-modi-aspirational-block-programme-spurring-development-parameters-8367955/>

Q.16) Consider the following statements regarding the Geysers:

1. They are vent in Earth's surface that periodically ejects hot water and steam.
2. They are very common and can be found evenly in every region of the world.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Geysers are **springs of hot water and steam** that may spout up to a height of 150 feet from the earth beneath. **The jet of water is usually emitted with an explosion and is often triggered off by gases seeping out of the heated rocks.** Old Faithful is the world's best-known geyser. It is located in **Yellowstone National Park (USA).**

Statement 1 is correct: A geyser is a vent in Earth's surface that periodically ejects a column of hot water and steam. Natural geysers are formations that absorb heat from the earth. Hot water is sprouted from its reservoir with a massive amount of force and is accompanied by a huge amount of steam. **This process generates an intensive amount of heat.** The water and steam sprouted from the geysers are **owed to the pipe channels known as conduits** found below the surface of the geysers.

Statement 2 is incorrect: Geysers are rare formations and are **largely distributed across five countries on the earth's surface, i.e. US, Russia, Chile, New Zealand and Iceland.** Most of the world's geysers are mainly confined to **three major areas – Iceland, the Rotorua district of North Island, New Zealand and Yellowstone Park in the USA.** So, statement 2 is incorrect.

Source: NCERT, Class 11th, Physical Geography
G C Leong book

Q.17) With reference to the intrusive volcanic landforms, consider the following statements:

Volcanic landform Feature

- | | |
|--------------|--|
| 1. Laccolith | It is a body of intrusive rock with a dome-shaped upper surface and a level base, fed by a conduit from below. |
| 2. Lopolith | It is a saucer shaped body of intrusive igneous rock, formed by the penetration of magma between the beds or layers of existing crustal rocks. |
| 3. Batholith | It is a large body of magmatic material that cools in the deeper depth of the Earth's crust. |

Which of the pairs given above are correct?

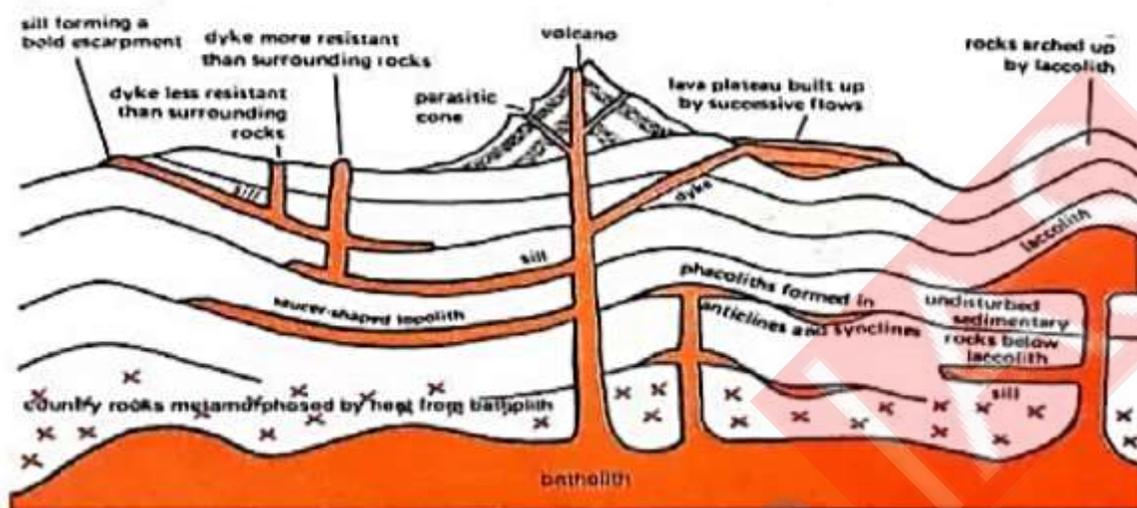
- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Volcanic landforms are divided into **extrusive and intrusive landforms** based on whether magma cools within the crust or above the crust. Intrusive landforms are formed when magma cools within the crust.

VOLCANO & VOLCANIC LANDFORMS



Pair 1 is correct: A **laccolith** is a body of intrusive rock with a **dome-shaped upper surface and a level base, fed by a conduit from below.**

Pair 2 is correct: **Lopoliths** are the **saucer shaped body** of intrusive igneous rock, formed by the penetration of magma between the beds or layers of existing rock and subsequent subsidence beneath the intrusion.

Pair 3 is correct: **Batholiths** are the large body of magmatic material that cools in the deeper depth of the crust develops in the form of large domes. They appear on the surface only after the denudational processes remove the overlying materials. They cover large areas, and at times, assume depth that may be several km. These are granitic bodies. **Batholiths are the cooled portion of magma chambers.**

Source: 11th NCERT (Fundamental of Physical Geography)- Chapter 3 : Interior of the Earth

[https://www.dictionary.com/browse/lopolith#:~:text=%2F%20\(%CB%88I%C9%92p%C9%99I%C9%AA%CE%B8\)%20%2F,beneath%20the%20intrusionCompare%20laccolith](https://www.dictionary.com/browse/lopolith#:~:text=%2F%20(%CB%88I%C9%92p%C9%99I%C9%AA%CE%B8)%20%2F,beneath%20the%20intrusionCompare%20laccolith)

Q.18) With reference to Solar System, Consider the following statements:

1. Earth is the densest planet in the solar system.
2. Mars is often referred to as the 'Earth twin' due to its similar size and proximity to the Sun.
3. Jupiter has the maximum number of satellites in the solar system.
4. Venus is often called the 'Red Planet' due to its reddish appearance.

Which of the above given statements are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

Our solar system consists of our star, the Sun, and everything bound to it by gravity – the planets Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune; dwarf planets such as Pluto; dozens of moons; and millions of asteroids, comets, and meteoroids.

SFG 2023 | LEVEL 2 | Test #28 – Solutions | 

Statement 1 is correct: The densest planet in the Solar System is Earth, which has an average density of $5,513 \text{ kg/m}^3$ (344 lb/cu ft). The next most dense planet is Mercury, at $5,240 \text{ kg/m}^3$ (327 lb/cu ft).

Statement 2 is incorrect: Venus is often referred to as the 'Earth twin' due to its similar size and proximity to the Sun. However, Venus has a thick and toxic atmosphere, which makes it the hottest planet in the solar system.

Statement 3 is correct: Jupiter has the maximum number of satellites in the solar system. It has up to 92 known moons, with the four largest known as the Galilean moons: Io, Europa, Ganymede, and Callisto.

Statement 4 is incorrect: Mars is often called the 'Red Planet' due to its reddish appearance, caused by iron oxide or rust on its surface. It is also known for its volcanoes, valleys, and polar ice caps.

Source: <https://ncert.nic.in/textbook/pdf/fess201.pdf>

<https://economictimes.indiatimes.com/news/international/us/which-planet-has-most-natural-satellites-in-our-solar-system-read-to-know/articleshow/97611195.cms?from=mdr>

<https://solarsystem.nasa.gov/planets/mars/overview/>

<https://www.guinnessworldrecords.com/world-records/densest-planet>

Q.19) Which of the following countries experiences the phenomenon of 'Land of Midnight Sun' during the summer solstice?

- a) Norway
- b) Switzerland
- c) Spain
- d) Greece

Ans) a

Exp) Option a is the correct answer.

The 'Land of Midnight Sun' is a natural phenomenon that occurs in countries located in the Arctic Circle, where the sun remains visible for 24 hours during the summer solstice, the longest day of the year. Norway is one of the countries that experience this phenomenon, along with Finland, Sweden, and Iceland. However, Norway is the most commonly associated with the 'Land of Midnight Sun'. This phenomenon occurs **because of the tilt of the Earth's axis**, which causes different parts of the planet to receive varying amounts of sunlight at different times of the year.

During the summer solstice (around June 20-21), the sun remains visible above the horizon for the entire day in these regions, resulting in continuous daylight for up to 24 hours. Conversely, during the winter solstice (around December 21-22), these same regions experience the opposite phenomenon known as polar night, where the sun remains below the horizon for 24 hours or more.

Source: <https://bestarctic.com/why-is-norway-the-land-of-the-midnight-sun/>

<https://explore.quarkexpeditions.com/blog/greenland-the-land-of-the-midnight-sun>

Q.20) With reference to 'Election expenditure limits in India', consider the following statements:

1. The expenditure limits of the candidates for Lok Sabha elections are set and reviewed by Delimitation Commission after every five years.
2. The election expenditure limit is always the same for every state for the candidates contesting for Lok Sabha elections.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Recently, Election Commission has raised the expenditure limit of candidates to Rs 95 lakh (up from Rs 70 lakh) each for Lok Sabha elections, and up to Rs 40 lakh (up from Rs 28 lakh) for Assembly polls. Similarly, for smaller states the new limit is Rs 28 lakh, up from Rs 20 lakh. As per Section 77 of the Representation of the People Act (RPA), 1951 every candidate must keep an account of all **expenditure incurred from the date on which they are nominated to the date of declaration of the result**. Section 10A of the Act also states that an incorrect account or expenditure beyond the cap can lead to disqualification of a candidate for up to three years.

Statement 1 is incorrect: The expenditure limits of the candidates for Lok Sabha elections are **set by Election Commission of India**. The expenditure limits for candidates running for the Lok Sabha are set under the Representation of the People Act, 1951 and the Conduct of Elections Rules, 1961.

Statement 2 is incorrect: The expenditure limits for candidates running for the Lok Sabha **can vary depending on the state in which the candidate is running for election**. The Election Commission of India takes into account several factors when setting expenditure limits, including the population, geographical area, and other socio-economic indicators of the state. The expenditure limit is determined by ECI on the basis of the state and their population, in order to make it fair and equal for all the candidates, regardless of the state they are contesting from. Recently, the Election Commission has enhanced the existing election expenditure limit for candidates in Parliamentary and Assembly constituencies. The ceiling on parliamentary poll expenditure has been **raised from 70 lakh to 95 lakh rupees in bigger states and 54 lakh to 75 lakhs in smaller states**. The bigger states include Maharashtra, Madhya Pradesh, Uttar Pradesh, West Bengal and Karnataka, and the smaller states include Goa, Sikkim, Arunachal Pradesh and UTs.

Source: <https://www.thehindu.com/news/national/expenditure-limit-for-lok-sabha-assembly-candidates-revised/article38161846.ece>

<https://blog.forumias.com/as-parties-get-an-ec-raise-the-high-ambition-and-low-reach-of-poll-expense-limits/>

<https://eci.gov.in/files/file/13928-limits-of-candidate%E2%80%99s-expenses-enhanced/>

Election Commission hikes expenditure limit for candidates in Parliamentary and Assembly polls (newsonair.gov.in)

Q.21) Which of the following statements best describes the term 'dyke'?

- It is an intrusive igneous landform, formed when the lava makes its way through cracks and solidifies vertically within Earth's crust.
- It is an elongated form of calcific landform formed by depositional activity of slowly dripping water.
- It is a depression or hole in the ground caused by the collapse of the surface layer.
- It is an oval-shaped hill largely composed of glacial deposits and formed beneath a glacier or ice sheet.

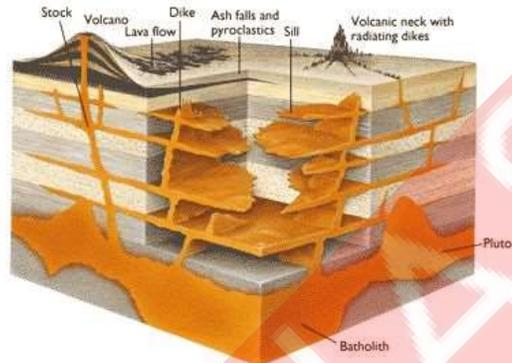
Ans) a

Exp) Option a is the correct answer.

Magma while thrusting its way up to the surface **cools and solidifies resulting in intrusive landforms**. When magma cools to form landforms like dykes the resulting rocks are called **plutonic rocks**. Intrusions when injected vertically as narrow walls of **igneous rocks** within the **sedimentary layers** are termed as dykes. Dykes are the most common intrusive formation.

Statement a is correct: When the lava makes its way through **cracks and the fissures** developed in the land, it **solidifies almost perpendicular to the ground**. It **gets cooled** in the same position to develop a **wall like structure**. Such structures are called **dykes**.

Dykes frequently intrude on open spaces between rocks, called fissures. A **dyke will either flow or build up in a fissure**, pushing the surrounding rock to the side. A dyke is, therefore, **younger than the rocks surrounding it**. Dykes are often vertical, or straight up and down. Dykes are the most commonly found intrusive forms in the **western Maharashtra area**. These are considered the **feeders for the eruptions** that led to the development of the **Deccan traps**.



Statement b is incorrect: Stalactite and stalagmite, **elongated forms of various minerals deposited from solution by slowly dripping water**. A stalactite hangs like an icicle from the ceiling or sides of a cavern. A stalagmite appears like an inverted stalactite, rising from the floor of a cavern.

Statement c is incorrect: A sinkhole is a depression or hole in the ground caused by some form of collapse of the surface layer.

Statement d is incorrect: **Drumlins** a very small **hill formed by the movement of a large mass of ice**. Drumlins are oval-shaped hills, largely composed of glacial drift, formed beneath a glacier or ice sheet and aligned in the direction of ice flow.

Source: Chapter-3: Interiors of the Earth, NCERT, Class 11th

<https://blog.forumias.com/answered-what-are-various-types-of-volcanoes-discuss-various-landforms-associated-with-it/>

<https://education.nationalgeographic.org/resource/dike/>

Q.22) With reference to Standard time and Time zones, consider the following statements:

1. Earth is divided into various time zones each differing the next by 15 degrees in longitude.
2. Indian Standard Time is ahead of Greenwich Mean Time by 5 hours and 30 minutes.
3. A country can have multiple time zones.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) d

Exp) Option d is the correct answer.

Sir Sandford Fleming, a Canadian railway engineer, first proposed the concept of Standard Time in 1879. The Prime Meridian, which passes through Greenwich, England, is used as the reference point for calculating Standard Time. Standard Time was established to prevent confusion and improve efficiency in transportation and communication, especially with the growth of railways and telegraphs.

Statement 1 is correct: The division of the world into 24 standard time zones is a well-established convention that is generally followed by most countries. **Each time zone differs from the next by 15**

degrees in longitude or one hour in time. However, due to the unique shapes and locations of some countries, it is not always practical or feasible to adhere strictly to this standard.

Statement 2 is correct: Indian Standard Time is ahead of Greenwich Mean Time by 5 hours and 30 minutes. This is because India is located east of the Prime Meridian.

Statement 3 is correct: A country can have multiple time zones, depending on its size and geographic location. For example, Russia has 11 time zones, while the United States has 6 time zones.

Source: Certificate Physical and Human Geography pg:9 <https://www.thoughtco.com/sir-sandford-fleming-1991817>

Q.23) Which of the following evidences prove that the Shape of the Earth is spherical?

1. The occurrence of day and night.
2. The appearance of volcanoes.
3. The shape of the Earth's shadow during a lunar eclipse.

Select the correct answer from the code given below:

- a) 2 and 3 only
- b) 3 only
- c) 1 and 3 only
- d) 1 and 2 only

Ans) b

Exp) Option b is the correct answer.

There are many ways to prove that the Earth is spherical in shape. Some of the evidences of Earth's sphericity are:

Statement 1 is incorrect: Occurrence of day and night can be explained by the rotation of the Earth on its axis, but not necessarily by its shape.

Statement 2 is incorrect: Volcanoes are not related to the shape of the Earth. Volcanoes erupt because of the way heat moves beneath Earth's surface. Heat is conveyed from the planet's interior to its surface largely by convection—the transfer of heat by movement of a heated fluid.

Statement 3 is correct: The shape of the Earth's shadow during a lunar eclipse. The shadow is always round, which suggests that the Earth is spherical.

Source: Certificate physical and human geography ch:1

Q.24) Consider the following statements with reference to comparison between Terrestrial Planets and Jovian Planets:

1. Terrestrial planets are comparatively smaller in size than Jovian Planets.
2. Terrestrial planets rotate much faster than the Jovian planets.
3. Terrestrial Planets have much thicker atmosphere compared to Jovian planets.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) a

Exp) option a is the correct option.

There are eight planets in our solar system. These can be divided into two groups: the four rocky planets nearest to the Sun are called Terrestrial Planets, and the four gas giants called Jovian Planets beyond the asteroid belt.

Statement 1 is correct: Terrestrial Planets are comparatively small in size and have relatively higher density compared to Jovian planets. Their atmospheres contain very little hydrogen and helium. Mercury and Mars have solid iron cores, while the solid cores of Venus and Earth contain iron and nickel. On the other hand, the Jovian Planets or the gas giants have deep, often stormy atmospheres. Unlike the rocky planets, these planets do not have solid surfaces, instead, each has a small, rocky core, surrounded by swirling gases and liquids, and is held together by the force of gravity and hence they have lesser density as gases couldn't escape them.

Statement 2 is incorrect: Unlike the spherical shapes of terrestrial planets, the jovian planets are all slightly oblong. The jovian planets rotate much faster than any of the terrestrial planets. Gravity by itself would make a planet spherical, but their rapid rotation flattens out their spherical shapes by flinging material near the equator outward.

Statement 3 is incorrect: Jovian planets are generally larger than the terrestrial planets and have thick atmosphere, mostly of helium and hydrogen. The solar wind was most intense nearer the sun; so, it blew off lots of gas and dust from the terrestrial planets. The solar winds were not all that intense to cause similar removal of gases from the Jovian planets. Also, the terrestrial planets are smaller and their lower gravity could not hold the escaping gases.

Source:

<http://62.182.86.140/main/1203000/5c4e6033d4718497408357424fc3d999/DK%20Publishing%20-%20The%20Planets-DK%20ADULT%20%282014%29.pdf>

https://lasp.colorado.edu/outerplanets/giantplanets_whatandwhere.php

Class 11 NCERT-CH 2

Q.25) Consider the following statement with reference to the office of Mayor:

1. The Mayor is elected by the elected and nominated Councilors of all the wards in the city.
2. Mayor presides over the meetings of the Municipal Council.
3. The 2nd Administrative Reforms Commission (ARC) recommends for the direct elections of the Mayor by the people.

Which of the statements given above is/are correct?

- a) 1, 2 and 3
- b) 2 and 3 only
- c) 3 only
- d) 1 and 2 only

Ans) b

Exp) Option b is the correct answer.

A municipal corporation has three authorities, namely, the council, the standing committees and the commissioner.

Statement 1 is incorrect: The **Council is the deliberative and legislative wing of the Municipal Corporation**. It consists of the Councillors directly elected by the people, as well as a few nominated persons. The **Council is headed by a Mayor**. Recently, the **Supreme Court ruled that nominated members cannot vote in the election for the mayor**. **Article 243R of Indian Constitution** provided that "persons having knowledge or experience in municipal administration" can be nominated to the civic bodies, but had specified that **these nominated members "shall not have the right to vote in the meetings of the municipality"**. Thus, they are prohibited from voting in election of Mayor.

Statement 2 is correct: The **municipal commissioner** is responsible for the implementation of the decisions taken by the council and its standing committees. Thus, he is the **chief executive authority of the corporation**. He is appointed by the state government and is generally a member of the IAS. While

Mayor is basically an ornamental figure and a formal head of the corporation. His main function is to preside over the meetings of the Council.

Statement 3 is correct: The 2nd Administrative Reforms Commission (ARC) recommended that the Chairperson/Mayor should be directly elected by popular mandate through a city-wide election. The Chairperson/Mayor will be the chief executive of the municipal body. Executive power should vest in the Mayor.

Source: Page 858 chapter 39 : Municipalities of M.Laxmikant

<https://timesofindia.indiatimes.com/city/delhi/nominated-members-cant-vote-in-mcd-mayor-poll-sc/articleshow/98030144.cms>

<https://www.ficciqualityforum.com/htm/nov13/HandbookARCRecommendationsRelatedConcepts.pdf>

<https://mohua.gov.in/upload/uploadfiles/files/chap08.pdf>

Q.26) Consider the following Pairs of Seismic Discontinuities:

Discontinuity	Separates
1. Mohorovicic Discontinuity	The Crust and the Mantle
2. Gutenberg Discontinuity	The Outer core and the Inner core.
3. Conrad Discontinuity	The mantle and the outer core

How many of the pairs given above are correct?

- Only one Pair
- Only two Pairs
- All the three Pairs
- None of the Pairs

Ans) a

Exp) Option a is the correct answer.

Seismologists have located two major layers which separate zones within the Earth having markedly different properties.

Pair 1 is correct: The outer one – Mohorovicic Discontinuity (Moho) – separates the crust from the mantle, its average depth being about 35 km.

Pair 2 is incorrect: The liquid outer core and solid lower mantle is marked by a boundary known as 'Gutenberg Discontinuity'. Lehmann Discontinuity separates the outer core from inner core.

Pair 3 is incorrect: The line of separation between the oceanic and continental crust is known as Conrad discontinuity.

Source: <https://egyankosh.ac.in/bitstream/123456789/59074/1/Block-2.pdf>

Q.27) Consider the following statements regarding the Surface Earthquake Waves:

- They are generated by the interaction of body waves with surface rocks.
- Their speed is slower than Body waves.
- They are usually more destructive than Body waves.
- As compared to Deeper Earthquakes, Shallow Earthquakes produce stronger Surface Waves.

Which of the statements given above are correct?

- 1, 2 and 3 only
- 1, 2 and 4 only
- 2, 3 and 4 only
- 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

There are two categories of seismic waves known as body and surface waves. Body waves move along the internal division of the Earth and further divided into two sub-types. These are primary and secondary waves designated by the P and S. Surface waves as the name itself indicates moves at the external division of the Earth's surface with two subtypes namely Rayleigh and Love waves.

Statement 1 is correct: Body waves are generated due to the release of energy at the focus and move in all directions travelling through the body of the earth. Hence, the name body waves. The body waves interact with the surface rocks and generate a new set of waves called surface waves. These waves move along the surface.

Statement 2 is correct: Surface waves arrive at the surface after the Body waves as their speed is slower than Body waves. In the Body waves, Primary or P waves are the first to arrive and then secondary or s waves. The surface waves are the last to report on seismograph as they are the slowest.

Statement 3 is correct: Surface waves are more destructive. They cause displacement of rocks, and hence, the collapse of structures occurs. It makes everything upon the surface to be in motion including buildings, bridges, transmission lines and numerous man-made objects. These waves generally affect only the surface of the earth and die out at smaller depth. These waves cover the longest distances of all the seismic waves. Though their speed is slower than P and S waves, but these are most violent and destructive.

Statement 4 is correct: **Shallow** earthquakes produce stronger surface waves; the strength of the surface waves is reduced in deeper earthquakes.

Source: <https://egyankosh.ac.in/bitstream/123456789/59074/1/Block-2.pdf> and

<https://www.mtu.edu/geo/community/seismology/learn/seismology-study/surface-wave/#:-:text=Surface%20waves%20travel%20more%20slowly,are%20reduced%20in%20deeper%20earthquakes.>

Q.28) Consider the following statements regarding the processes of Weathering and Erosion:

1. Weathering cannot occur if there is no erosion of the rocks.
2. Unlike Weathering, Erosion does not involve any movement of fragments of rock.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) option d is the correct answer.

Weathering is defined as mechanical disintegration and chemical decomposition of rocks through the actions of various elements of weather and climate. Erosion involves acquisition and transportation of rock debris.

Statement 1 is incorrect: Weathering processes are responsible for breaking down the rocks into smaller fragments and preparing the way for formation of not only regolith and soils, but also erosion and mass movements. **Erosion cannot be significant if the rocks are not weathered and not the other way round.** Weathering is a precondition for erosion even though not necessary for it. That means, weathering aids mass wasting, erosion and reduction of relief and changes in landforms are a consequence of erosion.

Statement 2 is incorrect: As very little or no motion of materials takes place in weathering, it is an in-situ or on-site process. Weathering is a static process whereas Erosion is a mobile process. Erosion is a process often confused with weathering. Both are geological processes in which the rocks are broken down

into finer particles. Erosion involves the movement of fragments of rock by the erosion processes and therefore differs from weathering, which is just concerned with the decay of rock in situ.

Source: NCERT chapter 5 and <https://www.bgs.ac.uk/discovering-geology/geological-processes/erosion/>

Q.29) Consider the following statements with reference to “Mantle Plumes “:

1. They are the cause of volcanic hotspots.
2. They are a secondary way through which the earth loses heat.

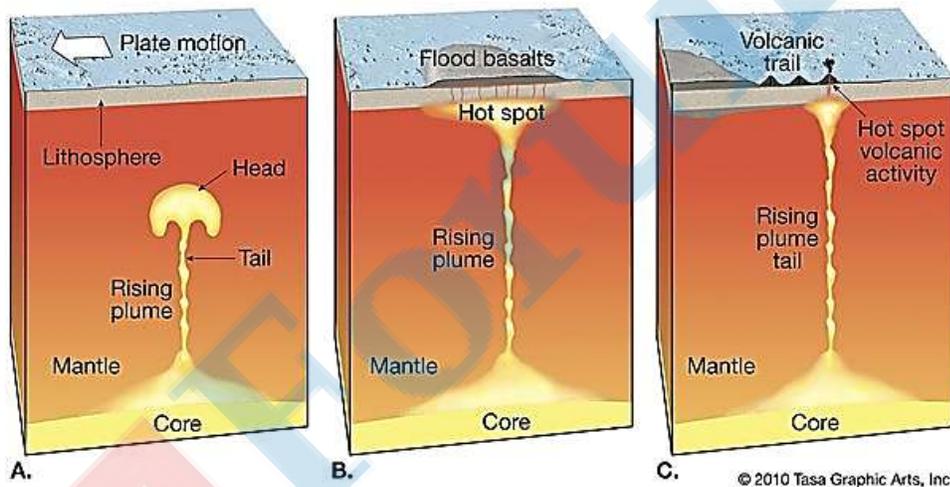
Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Mantle plume is an **upwelling of abnormally hot rock** within the earth’s mantle which carries **heat upward** in narrow, rising columns, **driven by heat exchange** across the core–mantle boundary. Eventually, the rising column of hot rock reaches the base of the lithosphere, where it spreads out, forming a mushroom-shaped cap to the plume. Heat transferred from the plume raises the temperature in the lower lithosphere to above melting point, and forms magma chambers that feed volcanoes at the surface. It is a **secondary way** through which earth loses heat.



Option 1 is correct. Mantle plumes are also thought to be the **cause of volcanic centres** known as **hotspots** and probably have also caused **flood basalts**. When a plume head encounters the base of the lithosphere, it is expected to flatten out against this barrier and to undergo widespread decompression melting to form large volumes of basalt magma. It may then erupt onto the surface.

Option 2 is correct. Plumes are a **secondary way** that Earth loses heat, much less important in this regard than is **heat loss at plate margins**. Some scientists think that plate tectonics cools the mantle, and **mantle plumes cool the core**. Two of the most well-known locations that fit the mantle plume theory are Hawaii and Iceland as both have volcanic activity.

Source: <https://blog.forumias.com/answered-define-mantle-plume-and-explain-its-role-in-plate-tectonics/>

Q.30) Consider the following statements with reference to Indian Judiciary:

1. When any case involves the substantial interpretation of Constitution, the verdict is based on the numerical majorities of Judges.
2. Minimum 5 number of judges are required for sitting, when the President seeks opinion of Supreme Court.
3. The Judgements are given only with the concurrence of majority of Judges hearing the case.
4. Only Parliament is empowered to make rules regarding the number of judges to sit for a hearing.

Which of the following statements is/are correct?

- a) 1, 2, and 3 only
- b) 2, 3, and 4 only
- c) 1 and 4 only
- d) 1, 2, 3, and 4

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: As opposed to standard matters heard by Division Benches consisting of two judges, **numerical majorities are of particular importance to cases which involve a substantial interpretation of constitutional provisions.** In such cases, Constitutional Benches, consisting of five or more judges, are set up in consonance with Article 145(3) of the Constitution. **Such Benches usually consist of five, seven, nine, 11 or even 13 judges.** This is done to facilitate decision-making by ensuring numerical majorities in judicial outcomes.

Statement 2 is correct: In the matters involving the substantial question of law as to the interpretation of the Constitution, minimum 5 number of judges are required to sit for the purpose of deciding the case. Also, **when the President seeks opinion of Supreme Court under Article 143, minimum number of judges required for the sitting is 5.**

Statement 3 is correct: The requirement for a majority consensus flows from Article **145(5) of the Constitution** which states that **no judgment in such cases can be delivered except with the concurrence of a majority of the judges** but that judges are free to deliver dissenting judgments or opinions. Hence, the judicial decisions are taken on the basis of majority.

Statement 4 is incorrect: Under Article 145, Supreme Court can fix the minimum number of judges who are to sit for any purpose. This rule is subject to two exceptions:

- 1) Where the case involves question of law as to the interpretation of Constitution.
- 2) Where a case has been referred to it by the President for an opinion.

In all other cases, the Supreme Court may fix minimum number of judges for hearings. However, this is subject to the Parliamentary law and approval of the President.

Source: <https://epaper.thehindu.com/ccidist->

ws/th/th_delhi/issues/23469/OPS/GOKAQV7I2.1+GE0AQVDDF.1.html

<https://indiankanoon.org/doc/1537130/>

Q.31) Consider the following statements regarding the Elastic Rebound Theory of earthquake:

1. This theory states that earthquake is result of elastic rebound of previously stored elastic strain energy in rocks along a fault.
2. When the accumulated strain due to tectonic movements is enough to overcome the strength of the rock, an earthquake occurs.
3. During an earthquake, the stored energy within the rocks is released only in the form of elastic waves.

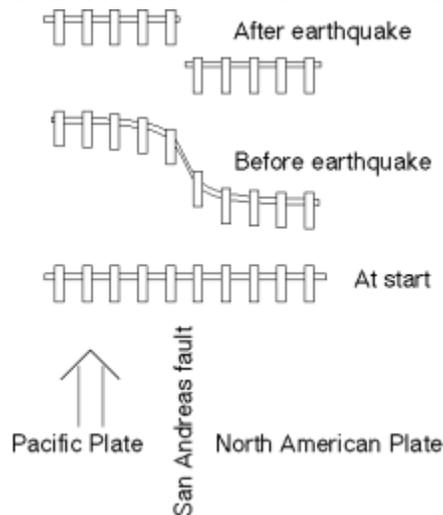
Which of the statements above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) option a is the correct answer.

Statement 1 is correct. The elastic rebound theory is an explanation for how energy is spread during earthquakes. Following the great 1906 San Francisco earthquake, Harry Fielding Reid examined the displacement of the ground surface around the San Andreas Fault. From his observations he concluded that the earthquake must have been the result of the elastic rebound of previously stored elastic strain energy in the rocks on either side of the fault.



Statement 2 is correct. As rocks on opposite sides of a fault are subjected to force and shift, they accumulate energy and slowly deform until their internal strength is exceeded. The deformation builds at the rate of a few centimeters per year, over a time period of many years. When the accumulated strain is great enough to overcome the strength of the rocks, an earthquake occurs.

Statement 3 is incorrect. Like an elastic band, the more the rocks are strained the more elastic energy is stored and the greater potential for an event. **The stored energy is released during the rupture partly as heat, partly in damaging the rock, and partly as elastic waves.** Hence this statement is incorrect.

Source : <https://courses.seas.harvard.edu/climate/eli/Courses/EPS281r/Sources/Earthquake>

Q.32) Consider the following statements about Vadose Zone of Earth's crust:

1. It is the subsurface zone between the land surface and the top of the ground water table.
2. This zone is completely saturated with water.

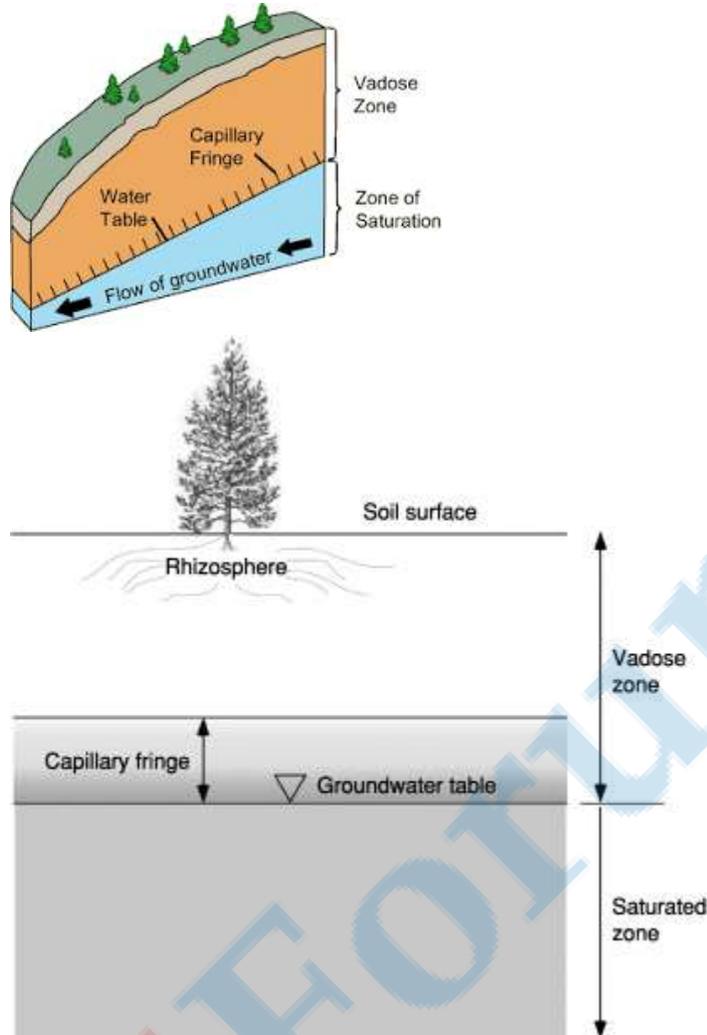
Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. The vadose zone is the part of Earth between the land surface and the top of the phreatic zone (the position at which groundwater is at atmospheric pressure). It is the portion of terrestrial subsurface that extends from the land surface downward to the water table. As such, it comprises the surface soil (the rooting zone), the underlying subsoil, and the capillary fringe that directly overlies the water table.



Statement 2 is incorrect. The vadose zone has also been defined as the unsaturated zone, since the sediments pores and rock fractures are generally not completely water filled, but instead contain both water and air. It is also known as 'zone of aeration'.

On the other hand, the water table is the zone of saturation where the pores and fractures of the ground are saturated with water.

Source: <https://www.science.gov/topicpages/v/vadose+zone+soils>

http://www.columbia.edu/~vjd1/groundwater_basics.htm

<https://web.viu.ca/earle/geol304/geol-304-b.pdf>

Q.33) Which one of the following region(s) experiences “intraplate seismicity”?

1. Narmada-Son region
2. Rann of Kutch
3. Latur region

Select the correct answer using the code given below:

- a) 3 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Seismicity may also occur away from tectonically stable regions. Such seismic activities, located within the plates away from the plate margins, are called **intraplate seismicity**. They are generally confined to the weaker zones of the earth's crust.

These weaker zones are represented by **faults or fractures** within the earth's crust and are generally **less intense** than the ones found near the **plate margins**.

Statement 1 is correct. One such zone of in-plate seismicity is the **Narmada-Son lineament**, cutting across the northern plane.

Activation of Narmada south fault caused the **devastating Jabalpur earthquake** (6.0 M) on May 22, 1997.

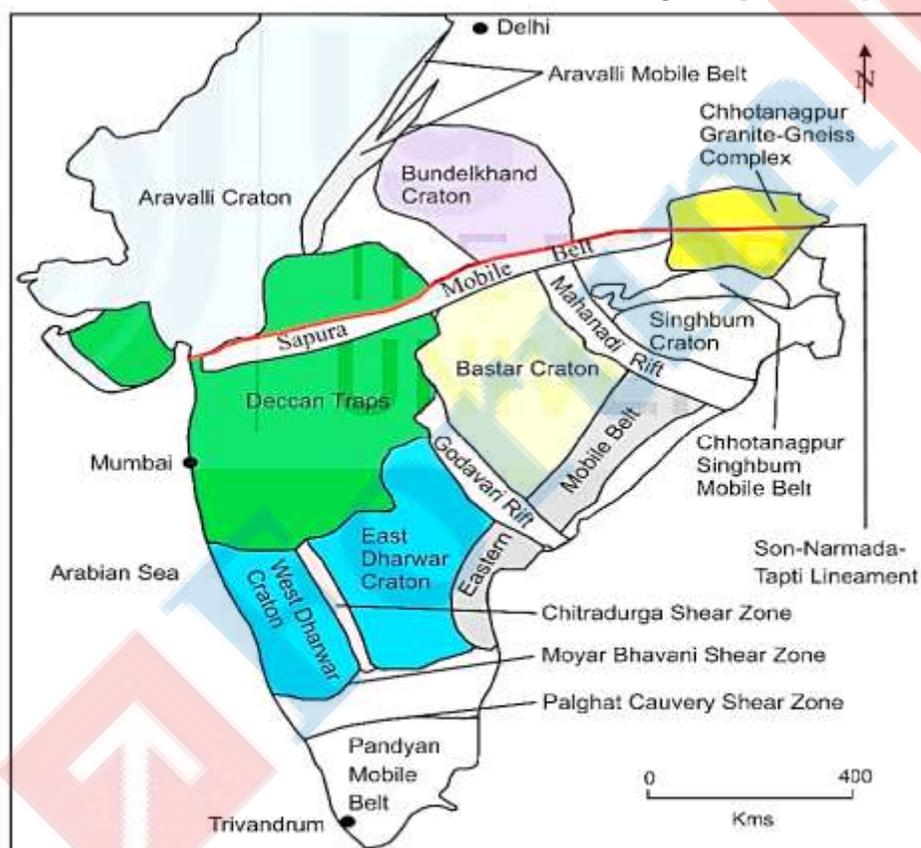


Fig. 6.3: Map of peninsular India showing major cratons and mobile belts.

(Source: simplified after Vaidyanadhan and Ramakrishnan, 2008; Sharma, 2009)

Statement 2 is correct. The earthquake of January 26, 2001 of **Gujarat** was also caused by the growing 'in-plate stress: whole **Kutch is a fault**. Bhuj, lies close to the Allah bund fault.

Hence, in-plate seismicity is due to the reactivation of concealed shields (stable parts of the Earth) and release of energy.

Statement 3 is correct. The intraplate seismicity caused the **Latur** earthquake of 30th September, 1993 in Peninsular India. It is characterised by a rather localised earthquake occurrence on the segmented fault lineaments. These fault zones are a zone of weakness which facilitates the faulting process.

Knowledge Base: Structurally, the Peninsular Plateau forms the **India shield**. A shield is, basically, a large tectonically stable area made up of crystalline igneous and metamorphic rocks of Precambrian age.

The east-west trending **Son-Narmada Tapti (SONATA) lineament** separates the Aravalli craton from the Bastar and Singhbhum cratons.

Source: <https://www.egyankosh.ac.in/bitstream/123456789/69599/1/Unit-3.pdf>

<https://www.sciencedirect.com/science/article/pii/S1674984722000027>

<https://www.hindawi.com/journals/geography/2013/325808/>

<https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.558.4795&rep=rep1&type=pdf>

<https://iarjset.com/upload/2016/si/SITES-16/IARJSET-SITES%208.pdf>

<https://timesofindia.indiatimes.com/city/visakhapatnam/krishna-godavari-fault-line-may-trigger-quakes-tsunamis-in-vizag/articleshow/77058879.cms#:~:text=HYDERABAD%3A%20Researchers%20at%20the%20University,it%20may%20become%20active%20again.>

Q.34) Consider the following statements:

1. P-Waves create troughs and crests in the material through which they pass.
2. S-Waves can travel only through solid materials in Earth's crust.
3. The shadow zone of S-wave is much larger than that of the P-waves.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Earthquake waves are basically of two types – body waves and surface waves. Body waves are generated due to the release of energy at the focus and move in all directions travelling through the body of the earth. There are two types of body waves. They are called P and S-waves. P-waves move faster and are the first to arrive at the surface. These are also called ‘primary waves’.

Statement 1 is incorrect.

P-waves vibrate parallel to the direction of the wave. This exerts pressure on the material in the direction of the propagation. As a result, it creates density differences in the material leading to stretching and squeezing of the material.

The direction of vibrations of **S-waves** is perpendicular to the wave direction in the vertical plane. Hence, they **create troughs and crests** in the material through which they pass. Surface waves are considered to be the most damaging waves.

Statement 2 is correct.

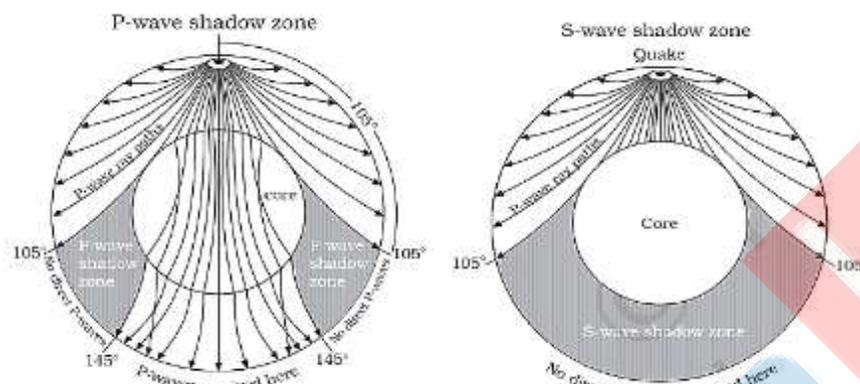
S-waves arrive at the surface with some time lag. These are called secondary waves. An **important fact about S-waves is that they can travel only through solid materials**. This characteristic of the S-waves is quite important. It has helped scientists to understand the structure of the interior of the earth.

Statement 3 is correct.

Earthquake waves get recorded in seismographs located at far off locations. However, there exist some specific areas where the waves are not reported. Such a zone is called the ‘shadow zone’. The study of different events reveals that for each earthquake, there exists an altogether different shadow zone. It was

observed that seismographs located at any distance within 105° from the epicentre, recorded the arrival of both P and S-waves. However, the seismographs located beyond 145° from epicentre, record the arrival of P-waves, but not that of S-waves.

Thus, a zone between 105° and 145° from epicentre was identified as the shadow zone for both the types of waves. The **entire zone beyond 105° does not receive S-waves**. The **shadow zone of S-wave is much larger than that of the P-waves**. The shadow zone of P-waves appears as a band around the earth between 105° and 145° away from the epicentre. The shadow zone of S-waves is not only larger in extent but it is also a little over 40 per cent of the earth surface.



Source: FUNDAMENTALS OF PHYSICAL GEOGRAPHY Pg no 23, 24

Q.35) With reference to 'Role of Governor in Indian polity', consider the following statements:

1. The Constitution of India provides for Governor to act as an ex-officio Chancellor of the state universities.
2. The functions and powers of the Governor as the Chancellor are given in the statutes of Central Universities Act, 2009.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Recently, the Kerala High Court restrained **the Governor of the state in his capacity as Chancellor of universities, from passing final orders on the show cause notices** he issued to Vice-Chancellors of eight universities. The Governor had issued the notices to the Vice-Chancellors citing violation of University Grants Commission (UGC) norms in their appointment.

Statement 1 is incorrect: Constitution of India **does not provide any provisions for Governor** to act as an ex-officio Chancellor of the state universities. The original intent of making Governors hold the office of Chancellor and vesting some statutory powers on them was to insulate universities from political influence. In most cases, the **Governor of the state is the ex-officio chancellor of the universities in that state as specified in respective state statutes.**

Statement 2 is incorrect: State public universities are established through laws passed by state legislatures. The Governor's powers and functions as the Chancellor are laid out in the **statutes that govern the universities under a particular state government.**

Under the **Central Universities Act, 2009, and other statutes, the President of India shall be the Visitor of a central university.** Chancellors are appointed by the President in his capacity as Visitor.

Source: <https://prsindia.org/theprsblog/explained-role-of-governor-in-public-universities>

<https://indianexpress.com/article/explained/explained-kerala-row-governors-role-in-universities-7669572/>

<https://www.thehindu.com/news/national/kerala/kerala-high-court-offers-interim-relief-to-vice-chancellors/article66111379.ece>

Q.36) Consider the following statements regarding the Epeirogenic movement of Earth:

1. These movements acts only horizontally along the surface of the earth.
2. These movements are responsible for the formation of continents.

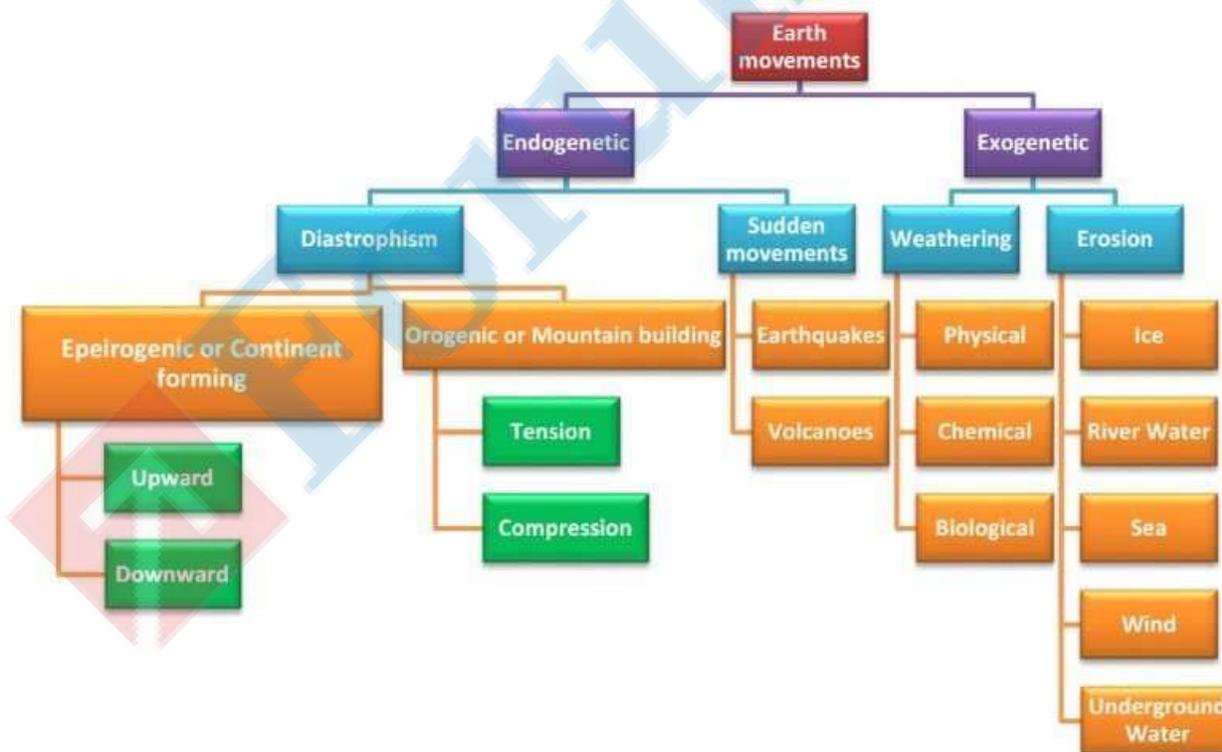
Which of the statements given above is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 & 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. The Epeirogenic movements are the ones which operate vertically from the center of the earth to its surface (do not work horizontally on the surface of earth) caused by radial forces (Convection Currents). It causes regional upliftment but on a large scale therefore, not much noticeable deformation of the surface takes place. Hence this statement is incorrect.



Statement 2 is correct. The Epeirogenic movements are basically the continent forming movements of earth. This movement causes regional upliftment or subsidence of the ground at a large scale without any noticeable deformation.

Knowledge Base: These movements (epeirogenic and orogenic) produce structural changes on the earth surface and make it uneven thus, producing land forms.

Source: Fundamentals of physical Geography textbook for class 11th - Chapter 6th - (Page No. 45-46) NCERT.
http://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000017GE/P001786/M025376/ET/1512629383EarthMovements_EpeirogenicOrogenicCymatogenic.pdf

Q.37) Consider the following statements about the apparent movement of the sun observed from the Earth:

1. The days on which the sun is directly overhead at the equator are known as equinoxes.
2. During the summer solstice in the Northern Hemisphere, the sun is directly overhead at the tropic of Capricorn around 21st of June of the year.
3. According to Hindu astrology, the Winter Solstice in the Northern Hemisphere marks the beginning of Tropical Uttarayana.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

In the course of a year, the earth's revolution round the sun with its axis inclined at 66.5 degree to the plane of the ecliptic changes the apparent altitude of the midday sun.

Statement 1 is correct: The sun is vertically overhead at the equator on two days each year. These are usually 21 March and 21 September, though the dates may change because a year is not exactly 365 days. These two days are termed as equinoxes meaning 'equal nights' because on these two days all parts of the world have equal days and nights.



Statement 2 is incorrect: After the March equinox, the sun appears to move north and is vertically overhead of the Tropic of Cancer (Not tropic of Capricorn) on about 21st June. This is known as the June or Northern Hemisphere's Summer Solstice, when the northern hemisphere will have its longest day and the shortest night. When the sun is overhead at the tropic of Capricorn on about 22nd December, it is known as Winter Solstice in the Northern Hemisphere. During this, the southern hemisphere will have the longest day and the shortest night.

Statement 3 is correct: According to Hindu astrology, the Winter Solstice is considered as Tropical Uttarayana. The Sidereal Uttarayana begins from Makar Sankranti as the beginning of harvest season where new crops are worshipped and shared.

Source: Certificate Physical and Human Geography, G C Leong. Pg. 6
NCERT, Class 11, Fundamental of Physical Geography

Q.38) The African Great Rift Valley system was recently seen in news. In this context, which of the following are the primary forces involved in the formation of rift valleys?

1. The tension forces in the crust caused by large scale Earth movements.
2. The Compression forces set up by earth movements.
3. The agents of denudation like running water, wind, glaciers and waves.

Select the correct answer from the codes given below.

- a) 1 only
- b) 1 and 2 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

A rift valley is a lowland region that forms where Earth's tectonic plates move apart or rift. It is formed majorly due to the process of faulting. Faulting may be caused by tension or compression forces which lengthen or shorten the Earth's crust, causing a section of it to subside or rise above the surrounding level.

Statement 1 is correct: The Earth's movement generate tension forces that tend to pull the crust apart and faults are developed. The tension may cause the central portion to be let down between the two adjacent blocks forming a graben or rift valley, with very steep walls. E.g., The great African Rift Valley.

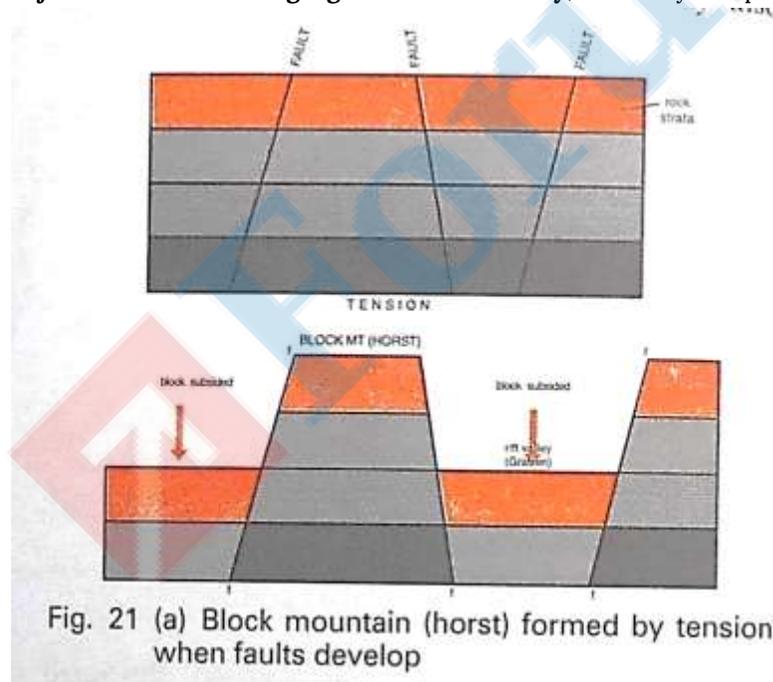
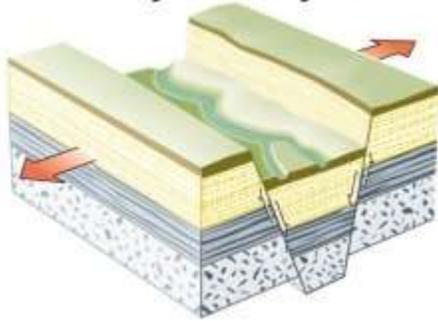


Fig. 21 (a) Block mountain (horst) formed by tension when faults develop

Statement 2 is correct: Compression forces set up by the Earth movements may produce a thrust or reverse fault and shorten the crust. Hence, a block may be raised to form a horst mountain or may be lowered to form a rift valley.

Rift Valley Formed by Extension

Statement 3 is incorrect: Agents of denudation like moving water, wind, glaciers do not lead to the formation of rift valleys, however they may modify a landform into residual mountains like Mt. Manodnock of the US, or as dissected plateau.

Source: Certificate Physical and Human Geography, G C Leong. Pg. 16

Q.39) Which of the following statements about the 'Continental Drift' Theory is correct?

- Pangaea first broke into two large continental masses as Laurasia and Panthalassa.
- The movement responsible for the drifting of the continents was caused by tectonic forces.
- The theory provided direct evidence and a mechanism to prove movement of continents.
- The presence of rocks of same age across the oceans are due to the drift of the continents.

Ans) d

Exp) Option d is the correct answer.

Continental drift describes one of the earliest ways geologists thought continents moved over time. Today, the theory of continental drift has been replaced by the science of plate tectonics.

Option a is incorrect: According to Wegener, all the continents formed a single continental mass and mega ocean surrounded the same. The supercontinent was called Pangea which meant all earth. The **mega-ocean was called PANTHALASSA**, meaning all water. He argued that, around 200 million years ago, the super continent, Pangaea, began to split. **Pangaea first broke into two large continental masses as Laurasia and Gondwanaland forming the northern and southern components respectively.** Subsequently, Laurasia and Gondwanaland continued to break into various smaller continents that exist today.

Option b is incorrect: Wegener suggested that the movement responsible for the drifting of the continents was caused by **pole-fleeing force and tidal force**. The polar-fleeing force relates to the rotation of the earth. The second force that was suggested by Wegener—the tidal force—is due to the attraction of the moon and the sun that develops tides in oceanic waters.

Option c is incorrect: The greatest problem facing Wegeners theory was the lack of direct evidence for the movements of continents (no GPS at the time!) and no mechanism was known to be powerful enough to move entire continents. Wegener proposed gravitational pull, tidal and centrifugal forces, but British geophysicist and astronomer Harold Jeffreys (1891-1989) demonstrated that these forces are much too weak to explain moving continents.

Option d is correct: Rocks of Same Age across the Oceans gave evidence about the drift of the landmasses. The radiometric dating methods developed in the recent period have facilitated correlating the rock formation from different continents across the vast ocean. The belt of ancient rocks of 2,000 million years from Brazil coast matches with those from western Africa. The earliest marine deposits along the coastline of South America and Africa are of the Jurassic age.

This suggests that the ocean did not exist prior to that time.

Source: NCERT Class-XI: Fundamentals of Physical Geography ch 4

<https://www.nationalgeographic.org/encyclopedia/continental-drift/>

<https://www.forbes.com/sites/davidbressan/2017/01/06/alfred-wegeners-lost-cause-for-his-continental-drift-theory/?sh=67849c311149>

Q.40) Consider the following statements:

1. Acidic lava is less viscous with low melting pointing than Basic Lava.
2. The presence of high percentage of silica is found in acidic lava.
3. Basic lava spreads out as thin sheets over great distances before solidifying.
4. High explosivity and rigidity are the defining features of Basic Lava.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

Magma is composed of molten rock and is stored in the Earth's crust. Lava is magma that reaches the surface through a volcano vent.

Statement 1 is incorrect.

Acidic lavas are **highly viscous** with a high melting point. Sometimes the lavas are so viscous that they form a lava plug at the crater like that of Mt. Pelée in Martinique They **flow slowly and seldom travel far** before solidifying. Basic Lava are **highly fluid and less viscous**.

Statement 2 is correct.

Acidic lavas are light-coloured, of low density, and have a **high percentage of silica**. They **flow slowly and seldom travel far** before solidifying. The resultant volcanic cone is therefore stratified (hence the name **stratovolcano**) and steep-sided.

Statement 3 is correct.

Basic lavas are the **hottest lavas**, about 1,000 °C and are **highly fluid**. Due to their high fluidity, they flow readily with a speed of 10 to 30 miles per hour. **They affect extensive areas, spreading out as thin sheets over great distances before they solidify**.

Statement 4 is incorrect.

Basic Lavas flow out of volcanic vent **quietly and are not very explosive**. But with respect to Acidic Lavas, the **rapid solidifying of lava** in the vent obstructs the flow of the out-pouring lava, resulting in **loud explosions**, throwing out many volcanic **bombs or pyroclasts**

Source: G C Leong Chapter 3 Vulcanism and Earthquakes pg 21, 22

Q.41) Which one of the following statements is correct with reference to the "Earth's Axial tilt"?

- a) Axial tilt has an impact on the length of day and night on Earth.
- b) It has no effect on the seasons on earth.
- c) Earth has the largest axial tilt in the solar system.
- d) Without axial tilt, equator would have had lesser temperature than at the poles.

Ans) a

Exp) Option a is the correct answer.

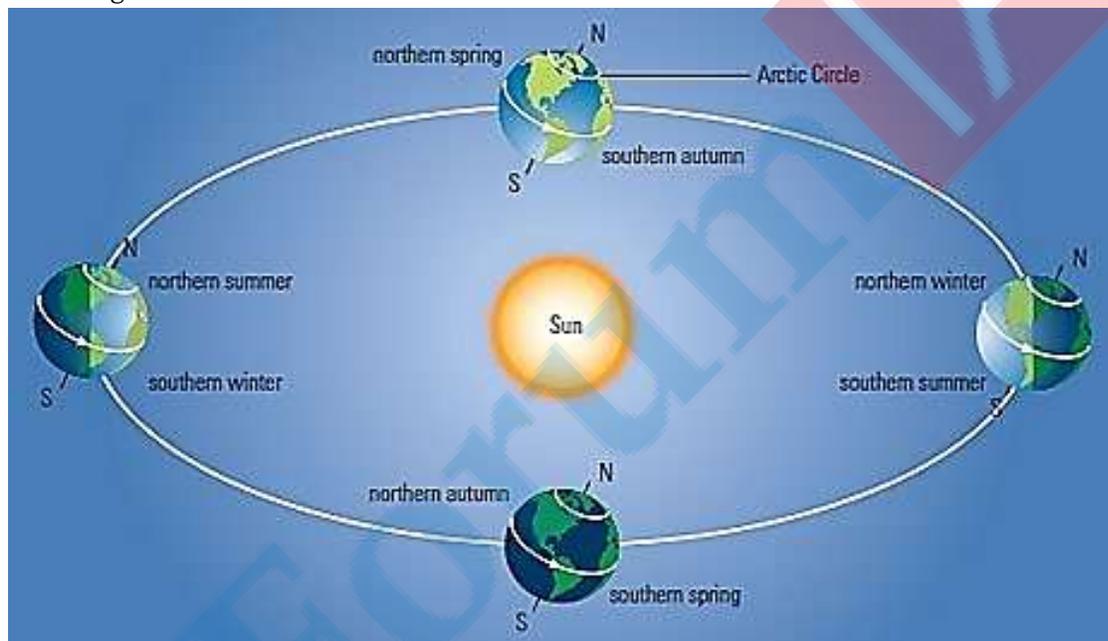
Option a is correct. Axial tilt determines the **length of daylight** at any point on the earth. The 23.5 degrees of tilt and the position of the north pole relative to the sun matters in this case. When the pole is tilted towards the sun, daylight is longer than when it is pointed away and vice-versa.

Option b is incorrect. Earth's axial tilt (also known as the obliquity of the ecliptic) is about 23.5 degrees. Due to this axial tilt, the sun shines on different latitudes at different angles throughout the year. This **causes the seasons on Earth.**

Option c is incorrect. Uranus has the largest axial tilt in the solar system. Its axis is tilted about 98 degrees, so its north pole is nearly on its equator. Astronomers suspect that this extreme tilt was caused by a collision with an Earth-sized planet billions of years ago, soon after Uranus formed.

Option d is incorrect. Without axial tilt, equator would have had **more temperature than the poles** and not otherwise. It would still be warm at the equator and cold at the poles. The most profound impact on temperatures would be at the poles. Instead of dark and frigid temperatures in the winter and warmer and constant sun in the summer, the **polar areas** would have much more **uniform temperatures year-round** and the **sun** would always be **low on the horizon.**

Knowledge Base:



Source: <https://www.nationalgeographic.org/encyclopedia/axis/>

<https://spaceplace.nasa.gov/seasons/#:~:text=Earth's%20tilted%20axis%20causes%20the,winter%20in%20the%20Northern%20Hemisphere.>

<https://theweatherprediction.com/habyhints2/471/>

Q.42) In the context of Earth's interior, consider the following statements about the Barysphere.

1. Olivine is the primary component of the Barysphere.
2. Owing to extremely high temperature and pressure, this entire region exists in the liquid state.

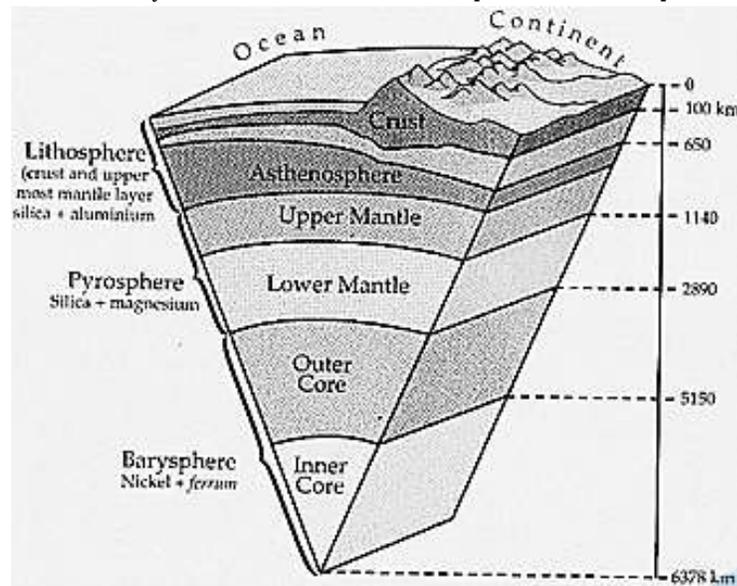
Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The earth is made up of several concentric layers like crust, mantle, outer core and inner core. Mechanically, it can be divided as lithosphere, asthenosphere, mesosphere, and barysphere.



Statement 1 is incorrect: The interior layer of the Earth is known as the Core or barysphere. It is further divided as inner core and outer core. It is primarily composed of Iron and nickel (nife). Olivine is a major constituent of the mantle/mesosphere.

Statement 2 is incorrect: The temperature in barysphere is estimated to be as high as 3,500°F, and is also subjected to extremely high pressure. In this, though the composition of both the inner and outer core is same, but due to difference in the amount of pressure, **outer core is in liquid state while the inner core is in solid state. Hence, the whole of barysphere is not in a liquid state, rather only outer core is in the liquid state.**

Source: Certificate Physical and Human Geography, G C Leong. Pg. 12

Q.43) 'These types of rocks are formed by the cooling and solidification of molten rock (magma) from beneath the earth's crust. They are normally crystalline in structure and do not occur in strata (layers).'

Which one of the following rocks is described in the above paragraph.

- Sedimentary Rocks
- Metamorphic Rocks
- Igneous Rocks
- Calcareous Rocks

Ans) c

Exp) Option c is the correct answer.

Igneous rocks (from the Latin word for fire) form when hot, molten rock crystallizes and solidifies. The melt originates deep within the Earth near active plate boundaries or hot spots, then rises toward the surface. They are normally crystalline in structure and do not occur in strata (layers). Due to extreme temperature during formation, they are devoid of any fossils.

Igneous rocks may be sub-divided based on mineral composition. When they contain a high proportion of silica, they are said to be acid.

In terms of origin there are two main classes of igneous rocks:

1) Plutonic rocks. These are igneous rocks, formed at some depth in the earth's crust. They have cooled and solidified slowly so that large, easily recognized crystals have been able to form.

2) Volcanic rocks. These are molten rocks poured out of volcanoes as lavas. They solidify rapidly on the earth's surface and the crystals are small.

Option a is incorrect: Sedimentary rocks are formed from sediment accumulated over long periods, usually under water. They are distinguished from the other rock types in their characteristic layer formation and are termed stratified rocks.

Option b is incorrect: Metamorphic rocks form when rocks are subjected to high heat, high pressure, hot mineral-rich fluids or, more commonly, some combination of these factors.

Option d is incorrect: Calcareous rocks are a type of sedimentary rocks formed from a variety of chemical and detrital sediments such as limestone, and dolostone.

Source: Certificate Physical and Human Geography, G C Leong. Pg. 12-13
NCERT, Class 11, Fundamental of Physical Geography

Q.44) Consider the following statements with reference to different types of rocks:

1. Sedimentary rocks are stratified and non-crystalline.
2. Igneous rocks contain a large quantity of fossils.
3. Limestone is a type of metamorphic rock.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct- Sedimentary rocks are properly stratified (exist as layers) in different rock beds and are great source of fossil fuels. They **do not have any crystalline structure** as those of igneous rocks. Thus, they are stratified and non-crystalline.

Statement 2 is incorrect- Igneous rocks **contains no or very less fossils** because of its formation from the hot molten magma.

It is sedimentary rocks which contains large quantity of fossils.

Statement 3 is incorrect-Limestone is type of sedimentary rock which is formed organically. Limestone converts into marble under heat and pressure. The marble thus formed is a metamorphic rock.

Source: NCERT- class 11- world physical geog-ch 5

Q.45) On which of the following charges can a Member of Parliament/ Member of Legislative Assembly be disqualified even if he/she is sentenced to less than two years of imprisonment?

1. Practicing and preaching untouchability.
2. Awarded the conviction of 8 months in case of contravention of law relating to food adulteration.
3. Given fine as punishment for committing offence of bribery.
4. Promotion of hostility among groups on ground of language.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Section 8 of the Representation of the People Act (RPA), 1951, contains provisions aimed at decriminalising electoral politics. There are two categories of criminal cases that attract disqualification upon conviction. In the first category are offences that entail disqualification for a period of six years upon any conviction. The second one forms a separate category under which mere conviction will not entail disqualification. A sentence of at least two years in prison is needed to incur such disqualification.

Statement 1 is correct: Any person convicted of offence pertaining to the Protection of Civil Rights Act, 1955 (22 of 1955), which provides for punishment for the preaching and practice of “untouchability” and for the enforcement of any disability arising therefrom shall be disqualified.

Statement 2 is correct: If the person is awarded the conviction of 8 months in case of contravention of law relating to food adulteration then he/she is disqualified from the seat in legislative assembly/ parliament. There are offences under which a person is sentenced to imprisonment for not less than six months, shall be disqualified from the date of such conviction and shall continue to be disqualified for a further period of six years since his release. These offences include:

A person convicted for the contravention of--

- (a) any law providing for the prevention of hoarding or profiteering
- (b) any law relating to the adulteration of food or drugs
- (c) any provisions of the Dowry Prohibition Act.

Statement 3 is correct: If the MP/MLA has committed offence under section 171E (offence of bribery) of Indian Penal Code 1860 then he/she is remained disqualified. If the punishment is a fine, the six-year period will run from the date of conviction.

Statement 4 is correct: MP/MLA is disqualified if he/she is convicted of an offence punishable under section 153A of IPC,1860. The offence includes promoting enmity between different groups **on ground of religion, race, place of birth, residence, language, etc., and doing acts prejudicial to maintenance of harmony.**

Source: [https://www.indiacode.nic.in/show-data?actid=AC_CEN_3_81_00001_195143_1517807327542&orderno=9#:~:text=\(ii\)%20imprisonment%2C%20from%20the,six%20years%20since%20his%20release.%5D](https://www.indiacode.nic.in/show-data?actid=AC_CEN_3_81_00001_195143_1517807327542&orderno=9#:~:text=(ii)%20imprisonment%2C%20from%20the,six%20years%20since%20his%20release.%5D)

<https://www.thehindu.com/news/national/explained-can-convicted-legislators-be-disqualified-from-assembly/article66088235.ece>

Q.46) Consider the following statements about the “Intermontane plateaus”:

1. These are generally formed because of the continual denudation by agents like water streams and glaciers.
2. These are some of the highest and the most extensive plateaus in the world.
3. The Deccan plateau is an example of intermont plateau.

Which of the statements given above is/are correct?

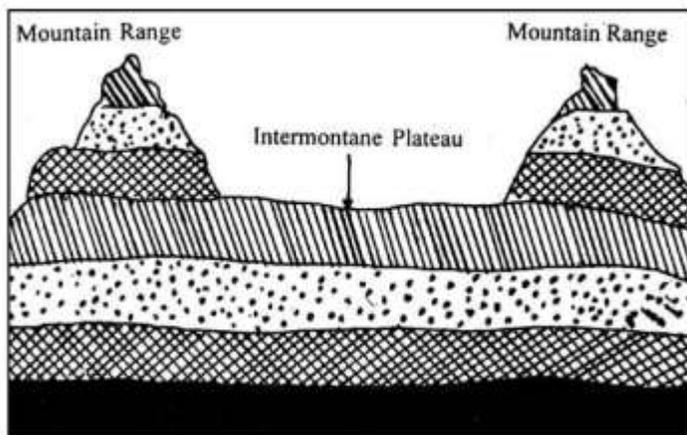
- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Plateaux are elevated uplands with extensive level surfaces, and usually descend steeply to the surrounding lowland. They are sometimes referred to as tablelands.

Statement 1 is incorrect: Intermontane plateaus are a type of tectonic plateaus formed by earth movements which cause uplift, and are normally of a considerable size, and fairly uniform altitude. **When the plateaus are enclosed by the fold mountains, they are known as intermont plateaus. However, plateaus formed from denudation are known as dissected plateaus.** E.g., Scottish Highlands.



Statement 2 is correct: Intermontane plateaus are landforms bordered by mountain rims and contained by high mountain chains. They feature almost horizontal rock strata that are uplifted to great heights by vertical earth movements. Hence, **they are considered as some of the highest and the most extensive plateaus in the world.**

Statement 3 is incorrect: The Deccan plateau is an example of volcanic plateau. However, the Tibetan plateau located between the Himalayas in the south and the Kunlun Mountains in north is an example of intermont plateau. The Bolivian plateau located between the ranges of the Andes is another example.

Source: Certificate Physical and Human Geography, G C Leong. Pg. 17

NCERT, Class 11, Fundamental of Physical Geography

Q.47) Consider the following statements about the metamorphism and metamorphic rocks.

1. In metamorphism, recrystallisation and reorganisation of minerals occurs within rocks.
2. In metamorphic rocks, minerals get arranged in layers or lines by the process known as foliation.
3. Slate, gneiss and schist are some of the examples of metamorphic rocks.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1, 2 and 3
- c) 1 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

The word metamorphic means 'change of form'. These rocks form under the action of pressure, volume and temperature (PVT) changes.

Statement 1 is correct: Metamorphism occurs when rocks are forced down to lower levels of the Earth by tectonic processes or when molten magma rising through the crust comes in contact with the crustal rocks or the underlying rocks are subjected to great amounts of pressure by overlying rocks. **Metamorphism is a process by which already consolidated rocks undergo recrystallisation and reorganisation of materials within original rocks.**

Statement 2 is correct: In the process of metamorphism in some rocks grains or minerals get arranged in layers or lines. Such an arrangement of minerals or grains in metamorphic rocks is called foliation or lineation.

Statement 3 is correct: Some of the well-known examples of metamorphosed rocks are as follows: clay may be metamorphosed into **slate**, limestone into **marble**, sandstone into **quartzite**, granite into **gneiss**, shale into **schist** and coal into **graphite**.

Source: Certificate Physical and Human Geography, G C Leong. Pg. 12-13
NCERT, Class 11, Fundamental of Physical Geography, Chapter 5, pg. 42.

Q.48) Consider the following statements about the volcanic mountains:

1. They can only occur near divergent boundaries of tectonic plates.
2. Composite volcanic mountains are the smallest type of volcanic mountains on the Earth.
3. Mt. Merapi, a type of volcanic mountain recently seen in news, is located in Indonesia.

Which of the statements given above is/are correct?

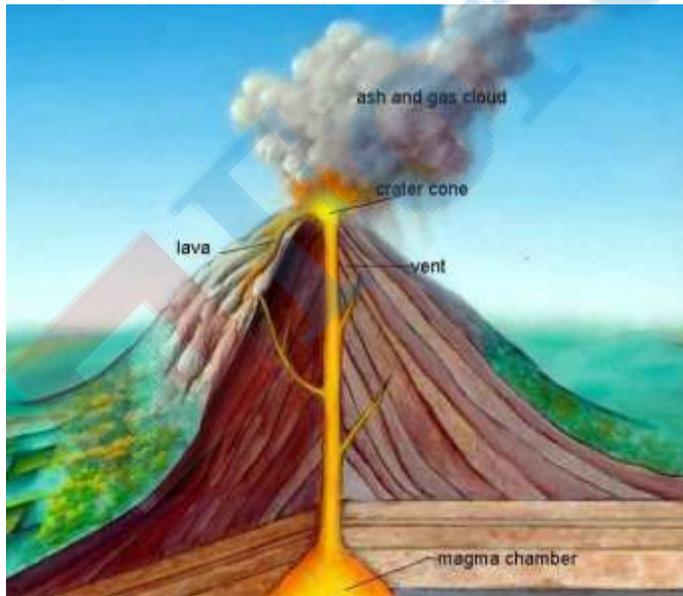
- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 3 only.

Ans) d

Exp) Option d is the correct answer.

Mountains which are built up from material ejected from fissures in the earth's crust are commonly known as volcanic mountains.

Statement 1 is incorrect: Volcanic mountains are, in fact, volcanoes which are built up from material ejected from fissures in the earth's crust. **They are commonly found in the circum-Pacific belt; however, they can also be often found in places where tectonic plates diverge or converge. They can also be found in alpine-Indonesian mountain belt, East African-Arabian belt, Eurasia, and Atlantic's.**



Statement 2 is incorrect: Cinder cones are also known as pyroclastic cones are the smallest and simplest type of volcanic mountains. Whereas, composite mountains/ Composite cones are large volcanoes (many thousands of feet or meters tall) generally composed of lava flows, pyroclastic deposits, and mudflow (lahar) deposits, as well as lava domes.

Statement 3 is correct: Mt. Merapi is the most active volcano in Indonesia and has erupted regularly since 1548. It is one of the most active volcanos of Indonesia. It is located near the centre of the island of Java and Indonesia's cultural capital, Yogyakarta.

Source: Certificate Physical and Human Geography, G C Leong. Pg. 17.
NCERT, Class 11, Fundamental of Physical Geography

Q.49) Consider the following statements regarding the recent earthquakes in Turkey:

1. Turkey lies in seismically active region at the confluence of three plates.
2. The mining events in Zonguldak region of Turkey caused isostatic imbalance.
3. The recent earthquakes were caused due to strike-slip fault.

Which of the statements given above are correct?

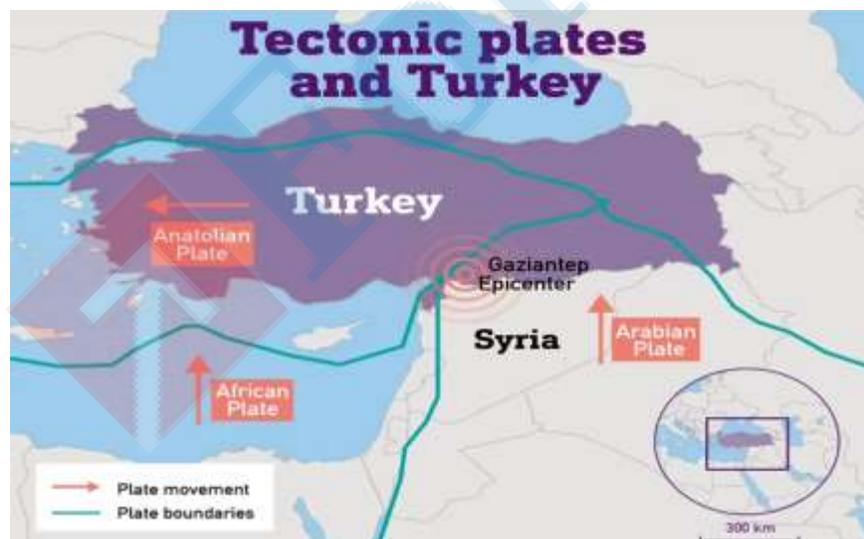
- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Two large earthquakes, **one of magnitude 7.8 and closely followed by a magnitude 7.5**, hit **south-eastern Turkey**, claiming thousands of lives, wreaking considerable damage in **Turkey** as well as **Syria**. According to one estimate, **almost 95% of the country's land mass** is prone to earthquakes, while about a third of the country is at high risk, including the areas around the major cities of Istanbul and Izmir and the region of East Anatolia. The earth crust plates **continually collide, push and grate against each other** and the meeting points of these plates are made up of a series of 'faults.

Statement 1 is correct: Turkey and Syria lie at the **confluence of three plates – the Arabian Plate, the Anatolian Plate and the Eurasian Plate**, making the region an extremely seismically active zone. The Arabian Plate is inching north into Europe, causing the Anatolian Plate (which Turkey sits on) to be pushed out west. **The bulk of Turkey sits on the Anatolian Plate** between two major faults: the North Anatolian Fault and the East Anatolian Fault.



Statement 2 is incorrect: Mining events in Zonguldak region of Turkey **did not cause any isostatic imbalance** in Turkey. Hence this statement is incorrect.

Statement 3 is correct: Geologists say that the earthquakes were from a **strike-slip** fault, which is like a earthquake in the region. One set of rocks rising up relative to the other is a **normal fault**, and one sliding down relative to the other is a **reverse fault**. **When they grate or move past one another, it's a strike-slip.** The **energy released travels as waves** that cause the ground to shake.



Knowledge Base: In addition to the Arabian and Anatolian plate, **the Aegean Sea Plate, located in the eastern Mediterranean Sea** under southern Greece and western Turkey, is also a source of seismic activity in the region.

Source: <https://www.thehindu.com/sci-tech/science/explained-why-were-the-turkey-earthquakes-so-deadly/article66498307.ece>
<https://indianexpress.com/article/explained/explained-sci-tech/turkey-earthquake-aftershocks-8427443/>

<https://www.thehindu.com/sci-tech/energy-and-environment/explained-why-turkey-is-prone-to-devastating-earthquakes/article66476957.ece>

Q.50) Which of the following best describes the phenomena of “scissors effect” as mentioned in the report of 15th Finance Commission?

- The effect where increase in Gross Domestic Product results in a proportionately larger rise in capital investment spending.
- A phenomenon where contracting revenue along with increasing expenditure is observed.
- Phenomena where decrease in sale of a product is due to consumers switching to cheaper alternatives when its price rises.
- The effect of increase or decrease in final income resulting from injection or withdrawal of capital in economy.

Ans) b

Exp) Option b is the correct answer.

A phenomenon in economy where contracting revenues along with need for increasing expenditure is observed is referred as Scissors effect

Statement a is incorrect: The accelerator effect states that investment levels are related the rate of change of GDP. Hence, when there is increase in Gross Domestic Product which results in large investment spending, acceleration effect is observed.

Statement b is correct: The 15th Finance (FC) commission expressed the concern on the dual pressure called “scissor effect” of the pandemic on state finances. The dual pressure of loss of revenues and need for increased spending was expected to hit hard the finances of the state governments.

Statement c is incorrect: The substitution effect is purely a reflection of frugality. It refers to decrease in sales for a product that can be attributed to consumers switching to cheaper alternatives when its price rises. If a brand raises its price, some consumers will select a cheaper alternative.

Statement d is incorrect: The multiplier effect refers to the proportional amount of increase, or decrease, in final income that results from an injection, or withdrawal of spending. Multipliers effects measure the impact that a change in economic activity—like investment or spending will have on the total economic output of something. This amplified effect is known as the multiplier.

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Source: <https://www.thehindubusinessline.com/data-stories/deep-dive/deep-dive-states-leave-behind-scissor-effect-show-healthy-recovery-in-own-tax-revenue/article65192800.ece>
https://www.nipfp.org.in/media/medialibrary/2022/01/WP_369_2022.pdf
<https://www.investopedia.com/terms/m/multipliereffect.asp>



Q.1) With reference to coastal plains of India, consider the following statements:

1. The Eastern Coastal Plain is an example of Emergent Coast.
2. The rivers flowing through Western Coastal Plains do not usually form deltas as *slope of rivers is very steep*.
3. *Kayals* are found along the Western Coastal Plains.
4. No estuary is found along the eastern coastal plains.

Which of the statements given above is/are correct?

- a) 1 and 4 only
- b) 2 and 3 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

On the basis of the location and active geomorphological processes, coastal plains can be broadly divided into two: (1) the western coastal plains; (2) the eastern coastal plains.

Statement 1 is correct: The eastern coastal plain is broader and is an example of an emergent coast. There are well developed deltas here, formed by the rivers flowing eastward into the Bay of Bengal. Because of its emergent nature, it has a smaller number of ports and harbours.

Whereas the western coastal plains are an example of submerged coastal plains. It is believed that the city of Dwaraka which was once a part of the Indian mainland situated along the west coast is submerged under water. Because of this submergence it is a narrow belt and provides natural conditions for the development of ports and harbours. Kandla, Mazagaon, JLN port Navha Sheva, Marmagao, Mangalore, Cochin, etc. are some of the important natural ports located along the west coast. Extending from the Gujarat coast in the north to the Kerala coast in the south.

Statement 2 is correct: The rivers flowing through western coastal plain do not form any deltas as slope of rivers is very steep. The slope of the Western Ghats is steep and that is the reason that these rivers have a rapid flow. They don't have to travel much distance to drain into the sea. As a result, they don't carry much sediments required to form deltas.

Statement 3 is correct: The Malabar coast, which is a part of western coastal plains, has got certain distinguishing features in the form of 'Kayals' (backwaters), which are used for fishing, inland navigation and also due to its special attraction for tourists. Every year the famous Nehru Trophy Vallamkali (boat race) is held in Punnamada Kayal in Kerala.

Statement 4 is incorrect: Estuaries are also found along the eastern coastal plains. For example - The Vellar estuary on the eastern coast of southern India (Tamil Nadu) and Hooghly River estuary. Western coastal plains also have estuaries. The Narmada, Periyar and Tapti are the long rivers, which flow west and make estuaries along the western coastal plain. Estuaries and their surrounding wetlands are bodies of water usually found where rivers meet the sea.

Source: 11th Geography-INDIA: PHYSICAL ENVIRONMENT + Chapter – 8 (STRUCTURE AND PHYSIOGRAPHY)

https://www.researchgate.net/figure/Location-map-of-the-major-estuaries-of-the-east-coast-of-India-showingthe-sites-where_fig1_263588167

<https://oceanservice.noaa.gov/facts/estuary.html>

Q.2) Which among the following conditions can be considered as favorable for the formation of Karst Topography?

The Presence of-

1. dense limestone near the surface.

2. moderate to heavy rainfall.
3. good groundwater circulation.

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Option 1 is correct: Karst Topography is the formation of landforms due to solution and deposition on **any limestone or dolomitic region** by the action of groundwater or surface water. **The presence of dense limestone near the surface is an important requirement for the formation of the Karst topography.** Different types of landforms will be developed from these limestone regions/blocks due to the action of ground water and rainwater.

Option 2 is correct: A **moderate to heavy rainfall is a favorable condition for the formation of Karst topography.** Rainwater percolates along both horizontal and vertical cracks, dissolving the limestone and carrying it away in solution.

Option 3 is correct: **Good groundwater circulation is an important condition for the formation of karst topography.** Ground water act as a primary agent in the formation of the karst landforms.

Source: <https://www.britannica.com/science/karst-geology>

Q.3) Rivers go through three main stages - the youthful or upper course, the mature or middle course, and the old or lower course. In this context, which of the following landforms are predominantly formed by the river in its upper course or youthful stage?

1. Interlocking spurs
2. Oxbow lakes
3. V-shaped valleys
4. Rapids
5. Plunge pools

Select the correct answer from the code given below:

- a) 1, 2 and 3 Only
- b) 1, 3 and 5 Only
- c) 3, 4 and 5 Only
- d) 1, 3, 4 and 5 only

Ans) c

Exp) Option c is the correct answer.

Rivers go through three main stages - the youthful or upper course, the mature or middle course, and the old or lower course.

V-shaped valleys, rapids, and plunge pools are typically formed by the river in its upper course or young age, while meanders and oxbow lakes are formed in the middle and lower course of the river.

Option 1 is incorrect: Interlocking spurs are convex (rounded) slopes that extend alternately from opposite sides of a valley, each one fitting into the "gap" between two similar slopes on the other side. Interlocking spurs are the predominant feature of mature stage.

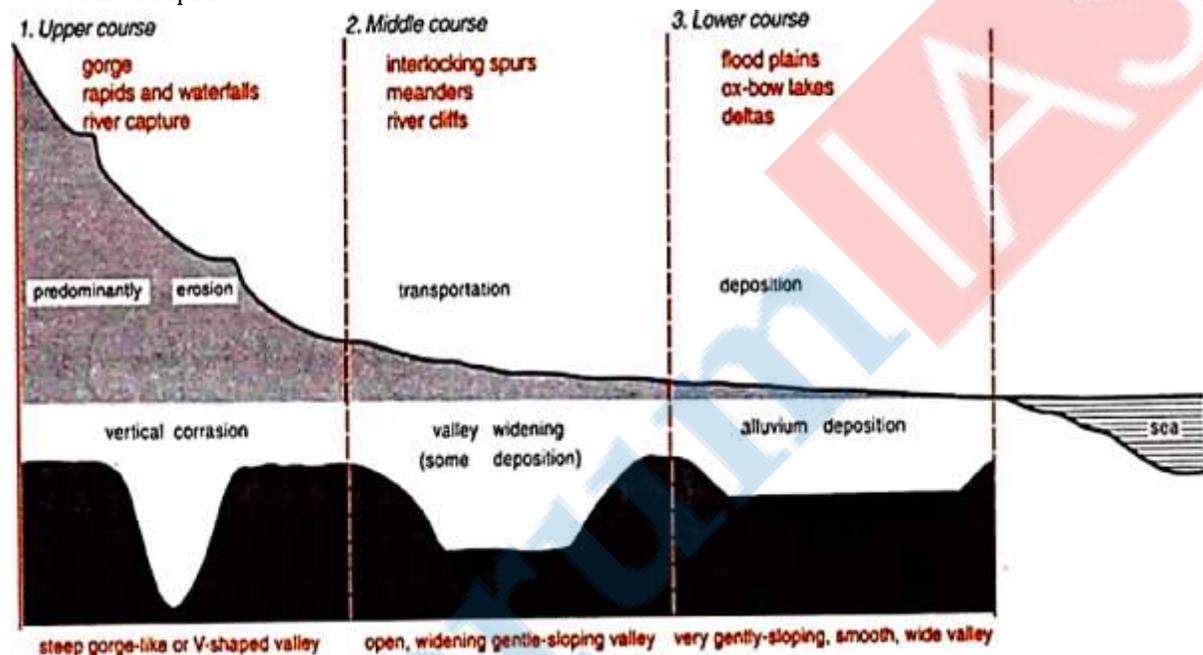
Option 2 is incorrect: Oxbow lakes are formed during the old or lower stages of a river's development, when it has a low gradient and a meandering course. They are formed when a meandering river erodes the

outer banks of a bend, causing the river to take a new, straighter course and leaving the old bend cut off from the main channel.

Option 3 is correct: V-shaped valleys are typically formed during the youthful stage of a river's development, when it has a high gradient and a greater erosive power. The river erodes the sides and bottom of the valley, creating a narrow, V-shaped channel.

Option 4 is correct: Rapids are formed wherever there is a sudden change in the river's gradient or where there are obstructions such as rocks or boulders in the river's course. They can form at any stage of a river's development but are most common during the youthful stage.

Option 5 is correct: Plunge pools are typically formed during the youthful stages of a river's development, when it has a greater erosive power. They are formed by the erosive action of falling water at the base of a waterfall or rapids.



Knowledge Base:

1) Youthful or Upper Course

- V-shaped valleys
- Waterfalls
- Rapids
- Plunge pools
- Gorges

2) Mature or Middle Course

- Meanders
- Interlocking spurs
- River cliff and slip off slopes

3) Old or Lower Course

- Deltas
- Oxbow lakes
- Floodplains
- Braided Channels
- Estuaries
- Natural levees
- Bayous

Source: Certificate physical and human geography ch 5 pg 41-44

Q.4) Which of the following water bodies in India are examples of Ox-Bow lakes?

1. Chilika Lake
2. Pulicat Lake
3. Kanwar Lake
4. Deepor Beel

Select the correct answer using the codes given below:

- a) 1 and 2 Only
- b) 2 and 3 Only
- c) 3 and 4 Only
- d) 1 and 4 Only

Ans) c

Exp) Option c is the correct answer.

Ox-Bow lakes are U-shaped bodies of water that form when a river's meander becomes so pronounced that it erodes the narrow strip of land between two bends and creates a new channel. As a result, a part of the river is cut off from the main channel, and the water gets collected in a curved lake.

Option 1 is incorrect: Chilika Lake is not an example of an Ox-Bow Lake as it is a lagoon, which is a shallow coastal water body separated from the sea by a narrow strip of land.

Option 2 is incorrect: Pulicat Lake is a brackish water lagoon that is located at the border of Andhra Pradesh and Tamil Nadu. The lagoon is separated from the Bay of Bengal by a sand bar and is connected to the sea by a narrow mouth.

Option 3 is correct: Kanwar jheel, as it is locally called, is located 22 km north-west of Begusarai town. It is a residual oxbow lake, formed due to meandering of Gandak river, a tributary of Ganga, in the geological past.

Option 4 is correct: Deepor Beel is a large oxbow lake located in the southwestern part of Guwahati city in Assam, India. It is a wetland of international importance under the Ramsar Convention and is also an Important Bird Area (IBA).

Source: http://www.rainwaterharvesting.org/pulicat_lake/pulicat_lake.htm

<https://edugreen.teri.res.in/explore/life/chilika.htm#:~:text=It%20has%20been%20formed%20due,for mation%20of%20a%20shallow%20lagoon.> <https://www.downtoearth.org.in/news/kanwar-lake-birds-paradise-lost-44693> <https://www.touristlink.com/india/vynthala-lake/overview.html>

<https://cuesonline.org/2017/08/30/whats-the-buzz-about-deepor-beel/>

Q.5) With reference to 'UPI23Pay facility' recently launched by Reserve Bank of India, consider the following statements:

1. It is a method to initiate and execute transactions that will work on simple non-smart feature phones.
2. Users can initiate a secured call from their phones to a predetermined Interactive Voice Response number to complete UPI based transaction.
3. Transactions can be made even without any internet connection.

Which of the statements given above are correct?

- a) 1 and 2 Only
- b) 2 and 3 Only
- c) 1 and 3 Only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Reserve Bank of India has launched new UPI service for feature phones called UPI123Pay. It has also launched a 24x7 helpline for digital payments called 'Digisaathi'.

Statement 1 is correct. UPI 123PAY is a **three-step offline method** to initiate and execute transactions that will work on simple feature phones. It will allow users to use feature phones for almost all transactions except scan and pay. The service **does not need an internet connection for transactions**. Users just need to link their bank account with their phones to use the service.

UPI123Pay offers users four options to make payments without internet connectivity-

Statement 2 is correct. Interactive Voice Response (IVR): Users would be required to initiate a secured call from their feature phones to a predetermined IVR number and complete UPI on-boarding formalities to start making financial transactions like money transfer, mobile recharge, EMI repayment, balance check, among others.

Statement 3 is correct. App-based functionality: One could install an app on feature phones through which several UPI functions, available on smartphones, will be available on their feature phone, except the **scan and pay** feature which is currently **not available**.

Missed call facility: The missed call facility will allow users to access their bank account and perform routine transactions such as receiving, transferring funds by giving a missed call on the number displayed at the merchant outlet. The customer will receive an incoming call to authenticate the transaction by entering UPI PIN.

Proximity sound-based payments: One could utilize the proximity sound-based payments option, which uses **sound waves to enable contactless**, offline, and proximity data communication on any device.

Source: RBI launches UPI123Pay that allows UPI payments on feature phones -ForumIAS Blog
Reserve Bank of India - Press Releases (rbi.org.in)

Q.6) Which of the following conditions are favourable for the formation of deltas?

1. Active lateral and vertical erosion at the upper course of the river.
2. Absence of heavy tides on coasts.
3. Presence of shallow sea adjoining the delta.
4. Presence of large lakes in the middle course of river.
5. Absence of strong currents running at right angles to the river mouth.

Select the correct answer from the codes given below.

- a) 1, 2 and 3 only
- b) 3, 4 and 5 only
- c) 1, 2, 3 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) c

Exp) Option c is the correct answer.

The Delta is originated from the Greek letter Δ which closely resembled the triangular delta of the Nile. It is formed when a river reaches the sea, and the fine materials it has not yet dropped are deposited at its mouth, forming a fan-shaped alluvial area. A number of factors such as the rate of sedimentation, the depth of the river and the seabed, and the character of the tides, currents and waves greatly influence the eventual formation of delta.

Statement 1 is correct: Active vertical and lateral erosion in the upper course of the river is necessary to provide extensive sediments to be eventually deposited as deltas. It acts as a source of sedimentation for further deposition.

Statement 2 is correct: The coast should be sheltered preferably tideless. If the coast is not sheltered, then the tides may erode the deposition at the river mouth and the sediments may get washed away.

Statement 3 is correct: The sea adjoining the delta should be shallow or else the load will disappear in the deep waters. Hence, presence of longer continental shelf is one of the key requirements of the formation of delta.

Statement 4 is incorrect: There should be no large lakes in the course of the river to filter off the sediments. If there is an extensive deposition at middle of the river, due to presence of large lakes there will be not enough load to be deposited at the river mouth and hence probability of forming a delta will be less.

Statement 5 is correct: There should be no strong current running at right angles to the river mouth. If such currents are present, then they may wash away the sediment deposits and hinder the formation of delta at the river mouth.

Source: Certificate Physical and Human Geography, G C Leong, pg. 44

Q.7) “It is a type of glacial erosional landform. It is a horseshoe shaped, deep, long and wide trough or basin with very steep to vertically dropping high walls at its head. It is a depression in which the firm or neve accumulates.”

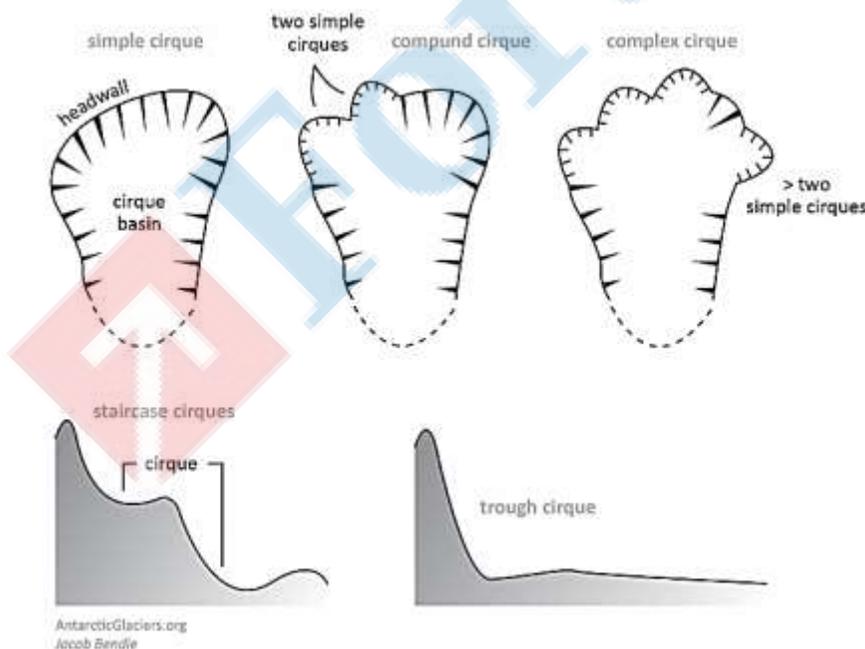
Which of the following landforms is described in the above passage?

- Hanging valley
- Aretes
- Cirque
- Bergschrund

Ans) c

Exp) Option c is the correct answer.

The downslope movement of a glacier from its snow-covered valley-head, and the intensive shattering of the upland slopes, tend to produce a depression where the firm or neve accumulates. The process of plucking operates on the back-wall, steepening it and the movement of the ice abrades the floor, deepening the depression into a steep, horse-shoe-shaped basin called a cirque (in French). It is also known as corrie.



Option a is incorrect: A tributary valley whose ice has melted and hence, hangs above the main valley so that its stream plunges down as a waterfall is known as hanging valley.

Option b is incorrect: When two corries or cirques cut back on opposite sides of a mountain, knife-edged ridges are formed called aretes (a French word).

Option d is incorrect: At the head of a glacier, where it begins to leave the snowfield of a corrie, a deep vertical crack opens up called a bergschrund (in German) or rimaye (in French).

Source: Certificate Physical and Human Geography, G C Leong, pg. 48

<https://www.sciencedirect.com/topics/earth-and-planetary-sciences/cirque>

<https://www.nps.gov/articles/cirques.htm>

Q.8) With reference to the Equatorial Rainforests, consider the following statements:

1. These forests are characterized by the presence of Lianas and Epiphytes.
2. Tropical rain forests in the Amazon Basin are called *Selvas*.
3. Equatorial forests are highly conducive for commercial exploitation of timber.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 2 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

The equatorial regions support a tropical rain forest due to high temperature and abundant rainfall, which is characterized by a great variety of vegetation including evergreen trees, smaller palm trees, climbing plants, ferns, orchids, and Lalang.

Statement 1 is correct: Epiphyte, also called air plant, any plant that grows upon another plant or object merely for physical support. Lianas are plants with long, flexible, climbing stems that are rooted in the ground, and usually have long dangling branches. Equatorial rainforests are characterized by the presence of Epiphytes and Lianas. One of the main reasons for such adaptation is to get access to the physical prerequisites like Sunlight.

Statement 2 is correct: In the Amazon basin, Tropical Rain Forests are so dense and so complete in their vegetational extravagance that a special term "*Selvas*" is used to denote them.

Statement 3 is incorrect: Tropical evergreen forests are difficult to exploit for commercial purposes because these forests are dense, and many plants and climbers are tangled with each other. Secondly, the lack of means of transport deep into the forests has made these trees difficult to be used commercially.

Source: Certificate of Physical Geography pg: 118

Q.9) Lakes can be formed by various geo-climatic and anthropogenic processes. In this context consider the following pairs.

Lakes - **Type of lakes**

1. Vembanad lake - Lagoon
2. Wular lake - Tectonic Lake
3. Vynthala lake - Man made Lake

How many of the pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) All the three pairs
- d) None of the pairs

Ans) b

Exp) Option b is the correct answer.

Lakes are amongst the most varied features of the earth's surface. They occupy the hollows of the land surface in which water accumulates. They vary tremendously in size, shape, depth and mode of formation.

Pair 1 is correct: Vembanad, one of the Ramsar site, is a coastal lagoon. It has a single, relatively narrow opening to the sea and must have been formed by the detritus dumped by six perennial rivers forming a narrow sand bar in the sea further west of the seashore.

Pair 2 is correct: Tectonic lakes are lakes formed as a result of the deformation of the Earth's crust and the resulting lateral and vertical motions. These motions include faulting, tilting, folding, and warping. **Wular Lake is one of Asia's largest freshwater lakes, having been produced by geological action. Hence, it is type of tectonic lake.**

Pair 3 is incorrect: Vynthala Lake is a natural oxbow lake found in Vynthala, near Mala, Thrissur District of Kerala. It was formed from a "cut-off" of the Chalakudy River which flows near to it. The lake is considered to be the only naturally formed Oxbow Lake in whole of South India.

Source: <https://whc.unesco.org/en/tentativelists/5896/>

[https://bandipore.nic.in/tourist-](https://bandipore.nic.in/tourist-place/wullar/#:~:text=Wular%20Lake%20(also%20spelt%20Wullar,)%2C%20depending%20on%20the%20season.)

[place/wullar/#:~:text=Wular%20Lake%20\(also%20spelt%20Wullar,\)%2C%20depending%20on%20the%20season.](https://bandipore.nic.in/tourist-place/wullar/#:~:text=Wular%20Lake%20(also%20spelt%20Wullar,)%2C%20depending%20on%20the%20season.)

<https://www.downtoearth.org.in/news/kanwar-lake-birds-paradise-lost-44693>

Q.10) Consider the following pairs:

Poverty Measures	Assumptions
1. Welfare Approach	Level of income reflects the level of freedom enjoyed by an individual.
2. Capability Approach	Real opportunities are the key to increasing human development
3. Multidimensional Poverty Index	Basic needs of the people need to be fulfilled rather than their choices

Which of the pairs given above is/are correctly matched?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Poverty measures are used to quantify the extent and nature of poverty in a given population. These measures are used by governments, international organizations, and researchers to understand the nature of poverty, identify those in need, and evaluate the effectiveness of poverty reduction programs.

Pair 1 is incorrectly matched: Welfare Approach approach looks at **human beings as beneficiaries or targets of all development activities**. The approach **argues for higher government expenditure on education, health, social secondary and amenities**. People are not participants in development but only passive recipients. The government is responsible for increasing levels of human development by maximising expenditure on welfare.

On the other hand, Income Approach is based on the idea that the **level of income reflects the level of freedom an individual enjoys**. Higher the level of income, the higher is the level of human development.

Pair 2 is correctly matched: The capabilities approach, developed by economist Amartya Sen, looks at a **person's capabilities, or the real opportunities they have to live a fulfilling life**. This approach emphasizes the importance of not just income, but also access to education, healthcare, and other opportunities that can lead to a person's overall well-being.

Pair 3 is incorrectly matched: The Multidimensional Poverty Index is based on the **understanding that poverty is a multidimensional phenomenon and that a household can be considered poor if it is deprived in several different ways**.

On the other hand, Basic Needs Approach emphasizes the provision of basic needs of defined sections and ignores the question of human choices.

Source: <https://ncert.nic.in/textbook/pdf/legy104.pdf>

Q.11) Fjord is a glacial landform. Regarding Fjord, consider the following statements.

1. A fjord is formed when a glacier retreats after carving its typical U-shaped valley, and then the sea fills the resulting valley floor with water.
2. Fjords are characteristically very shallow and wide water bodies.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Fjord comes from the Norse fjørðr. The word fjord was mostly used in the meaning "where one fares through", which has the same origin as the word "fare" (travel). It is a landform of highland glaciation.

Statement 1 is correct: Fjords are found in locations where current or past glaciation extended below current sea level. A fjord is formed when a glacier retreats, after carving its typical U-shaped valley, and the sea fills the resulting valley floor. The fjords were thus formed by the giant glacier tongues that through several ice ages have shaped the landscape.

Statement 2 is incorrect: A fjord is a deep, narrow and elongated sea or lake drain, with steep land on three sides. The opening toward the sea is called the mouth of the fjord and is often shallow. The fjord's inner part is called the sea bottom. **If the geological formation is wider than it is long, it is not a fjord.**

Then it is a bay or cove.

Source: <https://www.fjordnorway.com/en/inspiration/what-is-a-fjord>

<https://www.fjords.com/what-is-a-fjord/>

Q.12) Consider the following statements regarding the Taiga or Boreal forests:

1. It is the world's largest land biome in terms of area.
2. They are only found in the Northern Hemisphere, and not found in the Southern Hemisphere.
3. Trees are completely absent in these forests.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) option a is the correct answer.

Taiga, the term includes all cool, northern coniferous forests, including the so-called boreal forests of North America and Europe

Statement 1 is correct: The boreal forest (or "taiga") is the **world's largest land biome in terms of area**. The boreal ecozone principally spans 8 countries: Canada, China, Finland, Japan, Norway, Russia, Sweden and the United States.



Statement 2 is correct: The **Taiga types of forest are only found in the northern hemisphere** where the continents within the high latitudes have a broad east-west spread. The narrowness of the southern continents in the high latitudes is the main reason for absence of taiga forests in southern hemisphere.

The strong oceanic influence also reduces the severity of the winter in the southern hemisphere.

Statement 3 is incorrect: It is mainly made up of coniferous forest and **trees such as larches, spruces, birches, aspens, firs, and pines**. The conifers, which require little moisture are best suited to this type of sub-Arctic climate. Thus, there is no absence of trees, hence incorrect.

Source: [https://cloudflare-](https://cloudflare-ipfs.com/ipfs/bafykbzacedkfgnbodj45xylsoy3vlzcmsxu7axxjway7iwhmxregvt46zibac?filename=taiga-trevor-day-richard-garratt-biomes-of-the--annas-archive--libgenrs-nf-239547.pdf)

[ipfs.com/ipfs/bafykbzacedkfgnbodj45xylsoy3vlzcmsxu7axxjway7iwhmxregvt46zibac?filename=taiga-trevor-day-richard-garratt-biomes-of-the--annas-archive--libgenrs-nf-239547.pdf](https://cloudflare-ipfs.com/ipfs/bafykbzacedkfgnbodj45xylsoy3vlzcmsxu7axxjway7iwhmxregvt46zibac?filename=taiga-trevor-day-richard-garratt-biomes-of-the--annas-archive--libgenrs-nf-239547.pdf)

Q.13) With reference to various coastal landforms, consider the following statements:

1. A *Tombolo* is formed when a 'Spit' connects the mainland coast to an island.
2. A *Gloup* is a steep and often vertical column of rock in the sea near a coast.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

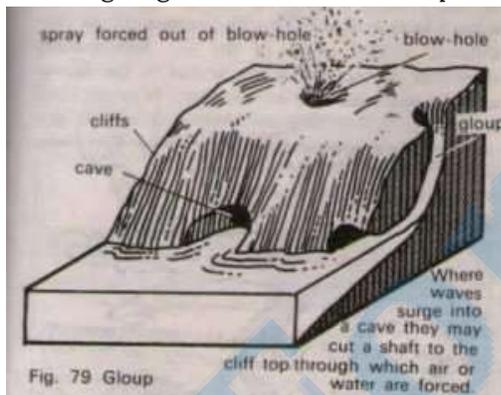
Exp) Option a is the correct answer.

Coastal landforms, any of the relief features present along any coast, the result of a combination of processes, sediments, and the geology of the coast itself. Examples of coastal landforms include cliffs, bays, sea arch, and caves, etc.

Statement 1 is correct: A Tombolo is formed when a spit connects the mainland coast to an island. A spit is a feature that is formed through deposition of material at coastlines. The process of longshore drift occurs, and this moves material along the coastline. (Fig. below is showing the tombolo)



Statement 2 is incorrect: Gloop is an opening in the roof of a sea cave through which incoming waves may force air to rush upward or water to spout intermittently. While **stack or sea stack** is a geological landform consisting of a steep and often vertical column or columns of rock in the sea near a coast, formed by wave erosion. Stacks are formed over time by wind and water, processes of coastal geomorphology. Like all other features, sea stacks are also temporary and eventually coastal hills and cliffs will disappear because of wave erosion giving rise to narrow coastal plains



Source: 11th NCERT (Fundamental of Physical Geography)- Chapter 7 : Landforms and their Evolution
https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.bbc.co.uk/bitesize/guides/zsdmv9q/revision/6%23:~:text=%3DA%2520tombolo%2520is%2520formed%2520when,moves%2520material%2520along%2520the%2520coastline.&ved=2ahUKEwjG8Z_7_YT-AhXG-jgGHUKEAnsQFnoECAgQBQ&usg=AOvVaw02k1JuLg40vq6z15IVDIct
https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.nps.gov/articles/000/format-ion-of-the-stockton-island-tombolo-apis.htm%23:~:text=%3DA%2520tombolo%2520is%2520a%2520landform,Stockton%2520and%2520Presque%2520Isle%2520Islands.&ved=2ahUKEwjG8Z_7_YT-AhXG-jgGHUKEAnsQFnoECBcQBQ&usg=AOvVaw1sF3rWxjcSzkah3at15KWg
https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.merriam-webster.com/dictionary/gloop%23:~:text=%3D%253A%2520an%2520opening%2520in%2520the%2520ro%2520of,spout%2520intermittently%2520%253A%2520blowhole%2520sense%25203&ved=2ahUKEwiXtobi_oT-AhWjr2wGHUjOC6kQFnoECA4QBQ&usg=AOvVaw33kwlffjFTRUKQ6wGxBrpq

Q.14) With reference to the terms related to the processes of erosion and weathering, consider the following pairs:

Term	Definition
1. Corrasion	It is the mechanical grinding of the river's traction load against banks and bed of the river
2. Corrosion	It is the gradual destruction or alteration of a material by chemical reaction.
3. Attrition	The process by which transported materials undergo wear and tear when they collide and roll into each other.

How many of the pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) All three pairs
- d) None of the pairs

Ans) c

Exp) Option c is the correct answer.

The above terms are related to the processes of erosion and weathering that occur in natural environments.

Pair 1 is correctly matched: Corrasion or abrasion is the mechanical grinding of the river's traction load against banks and bed of the river. The rock fragments are hurled against the sides of the river and also roll along the bottom of the river.

Pair 2 is correctly matched: Corrosion is the gradual destruction or alteration of a material by chemical reaction with its environment. In geology, it often refers to the dissolution of minerals in rocks by acidic water or other fluids.

Pair 3 is correctly matched: Attrition is the process by which transported materials undergo wear and tear when they collide and roll into each other. This causes coarser boulders to break down into smaller stones and angular edges to become rounded. Finer materials are carried downstream and eventually deposited.

Source: Certificate physical and human geography ch 5 pg 39-40

Q.15) Consider the following statements:

1. India is the largest importer of palm oil in Asia.
2. Andhra Pradesh is the largest producer of palm oil in India.
3. Palm oil production in India has declined continuously in the last five years.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

India is the world's second-largest consumer of palm oil. Palm oil accounts for about 40% of India's edible oil consumption and the nation is almost entirely dependent on imports to meet this demand.

Statement 1 is correct. In Asia, **India** is the **largest importer of palm oil** and accounts for **15 percent of global imports**. China with 9 percent, Pakistan with 4 percent, and Bangladesh with 2 percent of global imports are the other significant countries with a stake in palm oil production and trade. **India** relies on **Indonesia** to fulfil nearly half of its palm oil requirement of around 700,000 tonnes per month.

Statement 2 is correct. **Andhra Pradesh (AP)** is the largest producer of Palm oil in India with **240016 Metric Tons** of production in 2020-21. It is followed by Telangana with 39347 Metric Tons of palm oil.

Statement 3 is incorrect. According to the Economic Survey 2021-2022, the **palm oil production in India has increased between 2015-2016 and 2020-2021** at a compound annual growth rate of **6.1 per cent**. Since the launch of the **National Edible Oil Mission**, around **2.8 million hectares** of land have been assessed to be fit for oil palm cultivation by the reassessment committee of the Indian Council for Agricultural Research-Indian Institute of Oil Palm Research.

Source: <https://www.thehindubusinessline.com/economy/agri-business/5-major-palm-oil-importers-form-asian-alliance/article65921524.ece>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1780271>

<https://www.downtoearth.org.in/blog/agriculture/why-india-doesn-t-need-palm-oil-but-its-greener-alternatives-84255>

Q.16) What is common among *Ria coasts*, *Dalmitian coast* and *Fiord coast*?

- They all have Submergent coastline.
- They all have Emergent coastline.
- They all have Concordant coastline.
- They all have Discordant coastline.

Ans) a

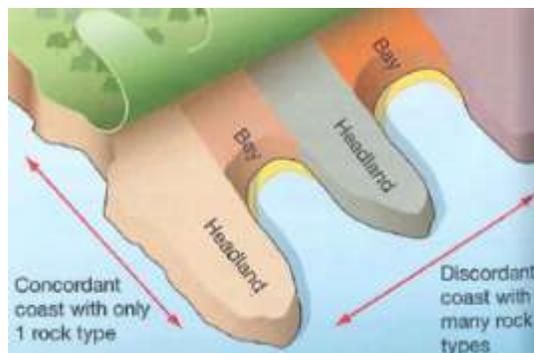
Exp) Option a is the correct answer.

Coastline is the area where land meets water. The water, with an endless supply of waves, whether pounding or gentle ripples, is constantly changing coastlines around the globe.

Option 1 is correct: Submergent coastlines are coastlines submerged under water due to rising sea levels. Many of these types of coastlines were actually formed toward the end of the Last Glacial Period (LGP). **Such coasts are Ria coasts, Fiord coasts, Dalmatian Coast and Estuarine coasts.**

Option 2 is incorrect: Emergent coastlines happen when either the water level has fallen, or the land has risen. Either way, there is now a (bit of) coastline that is no longer submerged under water. Emergent coastlines can pop up after tectonic activity. Emergent coastlines can have features such as marine terraces, relict sea cliffs, sea stacks, and raised beaches.

Option 3 is incorrect: Discordant coastlines occur when bands of different types of rocks run perpendicular (at 90 degrees) to the coast. These bands of rocks alternate between soft rock and hard rock, all eroding at different rates and in varying ways. Because of this difference in erosion resistance, discordant coastlines are home to **headlands**, due to eroding hard rock, and **bays**, due to eroding soft rock.



Option 4 is incorrect: Concordant coastlines have bands of similar rock types running parallel (alongside) to the coast. The difference in rock types between discordant and concordant coastlines means that there are differences in erosion. As mentioned earlier, discordant coastlines form headlands and bays; on the other hand, concordant coastlines form **coves**. These coves are formed by waves breaking through an outer layer of hard rock, such as limestone, and then, over time, the waves sweep away the soft rock further inland, like sand and clay, creating a cove.

Source: GC Leong Pg: 76

<https://www.studysmarter.co.uk/explanations/geography/coasts-geography/coastlines/#:~:text=The%20four%20major%20types%20of,concordant%20coastlines%3B%20and%20discordant%20coastlines.>

Q.17) Consider the following pairs with reference to different types of Coral reefs:

Types of Coral Description

Reefs

- | | |
|------------------|--|
| 1. Fringing reef | It grows seaward directly from the shore and form borders along the shoreline. |
| 2. Barrier reef | It is separated from the shore by a lagoon. |
| 3. Atoll | It is a circular oceanic reef system surrounding a large central lagoon |

Which of the pairs given above is/are correctly matched?

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Coral reefs are important ocean habitats and offer a compelling case of the risks of climate change. Reefs provide a large fraction of Earth's biodiversity—they have been called **“the rain forests of the seas.”** Scientists estimate that 25 percent of all marine species live in and around coral reefs, making them one of the most diverse habitats in the world. There are three kinds of coral reefs: fringing reefs, barrier reefs, and atolls.

Pair 1 is correct: Fringing reefs are the most common type of reef. This type of reef grows seaward directly from the shore. They form borders along the shoreline and surrounding islands. A fringing reef is composed of a reef flat and a reef slope. The reef flat is nearest to shore. Due to heavy sediment, few live corals live in the reef flat. **It is mostly made of exoskeletons.** The reef slope faces the open ocean. Most marine life is found on the reef slope.

Pair 2 is correct: A barrier reef is separated from the shore by a lagoon. The reef forms a barrier between the coast and the open ocean or sea. **Barrier reefs are far less common** than fringing reefs or atolls, although examples can be found in the tropical Atlantic as well as the Pacific.

Pair 3 is correct: An atoll is a roughly circular (annular) oceanic reef system surrounding a large (and often deep) central lagoon. When a fringing reef continues to grow upward from a volcanic island that has sunk entirely below sea level, an atoll is formed.

Source:

[https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.nationalgeographic.org/encyclopedia/reef/&ved=2ahUKewiLqtPHnoT-](https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.nationalgeographic.org/encyclopedia/reef/&ved=2ahUKewiLqtPHnoT-AhUz2DgGHVlXBAoQFnoECCAQAQ&usg=AOvVaw3BLX7no6XXGO2r0deV6M8K)

[AhUz2DgGHVlXBAoQFnoECCAQAQ&usg=AOvVaw3BLX7no6XXGO2r0deV6M8K](https://www.coral-reef-info.com/types-of-coral-reefs/#:~:text=Most%20reef%20scientists%20generally%20recognize,nearby%20land%20(if%20any).)

[https://www.coral-reef-info.com/types-of-coral-](https://www.coral-reef-info.com/types-of-coral-reefs/#:~:text=Most%20reef%20scientists%20generally%20recognize,nearby%20land%20(if%20any).)

[reefs/#:~:text=Most%20reef%20scientists%20generally%20recognize,nearby%20land%20\(if%20any\).](https://www.coral-reef-info.com/types-of-coral-reefs/#:~:text=Most%20reef%20scientists%20generally%20recognize,nearby%20land%20(if%20any).)

Q.18) Consider the following statements regarding the Alluvial Fans:

1. Alluvial fans are erosional landforms that are generally formed at the peak of the Mountains.
2. Alluvial fans cannot be formed underwater.
3. Fans formed due to mass wasting, without the aid of water, are called Colluvial Fans.

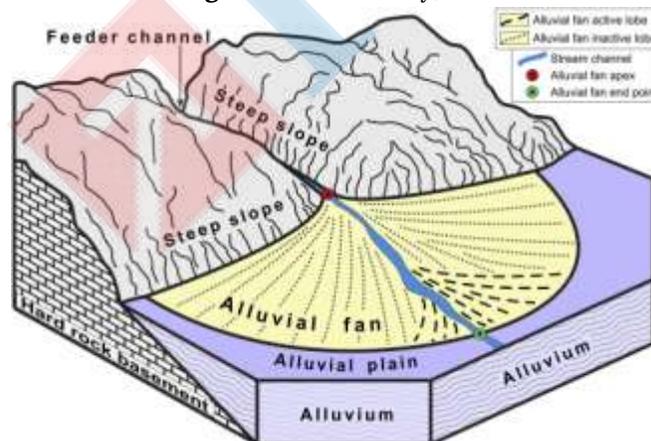
Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Alluvial fans are depositional landforms not erosional landforms. An alluvial fan is a triangle-shaped deposit of gravel, sand, and even smaller pieces of sediment, such as silt. This sediment is called alluvium. A river mouth is a place where a river flows into another larger body of water like ocean or large lakes. Generally, deltas are formed at the river mouth.



Statement 2 is incorrect: Alluvial fans are even found underwater. An underwater fan is created as an underwater current deposits alluvium from a submarine hill or glacier.

Statement 3 is correct: Sometimes, fans are formed without the aid of water. These are called colluvial fans. **Colluvial fans are created by mass wasting.** Mass wasting is simply the downward movement of rock, soil, or other material. **Alluvium is a material transported by water, while colluvium is material transported by mass wasting.** Landslides are an instance of mass wasting that often create colluvial fans.

Source: <https://education.nationalgeographic.org/resource/alluvial-fan/>

<https://www.britannica.com/science/alluvial-fan>

<https://www.sciencedirect.com/topics/earth-and-planetary-sciences/alluvial-fan#:~:text='Alluvial%20fans'%20are%20depositional%20landforms,onto%20a%20low%2Drelief%20plain>

Q.19) Consider the following statements regarding the Meanders:

1. They are only formed at the upper course of the river mainly because of vertical erosion by the rivers.
2. Slip-off slope and River cliff are the landforms associated with the Meanders.

Which of the statements given above is/are correct?

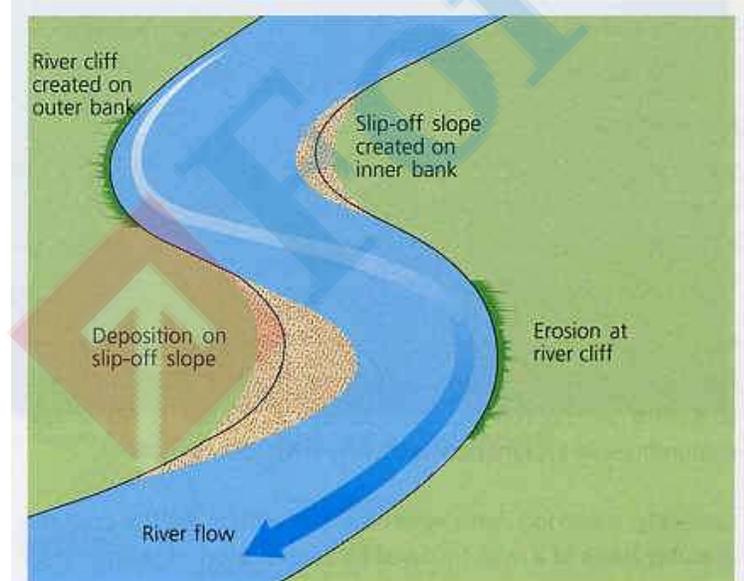
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The middle course of a river has more energy and volume than the upper course. The gradient is gentler and more lateral (sideways) erosion has widened the channel. The river channel has also become deeper. Meanders are typical landforms found in this stage of the river.

Statement 1 is incorrect: A meander is a winding curve or bend in a river. They are typical of the middle and lower course of a river. **This is because vertical erosion is replaced by a sideways form of erosion called LATERAL erosion, plus deposition within the floodplain.**



Statement 2 is correct: A meander is formed because the river flows faster on the outside edge of any small curve and slower along the inside edge. Deposition of sediment occurs on the inner edge because the river, moving slowly, cannot carry its sediment load, creating a slip-off slope. The faster moving current on the

outside bend has more erosive ability and the meander tends to grow in the direction of the outside bend, forming a river cliff.

Source: geography.learnontheinternet.co.uk/topics/river_middle_course.html

<https://www.cs.mcgill.ca/~rwest/wikispeedia/wpcd/wp/m/Meander.htm>

[https://link.springer.com/referenceworkentry/10.1007/3-540-31060-](https://link.springer.com/referenceworkentry/10.1007/3-540-31060-6_186#:~:text=Intrenched%20or%20entrenched%20meanders%20are,normally%20develop%20under%20slower%20incision.)

[6_186#:~:text=Intrenched%20or%20entrenched%20meanders%20are,normally%20develop%20under%20slower%20incision.](https://link.springer.com/referenceworkentry/10.1007/3-540-31060-6_186#:~:text=Intrenched%20or%20entrenched%20meanders%20are,normally%20develop%20under%20slower%20incision.)

Q.20) Consider the following statements regarding 'Swatantrata Sainik Samman Yojana':

1. The scheme provides monthly pension to freedom fighters as a token of respect for their contribution in the national freedom struggle.
2. The Union Ministry of Culture is the nodal ministry for the implementation of the scheme.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The government has recently approved the continuation of the Swatantrata Sainik Samman Yojana (SSSY) till 2025-26.

Statement 1 is correct: Swatantrata Sainik Samman Yojana (SSSY) aims to provide a **monthly Samman Pension to freedom fighters**, as a token of respect for their contribution in the national freedom struggle and on their demise to their eligible dependents viz. spouses and thereafter, unmarried and unemployed daughters and dependent parents.

Statement 2 is incorrect: Ministry of Home Affairs is the nodal agency for the scheme. In 1972, to commemorate the 25th Anniversary of Independence, a regular scheme for grant of freedom fighters' pension was introduced. Thereafter, in 1980, a scheme by the name 'Swatantrata Sainik Samman Pension Scheme' was implemented. From 2017-18 onwards, the nomenclature of the Scheme has been changed to 'Swatantrata Sainik Samman Yojana'.

Source: Government has approved continuation of Swatantrata Sainik Samman Yojana(SSSY) -ForumIAS Blog

Q.21) Which of the following statements best describes the term "River Piracy"?

- a) The act of illegally taking over a river vessel by pirates.
- b) The process of stealing water from a river for irrigation purposes.
- c) The process by which a river captures the drainage of another river.
- d) The illegal transportation of goods through a river.

Ans) c

Exp) Option c is the correct answer.

River capture, also known as river piracy or beheading, occurs when one river captures the drainage of another river by eroding the divide that separates them. This is due to differences in the rate of headward erosion into the divide caused by varying gradients or precipitation. The more erosive river enlarges its basin at the expense of the weaker river, eventually breaking through the divide and capturing the other river. The point at which this occurs is called the elbow of capture, and the beheaded river is referred to as the misfit. The valley below the elbow is called a wind gap and can serve as a valuable transportation route.

Examples of river capture can be found in various places, including the Upper Sittang captured by the Irrawaddy in Burma and the Blyth and Wansbeck beheaded by the North Tyne in Northumberland, England.
Source: Certificate physical and human geography ch 5 pg 40

Q.22) Consider the following statements regarding the Caverns:

1. It is an underground cave formed by the action of water in a limestone area.
2. Borra caves in Andhra Pradesh is a well-known site of caverns in India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Cavern is an underground cave formed by water action by various methods in a limestone or chalk area. Cave formation is prominent in areas where there are alternating beds of rocks (shales, sandstones, quartzites) with limestones or dolomites in between or in areas where limestones are dense, massive and occurring as thick beds.

Statement 2 is correct: Borra Caves located in the Visakhapatnam district of Andhra Pradesh is a prominent example of caverns in India. Among the deepest caves of India, the Borra cave was created millions of years ago by the karstic action of the Gosthani river and has some spectacular speleothems. The local tribals also associate several legends with the cave. The cave is also highly valuable for anthropological research, with excavations unearthing stone tools of middle Paleolithic culture (confirming human habitation in the area dating back to between 30,000 and 50,000 years ago)

Knowledge Base: Geologists refer to the mineral formations in caves as “speleothems.” While the water flows, the speleothems grow in thin, shiny layers. The amount of growth is an indicator of how much ground water dripped into the cave. Little growth might indicate a drought, just as rapid growth could point to heavy precipitation. When the speleothems stop growing, the outside becomes dirty and eroded in places, giving it a dull appearance. A growing speleothem looks smooth and wet.

Source : <https://worldofcaves.com/whats-the-difference-between-a-cavern-vs-cave/>

<https://cavern.com/learn/Cavern%20Geology%20Lesson%20Plan%201.pdf>

<https://www.thebetterindia.com/118998/lesser-known-natural-wonders-india-offbeat-travel-inspiration/>

https://earthobservatory.nasa.gov/features/Paleoclimatology_Speleothems

Q.23) Consider the following description:

“These forests are characterized by cold temperatures, short growing seasons, and coniferous trees. These forests are found in the high latitudes of the Northern Hemisphere, primarily in Canada, Alaska, Scandinavia, and Russia. The soil in these forests is thin and nutrient-poor, and the vegetation is adapted to survive harsh conditions such as cold temperatures and permafrost.”

Which of the forest types is mentioned in the above paragraph?

- a) Tropical rainforest
- b) Temperate deciduous forest
- c) Tundra forest
- d) Mediterranean forest

Ans) c

Exp) Option c is the correct answer.

Tundra forests, also known as boreal forests or taiga, are a biome **characterized by their cold and harsh climate, dominated by long, cold winters** and short, cool summers. They **are found in the northern hemisphere, in regions such as Canada, Russia, and Scandinavia**. The dominant tree species in **tundra forests are evergreens, such as spruce, fir, and pine**. These trees are adapted to the **cold climate by having narrow needles, which help them conserve water**, and a conical shape, which allows them to shed snow easily. The understory of tundra forests is typically composed of shrubs, mosses, and lichens. Tundra forests are an important habitat for a wide range of wildlife. Mammals such as moose, reindeer, wolves, and bears are commonly found in these forests, as are a variety of bird species, including owls, woodpeckers, and grouse. Many of these animals rely on the forests for food and shelter, and some, such as the lynx and the snowshoe hare, have evolved specialized adaptations to survive in the harsh winter conditions.

Source: <https://ncert.nic.in/textbook/pdf/gess206.pdf>

<https://ncert.nic.in/textbook/pdf/iess105.pdf>

Q.24) With reference to Ocean currents, consider the following pairs:

Current	Feature
1. Humboldt current	a main cause of dry climatic conditions prevailing in Atacama Desert
2. Gulf stream	Responsible for bringing warm water from the Gulf of Mexico to the east coast of North America
3. Canaries current	Cold ocean current that flows off the west coast of Africa

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- All the three pairs
- None of the pairs

Ans) c

Exp) Option c is the correct answer.

Ocean currents play a significant role in redistributing heat and salt throughout the world's oceans. They are driven by a combination of factors, including wind, temperature, and the Earth's rotation.

Pair 1 is correctly matched: The Atacama is one of the driest places on earth. It receives less than 1 mm of precipitation each year, and some areas haven't seen a drop of rain in more than 500 years. There are two main reasons for the prevailing dry climatic conditions in Atacama Desert. On one hand Andes Mountains obstruct the moisture laden winds, these winds ascend near the mountains only and bring rains in those regions. The dry winds will reach Atacama Desert. On the other hand, **Humboldt Current, which is a cold ocean current, makes coastal surface water cold and prevents evaporation of the water**. When winds blow from ocean into the land, they will be dry and cold. These dry winds do not bring any rain to the Atacama region.

Pair 2 is correctly matched: The Gulf stream is a warm ocean current that flows from the Gulf of Mexico along the east coast of North America. It is responsible for bringing warm water to the region and has a significant impact on the climate and weather patterns in the area.

Pair 3 is correctly matched: The Canaries current is a cold ocean current that flows off the west coast of Africa, between the Canary Islands and the African mainland. It is known for its strong winds and large waves, which can make navigation in the region difficult.

Source: Certificate of Physical Geography pg: 89-90

Q.25) Which of the following best describes the DeFi (Decentralized Financing) system, that has been recently seen in news?

- a system that provides a range of financial services using digital assets.
- a technology used for the mining of crypto currencies.
- a new loan disbursement scheme launched by the RBI for achieving financial inclusion.
- a new type of Non-Banking Financial Company set up to exclusively provide credit facilities in tribal areas.

Ans) a

Exp) Option a is the correct answer.

DeFi refers to Decentralised Financing which is a component of the Web 3.0 concept. **DeFi** provides a **range of financial services** like **trading in securities, lending & borrowing, paying for services/ assets, or maintaining saving accounts** using **digital assets** such as cryptocurrencies using a **peer-to-peer system**. In case of DeFi system entire financial transaction occurs between two ordinary individuals without the involvement of a central authority like a tech company or a central bank or a commercial bank which generally regulates financial transactions currently.

These transactions will use the Distributed Ledger Technology (DLT) (such as blockchain) for carrying out these transactions. DLT means that the resources used to complete the transaction and record the financial agreement will be distributed across several personal systems and not concentrated in servers/ clouds owned by a few tech corporates or government.

Source: <https://indianexpress.com/article/explained/explained-crypto-banking-and-decentralized-finance-7489689/>

<https://indianexpress.com/article/technology/crypto/what-is-web3-and-why-it-matters-7659054/>

<https://www.businessworld.in/article/How-Defi-And-Web-3-0-Could-Shape-The-Future-Of-Finance/17-06-2022-433058/>

<https://www.forbes.com/advisor/investing/cryptocurrency/defi-decentralized-finance/>

<https://economictimes.indiatimes.com/tech/trendspotting/explained-how-defi-could-one-day-liberate-finance/articleshow/87511218.cms?from=mdr>

<https://www.nytimes.com/interactive/2022/03/18/technology/what-is-defi-cryptocurrency.html>

Q.26) Which of the following are erosional desert landforms?

- Barchans
- Loess
- Hoodoos
- Mesas
- Inselbergs

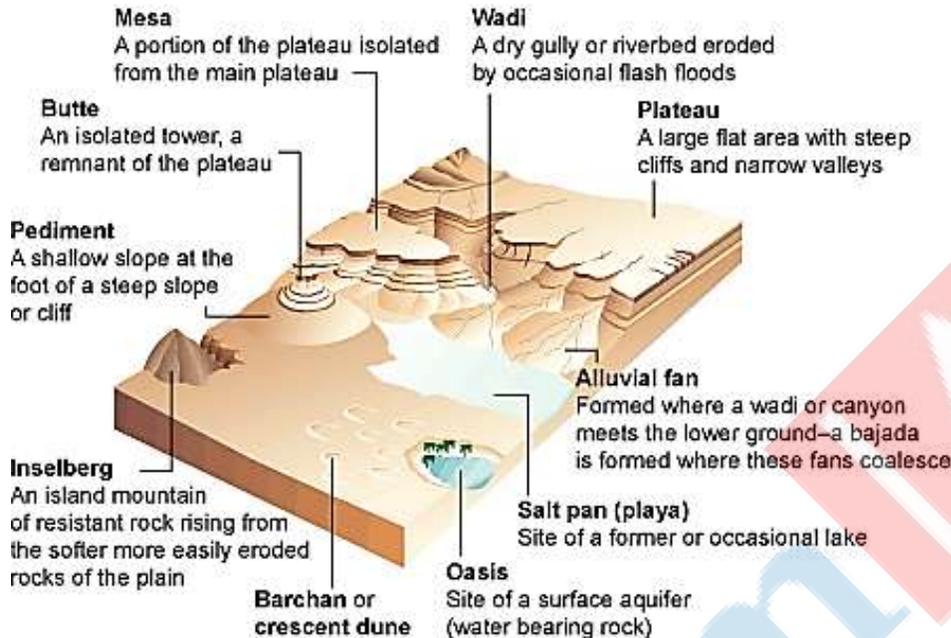
Select the correct answer from the code given below:

- 2, 3 and 4 only
- 3, 4 and 5 only
- 1, 3, 4, and 5 only
- 1, 2, 3, 4, and 5

Ans) b

Exp) Option b is the correct answer.

Erosional desert landforms are created by the action of wind and water on the landscape.



Options 1 and 2 are incorrect: Barchans and Loess are examples of depositional landforms of the desert.

Barchans are primarily crescent-shaped sand dunes that are likely to shift while facing the wind with intensity from one particular direction. Loess is defined as sediment that has been entrained, transported, and deposited by the wind and is dominated by silt-sized (50–2 μm diameter) particles.

Option 3 is correct: Hoodoos are tall, thin spires of rock that are formed by the erosive action of wind and water on soft rock formations. They are also an example of an erosional desert landform.

Option 4 is correct: Mesas are flat-topped hills with steep sides that are formed by the erosion of softer rock layers that cover harder, underlying rock formations. They are also an example of an erosional desert landform.

Option 5 is correct: Inselbergs are isolated hills or mountains that rise abruptly from a plain or desert floor. They are formed by the exposure of hard, resistant rock that has been uplifted and eroded over time.

Source: Certificate of Physical Geography pg: 56-61

Q.27) Which of the following best describes the difference between Gorges and Canyons?

- Gorges are always deeper than Canyons.
- Gorges are formed on the land surface whereas canyons are only formed on the ocean surface.
- A gorge is a result of river erosion, while a canyon is a result of glacial deposition.
- Canyons are generally wider than Gorges.

Ans) d

Exp) Option d is the correct answer.

Canyons and gorges are geographical landforms belonging to the broad categories of valleys. Morphologically, they are either V-shaped or U-shaped with a downward fold extending below the earth's surface. Though these terms have been utilized interchangeably, there exists some critical differences between a canyon and a gorge in terms of size, mode of formation, localization and preference of usage of the terms.

In terms of the proportions of the two, a canyon is considered larger than a gorge. **They are both deep valleys, but a canyon is often wider compared to a gorge. The term gorge is at times used to describe ravines which are narrower than canyons.** Canyons are mainly localized to the arid areas while gorges can be found in temperate areas like between mountain ranges.

Option a is incorrect: Both Gorges and Canyons are deep valleys, depth of gorges and canyons changes with the location and other factors. However, we cannot say that gorges are always deeper than canyons or vice versa.

Option b is incorrect: Submarine canyons are the canyons formed on the ocean floor. Apart from these submarine canyons, canyons can also be widely found on the land surface. For example, The Grand Canyon is canyon carved by the Colorado River in Arizona, United States.

Option c is incorrect: Both canyons and gorges are erosional landforms.

Source: <https://www.worldatlas.com/articles/what-is-the-difference-between-a-canyon-and-a-gorge.html>

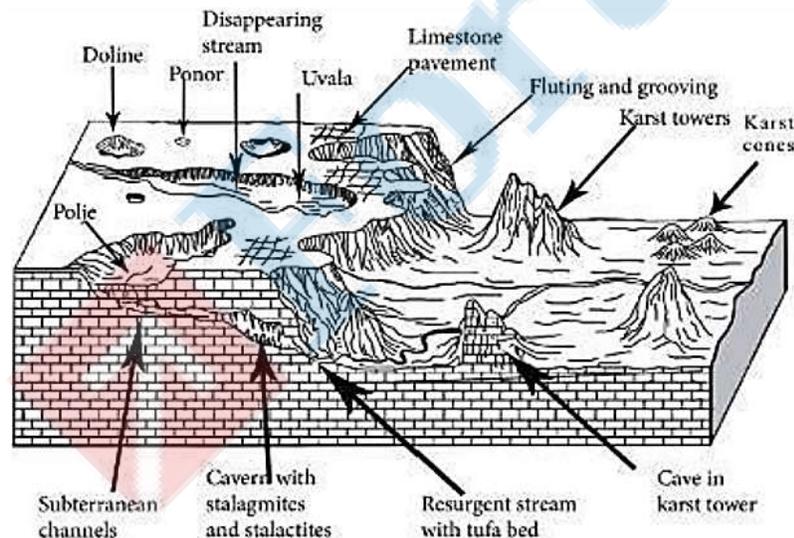
Q.28) The Kentucky region of the United States, the Yucatan peninsula of Mexico and the Cockpit country of Jamaica are well known for which of the following topographic features?

- Karst landforms
- Loess formations
- Mesas and buttes topography
- Ox bow lake formations

Ans) a

Exp) Option a is the correct answer.

Karst Topography is the formation of landforms due to solution and deposition on any limestone or dolomitic region by the action of groundwater or surface water. It is a type of landscape where the dissolving of the bedrock has created sinkholes, sinking streams, caves, springs, and other characteristic features.



The most characteristic stretch of limestone occurs in north-west Yugoslavia. Other regions include: the Causses district of southern France, the Pennines of Britain, Yorkshire and Derbyshire in particular, **the Kentucky region of the United States, the Yucatan Peninsula of Mexico, the Cockpit Country of Jamaica, and the limestone hills of Perlis.**

Source: Certificate Physical and Human Geography, G C Leong, pg. 64

Q.29) This is an important landform of river which provides valuable flood control and erosion protection services. It also helps to direct the flow of the river. It is formed parallel to a river channel due to repeated flooding events. It is composed of coarser material such as gravel and sand.

Which of the following landforms has been described in the passage above?

- Monadnocks
- Penplain
- Natural levees
- Rapids

Ans) c

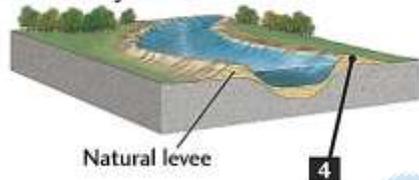
Exp) option c is the correct answer.

Option a is incorrect. **Monadnock** is an isolated hill of bedrock standing conspicuously above the general level of the surrounding area. Monadnocks are left as erosional remnants because of their more resistant rock composition.

Option b is incorrect. **Peneplains** represent low **featureless plain** having undulating surface and remnants of convexo-concave residual hills. These are, in fact, the end products of the normal cycle of erosion. It refers to an undulating featureless plain punctuated with low-lying residual hills of resistant rocks. It is considered to be an end product of an erosional cycle.

Option c is correct. Natural levees are embankments formed naturally after a river floods and recede. Friction with the floodplain during a flood causes a decrease in the velocity of the river leading to the deposit of the material that the flood water is carrying. The deposits in natural levees contain **mud, sand, and stones** and are formed such that they slope away from either side of the river or flood plain. Levees also **direct the flow of the river.**

After many floods



Option d is incorrect. Rapids are areas of shallow, fast-flowing water in a stream. Rapids tend to form in younger streams, with water flow that is straighter and faster than in older streams. Softer rocks in the streambed erode, or wear away, faster than harder rocks.

Source: NCERT 11th

Q.30) Consider the following statements regarding the Sovereign Green Bond Framework of India:

- The Framework applies to all Sovereign Green Bonds issued by Government of India.
- The Department of Economic Affairs of the Ministry of Finance reserves the right to modify this Framework.
- The framework is designed to comply with recommendations of the Green Bond Principles of International Capital Market Association.
- As per the provisions of the framework, Green Finance Working Committee was constituted.

Which of the statements given above are correct?

- 1, 2 and 3 only
- 1, 2 and 4 only
- 3 and 4 only
- 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

The Union Budget 2022-23 announced the issuance of Sovereign Green Bonds. As a part of the government's overall market borrowings in 2022-23, sovereign Green Bonds will be issued for mobilizing resources for green infrastructure. The proceeds will be deployed in public sector projects which help in reducing the carbon intensity of the economy.

Statement 1 is correct: Green Bond Framework sets forth the obligations of the Government of India as a Green Bond issuer. **The Framework applies to all sovereign Green Bonds issued by the Government of India.**

Statement 2 is correct: Department of Economic Affairs, Ministry of Finance reserves the right to modify **this Framework** according to international best practices or in accordance with the Government of India's international commitments and environmental priorities. Changes to the Framework will be reviewed by an independent provider.

Statement 3 is correct: The framework is designed to comply with four components and key recommendations of the International Capital Market Association (ICMA) Green Bond Principles (2021). These principles recommend delineation of a clear process and disclosure by the issuer to enable the investors and banks and others to understand the characteristics of the green bond. The four core components as outlined by ICMA green bond principles are: i. Use of proceeds; ii. Project evaluation and selection; iii. Management of proceeds; and iv. Reporting.

Statement 4 is correct: Green Finance Working Committee (GFWC) has been established to oversee and validate key decisions on issuance of Sovereign green bonds under the Chairmanship of Chief Economic Adviser, Government of India.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1874788>

<https://dea.gov.in/sites/default/files/Framework%20for%20Sovereign%20Green%20Bonds.pdf>

Q.31) Which of the following statements is/are correct about River Rejuvenation?

1. River rejuvenation can lead to the formation of waterfalls and incised meanders.
2. The point where the old and rejuvenated profile of river meet is called Knick point.

Select the correct answer using the codes below:

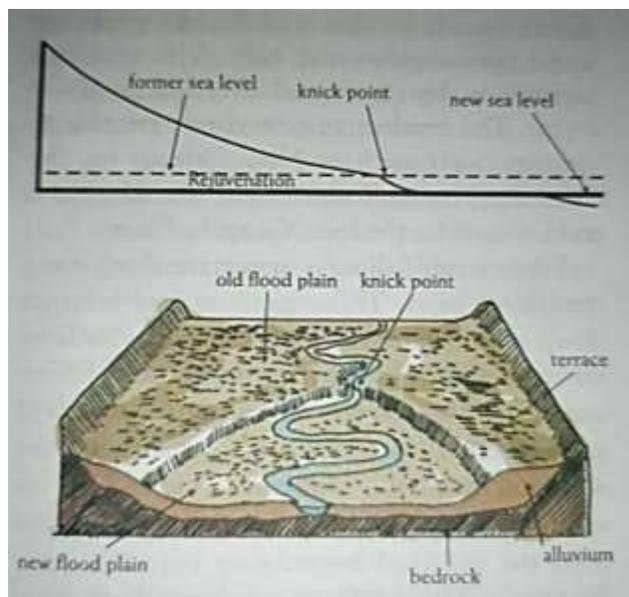
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) option c is the correct answer.

Statement 1 is correct: River rejuvenation can lead to a number of changes in landscape. **These include the formation of waterfalls and rapids, Knick points, river terraces and incised meanders.** Rejuvenated terrains usually have complex landscapes because remnants of older landforms are locally preserved. Parts of floodplains may be preserved as terraces alongside the down-cutting stream channels.

Statement 2 is correct: A Knick point is a point where the old and rejuvenated profile of river is met. It is also known as rejuvenated head. It is a point on the river's course where there is a change in the gradient of the river profile. **An example of a visible knick point would be a waterfall.** However, some Knick points can be concealed in the landscape.



Source: NCERT

Q.32) Which of the following landforms can be considered as depositional landforms formed by glaciers?

1. Esker
2. Drumlin
3. Aretes
4. Cirque

Select the correct answer using the codes below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 4 only

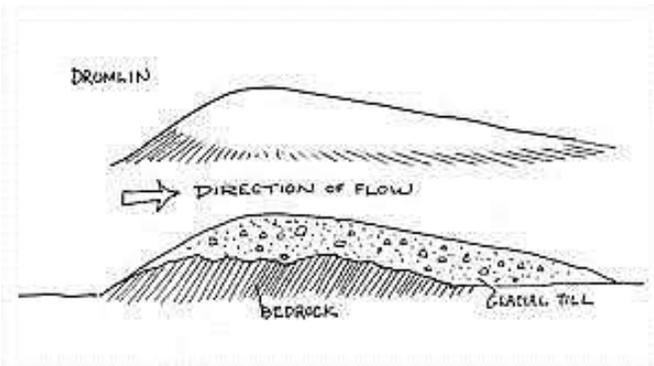
Ans) a

Exp) option a is the correct answer.

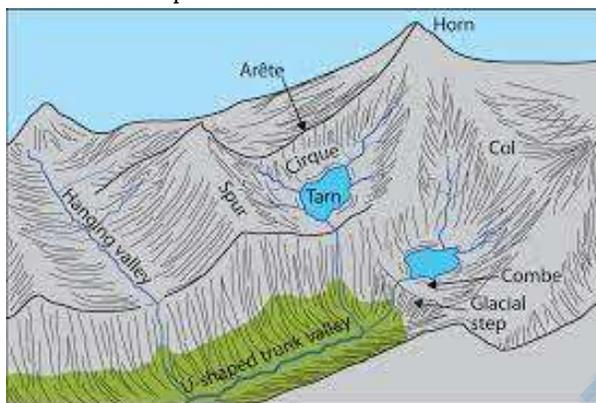
A depositional landform is a **landform that is created from glacial deposits**. This is when a glacier carries some sediment, which is then placed (deposited) somewhere else. This could be a large group of glacial sediment or a single significant material.

Option 1 is correct: Esker refers to **Winding ridge of un-assorted depositions of rock, gravel, clay etc.** running along a glacier in a till plain. The eskers resemble the features of an embankment and are often used for making roads. It is a type of depositional feature of glacial.

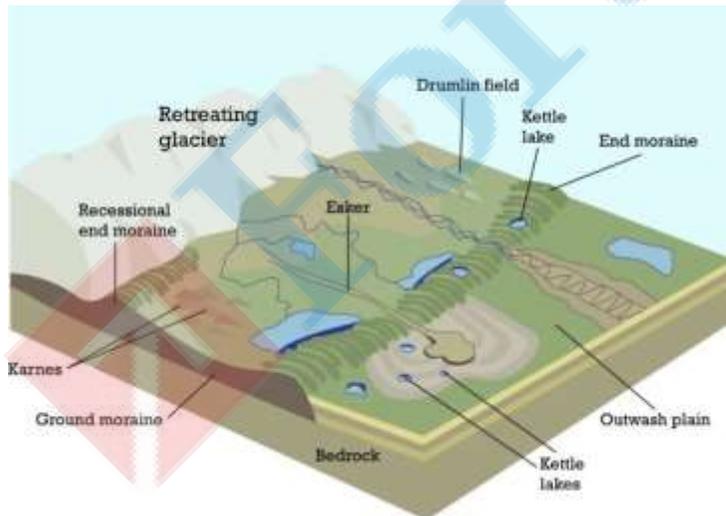
Option 2 is correct: **Drumlin have been formed by the streamlined movement of glacial ice sheets across rock debris, or till. It looks like an Inverted boat-shaped** deposition in a till plain. These are mainly depositional features of glaciers.



Option 3 is incorrect: When the divide between two cirque walls gets narrow because of progressive erosions, it results in the formation of a saw-toothed ridge called **Arête**. They are formed by **headward erosion** of cirque wall.



Option 4 is incorrect: Cirque is Hollow basin cut into a mountain ridge. It has steep sided slope on three sides, an open end on one side and a flat bottom. When the ice melts, the cirque may develop into a tarn lake. It is an **erosional landform**.



Source: NCERT

Q.33) Consider the following statements regarding the Moraines:

1. It is formed by the deposition of unsorted glacial debris including gravel, sand and clay.
2. Moraines can be used to reconstruct the history of a glacier including its shape and size.

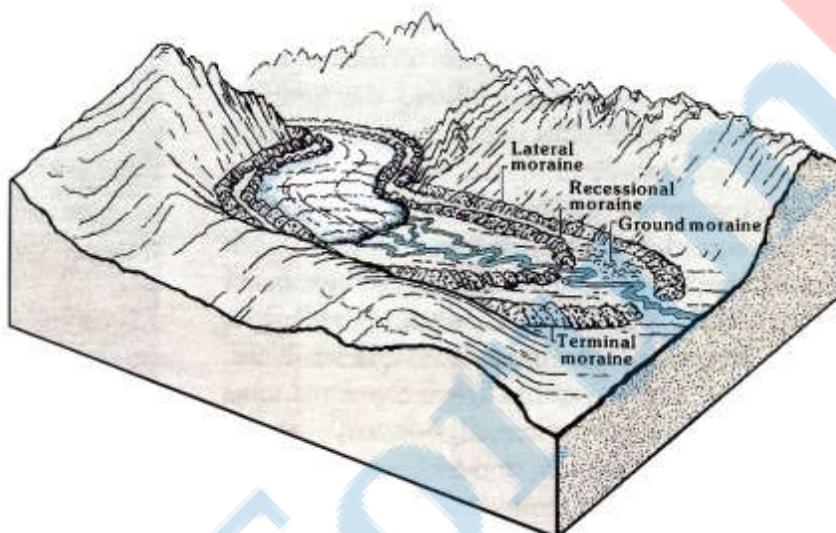
Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) option c is the correct answer.

Statement 1 is correct: Moraines are glacial landforms formed by the deposition of glacial sediments that accumulate along the edges and at the terminus of a glacier. Moraines are typically composed of **unsorted glacial debris including rocks, boulders, gravel, sand, and clay**. These landforms are important indicators of past glacial activity and can be used to reconstruct the history of a glacier, including its size, shape, direction of movement, and the timing of its advance and retreat.



Statement 2 is correct: By studying the characteristics of moraines, scientists **can reconstruct the history of a glacier, including its size, shape, direction of movement**, and the timing of its advance and retreat. **For example**, the location of a terminal moraine can provide an estimate of the maximum extent of the glacier during its last advance, while the size and shape of lateral moraines can provide information about the width and direction of the glacier's movement.

Source: GC leong

Q.34) Which of the following statements are the correct reason for Narmada and Tapi rivers not forming deltas?

1. Both rivers follow a very steep gradient
2. Both rivers have strong flow of water.
3. Both rivers flow through rocky topography.
4. Both rivers have large numbers of tributaries.

Select the correct answer using the code given below.

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) option a is the correct answer.

Option 1, 2 and 3 are correct. The Narmada and Tapi rivers do not form deltas due to the **steep gradient** and **strong flow** of the rivers, which prevents sediment accumulation at their mouths, and the **rocky and uneven topography of the region**. Further they meet the Arabian Sea, where rivers create estuaries.

Option 4 is incorrect: This option is incorrect as large number of tributaries **increases the volume of water** which helps eroding and formation of sediments. This eventually is helpful in the formation of the delta.

Source: NCERT & G C LEONG

Q.35) Which of the following are the features of the Bharat Gaurav Scheme?

1. An operator can take trains on lease from Indian railways to run on a theme-based circuit.
2. Indian railways will get fixed 30% of the generated revenue in a financial year.
3. Mandatory insurance of the tourists shall be the liability of the service provider and not the Indian railways.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Bharat Gaurav policy, launched in 2021, allows private players to operate trains on theme-based circuits.

Option 1 is correct: According to the Bharat Gaurav policy, **any operator or service provider, or virtually anyone, can lease trains from Indian Railways** to run on a theme-based circuit as a special tourism package. The operator has the **freedom to decide the route, the halts, the services provided**, and, most importantly, the tariff.

Option 2 is incorrect: Under the Bharat Gaurav scheme, the **Railways will get revenue in the form of right to use charges for the rakes; haulage charges; empty haulage charges and stabling charges. There are not any provisions for fix 30% revenue.**

Option 3 is correct: Mandatory insurance of the tourists shall be the **liability of the service provider and the Railways shall bear no liability** in this regard. All liability arising out of accident/untoward incident will be borne by the Indian Railways based on Accident Inquiry Report.

Knowledge Base:

Other features of the Bharat Gaurav Scheme:

- 1) The tenure of the arrangement is a **minimum of two years** and maximum of the codal life of the coach.
- 2) The Bharat Gaurav operator will also have to propose a similar business model wherein it takes care of **local transport, sightseeing, food, local stays**, etc. along with operating the trains.

- 3) The operator has to, however, take care of end-to-end, comprehensive service like hotel stay, local arrangements, etc. These trains **cannot be used as ordinary transport trains** between an origin and destination.
- 4) Indian **railways will provide staff** to drive the trains, guards and also maintenance staff on board for the coaches. Other staff, like housekeeping and catering, etc, will be deployed by the operator.

Source: <https://indianexpress.com/article/explained/explained-bharat-gaurav-train-indian-railways-7973371/>

<https://www.thehindubusinessline.com/blexplainer/why-indian-railways-bharat-gaurav-scheme-is-significant/article65548423.ece>

Q.36) Xerophytes are predominantly and most likely to be found in which of the following climate types?

- Tropical rainforest
- Temperate oceanic climate
- Continental climate
- Dry desert Climate

Ans) d

Exp) Option d is the correct answer.

Xerophytes are a group of plants that have **evolved adaptations to survive in deserts where dry or arid environments exist with little available water**. They are able to thrive in these harsh conditions due to a variety of physical and physiological adaptations, **such as water-storing stems, deep roots to access underground water sources, and specialized leaf structures** that reduce water loss through transpiration. Xerophytes are most likely to be found in desert environments, where rainfall is low and temperatures can be extreme. Examples of **desert xerophytes include cacti, agaves, and yuccas**. Some xerophytes also live in other types of dry environments, such as grasslands or rocky outcrops. The reason xerophytes are predominant in these environments is due to their adaptations to cope with the lack of water.

Source: <https://ncert.nic.in/ncerts/l/lebo114.pdf>

<https://ncert.nic.in/pdf/publication/sciencelaboratorymanuals/classXII/biology/lelm212.pdf>

Q.37) Consider the following statements:

- The rate of decrease of temperature of oceans with depths is lower at the equator than at the poles.
- The winds blowing from the land towards the ocean helps in upwelling of cold water at coast.
- The enclosed seas in the high latitudes record relatively higher temperatures than the open seas.

Which of the statements given below is/are correct?

- 1 and 2 only
- 2 only
- 1 and 3 only
- 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. The rate of decrease of temperature with depths **is greater at the equator** than at the poles. **Though the surface temperature of the seas decreases from equator towards the poles but the temperature at the ocean bottoms is uniform from the equator towards the pole, which means that the rate of decrease of temperature with increasing depth is more rapid near the equator than towards the poles.**

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Statement 2 is correct. The winds blowing from the land towards the oceans drive warm surface water away from the coast resulting in the upwelling of cold water from below.

Statement 3 is incorrect. The enclosed seas in the low latitudes record relatively higher temperatures than the open seas. Whereas the enclosed seas in the high latitudes have lower temperatures than the open seas.

Source: <https://ncert.nic.in/ncerts/l/kegy213.pdf>

Q.38) Consider the following pairs:

Karst Landform	Description
1. Sinkhole	Topographic depression formed due to dissolution of underlying limestone.
2. Stalactites	An upward-growing mound of mineral deposits precipitated from water dripping onto the floor of a cave.
3. Polje	Numerous needle-shaped dripstones hanging from the cave ceiling.

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- All the three pairs
- None of the pairs

Ans) a

Exp) Option a is the correct answer.

Karst is a type of topography that features landforms produced by the dissolution of soluble rocks like limestone, gypsum, and dolomite.

Pair 1 is correct: Sinkhole, also called sink or doline is a topographic depression formed when underlying limestone bedrock is dissolved by groundwater. It is considered the most-fundamental structure of karst topography. Sinkholes vary greatly in area and depth and may be very large. There are two main varieties, one caused by the collapse of the roof of a cavern, the other by the gradual dissolving of rock under a soil mantle.

Pair 2 is incorrect: A stalactite is an icicle-shaped formation that hangs from the ceiling of a cave and is produced by precipitation of minerals from water dripping through the cave ceiling. Most stalactites have pointed tips. **A stalagmite is an upward-growing mound of mineral deposits that have precipitated from water dripping onto the floor of a cave. Most stalagmites have rounded or flattened tips.**

Pair 3 is incorrect: Polje is an elongated basin having a flat floor and steep walls. It is formed by the coalescence of several sinkholes. The basins often cover 250 square km (about 100 square miles) and may expose “disappearing streams.” Numerous needle-shaped dripstones hanging from the cave ceiling are called Drapes or Curtains.

Source: <https://www.worldatlas.com/articles/the-different-types-of-karst-landforms.html>

<https://education.nationalgeographic.org/resource/karst/>

<https://www.britannica.com/science/polje>

<https://oceanexplorer.noaa.gov/facts/stalactite.html>

Q.39) The Subsidence Theory and the Glacial Control Theory are related to:

- Formation of mantle plume
- Formation of coral reefs and atolls
- Chronological sequencing of fossils
- Direction of Gyre circulations

Ans) b

Exp) Option b is the correct answer.

Subsidence theory and Glacial control theory are related to the formation of coral reefs and atolls. The subsidence theory was postulated by Charles Darwin in 1837 and modified in 1842. According to this theory, **fringing reefs, barrier reefs, and atolls are successive stages of coral reef development** due to the **gradual subsidence of land**. Glacial control theory was proposed by Reginald Aldworth Daly. According to this theory, fluctuations of sea level during the building up and melting down of glaciers during the Pleistocene Epoch played a **major role in allowing coral to slowly build up structures**.

Source : <https://www.britannica.com/science/glacial-control-theory>

<https://www.britannica.com/science/Darwinian-subsidence-theory>

Q.40) Consider the following statements regarding the report ‘Poverty and Shared Prosperity 2022’:

- The report was released by the International Monetary Fund (IMF).
- The report stated that the world is on track to end extreme poverty by 2030.
- The data on India was based on studies conducted by private organisation ‘Centre for Monitoring Indian Economy’.

Which of the statements given above is/are correct?

- 3 only
- 2 and 3 only
- 2 only
- 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

The latest Poverty and Shared Prosperity report offers the first comprehensive look at the global landscape of poverty in the aftermath of COVID-19 and the war in Ukraine. It outlines the limits of current fiscal policies for poverty reduction in low and lower-middle income economies, and points to the importance of reviving economic growth. It also shows the potential of fiscal policy reforms to help reduce poverty and support broad-based growth and development.

Statements 1 and 2 are incorrect: The World Bank has released the report ‘Poverty and Shared Prosperity 2022: Correcting Course’. By 2015, the global extreme-poverty rate had been cut by more than half. Since then, poverty reduction has slowed in tandem with subdued global economic growth. The economic upheavals brought on by COVID-19 and later the war in Ukraine produced an outright reversal in progress. **It became clear that the global goal of ending extreme poverty by 2030 would not be achieved.** In 2020 alone, the number of people living below the extreme poverty line rose by over 70 mn. That is the largest one-year increase since global poverty monitoring began in 1990.

Statements 3 is correct: The World Bank report publishes global and regional estimates based on new data for India available for 2015–19. The source of the data is the Consumer Pyramids Household Survey (CPHS), conducted by the Centre for Monitoring Indian Economy, a private data company. India has not published official survey data on poverty since 2011. According to CPHS data for 2020, 5.6 crore Indians slipped into poverty in 2020.

Source: <https://openknowledge.worldbank.org/bitstream/handle/10986/37739/9781464818936ov.pdf>

Q.41) Consider the following statements regarding the Tropical Marine Climate:

1. It is experienced only along the western coast of tropical lands.
2. The rainfall here is both orographic as well as convectional.
3. It usually experiences rainfall every month of the year.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) option c is the correct answer.

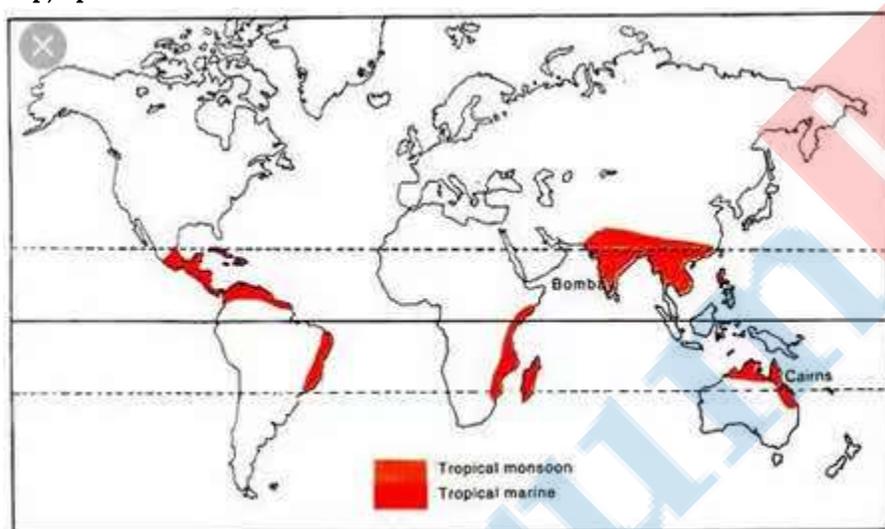


Fig. 124 The tropical monsoon and marine regions

Statement 1 is incorrect: This type of climate is experienced **along the eastern coasts of tropical lands**, receiving steady rainfall from the Trade Winds all through the year.

Statement 2 is correct: The rainfall is **both orographic** where the moist trades meet upland masses as in eastern Brazil, **and convectional** due to intense heating during the day and in summer.

Statement 3 is correct: Rainfall tendency is towards a summer maximum as in monsoon lands, but without any distinct dry period. Approximately 70 percent of the annual rainfall is concentrated in the summer months. There is **no month without any rainfall**.

Source: G C Leong chapter 16

Q.42) Which of the following options is the correct description of the geographical feature named 'Playas'?

- a) These are depressions formed due to the impact of extra-terrestrial objects.
- b) These are depressions occur in the limestone regions where the bedrock contains water-soluble materials like gypsum.
- c) These are flat-bottomed depressions found in interior desert basins.
- d) These are glacial depressions filled with water from melted glacier.

Ans) c

Exp) Option c is the correct answer.

Lakes are large waterbodies that are surrounded by land and generally occupy inland basins. Usually, they have standing water unless any river or other outlet serves to feed or drain them. Lakes are usually bigger than ponds, and distinct from lagoons by the fact that lagoons are connected to oceans, while lakes are not.

Option a is incorrect: Meteorite Lakes are formed in craters on the earth's surface due to the impact of extraterrestrial objects like asteroids or meteorites. Over time, water accumulates in these craters, and lakes appear. So, they are often referred to as extraterrestrial impact lakes or crater lakes. Sediments obtained from the bottom of these lakes often carry useful information on extraterrestrial or cosmic objects. **Examples: Lonar Lake in India.**

Option b is incorrect: Solution lakes occur in the basins where the bedrock contains water-soluble materials like limestone, gypsum, and dolomite. The bedrocks are dissolved by rainfall and percolation of water, thus producing cavities that are eventually filled by rainfall, giving birth to a solution lake.

Examples: Dalmatian coast of Croatia and Florida.

Option c is correct: Playa, also called dry lake, are **flat-bottom depressions found in interior desert basins** and adjacent to coasts within arid and semiarid regions. They are periodically covered by water that slowly filtrates into the ground water system or evaporates into the atmosphere. It causes the deposition of salt, sand, and mud along the bottom and around the edges of the depression. It is a dry, vegetation-free, flat area at the lowest part of an undrained desert basin. It is a location where ephemeral lakes form during wet periods, and is underlain by stratified clay, silt, and sand, and commonly, soluble salts. **Example:** Lake Eyre in Australia, Lake Chad in central Africa, **Sambhar Lake in India.**

Option d is incorrect: Glacial lakes are formed from a melted glacier. As glaciers flow down, the erosive action of the glaciers often creates natural depressions in the bedrock below the glaciers. Once the ice in these depressions' melts, glacial lakes are created. Glacial lakes are quite common and most of North America's and Europe's lakes have a glacial origin. The Great Lakes of North America and **South Lhonak Lake, Roop Kund and Kedartaal in India.**

Source: <https://pubs.usgs.gov/of/2004/1007/playas.html>

<https://www.britannica.com/science/playa>

<https://www.worldatlas.com/articles/how-many-types-of-lakes-are-there-on-the-basis-of-origin.html>

Q.43) With reference to the Ekman Spiral, consider the following statements:

1. It is the result of Coriolis force on the movement of surface water.
2. In Ekman spiral, each deeper layer moves more slowly than the layer above it.
3. Due to Ekman spiral, net waterflow in oceans is at 90 degrees of the wind direction.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

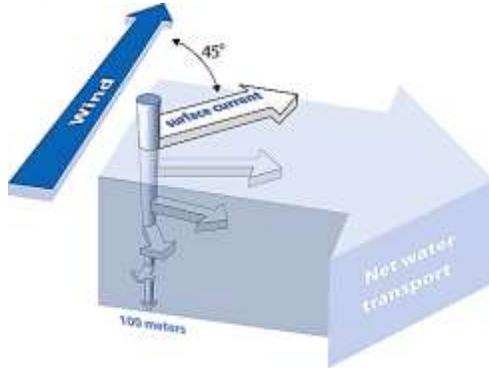
Ans) d

Exp) option d is the correct answer.

Statement 1 is correct. Ekman Spiral is the result of **Coriolis force on the movement of surface water**. The wind-stress moves the uppermost layer of water. This layer, in turn, drags the layer below it. Each deeper layer moves more slowly than the layer above it until the movement ceases at a depth of about 100 meters.

Statement 2 is correct. In Ekman spiral each layer of water molecules is moved by friction from the shallower layer, and **each deeper layer moves more slowly than the layer above it**, until the movement ceases at a depth of about 100 meters (330 feet).

Statement 3 is correct. All layers of water are deflected by Coriolis force to the right in the Northern Hemisphere and to the left in the Southern Hemisphere. As a result, each successive layer moves 45 deg. to the direction of drag force being applied. This creates a **twisting effect** creating the spiral. The spiral is known as **Ekman Spiral**. The average movement of oceanic water (of all the layers) comes out to be **90 degrees** to the direction of the surface wind.



Source: https://oceanservice.noaa.gov/education/tutorial_currents/media/supp_cur04e.html

Q.44) Consider the following statements regarding the impact of Downwelling of Ocean Currents:

1. Regions of downwelling generally have low biological productivity.
2. Ekman transport plays an important role in the downwelling of ocean currents.
3. Due to downwelling, hydrogen sulfide is produced at the bottom of ocean in huge quantity.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

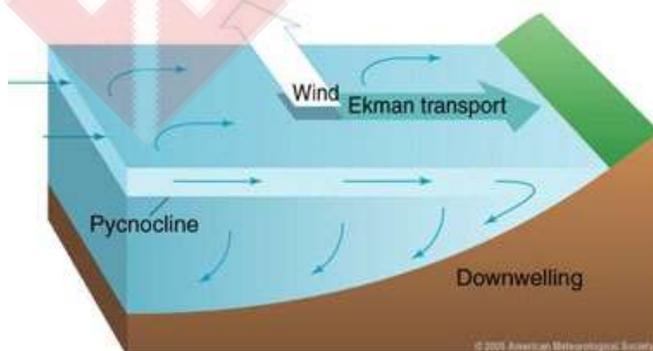
Ans) a

Exp) option a is the correct answer.

Downwelling is where surface water is forced downwards, where it may deliver oxygen to deeper water.

Statement 1 is correct: Regions of downwelling have **low productivity** because the nutrients get used up and are not continuously resupplied by the cold, nutrient-rich water from below the surface. Downwelling reduces biological productivity and transports heat, dissolved materials, and surface waters rich in dissolved oxygen to greater depths.

Statement 2 is correct: Ekman transport **helps in both upwelling and downwelling of water** in oceans. Where Ekman transport moves surface waters toward the coast, the water piles up and sinks in the process known as coastal downwelling. This example is from the Northern Hemisphere.



Statement 3 is incorrect: This is **not the impact of Downwelling** but rather what would happen if there were no Downwelling. A downwelling takes oxygen-rich surface water and flushes it through the deep sea. Without this renewal, the dissolved oxygen in bottom sediments and waters would quickly be used up by the decay of organic matter. **Anaerobic bacteria** would take over decomposition, **leading to a buildup of hydrogen sulfide**. Only a few benthic animals would survive such toxic conditions.

Source: https://oceanexplorer.noaa.gov/edu/learning/8_ocean_currents/activities/currents.html
<http://oceanmotion.org/html/background/upwelling-and-downwelling.htm>

Q.45) The term 'Doom Loop' was recently seen in the news. Which of the following statements is **incorrect** regarding 'Doom Loop'?

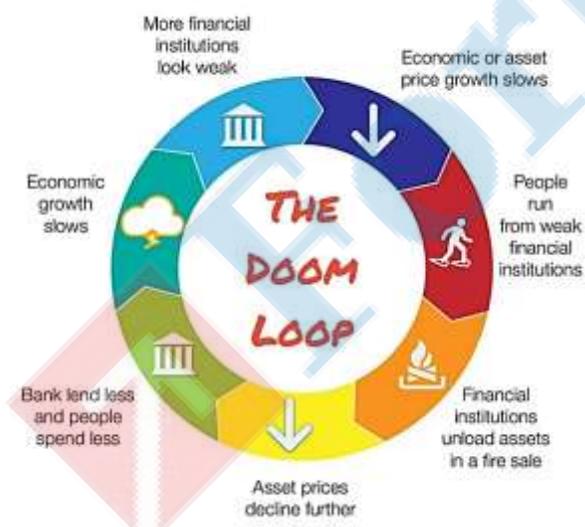
- Doom Loop is a vicious cycle in which an economic vulnerability spirals down and becomes self-reinforcing.
- The excessive government debt can never lead to an economic doom loop.
- The Doom loop can be activated by external forces such as a slowdown in global economic activity.
- Intervention in the form of a bailout is usually needed to break an economic doom loop.

Ans) b

Exp) Option b is the correct answer.

Option a, c and d are correct: Doom loop is the circle of vulnerability where a country's banking system can be severely hurt by volatility in the economy. A country is at risk of a doom loop when a shock to one part of its economic system is amplified by its effect on another. **It is a vicious cycle in which a vulnerability spirals down and becomes self-reinforcing. The Doom loop can also be activated by external forces such as a slowdown in global economic activity. Intervention in the form of a bailout is usually needed to break a doom loop.**

Option b is incorrect: Excess government debt can trigger an economic doom loop, as happened in Greece in 2010.



Source: <https://www.investopedia.com/doom-loop-6748009#:~:text=A%20doom%20loop%20describes%20a,downward%20trend%20becomes%20self%20reinforcing.>

Q.46) Which of the following is/are Tropical Grasslands found around the world?

1. Llanos
2. Campos
3. Pustaz
4. Pampas
5. Prairies

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 1, 2, 3 and 5 only
- c) 1, 2 and 4 only
- d) 2 and 4 only

Ans) a

Exp) option a is the correct answer.

Tropical grasslands include the hot savannas of sub-Saharan Africa and northern Australia. Rainfall can vary across grasslands from season to season and year to year, ranging from 10 to 40 inches annually.

The Savanna or Sudan Climate or Tropical Grasslands is a transitional type of climate found between the equatorial forests and the trade wind hot deserts.



Option 1 and 2 are correct: Llanos and Campos are tropical grasslands. In South America, there are two distinct regions of savanna north and south of the equator, namely the *llanos* of the Orinoco basin and the *campos* of the Brazilian Highlands.

Option 3 is incorrect: Pustaz is a temperate grassland biome of the Great Hungarian Plain. The Pustaz landscape is composed of treeless plains, saline steppes and salt lakes, and includes scattered sand dunes, low, wet forests and freshwater marshes along the floodplains of the ancient rivers.

Option 4 and 5 are incorrect: The South American pampas and prairies of North America are example of temperate grasslands (not tropical grassland).

Source: GC Leong

Q.47) Consider the following statements with reference to the effects of ocean currents:

1. Cold Ocean currents result in desert formation in west coast regions of the tropical continents.
2. North Atlantic Drift keeps the coasts of the North Sea warm.
3. The mixing of warm and cold currents favors the growth of plankton.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Ocean currents have a number of direct and indirect influences on human activities -

- 1) West coasts of the continents in tropical and subtropical latitudes are bordered by cool waters. **Cold ocean currents have a direct effect on desert formation in west coast regions of the tropical and subtropical continents.**
- 2) Warm ocean currents bring rain to coastal areas and even interiors. Example: The **North Atlantic Drift keeps the coasts of the North Sea warm** which is unusual for such high latitudes.
- 3) Warm currents flow parallel to the east coasts of the continents in tropical and subtropical latitudes. This results in warm and rainy climates. These areas lie in the western margins of the subtropical anti-cyclones.
- 4) They are responsible for moderate temperatures at coasts. Ex: **Canary cold current brings cooling effect to Spain, Portugal etc.**
- 5) The mixing of warm and cold currents helps to **replenish the oxygen and favour the growth of planktons**, the primary food for fish population.

Source: Geography, NCERT XI, Chapter-14, Pg. 120

Q.48) With reference to Estuaries, consider the following statements:

1. Estuaries are among the lowest productive zones in the world and are the least populated.
2. Estuaries are the ecotone zones where the freshwater mixes with the salt water.

Which of the above-mentioned statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

An Estuary is a semi enclosed coastal body of water with one or more rivers or streams flowing into it. Features of estuaries are:

Statement 1 is incorrect - Estuarine environments are among the most productive on earth, creating more organic matter each year than comparably sized areas of forest, grassland or agricultural land. The sheltered waters of estuaries also support unique communities of plants and animals specially adapted for life at the margin of the sea. Thousands of species of birds, mammals, fish and other wildlife depend on estuarine habitats as places to live, feed and reproduce. And many marine organisms, including most commercially important species of fish, depend on estuaries at some point during their development.

Statement 2 is correct - An estuary is a partially enclosed body of water along the coast where freshwater from rivers and streams meets and mixes with salt water from the ocean. It is an ecotone zone between river environments and maritime environments. Estuaries and the lands surrounding them are places of transition from land to sea and freshwater to salt water.

Source: NCERT – Class XI – Oceans

Q.49) This type of vegetation features short grasses with very few trees. It has hot summers and cold winters and is found in parts of Eurasia. The type of vegetation refers to-

- a) Tropical Savannah
- b) Cold Dessert
- c) Boreal forest
- d) Temperate Steppe

Ans) d

Exp) Option d is the correct answer.

Temperate Steppe Grassland are found in the parts of Eurasia and North America. It experiences hot summers and cold winters with the rainfall of 500-900 mm. It has thin flocculated soil, rich in bases. With respect to flora and fauna, it has **grasses and occasional trees** such as cottonwoods, oaks and willows; gazelles, zebras, rhinoceros, wild horses, lions, varieties of birds, worms, snakes etc., are common animals.



Temperate Steppe

Option a is incorrect. The **Tropical Savannahs** are practically treeless and the grasses are taller as compared to temperate steppe. Large regions of tropical savanna extend through the nations of Botswana, Namibia, and Kenya in Africa, southern Brazil, India, and Australia.

Option b is incorrect. In **cold dessert**, few plants survive. The greatest inhibiting factor is the region's deficiency in heat. There are no trees in the tundra. Such an environment can support only the lowest form of vegetation, mosses, lichens and sedges.

Option c is incorrect. The **taiga**, which is also known as the boreal forest region, occupies about 17 percent of Earth's land surface area in a circumpolar belt of the far Northern Hemisphere. The taiga is characterized predominantly by a limited number of conifer species of pine. Plants and animals in the taiga are adapted to short growing seasons of long days that vary from cool to warm.

Source: NCERT 11th Chapter 15 Life on Earth

Q.50) Consider the following statements with respect to the Sovereign Gold Bond Scheme:

1. The gold bonds can be sold only through small finance banks and Payment Banks.
2. The bonds cannot be issued to trusts or charitable institutions.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Sovereign Gold Bonds (SGBs) are government securities denominated in grams of gold. They are substitutes for holding physical gold. Investors have to pay the issue price in cash and the bonds will be redeemed in cash on maturity.

Statement 1 is incorrect: The Sovereign Gold Bonds (SGBs) will be sold through **Scheduled Commercial banks (except Small Finance Banks and Payment Banks)**, Stock Holding Corporation of India Limited (SHCIL), Clearing Corporation of India Limited (CCIL), **designated post offices, and recognised stock exchanges** viz., National Stock Exchange of India Limited and Bombay Stock Exchange Limited.

Statement 2 is incorrect: The SGBs can be issued/sold to **resident individuals, HUFs, Trusts, Universities and Charitable Institutions.**

Knowledge Base:

Sovereign Gold Bond Scheme 2022-23

- 1) To be **issued by Reserve Bank** of India on behalf of the Government of India.
- 2) The SGBs will be denominated in multiples of gram(s) of gold with a **basic unit of one gram.**
- 3) The tenor of the SGB will be for a **period of eight years** with an option of **premature redemption after 5th year** to be exercised on the date on which interest is payable.
- 4) Minimum permissible investment will be **One gram** of gold.
- 5) The **maximum limit** of subscription shall be **4 KG for individual**, 4 Kg for HUF and **20 Kg for trusts** and similar entities per fiscal year (April-March) notified by the Government from time to time.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1834549>

<https://www.rbi.org.in/Scripts/FAQView.aspx?Id=109>

Q.1) Consider the following statements with reference to the ‘Atlantic Meridional Overturning Circulation (AMOC)’:

1. It is the movement of ocean water driven by differences in densities.
2. It carries warm surface waters from the tropics to northward in the Atlantic Ocean.
3. The melting of ice shelves in the Arctic has caused the AMOC to strengthen.
4. The weakening of the AMOC can result in droughts across Europe.

Which of the statements given above are correct?

- a) 1, 2, and 3 only
- b) 1, 2, and 4 only
- c) 2 and 4 only
- d) 1, 3, and 4 only

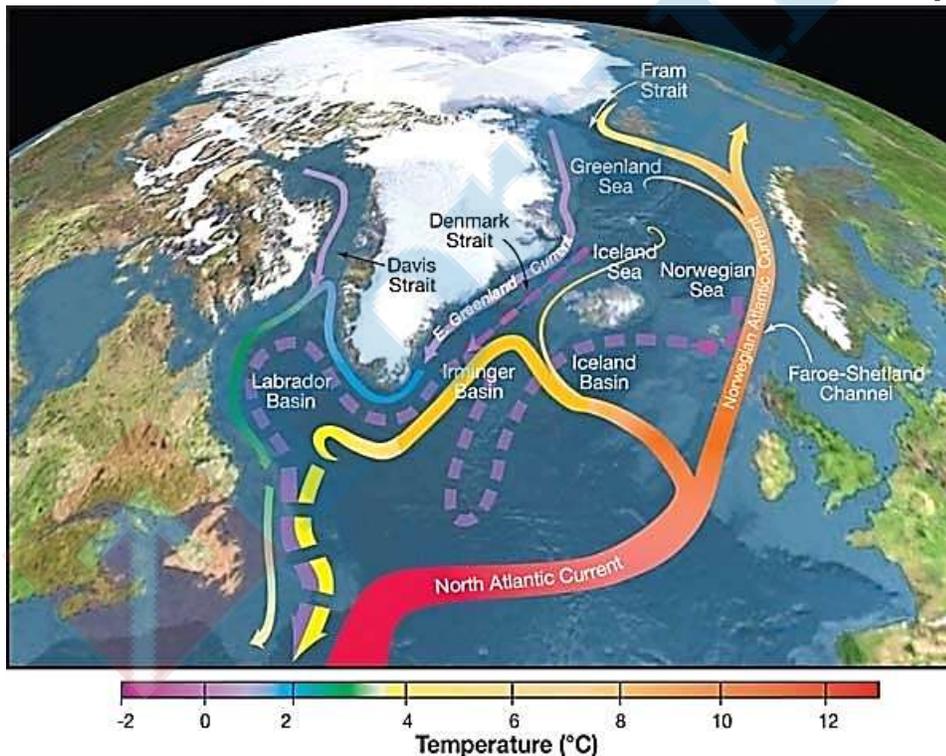
Ans) b

Exp) Option b is the correct answer.

Atlantic Meridional Overturning Circulation (AMOC) is a part of the global ocean conveyor belt (THC) that works to distribute nutrients and heat all over the globe.

Statement 1 is correct: Atlantic Meridional Overturning Circulation (AMOC) is a Thermo-Haline circulation (THC) -i.e., **movement of ocean water driven by differences in densities due to salinity and temperature**, in the Atlantic Ocean.

Statement 2 is correct: AMOC carries **warm surface waters from the tropics northwards in Atlantic Ocean**, where it cools and sinks. It then returns to the tropics and then to the South Atlantic as a bottom current. From there it is distributed to all ocean basins via the Antarctic circumpolar current.



Statement 3 is incorrect: IPCC's Assessment Report 6 (AR6) as well as recent papers in Nature Climate Change, indicate that **due to anthropogenic climate change, the AMOC is slowing down** to unprecedented levels in a millennium. Global warming is causing **melting** of even the deepest and most untouched **ice shelves in the Arctic** from an area called “The Last Ice Area”. The freshwater from the melting ice **reduces**

the salinity and density of the water. Now, the water is unable to sink as it used to, and **this weakens the AMOC flow.**

Statement 4 is correct: The **weakening** of the Atlantic Meridional Overturning Circulation (AMOC) could result in more storms in the UK, more **intense winters and an increase in damaging heatwaves and droughts across Europe.**

Source: <https://www.theguardian.com/environment/2021/feb/25/atlantic-ocean-circulation-at-weakest-in-a-millennium-say-scientists>

<https://www.the-scientist.com/news-opinion/atlantic-circulation-weakest-in-more-than-a-millennium-study-68497>

<https://indianexpress.com/article/explained/explained-atlantic-ocean-current-system-slowng-implications-7445388/>

Q.2) Consider the following statements regarding the Ionosphere, present in the atmosphere:

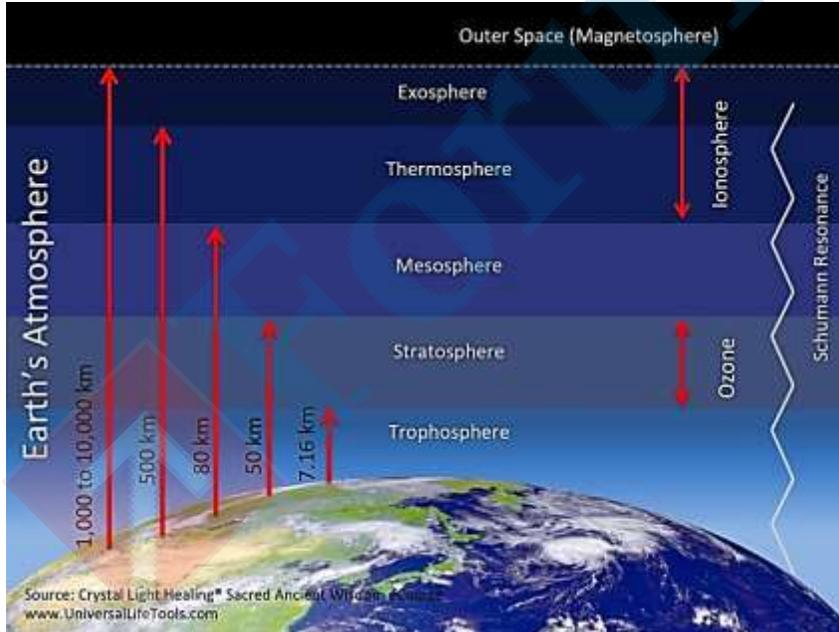
1. Many of the low-Earth orbiting satellites are located in the ionosphere.
2. In this layer, the temperature starts decreasing with increasing height.
3. Radio waves transmitted from the Earth are reflected back to the Earth by this layer of atmosphere.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct option.



Statement 1 is correct. The ionosphere is home to many low-Earth orbiting satellites, including the International Space Station. It also acts as a conduit for many of our communications signals, such as radio waves and the signals that make GPS systems work. Particles in the ionosphere carry electrical charges that can disrupt communications signals, induce electrical charge in low-Earth orbiting satellites, and, in extreme cases, spark power outages on the ground. Unpredicted changes in the ionosphere, such as ripples and bubbles of dense plasma, can have significant impacts on our technology and communication systems.

Statement 2 is incorrect. In the ionosphere, **temperature starts increasing with the increasing height.** The radiation from the sun is so powerful that it ionizes, or breaks electrons free from different atoms present in the atmosphere **Ionization processes release energy which heat up the upper atmosphere.** So temperature increases with height in the ionosphere region to the extent that by 150-200km, the Earth's atmosphere is extremely hot compared to surface temperatures Hence this statement is incorrect.

Statement 3 is correct. Due to the ability of ionized atmospheric gases to refract high frequency, the ionosphere can reflect and modify radio waves directed into the sky, back towards the earth which helps in communication and navigation for long distances.

Source: NCERT- Class 11th- Chapter 8th. (Page-No. 77)

Q.3) With reference to ocean currents, consider the following statements:

1. They help in the distribution of solar radiation across the Earth.
2. They can lead to the formation of fog and storms in certain regions.
3. Some of the ocean currents help in the formation of deserts.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct. Ocean currents are the in-charge of transporting heat from the Equator to the poles. As a result, it contributes to climate balance. Currents in the ocean serve as a conveyor belt. Warm water flows from the equator to the poles, whereas cold water flows from the poles to the tropics. It also aids in the distribution of solar radiation across the Earth's surface. Regional temperatures would be more extreme without ocean currents, with the equator becoming extremely hot and the poles becoming extremely cold.

Statement 2 is correct. Fog and storms are noticed at the junction of the warm and cold ocean currents due to the variety of warm and cool ocean currents as well as a change in temperature in a limited space. New Falkland and Japan are practically foggy all the time because of these factors. A violent storm can occur when warm and cold currents meet. Hurricanes that strike the United States' coast follow the line where the Gulf Stream meets the Labrador Current.

Statement 3 is correct.: Cold Ocean currents have a direct effect on desert formation in west coast regions of the tropical and subtropical continents. There is fog and most of the areas are arid due to desiccating effects (loss of moisture).

Source: NCERT- Class 11th - Chapter 13th - Page No- 115-117

Q.4) Consider the following statements:

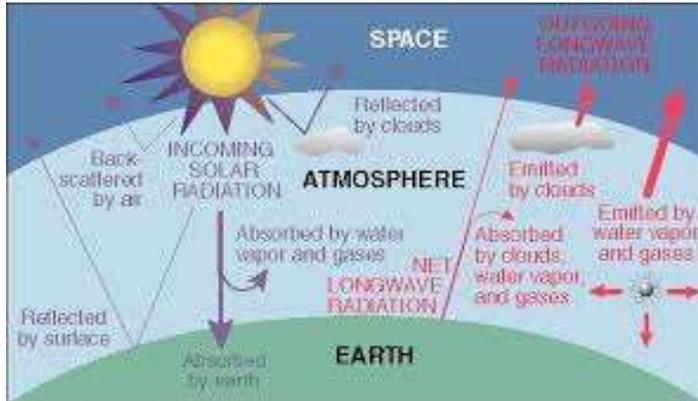
1. Earth absorbs only the long-wave radiation coming from the Sun.
2. Out of total radiation coming to Earth from the sun, more than 50% is reflected back to space by clouds.

Which of the statements given above is/are **incorrect**?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) option c is the correct answer.



Statement 1 is incorrect. Solar energy enters our atmosphere as shortwave radiation in the form of ultraviolet UV rays and visible light. Earth's surface absorbs this short-wave radiation and re-emits the energy as long-wave radiation in the form of infrared rays.

Statement 2 is incorrect. It is estimated that of the total radiation coming to us, 35% is directly reflected to space by dust, clouds and air molecules. Another 14% is absorbed by water vapor, carbon dioxide and other gases. The remaining 51% reaches the earth and warms the surface.

Although the Earth maintains a balance between insolation and terrestrial radiation, we do not see this at all latitudes. The amount of insolation in the tropical zone is greater than the amount of terrestrial radiation.

Source: G.C. Leong – Chapter- 14th (Page No- 105-106)

Q.5) Consider the following statements regarding Indian Antarctic Act, 2022:

1. The Act is applicable on a citizen of India as well as citizens of any other country.
2. According to the act, no permit is required to collect samples of mineral resources from the Antarctic for the purposes of scientific research.
3. Commercial fishing in Antarctica is allowed only after obtaining a permit from the appropriate authority.

Which of the statements given above is/ are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 only
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

Recently, Indian Antarctic Act, 2022 has been passed. Its key objectives include having India's **own national measures** for protecting Antarctic environment, ensuring **de-militarization** of the region, getting rid of **mining** or illegal activities, management of growing Antarctic **tourism** and sustainable development of **fisheries**.

Statement 1 is correct: The Indian Antarctic Act, 2022 is applicable on **Indian citizens, citizens of foreign countries** and a **vessel or aircraft** registered in India or outside India. It is also applicable on a company, body corporate, corporation, partnership firm, joint venture, an association of persons or any other **entity incorporated, established or registered as such under any law in force in India**.

Statement 2 is incorrect: In general, drilling, dredging, excavating, collecting samples etc. of mineral resources is **not allowed**. However, **permission can be granted** for these activities for the purposes of

scientific research or construction, repair and maintenance of an Indian station or any other structure. Hence, a permit is required.

Statement 3 is correct. Any person who intends to go to Antarctica for the purpose of **commercial fishing shall apply for a permit** to the appropriate authority.

Other regulated and prohibited activities:

Regulated Activities- 'Permit' is required	Absolute Prohibition
1) Indian expedition to Antarctica	1) Nuclear explosion or disposal of radioactive waste material
2) Indian station in Antarctica	2) Introducing non-sterile soil
3) Permit for vessel and aircraft entering Antarctica	3) Damage, destroy or remove any historic site or monument or any of its part
4) Permit for mineral resource activities	4) Discharge of certain specified products or substances.
5) Permit for introducing non-native animals and plants into Antarctica.	5) Other specified activities
6) Permit for introducing microscopic organisms.	
7) Permit for discharge into sea.	
8) Permit for waste disposal.	
9) Permit to enter protected areas.	
10) Special permit for commercial fishing in Antarctica	
11) Other specified activities	

Knowledge Base:

Other important provisions of the Act:

- 1) **Background:** To give effect to the provisions of **Antarctic Treaty**, the **Protocol on Environment Protection (Madrid Protocol)** to the Antarctic Treaty and to the **Convention on the Conservation of Antarctic Marine Living Resources**. **India acceded to Antarctic Treaty system in 1983.**
- 2) Central Government shall establish a **Committee on Antarctic Governance and Environmental Protection**. This committee shall be chaired by the **Secretary, Ministry of Earth Sciences**.
- 3) This committee shall establish a **waste classification system and waste management plans**.

Important Facts about Antarctica

- 1) It is the southernmost continent, fifth largest in area and contains the geographic South Pole.
- 2) It is mostly uninhabited, except approximately 40 permanent stations established by several countries. **Maitri and Bharti are India's research stations** on the continent.
- 3) Native species of animals include **mites, nematodes, penguins, seals and tardigrades** etc. Vegetation occurs, mostly, in the form of **lichens and moss**.

Source:

https://prsindia.org/files/bills_acts/acts_parliament/2022/The%20Indian%20Antarctic%20Act,%202022.pdf

<https://pib.gov.in/PressReleasePage.aspx?PRID=1847047>

Q.6) Consider the following paragraph:

“When an air parcel remains over a homogenous area for a sufficiently longer time, it acquires the characteristics of the area. The homogenous area can be the vast ocean surface or vast plains. This air parcel has distinctive characteristics in terms of temperature and humidity. It is defined as a large body of air having little horizontal variation in temperature and moisture. The homogenous surfaces, over which it is formed, are called the source regions”.

About which phenomenon the above paragraph is talking about?

- a) Local winds
- b) Jet streams
- c) Fronts
- d) Air Masses

Ans) d

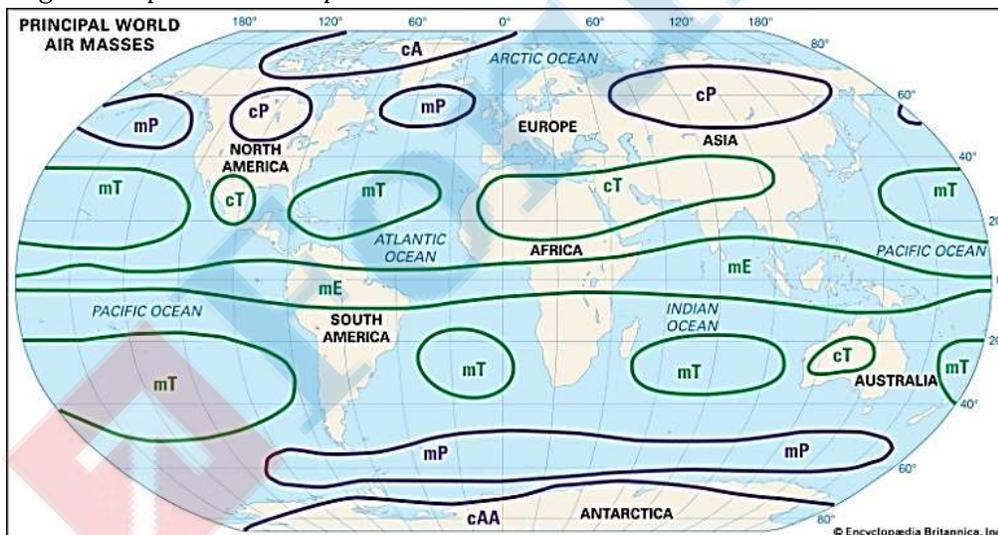
Exp) option d is the correct answer.

Option a is incorrect: Local winds - Local Winds are a natural phenomenon that can be observed in many parts of the world. It is created when air moving over a geographic feature such as a mountain or body of water is forced to rise and then falls. The high-pressure air at the top of the hill (or over the water) causes the air at the bottom to rush out and create local winds.

Option b is incorrect: The Intertropical Convergence Zone- ITCZ is the region that circles the Earth, near the equator, where the trade winds of the Northern and Southern Hemispheres come together. The intense sun and warm water of the equator heats the air in the ITCZ, raising its humidity and making it buoyant.

Option c is incorrect: - A front is a weather system that is the boundary separating two different types of large air bodies. One type of air is usually denser than the other, with different temperatures and different levels of humidity. This clashing of air types causes weather: rain, snow, cold days, hot days, and windy days.

Option d is correct: Air mass is large body of air having nearly uniform conditions of temperature and humidity at any given level of altitude. Such a mass has distinct boundaries and may extend hundreds or thousands of kilometres horizontally and sometimes as high as the top of the troposphere (about 10–18 km [6–11 miles] above the Earth's surface). An air mass forms whenever the atmosphere remains in contact with a large, relatively uniform land or sea surface for a time sufficiently long to acquire the temperature and moisture properties of that surface. The Earth's major air masses originate in polar or subtropical latitudes.



Source: NCERT- Chapter- 10th – (Page-no- 93)

Q.7) Consider the following statements about the Inter-Tropical Convergence Zone (ITCZ):

1. It is formed due to the convergence of trade winds from the southern and northern hemispheres.
2. High incidence of thunderstorms is an important feature of the ITCZ.

Which of the above given statements is/are correct?

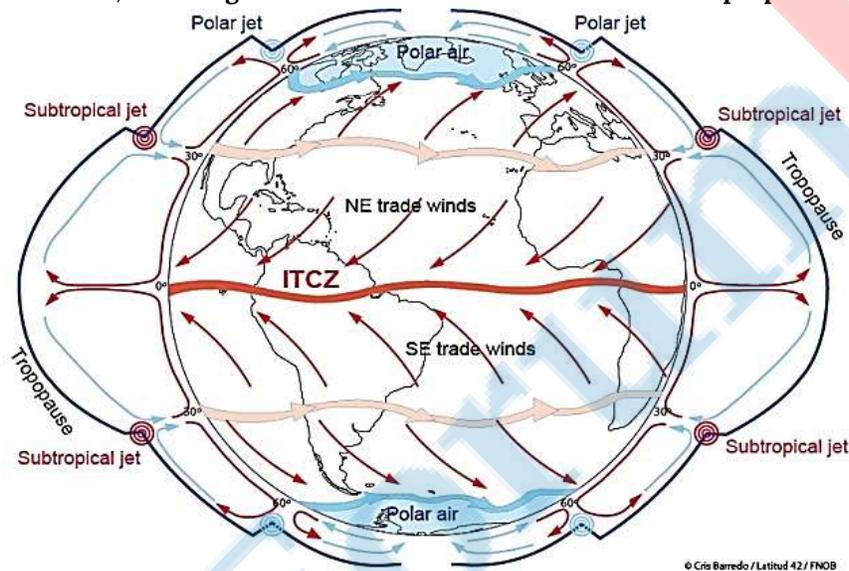
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: ITCZ exists because of the convergence of the trade winds. In the northern hemisphere the northeast trade winds converge with southeast winds from the Southern Hemisphere. The point at which the trade winds converge forces the air up into the atmosphere, forming the ITCZ.

Statement 2 is correct: The Intertropical Convergence Zone, or ITCZ, is the region that circles the Earth, near the equator, where the trade winds of the Northern and Southern Hemispheres come together. The intense sun and warm water of the equator heats the air in the ITCZ, raising its humidity and making it buoyant. Aided by the convergence of the trade winds, the buoyant air rises. **As the air rises it expands and cools, releasing the accumulated moisture in an almost perpetual series of thunderstorms.**



Source: NCERT- class 11th - Chapter 10th - (Page No- 92)

<https://earthobservatory.nasa.gov/images/703/the-intertropical-convergence-zone#:~:text=The%20Intertropical%20Convergence%20Zone%2C%20or,and%20Southern%20Hemisphere%20come%20together.>

Q.8) Consider the following statements about the El Niño:

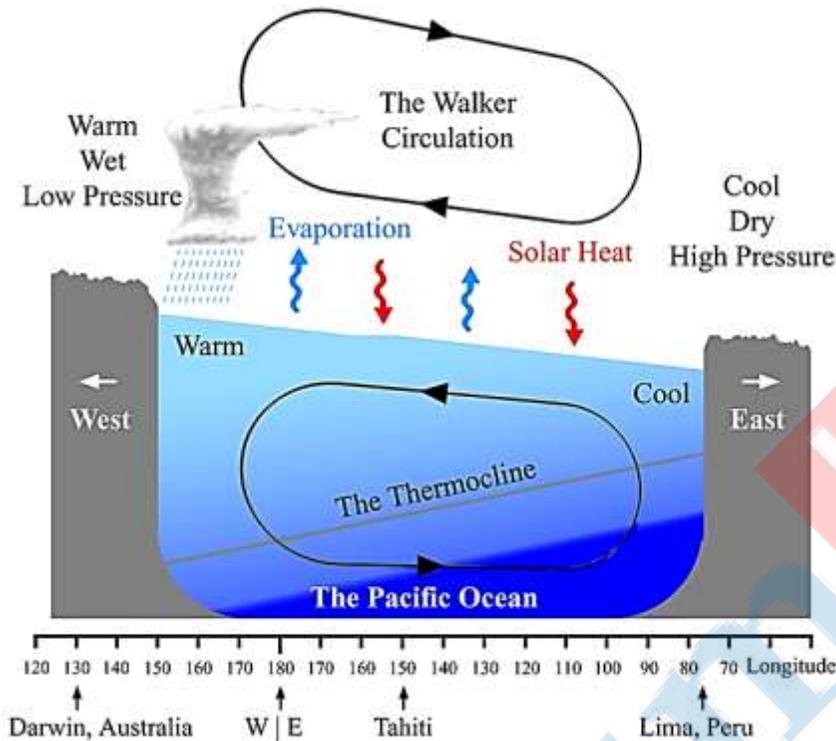
1. Intensity of Walker Circulation diminishes during an El Niño event.
2. Compared to normal circumstances, there will be low pressure near Peruvian coast and high pressure in the Indian Ocean during the El-Niño.
3. An El-Niño event always leads to increased occurrence of hurricanes in the mid-Atlantic Ocean.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 1 only

Ans) c

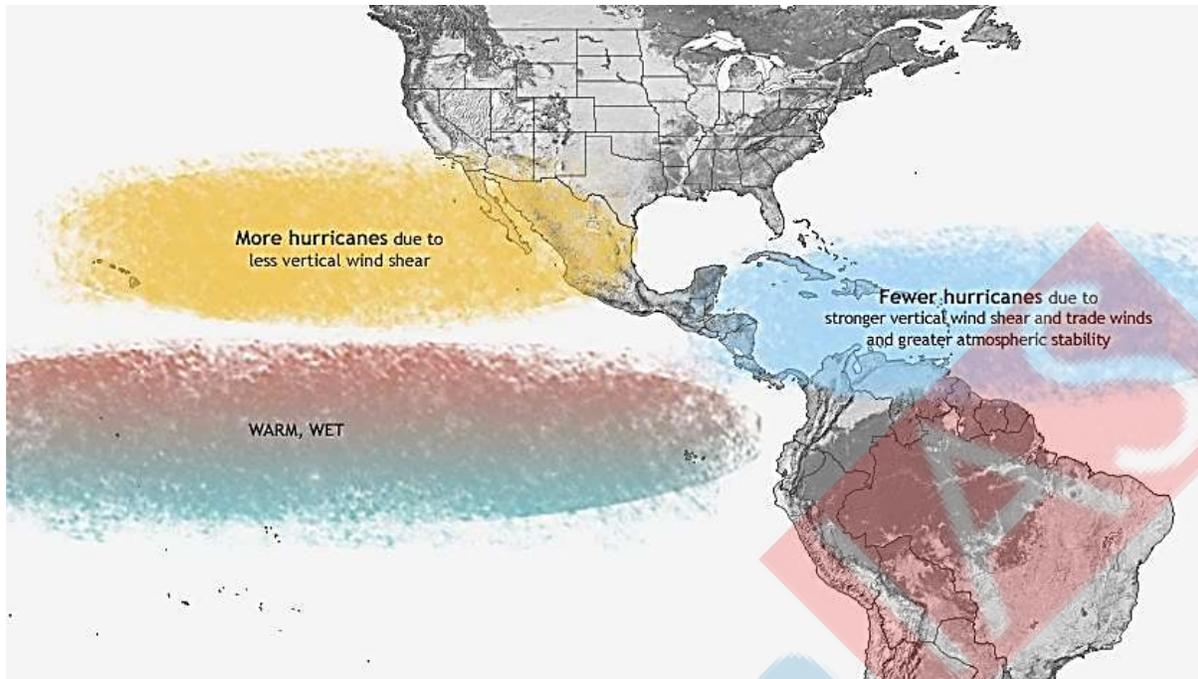
Exp) option c is the correct answer.



Statement 1 is correct. The Walker Circulation is an atmospheric system of air flow in the equatorial Pacific Ocean. **During an El Niño event, the Walker Circulation is greatly diminished. Increased precipitation and abnormally warm water are found in the central Pacific during an El Niño event (or ENSO warm phase).** These changes in weather patterns have a cascading effect on weather patterns in other parts of the world.

Statement 2 is correct. In normal times, when the tropical south Pacific Ocean (especially near Peru and Chile) experiences high pressure, alternatively the tropical Indian ocean experiences low pressure conditions. However, these pressure conditions are sometimes reversed which results in low pressure in the Pacific and alternatively high pressure in the Indian ocean. This is the periodic change in pressure conditions which is referred to as the Southern Oscillation.

Statement 3 is incorrect. In the Atlantic, **El Niño typically leads to fewer hurricanes.** This is largely due to increased vertical wind shear and more stability in the atmosphere. Wind shear is not good for the development or the sustaining of hurricanes as it rips them apart and a more stable atmosphere prevents the lift required for these storms.



Source: NCERT- Class 11- Chapter 10- (Page No- 92)

Statement 2: <https://www.weather.gov/fwd/basics>

Q.9) The term 'Methane Rainfall' is often heard in the news. In this context, consider the following statements regarding the Methane Rainfall:

1. It occurs due to the chemical reaction between the water in clouds and small amounts of gases containing methane.
2. It generally occurs in the deserts of Sub-Saharan Africa.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Scientists have found that Saturn's largest moon Titan has small liquid lakes that run more than 100 meters deep and are filled with methane. Scientists have known that Titan's hydrologic cycle works similarly to Earth's – with one major difference. Instead of water evaporating from seas, forming clouds and rain, Titan does it all with methane and ethane.

Statement 1 is incorrect: Lakes on Titan's surface are made of methane. Scientists believe that ice volcanoes erupt and spew methane into Titan's atmosphere, which then rains down onto the surface, forming lakes. Liquid methane is the dominant force behind Titan's weather and surface erosion. Water is not present on the titan and methane rainfall is not due to the chemical reaction between water and methane gases.

Statement 2 is incorrect: Earth and Titan are the only bodies in the Solar System where liquid rains on a solid surface – though **on Titan, the rain is methane rather than water. On Titan, liquid hydrocarbons take the place of water as rainfall. This phenomenon does not occur in deserts of sub-Saharan Africa.**

NASA's Cassini orbiter captured the occurrence of rainfall on the north pole of Titan, looking like a wet sidewalk after a bit of rain. This rainfall also signifies a change in season on the Titan.

Source: <https://astronomy.com/news/2019/01/methane-rain-falls-on-titans-north-pole-from-cloudless-skies>

<https://blogs.scientificamerican.com/lab-rat/what-makes-things-acid-the-ph-scale/>

<https://www.epa.gov/acidrain/what-acid-rain>

Q.10) Which among the given sets of international groupings, has both India and Bangladesh as member countries?

- SAARC, G20 and Shanghai Cooperation Organization (SCO)
- BIMSTEC, Organization for Economic Cooperation and Development (OECD) and G20
- Asian Infrastructure and Investment Bank (AIIB), New Development Bank (NDB) and Organization for Economic Cooperation and Development (OECD)
- International Solar Alliance (ISA), New Development Bank (NDB) and Indian Ocean Rim Association (IORA)

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: Both India and Bangladesh are the members of SAARC, but **Bangladesh is not a member either of G20 or SCO**. G20 is a grouping of 19 countries (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, United Kingdom and United States) and European Union.

Members of SCO nations include Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan, Uzbekistan, India and Pakistan.

Option b is incorrect: Both India and Bangladesh are the members of BIMSTEC, but Bangladesh is not a member either of G20 and OECD. OECD is a group of 38 high-income countries to stimulate world trade and economic progress.

Option c is incorrect: Bangladesh is a member of AIIB and NDB, but not a member of OECD. As of January 2023, members of NDB include **Brazil, Russia, India, China, and South Africa**. Also, **Bangladesh and UAE joined the organization in 2021. Egypt and Uruguay are the prospective members.**

Option d is correct. Both India and Bangladesh are the members of all the three groupings- ISA, NDB and IORA. **The membership of ISA is open to all the members of United Nations.** So far, 106 nations have signed the ISA Framework agreement. IORA members:



(Source: IORA)

Knowledge Base: The differences between SAARC and BIMSTEC Memberships:

SAARC Nations	BIMSTEC Nations
Bangladesh Bhutan India Nepal Sri Lanka	
Afghanistan Maldives Pakistan	Myanmar Thailand

Source) https://www.eeas.europa.eu/eeas/south-asian-association-regional-cooperation-saarc_en#:~:text=The%20Secretariat%20of%20the%20Association,Pakistan%20and%20Sri%2DLanka.

<https://isolaralliance.org/membership/countries>

[https://www.ndb.int/about-](https://www.ndb.int/about-ndb/#:~:text=The%20New%20Development%20Bank%20(NDB,and%20developing%20countries%20(EM)

[ndb/#:~:text=The%20New%20Development%20Bank%20\(NDB,and%20developing%20countries%20\(EM](https://www.ndb.int/about-ndb/#:~:text=The%20New%20Development%20Bank%20(NDB,and%20developing%20countries%20(EM)
DCs).

Q.11) “These are the highest clouds in the Earth’s atmosphere and are observed slightly below the mesopause in the polar summertime. These clouds are of special interest, as they are sensitive to both global climate change and to solar/terrestrial influences. Both satellite and ground-based observations over the past four decades have indicated that the presence of these clouds has been increasing in both frequency and brightness. The first recorded sightings of these clouds were reported in 1885”

Which of the following types of clouds is described in the above passage?

- Cirrus clouds
- Cirrostratus clouds
- Noctilucent clouds
- Cumulonimbus clouds

Ans) c

Exp) Option c is the correct answer.

Noctilucent clouds are the highest clouds in the Earth's atmosphere, 83 km (50 miles) and are observed slightly below the mesopause in the polar summertime. These clouds are of special interest, as they are sensitive to both global climate change and to solar/terrestrial influences. The first recorded sightings of noctilucent clouds were reported in 1885 and both satellite and ground-based observations over the past four decades have indicated that the presence of these clouds has been increasing in both frequency and brightness. Scientists now realize that these clouds are very sensitive indicators for what is going on in the atmosphere at higher altitudes as small changes in the atmospheric environment can lead to large changes in the properties of these clouds. Further, since these clouds form on condensation nuclei through cold temperatures and the presence of water vapor – and these properties of the mesosphere are tied to carbon dioxide and methane, the anthropogenic causes of climatic change may be directly related to the presence of noctilucent clouds.

Source: <https://www.space.com/noctilucent-clouds#section-are-noctilucent-clouds-appearing-more-frequently>

<https://www.bbc.com/news/uk-northern-ireland-27936905>

Q.12) The term 'Heat Island' is often seen in the news. In this context, consider the following statements regarding the Heat Island:

1. Calm and clear weather conditions can result in severe heat islands.
2. Strong winds and cloud cover enhances the formation of heat islands.
3. The low albedo value of concrete surfaces helps in the formation of Heat Islands.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 2 only

Ans) b

Exp) Option b is the correct answer.

Structures such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies. Urban areas, where these structures are highly concentrated, and greenery is limited, become "islands" of higher temperatures relative to outlying areas. These pockets of heat are referred to as "heat islands."

Statement 1 is correct: Calm and clear weather conditions result in more severe heat islands by maximizing the amount of solar energy reaching urban surfaces and minimizing the amount of heat that can be carried away.

Statement 2 is incorrect: Strong winds and cloud cover suppress heat island formation. Geographic features also impact the heat island effect such as nearby mountains can block wind from reaching a city or create wind patterns that pass through a city.

Statement 3 is correct: Conventional human-made materials used in urban environments such as pavements or roofing tend to reflect less solar energy and absorb and emit more of the sun's heat compared to trees, vegetation, and other natural surfaces. Thus, low albedo value of concrete surfaces helps in the formation of Heat Islands in urban areas. Often, heat islands build throughout the day and become more pronounced after sunset due to the slow release of heat from urban materials.

Source: [https://www.epa.gov/heatislands/learn-about-heat-](https://www.epa.gov/heatislands/learn-about-heat-islands#:~:text=These%20temperature%20differences%20constitute%20intra,are%20cooler%20than%2)

[islands#:~:text=These%20temperature%20differences%20constitute%20intra,are%20cooler%20than%2](https://www.epa.gov/heatislands/learn-about-heat-islands#:~:text=These%20temperature%20differences%20constitute%20intra,are%20cooler%20than%2)

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0downtown%20areas.&text=Surface%20temperatures%20vary%20more%20than,are%20generally%20similar%20at%20night.

<https://education.nationalgeographic.org/resource/urban-heat-island/>

Q.13) Consider the following statements with reference to the conditions favorable for occurrence of Cold Wave in India:

1. Foggy weather developed during the day.
2. Clear sky conditions developed during the night.
3. Intense radiation cooling during the night.

Which of the statements given above are correct?

- a) 2 and 3 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

A cold wave is a rapid fall in temperature within a 24-hour period. A cold wave is a weather phenomenon that is distinguished by the cooling of the air. Cold wave conditions develop if the temperature falls rapidly much below normal.

Statement 1 is correct: Foggy weather developed during the day which inhibits day warming and provides favorable conditions for cold wave conditions to linger on.

Statements 2 and 3 are correct: Clear sky conditions during the night, further facilitate lowering of temperature by radiation cooling. Occasionally, in the absence of western disturbances and persistent clear sky conditions, intense nocturnal radiation cooling may also cause night temperatures to fall below normal and result in cold wave conditions.

Source: <https://egyankosh.ac.in/bitstream/123456789/25165/1/Unit-17.pdf>

Q.14) With reference to World Geography, what is Madden Julian Oscillation?

- a) It is a warm ocean current, which occasionally replaces the normal cold Peru Current that moves north along the western coast of South America.
- b) It is an eastward moving pulse of cloud and rainfall near the equator that typically recurs every 30 to 60 days.
- c) It is a zone where air tends to ascend.
- d) It is the periodic change in pressure conditions in the Central Pacific and Australia.

Ans) b

Exp) Option b is the correct answer.

Statement a is incorrect: El Nino is a warm ocean current, which occasionally replaces the normal cold Peru Current that moves north along the western coast of South America. The surge of warm ocean waters recurs every three to five years and lasts from six to eighteen months. (Between El Nino there are often periods of cooling surface waters in the same area called La Nina).

Statement b is correct: The Madden-Julian Oscillation (MJO) is the major fluctuation in tropical weather on weekly to monthly timescales. The MJO can be characterised as an eastward moving 'pulse' of cloud and rainfall near the equator that typically recurs every 30 to 60 days. The MJO consists of two parts or phases. Strong MJO activity often dissects the planet into halves. One half within the enhanced convective phase and the other half in the suppressed convective phase.

Statement c is incorrect: The **Inter Tropical Convergence Zone (ITCZ)** is low pressure zone located at the equator where trade winds converge, and so, **it is a zone where air tends to ascend**. In July ITCZ is located around 20 degrees north – 25-degree north latitudes (over the Gangetic plains), sometimes called the monsoon trough. This monsoon trough encourages the development of thermal low over north and North West India.

Statement d is incorrect: **El Nino event is closely associated with the pressure changes in the Central Pacific and Australia**. This change in pressure condition over pacific is known as the southern oscillation. The combined phenomenon of southern oscillation and El Nino is known as ENSO (El Nino Southern Oscillation).

Source:

[http://www.bom.gov.au/climate/mjo/#:~:text=The%20Madden%2DJulian%20Oscillation%20\(MJO,Read%20more%3A%20About%20the%20MJO](http://www.bom.gov.au/climate/mjo/#:~:text=The%20Madden%2DJulian%20Oscillation%20(MJO,Read%20more%3A%20About%20the%20MJO)

<https://egyankosh.ac.in/bitstream/123456789/46759/1/Unit-14.pdf>

Q.15) Which of the following statements correctly describes the ‘Samarkand’ declaration?

- It is a commitment by SCO members for peaceful settlement of disputes through dialogue.
- It is to strengthen primary healthcare and achieve universal health coverage by 2030.
- It is for tackling global nitrogen challenge by halving nitrogen waste by 2030.
- It is to reaffirm WHO’s goal to end tuberculosis by 2030.

Ans) a

Exp) Option a is the correct answer.

The annual summit of **Shanghai Cooperation Organization (SCO)** has been recently held in **Samarkand, Uzbekistan**. Members of the organization concluded the summit with Samarkand declaration.

Statement a is correct: Samarkand Declaration advocated commitment to **peaceful settlement of differences and disputes between countries** through dialogue and consultation. The Samarkand Declaration stressed that SCO member states agree on further **improvement of the global economic governance architecture** and are committed to promoting an **open and transparent trade system, opposing protectionist actions and the unilateral application of economic sanctions**.

Statement b is incorrect: Astana Declaration of WHO pertains to achieving primary healthcare and universal health coverage by 2030.

Statement c is incorrect: Colombo Declaration of UN members deal with tackling global nitrogen challenge. The aim of the declaration is to halve nitrogen waste by 2030.

Statement d is incorrect: Moscow Declaration is popularly known to reaffirm WHO’s goal to end TB by 2030.

Source:<https://www.mea.gov.in/bilateraldocuments.htm?dtl/35724/Samarkand+Declaration+of+the+Council+of+Heads+of+State+of+Shanghai+Cooperation+Organization>

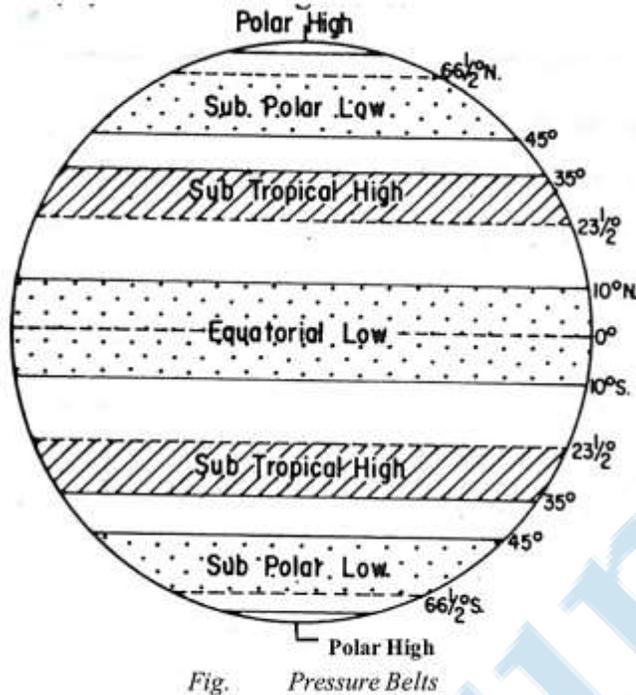
Q.16) Which one of the following statements is **incorrect** about the Sub-Tropical High-Pressure belt?

- It is formed due to subsidence of air coming from the equatorial region.
- Many of the world’s deserts are present along this belt.
- This belt is also known as the ‘Doldrums’.
- It is characterized by anticyclonic conditions with calm and arid weather.

Ans) c

Exp) Option c is the correct answer.

The latitudinal distribution of atmospheric pressure is also known as horizontal distribution of atmospheric pressure. It is characterized by low- and high-pressure belts. There are mainly seven pressure belts on the earth.



Option a is correct: The **sub-tropical high-pressure** belts are located between latitudes 25° to 35° in both hemispheres. In the northern hemisphere it is called the North sub-tropical high-pressure belt and in the southern hemisphere it is known as South sub-tropical high-pressure belt. **The high-pressure belt in these latitudes is because of the settling down of winds that arose in the equatorial region and got deflected towards poles due to the earth's rotation.**

Option b is correct: Hot deserts are mainly found around the Tropics of Cancer and Capricorn. The hot deserts of the world are located between 15° and 30° north or south of the equator, where the air is subsiding or sinking air. **The hot deserts lie along the Horse Latitudes or the Sub-Tropical High-Pressure Belts where the air is descending,** a condition least favorable for precipitation of any kind to take place. The rain-bearing Trade Winds blow off-shore and the Westerlies that are on-shore blow outside the desert limits.

Option c is incorrect: The **Equatorial Low-Pressure Belt** is located in the vicinity of the equator between 5° N and 5° S latitudes. The equatorial trough of low pressure is the zone of convergence of trade winds blowing equator wards from the sub-tropical belts of high pressure in the northern and southern hemispheres. As these regions receive vertical rays of the sun the ground gets heated cause air to rise upwards creating a low pressure along the ground. **That is why these belts are called the Doldrums.** Whereas the latitudes of sub-tropical high-pressure belts are called **horse latitudes.**

Option d is correct: The **sub-tropical high-pressure** belts have a convergence zone at higher altitudes which when subsides, causes piling up of air and reduction of volume thus resulting in high pressure. Thus, anticyclonic conditions develop which results in **calm and arid weather.**

Source: <https://egyankosh.ac.in/bitstream/123456789/79918/1/Block-2.pdf>

Q.17) Consider the following statements regarding the Ozone Layer present in the atmosphere:

1. The Ozone layer is almost transparent to most Ultraviolet-A (UV-A) type of radiation.
2. Carbon Tetrachloride is one of the Ozone layer depleting substances.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) option c is the correct answer.



Statement 1 is correct. UV radiation is divided into three categories, based on its wavelength; these are referred to as UV-A (400–315 nm), UV-B (315–280 nm), and UV-C (280–100 nm). Ozone is transparent to most UV-A, so most of this longer-wavelength UV radiation reaches the surface, and it constitutes most of the UV reaching the Earth. This type of UV radiation is significantly less harmful to DNA, although it may still potentially cause physical damage, premature aging of the skin, indirect genetic damage, and skin cancer.

Statement 2 is correct. Carbon tetrachloride (CCl_4) is a long-lived greenhouse gas and an ozone-depleting substance. Its emissive use, production and consumption are regulated under the Montreal Protocol on Substances that Deplete the Ozone Layer

Source: NCERT for Class 11th- Chapter 8th (Page No-76)

Q.18) With reference to the velocity and direction of wind, consider the following statements:

1. The speed of the wind is directly proportional to the pressure gradient force.
2. The friction force on the wind is more at the land surface than on the sea surface.
3. The rotation of Earth on its axis causes a change in wind's direction.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The air in motion is called wind. Wind is moving air and is caused by differences in air pressure within our atmosphere. Air under high pressure moves toward areas of low pressure. The greater the difference in pressure, the faster the air flows.

Statement 1 is correct: The differences in atmospheric pressure produce a force. **The rate of change of pressure with respect to distance is the pressure gradient.** The pressure gradient is strong where the isobars are close to each other and are weak where the isobars are apart. The **speed of the wind is directly proportional to the pressure gradient force**, meaning that as the change in pressure increases (i.e. pressure gradient increases) the speed of the wind also increases at that location.

Statement 2 is correct: The **friction force on the wind is more at the land surface** than on the sea surface. The Frictional Force is **greatest at the surface** and its influence generally extends up to an elevation of 1 – 3 km. Over the sea surface the friction is minimal. Over uneven terrain, however, **due to high friction, the wind direction makes high angles with isobars and the speed gets retarded.**

Statement 3 is correct: The **rotation of Earth on its axis causes winds to shift direction, creating what are called the prevailing winds.** This wind shift, **known as the Coriolis effect**, causes winds in the Northern Hemisphere to shift to the right and winds in the Southern Hemisphere to shift to the left.

Source:

<https://www.weather.gov/jetstream/wind#:~:text=Pressure%20gradient%20is%20just%20the,also%20increases%20at%20that%20location.>

<https://sciencing.com/wind-affect-weather-6394667.html>

Q.19) Consider the following pairs:

Terms	Description
1. Relative Humidity	It is the ratio of mass of water vapour to the total mass of the air parcel.
2. Dew Point	It is the temperature at which the air becomes fully saturated.
3. Absolute Humidity	It represents the actual amount of water vapour present in the air.

Which of the pairs given above is/are correctly matched?

- a) 1 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The amount of Water Vapour present in the air is known as humidity. It is expressed quantitatively in different ways.

Pair 1 is incorrect: Specific Humidity (not relative humidity) is the ratio of the mass of water vapour to the total mass of the air parcel.

Whereas Relative humidity is the ratio of the amount of water vapor actually in a volume occupied by air to the amount the space could contain at saturation. The **percentage of moisture present in the atmosphere as compared to its full capacity at a given temperature** is known as the relative humidity. The relative humidity of an air at saturation point is hundred percent.

Pair 2 is correct: Dew point is the temperature at which the air becomes fully saturated (100 percent relative humidity). It is dependent on only the amount of moisture in the air.

Pair 3 is correct: Absolute humidity is the actual amount of water vapour present in the air. In other words, **it is the mass of water vapor divided by the mass of dry air in a volume of air.** It does not take temperature into consideration. Absolute humidity in the atmosphere ranges from near zero to roughly 30 grams per cubic meter when the air is saturated at 30 °C. The absolute humidity differs from place to place on the surface of the earth.

Source: Page 98, G. C. Leong

<https://www.air-solutions.co.nz/news/2014/11/26/what-is-relative-humidity-absolute-humidity-and-dew-point-arzy7>

<https://www.weather.gov/lmk/humidity>

Q.20) Consider the following statements regarding Eastern Economic Forum (EAF):

1. It is an intergovernmental body that aims to encourage investments in Russia's Far East.
2. India has made significant investments in the Russian Far East in the fields of diamonds and pharmaceuticals.
3. Indian Government has also announced an "Act Far East" policy to boost India's engagement with the Russian Far Eastern region.

Which of the statements given above is/ are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Eastern Economic Forum is an **international forum** that takes place in **Vladivostok, Russia** to **encourage investments in Russian Far East**. Russia's Far East comprises area from Lake Baikal to Pacific Ocean, which is **approximately a third of Russia's territory**.

Statement 1 is incorrect: Eastern Economic Forum is **not** an inter-governmental body. It is an international platform to **encourage entrepreneurs** to invest in Russia's Far East. It is organized annually by **Roscongress Foundation**.

Statement 2 is correct: Russia's Far East is a **resource rich region** having abundant resources like **coal, natural gas, diamonds, gold, tungsten, borax materials, fish and sea food**. India has made investments in fields of pharmaceuticals, diamonds, oil and gas exploration etc. India can also supply skilled workforce to the region.

Statement 3 is correct: 'Act Far East' policy of India was launched in 2019 at the plenary session of 5th **Eastern Economic Forum** to boost India's engagement with Russia's Far East region. India extended \$1 billion line of credits towards the development of Russia's Far East. This policy gives a new dimension to India's economic policy.

Knowledge Base:



(Source: <https://forumvostok.ru/en/about-the-forum/>)

Source: <https://forumvostok.ru/en/about-the-forum/>

<https://forumvostok.ru/en/news/itogi-vii-vostochnogo-ekonomicheskogo-foruma/>

Q.21) Which one of the following conditions is favorable for the formation of Hailstorm in India?

- absence of a jet stream at a higher level in the atmosphere.
- less variations in wind velocity over vertical distances.
- active western cyclonic disturbances during winter and the pre-monsoon season
- low moisture content in the atmosphere.

Ans) c

Exp) Option c is the correct answer.

Hail is a type of precipitation or water in the atmosphere. Hail is formed when drops of water freeze together in the cold upper regions of thunderstorm clouds. Most hailstones measure between 5 millimeters and 15 centimeters in diameter and can be round or jagged.

Option c is correct: Hailstorms occur mostly over mid-latitude continental regions and decrease in frequency towards the pole and equator and over oceans. In India, the **favourable hail conditions are met by active western cyclonic disturbances during winter and the pre-monsoon season.** Low level circulation associated with western disturbance, middle level trough in westerly winds and **presence of a jet stream at higher level** provide favourable conditions for the formation of hail-bearing thunderstorms along the line of discontinuity over north and northeast India. Other Atmospheric conditions favourable for the formation of hail bearing thunderstorm are: High degree of instability, **High moisture content in the atmosphere**, Low freezing level, **High vertical wind shear (strong variation of wind velocity over vertical distances).**

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Source : <https://www.weatherandradar.in/weather-news/severe-weather-explained-what-is-hail--31236ab4-84f4-46ce-9b9f-925874f18a6a>
<https://www.weather.gov/jetstream/hail>
<https://geography.name/what-causes-hail/>

Q.22) Consider the following statements about the effects of temperature inversion on the local weather:

1. It causes atmospheric stability in the lower layers of atmosphere by limiting the vertical movement of air.
2. It makes condition suitable for the formation of dense fog.
3. Temperature inversion in hills and mountains helps to protect plants from frost damage.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Normally, temperature decreases with increase in elevation. It is called normal lapse rate. At times, the situation is reversed, and the normal lapse rate is inverted. It is called Inversion of temperature. Inversion is usually of short duration but quite common, nonetheless.

Statement 1 is correct: Inversion of temperature causes atmospheric stability which stops upward and downward movement of air. The atmospheric stability discourages rainfall and favours dry conditions.

Statement 2 is correct: It intensifies the process of formation of fog, as fog is formed due to the situation of warm air above and cold air below. Because the warm air is cooled from below and resultant condensation causes the formation of tiny droplets around suspended dust particles. Hence, dense fogs in mornings are common occurrences especially during winter season.

Statement 3 is correct: The inversion takes place in hills and mountains due to air drainage. Cold air at the hills and mountains, produced during night, flows under the influence of gravity. Being heavy and dense, the cold air acts almost like water and moves down the slope to pile up deeply in pockets and valley bottoms with warm air above. **This is called air drainage. It protects plants from frost damages.**

Source: Fundamental of Physical Geography, Class 11, pg. 85

Q.23) Consider the following statements regarding different types of Local Winds:

1. Sirocco is a cold and dry wind which flows towards the Mediterranean Sea from the Arctic region.
2. Mistral is a cold wind which blows from southern France into the Gulf of Lion.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. Sirocco is a **hot, dry, dusty wind which** flows towards the Mediterranean Sea. It **originates in Sahara Desert.** It is most frequent in spring. It **blows towards the Mediterranean Sea from the desert interior.**

Statement 2 is correct. The mistral is a strong, cold, north-westerly wind that blows from southern France into the Gulf of Lion in the northern Mediterranean. Mistral blows towards the Rhone valley. Its velocity is

intensified by the **funnelling effect in the valley between the Alps and Central Massif**. It is **most frequent in winter**.

Knowledge Base: A similar type of **cold north-easterly winds are Bora** which is experience along the **Adriatic coast**. It also usually occurs in winter. But it is **more violent than mistral winds**. Bora blows onwards into Mediterranean Sea.

Source: GC Leong Chapter-19 pge-143, 144

Q.24) Which of the following are the characteristic features of China type of Climate?

1. High degree of pressure variation between the summer and winter seasons.
2. Low pressure region created during the summers due to intense heating.
3. Presence of rain bearing South-west monsoon winds.
4. Very low annual temperature range.

Select the correct answer from the codes given below.

- a) 1 and 2 only
- b) 1, 3 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2 and 4 only

Ans) a

Exp) Option a is the correct answer.

China type of climate is found on the eastern margins of continents in warm temperate latitudes, just outside the tropics. It is typified by a warm moist summer and a cool, dry winters. It can be found in central and north China, including southern Japan. There are various local geological conditions responsible for occurrence of this type of climate.

Statement 1 is correct: The vast landmass of the Asian continent and mountainous regions that lie in the heart of it create great changes in pressure between the winter and summer seasons. It results in a temperate monsoon kind of climate i.e., China type of climate.

Statement 2 is correct: This region also known as the heart of Asia gets intensely heated up in the summers. This intense heating of a wider landmass leads to formation of a low-pressure region.

Statement 3 is incorrect: The creation of low-pressure region causes the moist air stream from the Tropical Pacific to flow in and cause rain in the form of the South-East Monsoon (not south-west monsoon). This contributes to heavy precipitation in the northern and central parts of China, which results in annual rainfall of approximately 100cm.

Statement 4 is incorrect: In winter, a steep pressure gradient is set up between the cold interiors of Mongolia and Siberia. The continental polar air stream flows outwards as the North- West Monsoon, bitterly cold and very dry. This results in a great annual temperature range in this type of climate.

Source: G C Leong, pg. 155

Q.25) Consider the following statements regarding India-UN Development Partnership Fund?

1. The 'Fund' is established by United Nations (UN) to support India's progress towards Sustainable Development Goals (SDGs).
2. The fund is also aimed to promote multilateralism and shared prosperity in the global South.
3. UNICEF, UNESCO and WHO are the implementing partners of the Fund.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The year 2022 marks the 5th anniversary of India-UN Development Partnership Firm.

Statement 1 is incorrect: The fund was **established (in 2017), supported and led** by the **Government of India** and implemented in collaboration with the UN Systems. Its key objectives are:

- 1) Promote **multilateralism and shared prosperity** in the global South. (**South-South Cooperation**)
- 2) The Fund **supports Southern-owned and -led, demand-driven and transformational sustainable development** projects across the developing world, with a focus on **least developed countries and Small Island developing States**.
- 3) Its thematic reach spans all 17 Sustainable Development Goals (SDGs).
- 4) **The Government of India has committed USD150 million over 10 years to the India-UN Fund.**

Statement 2 is correct: One of the key objectives of the fund is to **promote multilateralism and shared prosperity in the global South**.

Statement 3 is correct: **UNICEF, UNESCO and WHO** are among the implementing partners of the Fund. The fund has 12 UN entities as implementing partners:

12 UN entities as implementing partners



(Source: <https://indiaunfund.unsouthsouth.org/>)

Source: <https://indiaunfund.unsouthsouth.org/>

Q.26) Consider the following statements about the Polar Vortex, often seen in news:

1. It is a large area of high pressure and warm air surrounding both the poles of Earth.
2. Cold surges in the parts of the US, Europe and Asia are sometimes associated with polar vortex.
3. Sudden stratospheric warmings can strengthen the polar vortex.
4. Polar vortex is generally located above the polar jet streams in the atmosphere.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 4 only
- c) 1, 2 and 3 only
- d) 2, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

The stratospheric polar vortex is a large-scale region of air that is contained by a strong west-to-east jet stream that circles the polar region.

Statement 1 is incorrect: The polar vortex is a large area of low pressure (and NOT high pressure) and cold air surrounding both of the Earth's poles. It exists near the poles but weakens in summer and strengthens in winter. The term "vortex" refers to the counter-clockwise flow of air that helps keep the colder air near the Poles.

Statement 2 is correct: Many a times during winter in the northern hemisphere, the polar vortex will expand, sending cold air southward with the jet stream. This occurs fairly regularly during wintertime and is often associated with large outbreaks of Arctic air in the United States. However, this phenomenon is also observed in parts of Europe and Asia as well.



Statement 3 is incorrect: A sudden stratospheric warming is a significant disruption of the stratospheric polar vortex that begins with large-scale atmosphere waves (called Rossby waves) getting pushed higher into the atmosphere. These waves can "break" (like waves in the ocean) on top of the polar vortex and weaken it (and NOT strengthen it). If waves are strong enough, the winds of the polar vortex can weaken so much that they can reverse from being westerly to easterly.

Statement 4 is correct: The polar vortex is a band of strong westerly winds located 16-50 kilometres (10-30 miles) above Earth's surface in the stratosphere. Whereas the polar jet stream occurs in the troposphere at altitudes of 8-14 km (5-9 miles). The polar vortex thus, lies above and does not interfere with the polar jet streams.

Source : <https://www.weather.gov/safety/cold-polar-vortex>

https://www.weather.gov/bis/sudden_stratospheric_warming_events#:~:text=A%20sudden%20stratospheric%20warming%20is,polar%20vortex%20and%20weaken%20it.

<https://www.climate.gov/news-features/understanding-climate/understanding-arctic-polar-vortex>

[https://scied.ucar.edu/learning-zone/climate-change-impacts/why-polar-air-keeps-breaking-out-arctic#:~:text=The%20polar%20vortex%20is%20a,\(5%2D9%20miles\)](https://scied.ucar.edu/learning-zone/climate-change-impacts/why-polar-air-keeps-breaking-out-arctic#:~:text=The%20polar%20vortex%20is%20a,(5%2D9%20miles)).

Q.27) Consider the following statements about Katabatic winds, in the context of mountain and valley winds:

1. It is warm wind that blows up a mountain slope due to a warmer temperature on the mountain slope.
2. The Bora winds of Adriatic and Oroshi winds of Japan are the examples of katabatic wind.
3. They can sometimes lead to the formation of Antarctic Oases.

Which of the statements given above is/are correct:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Wind is the bulk movement of air that either result from temperature difference, largescale synoptic pressure, or local pressure and temperature differences. When these winds occur in the mountainous region they are called as mountain winds. There are two types of winds, anabatic and katabatic winds.

Statement 1 is incorrect: An anabatic wind is warm wind that blows up a mountain slope due to a warmer temperature on the mountain slope compared to the temperature in the air column. Also known as an upslope wind or upslope flow. This type of wind usually occurs on a clear sunny day. The opposite of an anabatic wind is a katabatic wind, which blows down the slope of a mountain. Additionally, katabatic winds blow at night and are caused by reversed temperature differences between the air column and the mountain slope.

Statement 2 is correct: The examples of katabatic winds include bora winds of the Adriatic, Oroshi winds of Japan, and Pitera winds in Greenland.

Statement 3 is correct: Katabatic winds most commonly blow out from large, elevated ice sheets in Greenland and Antarctica regions. The high-density cold air that builds up over the ice sheet and the elevation of the ice sheet increases the force of gravity. When these winds are concentrated in a restricted area, they will blow with hurricane speed. **In some areas, especially in Antarctica, the snow may be scoured away by the force of these winds, leading to the formation of Antarctic oases.**

The areas where, during the summer season, much of the snow melts away, revealing Antarctica's rock surface. They are dotted with freshwater lakes of various sizes, which become ice-free in the summer. It is these areas that are known as **Antarctic oases**.

Source : <https://www.worldatlas.com/articles/what-is-a-katabatic-wind.html>

[https://www.britannica.com/science/anabatic-](https://www.britannica.com/science/anabatic-wind#:~:text=anabatic%20wind%2C%20also%20called%20upslope,plain%20at%20the%20same%20altitu)

[wind#:~:text=anabatic%20wind%2C%20also%20called%20upslope,plain%20at%20the%20same%20altitu](https://www.britannica.com/science/anabatic-wind#:~:text=anabatic%20wind%2C%20also%20called%20upslope,plain%20at%20the%20same%20altitu)
de.

Q.28) In the context of Indian physiography, consider the following statements about Karewas:

1. Karewas are fertile alluvial soils found in the Kashmir valley.
2. These are important for the cultivation of almonds, walnuts and apples.
3. Karewas are formed by unconsolidated lacustrine deposits.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Kashmir Himalayas are also famous for Karewa formations, which are useful for the cultivation of Zafran, a local variety of saffron.

Statement 1 is correct: Karewas are plateau like landform which are 13000-18000-metre-thick deposits of alluvial soils and sediments like sandstone and mudstone. These are found in Kashmir valley region, especially in the Pir Panjal range. The karewa sediments not only hold fossils and remnants of many human civilisations and habitations but are also the **most fertile spots** in the valley.

Statement 2 is correct: Karewas are very famous for the Zafran cultivation but are also very important for the cultivation of almonds, walnuts, apples and several other cash crops.

Statement 3 is correct: Karewas are formed by unconsolidated lacustrine deposits which are also known as lake deposits. In Pleistocene period, when the upliftment of the Pir Panjal ranges happened, the flow of the river had stopped. As a result, the whole of Kashmir valley became a large lake. Slowly, the glacial deposits have accumulated here in this lake. Thus, creating a large lacustrine plain. Later, the water drained away, and these unconsolidated deposits remained there. These unconsolidated gravel and mud deposits are known as Karewa formation.

Source: <https://www.downtoearth.org.in/news/environment/heritage-erased-how-the-kashmir-valley-s-ancient-mound-formations-are-being-levelled-81683>

Q.29) Which of the following statements best describe the term 'Rohi'?

- The fertile flood plains located near the western slopes of Aravali.
- A marshland area recently recognised as the Ramsar site.
- A hilly tract famous for Gucchi cultivation located in the Khasi hills.
- Dry wasteland located on the western side of the cold deserts of Ladakh.

Ans) a

Exp) Option a is the correct answer.

The region lying to the west of the Bangar region in the desert of Rajasthan is known as Rohi. It is a fertile floodplain formed by several small rivers or streams which rise in the Aravalli range and flow westwards through the desert region. The streams remain dry for most of the time in the year but get flooded during the rainy season. **The plain thus created by the flooding of these streams is known as Rohi.**

Source: ICSE Total Geography

Q.30) Consider the following statements regarding India-ASEAN relationship:

- Recently India and ASEAN have elevated their ties from the existing 'Strategic Partnership' to the 'Comprehensive Strategic Partnership'.
- The year 2022 has been designated as ASEAN-India Friendship Year.
- In 2021-22, for the first-time bilateral trade between India and ASEAN has crossed USD100 billion.

Which of the statements given above are correct?

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Recently, 19th India-ASEAN Summit has been held in **Cambodia**. The year 2022 marks **30 years of ASEAN-India relations**.

Statement 1 is correct: Following are the key takeaways from the recent Summit:

- ASEAN and India announced **elevating of the existing 'Strategic Partnership' to 'Comprehensive Strategic Partnership'**.
- Both the sides reaffirmed importance of **maintaining and promoting peace, stability, maritime safety and security, freedom of navigation and overflight in the Indo-Pacific region**
- Reiterated the commitment to enhance India-ASEAN cooperation in various areas such as **maritime activities, counterterrorism, transnational crimes, cyber security, digital economy, regional connectivity** etc.

Statement 2 is correct: The leaders of both sides have designated year 2022 as ASEAN-India Friendship year. The year 2022 marks 30 years of ASEAN-India relations.

Statement 3 is correct: The ASEAN-India bilateral trade during 2021-22 has crossed USD 100 billion for the first time and reached **USD 110.39 billion**. Out of this, approximately USD 30 billion worth trade was made between India and Singapore only. **India has overall trade deficit**, despite having signed Free Trade Agreement (FTA) with ASEAN.

Knowledge Base: ASEAN is a regional grouping of 10 member states:



Image: ASEAN

(Source: World Economic Forum)

Key Initiatives with ASEAN/ Member Countries: ASEAN-India Free Trade Agreement, ASEAN-India Green Fund, India-Myanmar-Thailand Trilateral Highway, Kaladan Multimodal Project, Mekong Ganga Cooperation etc.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1875478>

https://www.mea.gov.in/Portal/ForeignRelation/India-ASEAN-_Relations_2022.pdf

Q.31) The Indian Peninsular Plateau is often characterized by the presence of which of the following geomorphological features?

1. Tors
2. Hummocky hills
3. Eskers
4. Quartzite dykes
5. Rift valleys

Select the correct answer from the codes given below:

- a) 1, 3 and 5 only
- b) 2, 4 and 5 only
- c) 1, 3 and 4 only
- d) 1, 2, 4 and 5 only

Ans) d

Exp) Option d is the correct answer.

Peninsular plateau is an irregular triangle which rises from the height of 150 m above the river plains up to an elevation of 600–900 m. Delhi ridge in the northwest, (extension of Aravalis), the Rajmahal hills in the east, Gir range in the west and the Cardamom hills in the south constitute the outer extent of the Peninsular plateau. Some of the important physiographic features of this region are **tors, block mountains, rift valleys, spurs, bare rocky structures, series of hummocky hills and wall-like quartzite dykes offering natural sites for water storage.**

Statement 1 is correct: Tors are exposed rock mass of jointed and broken blocks. Tors are seldom more than 15 metres (50 feet) high and often occur as residues at the summits of inselbergs and at the highest points of pediments. Tors are observed in peninsular plateau region of India.

Statement 2 is correct: In geology, a hummock is a small knoll or mound above ground. They are typically less than 15 meters (50 ft) in height and tend to appear in groups or fields. Large landslide avalanches that typically occur in volcanic areas are responsible for formation of hummocks. Hummocks are observed in peninsular plateau region of India.

Statement 3 is incorrect: Eskers are landforms of glaciated lowlands. They are found in the glacial regions and not in the peninsular plateau region. They are long, narrow, sinuous ridges composed of sand and gravel which mark the former sites of sub-glacial melt-water streams.

Statement 4 is correct: When the lava makes its way through cracks and the fissures developed in the land, it solidifies almost perpendicular to the ground. It gets cooled in the same position to develop a wall-like structure. Such structures are called dykes. These are the most commonly found intrusive forms in the western Maharashtra area.

Statement 5 is correct: A rift valley is a lowland region that forms where Earth's tectonic plates move apart or rift. Faulting due to divergence creates the rift system. The Narmada and Tapi are examples of a rift valley. The Chambal River also flows through a rift valley.

Source: NCERT, India: Physical Environment, Class 11, pg. 16

Q.32) Which of the following statements best explain the meaning of the term 'dhrians'?

- a) The coastal backwaters that are located in the Malabar region.
- b) A basin made up of mostly soft and unconsolidated deposits.
- c) A basin developed in an area of intense temperature and rainfall, characterized by heavy leaching.
- d) The moving or shifting sand dunes of the Thar desert.

Ans) d

Exp) Option d is the correct answer.

To the northwest of the Aravali hills, the Great Indian Desert (also known as Marusthali) is a land of undulating topography dotted with longitudinal dunes and barchans. In this desert, speedy winds force the sand dunes to move from one place to another along the direction of the wind. These moving or shifting sand dunes are locally known as dhrians and the blown-out depression is known as Dhand.

Option a is incorrect: The coastal backwaters located in the Malabar region are known as kayals.

Option b is incorrect: A basin made up of mostly soft and unconsolidated deposits in the region of Mizoram is mostly known as 'Molassis basin'.

Option c is incorrect: A basin developed in an area of intense temperature and rainfall, characterized by heavy leaching, is commonly known as laterite soil basin.

Source: <https://imp.center/i/paragraph-great-indian-desert-thar-desert-rajasthan-plains-1232/>

Q.33) Consider the following statements about the Himalayas:

1. Himalayas are the youngest fold mountains of India.
2. Marmolada glacier is one of the largest glaciers located in the Himalayas.
3. The longitudinal valleys present in the Himalayan regions are known as Duars.
4. The crustal thickness of the Himalayan range generally increases from the Indo Gangetic plains towards the Greater Himalayas.

Which of the statements given above are correct?

- a) 1 and 4 only
- b) 1 and 2 only
- c) 1, 2 and 3 only
- d) 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

The Himalayas are the young-fold mountains consisting of several hill ranges, extending from the northwest of India to the East. They not only act as a physical barrier but also as a climatic, drainage and cultural divide.

Statement 1 is correct: Himalayas are the youngest fold mountains of India. They were formed due to collision between the Indo-Australian and the Eurasian plate. They are fold mountains which stretch over the northern borders of the Indian subcontinent.

Statement 2 is incorrect: Marmolada glacier is not located in the Himalayas. It is located in the Alps Mountain ranges. The prominent glaciers in the Himalayas are Baltoro and Siachin among others.

Statement 3 is incorrect: The longitudinal valleys present in the Himalayan regions are known as duns. Such as Jammu dun and Pathankot dun. However, duars are the alluvial floodplains in northeastern India that lie south of the outer foothills of the Himalayas and north of the Brahmaputra River basin.

Duars, also spelled **Dwars** or **Dooars**, region of northeastern India, at the foot of the east-central Himalayas. It is divided by the Sankosh River into Western and Eastern Duars.

Statement 4 is correct: The most distinctive feature of the Himalayas is the **crustal thickness**, which increases from about 35 to 40 km in the **Indus-Ganga-Brahmaputra Plains** to between 65 and 80 km over the **Greater Himalayas**

Source: NCERT, India: Physical Environment, Class 11, pg. 9-14

Q.34) Arrange the following Hills of the North-East India in the correct sequence of their location from North to South.

1. Mikir Hills
2. Mishmi Hills
3. Dafla Hills
4. Lushai Hills

Which of the options given below is correct?

- a) 1 – 2 – 3 – 4
- b) 4 – 2 – 3 – 1
- c) 2 – 3 – 1 – 4
- d) 3 – 2 – 4 – 1

Ans) c

Exp) Option c is the correct answer.

Correct order from North to South is: Mishmi – Dafla – Mikir – Lushai. Hence, option c is correct the answer.

Option 2: Mishmi Hills: These are located at the north-eastern tip of India, in north-eastern Arunachal Pradesh.

Option 3: Dafla Hills: These are located on the border of western Arunachal and Assam occupied by an independent tribe called Daphla.

Option 1: Mikir Hills: These are a group of hills located to the south of the Kaziranga National Park, Assam. The easternmost Meghalaya comprising the detached Mikir Hills is partly isolated being surrounded by three sides. Karbi plateau or Mikir Hills is known oldest landform in Assam.

Option 4: Lushai Hills: These are a mountain range in Mizoram and Manipur, India. The range is part of the Patkai range system.



Source: <https://www.google.com/maps>

Q.35) Consider the following statements regarding United Nations Security Council (UNSC):

1. Only P-5 (Permanent-5) members can preside over the proceedings of UNSC.
2. The ten non-permanent members of UNSC are elected on a regional basis for tenure of 2 years.
3. The non-permanent members are not entitled to vote on UNSC resolutions.

Which of the statements given above is/ are correct?

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

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UNSC is of the six principal organs of the United Nations. It is composed of 15 members, consisting of 5 permanent members (China, France, Russia, United Kingdom and United States) and 10 non-permanent members. The UNSC is empowered to investigate any situation threatening international peace.

Statement 1 is incorrect: Presidency rotates between all the permanent and non-permanent members after every month.

Statement 2 is correct: The non-permanent members are elected on a regional basis for a term of 2 years. India was also an elected member at UNSC during the years 2021-22 and held presidency twice.

Statement 3 is incorrect: Both permanent and non-permanent members are entitled to vote on all the substantive matters. A decision requires affirmative votes of 3/5th (i.e. 9) members. However, a negative vote (i.e. veto) by a permanent member prevents adoption of a proposal.

Knowledge Base: Recently, India abstained from voting on the following resolutions:

Resolution sponsored by Russia alleging Ukraine and USA carrying out militarily biological activities.

Resolution declaring Russia's annexation of four Ukrainian territories as invalid.

Source: <https://www.un.org/securitycouncil/content/voting-system>

<https://www.un.org/securitycouncil/content/current-members>

<https://www.un.org/securitycouncil/content/presidency>

Q.36) Which of the following pairs is/are correctly matched?

Types of Thrust	Located Between
1. Main Frontal Thrust (MFT)	Between Shiwalik Himalayas and Northern Plain
2. Main Central Thrust (MCT)	Between the Lesser Himalayas and the Shiwalik Himalayas
3. Main Boundary Thrust (MBT)	Between the Greater Himalayas and Lesser Himalayas

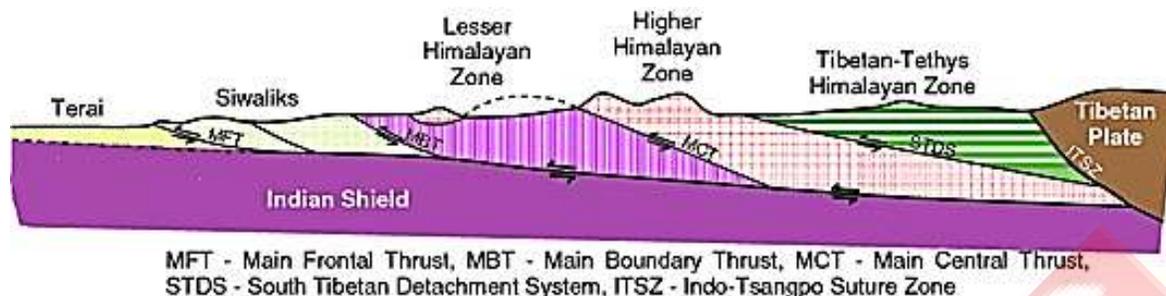
Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Types of Thrust	Located Between	
1) Main Frontal Thrust (MFT)	Between Shiwalik Himalayas and Northern Plain	Hence, Pair 1 is correct.
2) Main Central Thrust (MCT)	Between the Greater Himalayas and Lesser Himalayas	Hence, Pair 2 is incorrect.
3) Main Boundary Thrust (MBT)	Between the Lesser Himalayas and Shiwalik Himalayas	Hence, Pair 3 is incorrect.



Source: <http://reports.ias.ac.in/report/18600/structural-analysis-of-main-boundary-thrust-and-himalayan-frontal-thrust-around-dehra-dun-nw-himalaya-implications-of-neotectonics>

Q.37) Consider the following statements regarding the various rocks systems of India:

1. Archean rocks are only found in the Aravalli Mountains.
2. Papaghani series is related to the Cuddapah system of rocks.
3. Vindhyan rocks are largely devoid of metalliferous minerals.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

India's geographical land area can be classified into: Archaean System, Dharwar System, Cuddapah System, Vindhyan System, Gondwana System, Deccan Trap, Tertiary System and Quaternary System.

Statement 1 is incorrect: Archean rocks, also known as Pre-Cambrian rocks are the oldest rocks of the earth's crust. This period marks the development of first photosynthesis, the life support atmosphere. **The Archean rocks in India are found in Aravallis mountains, 2/3rd of the Deccan peninsula and some parts of north east. So, it is not limited to only Aravallis region.** These rocks have abundant metallic and non-metallic minerals such as iron, copper, manganese, bauxite, lead, zinc, gold, silver, tin, tungsten, mica, asbestos, graphite etc.

Statement 2 is correct: Cuddapah System rocks have been formed as a result of erosion and sedimentation of the rocks of Dharwar system, these are also sedimentary rocks. The rocks have been named after the district of Cuddapah in Andhra Pradesh where these are semi-circular in expansion. These are famous for sandstone, limestone, quartzite, slate, marble and asbestos. The Cuddapah rocks are also found in Rajasthan, Chhattisgarh, Delhi and the lesser Himalayas. **One of the important series of Cuddapah System is Papaghani series**, named after the river of same name in Andhra Pradesh.

Statement 3 is correct: Vindhyan System have been formed after the cuddapah rocks by the deposition of silt of river valleys and shallow oceans, these rocks are also sedimentary rocks. The rocks are largely **devoid of metalliferous minerals**, but provides large quantities of durable stones, ornamental stones, limestone, pure glass making sand etc. This system rocks are extensively distributed in India from Chittorgarh (Rajasthan) to Sasaram (Bihar). These rocks are found in the Vindhyas, e.g. the Malwa plateau, the Semari range in the Son valley, Bundelkhand etc. **This rock system is famous for house-building rocks.** The Sanchi Stupa, the Red Fort, the Jama Masjid etc are built with the red sandstone of this structure.

Q.38) With reference to the Western Himalayas, consider the following statements:

1. All the three ranges (Greater, Lesser and Shiwalik) of Himalayas are found in this region.
2. The Shiwalik Himalayas is locally known as Nagtibha in Uttarakhand.
3. Bhotiya is a tribe which lives in the upper reaches of Himalayas.
4. Marg are the summer grasslands found on the slopes of Lesser Himalayas.

Which of the statements given above are correct?

- a) 2 and 3 only
- b) 1, 3 and 4 only
- c) 2, 3, and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

Western Himalayas lies approximately between the Indus in the west and the Kali River in the east (880 km). These Himalayas spread across three states of Jammu and Kashmir, Himachal Pradesh and Uttarakhand.

Statement 1 is correct: All the three ranges of Himalayas are prominent in the region of Himachal and Uttarakhand Himalayas. These are the Great Himalayan range, the Lesser Himalayas and the Shiwalik range from the North to the South.

Statement 2 is incorrect: The Lesser Himalayas is locally known as Dhaoladhar in Himachal Pradesh and Nagtibha in Uttarakhand (Not Shiwalik Himalayas).

Statement 3 is correct: Bhotiyas are people of presumed Tibetan heritage that live along the Indo-Tibetan border in the upper reaches of the Great Himalayas. They were primarily traders and involved in the Indo-Tibetan trade. But when the trade stopped after 1962 due to Indo-China war, they were left without any job. The government later on recognised the tribe as Scheduled Tribe and offered them benefits in education and service industry.

Statement 4 is correct: Bahaks/Margs are the summer grasslands in Jammu and Kashmir. These are small grasslands on the slopes of Lesser Himalayan range. Whereas 'Bogyals' are the summer grasslands of Bhotias in the state of Uttarakhand in the higher reaches.

Source: 11th Geography-INDIA: PHYSICAL ENVIRONMENT + Chapter - 8 (STRUCTURE AND PHYSIOGRAPHY)

<https://krishi.icar.gov.in/jspui/bitstream/123456789/18418/1/138-146.pdf>

Q.39) Which of the following statements best describes the difference between the Eastern Ghats and the Western Ghats?

1. Eastern Ghats are comparatively more continuous than Western Ghats.
2. Eastern Ghats have a much higher level of biological diversity than Western Ghats.
3. Eastern Ghats are usually older than the Western Ghats.

Select the correct answer using the code given below:

- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Ghats are two mountain ranges forming the eastern and western edges of the Deccan plateau of peninsular India. The two ranges run roughly parallel to the Bay of Bengal and Arabian Sea coasts, respectively, from which they are separated by strips of fairly level coastal land.

Statement 1 is incorrect: Western Ghats are comparatively higher in elevation and more continuous than the Eastern Ghats. Their average elevation is about 1,500 m with the height increasing from north to south. **Eastern Ghats comprising the discontinuous and low hills** are highly eroded by the rivers such as the Mahanadi, the Godavari, the Krishna, the Kaveri, etc.

Statement 2 is incorrect: Western Ghats has an exceptionally high level of biological diversity and endemism and is recognized as **one of the world's eight 'hottest hotspots' of biological diversity**. The forests of the site include some of the best representatives of non-equatorial tropical evergreen forests anywhere and are home to at least 325 globally threatened flora, fauna, bird, amphibian, reptile and fish species.

Statement 3 is correct: Eastern Ghats are older than the Western Ghats and have a complex geologic history. Eastern Ghats were formed during the breakup of the supercontinent Gondwana 600 - 700 million years ago, while the Western Ghats were formed more recently when the supercontinent Gondwana broke up about 150 million years ago. **The Western Ghats are on average several thousand feet higher than the Eastern Ghats primarily because they are hundreds of millions of years younger.**

Source: 11th Geography-INDIA : PHYSICAL ENVIRONMENT + Chapter - 8 (STRUCTURE AND PHYSIOGRAPHY)

<https://whc.unesco.org/en/list/1342/>

<https://thedialogue.co.in/article/OIEBZjzj7KFv4EPst3cG/eastern-ghats-are-older-and-richer-than-western-ghats-but-less-studied-one>

<http://scstsenvis.nic.in/index3.aspx?sslid=3261&subsublinkid=2487&langid=1&mid=1>

Q.40) With respect to the terms 'Global North' and 'Global South', often seen in the news, consider the following statements:

1. Brandt line is a visual depiction of the North-South divide.
2. India showing Zambia how to convert cotton by-products into clean energy and jobs is an example of South-South cooperation.

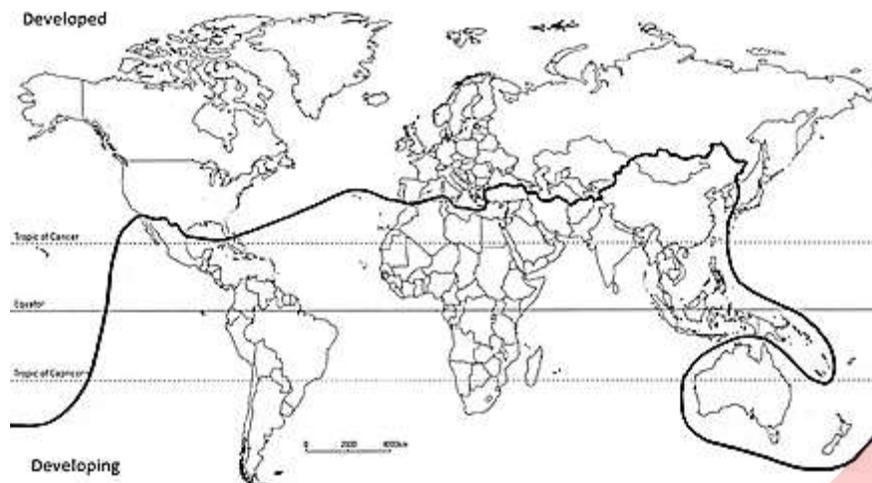
Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: The Brandt line is used to present the North-South divide. This was proposed by former German Chancellor **Willy Brandt in 1980s**.



Statement 2 is correct: South-South Cooperation means **manifestation of solidarity among people and countries of Global South**. Hence, India showing Zambia how to convert cotton by-products into clean energy and jobs is an example of South-South Cooperation. Other examples can be India's developmental assistance to Madagascar, Sri Lanka etc.

Knowledge Base: The United Nations Office for South-South Cooperation promotes and facilitates South-South and triangular cooperation for development on a global and United Nations system-wide basis. The Office is supporting the countries of the Global South to fight the pandemic and its social and economic fallout through cooperation.

Source: <https://unctad.org/news/south-south-cooperation-offers-solutions-solidarity-global-challenges>

<https://www.un.org/en/observances/south-south-cooperation-day>

<https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.bisa.ac.uk%2Farticles%2Fbrandt-line-after-forty-years-more-north-south-relations-change-more-they-stay-same&psig=AOvVaw0yv6AeeOxH1LX2n6BN3LcJ&ust=1674377782022000&source=images&cd=vfe&ved=0CBAQjRxqFwoTCIjzl7ml2PwCFQAAAAAdAAAAABAR>)

Q.41) Which of the following cities are located to the North of Mumbai?

1. Nasik
2. Nagpur
3. Pune
4. Aurangabad

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2 and 4 only

Ans) d

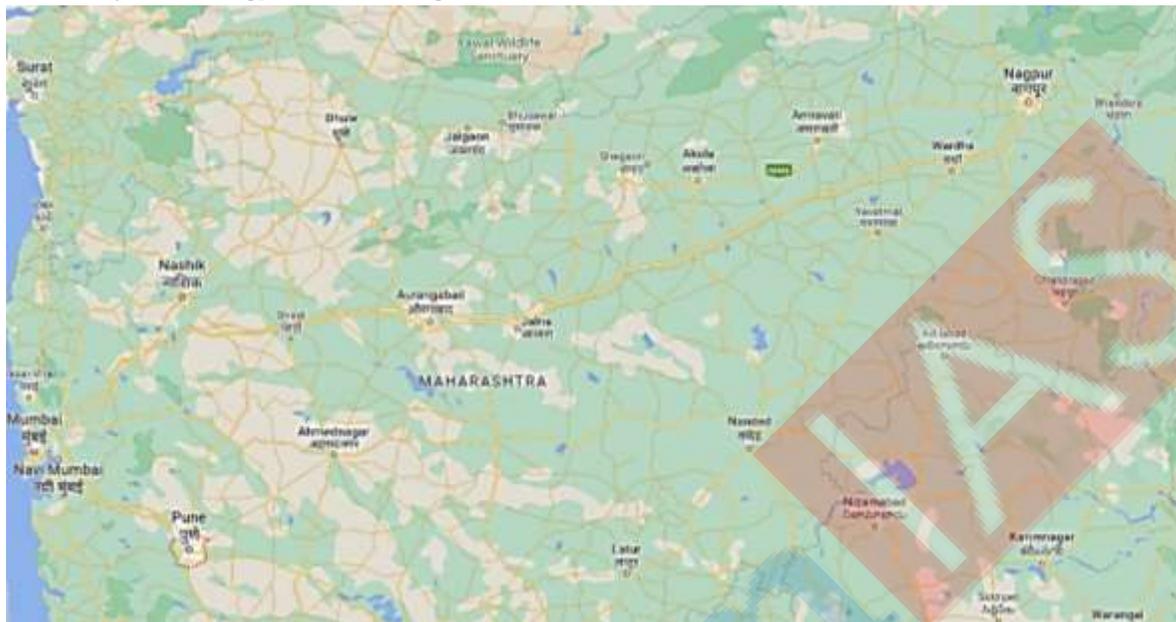
Exp) Option d is the correct answer.

Latitude is the measurement of distance north or south of the Equator. It is measured with 180 imaginary lines that form circles around Earth east-west, parallel to the Equator. Latitude of the followings cities are:

- 1) Mumbai - 19.0760° N
- 2) Nasik- 19.9975° N
- 3) Nagpur- 21.1458° N

- 4) Pune 18.5204° N
5) Aurangabad - 19.8762° N

Thus, only Nasik, Nagpur, and Aurangabad are cities located north of Mumbai.



Source: <https://www.google.com/maps/@18.8057217,79.2618272,7.03z>

Q.42) Consider the following pairs regarding different Mountain Passes:

Name of Passes	Connects
1. Aghil Pass	Ladakh with China
2. Pensi La	Kashmir Valley with Kargil.
3. Mangsha Dhura	Himachal with Ladakh.
4. Bomdila pass	Arunachal Pradesh with Myanmar.

Which of the above pairs are correctly matched?

- a) 1 and 2 only
b) 3 and 4 only
c) 1, 2 and 4 only
d) 1, 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

Name of Passes	Connects	
Aghil Pass	Ladakh region with the Xinjiang Province of China.	Hence, Pair 1 is correct.
Pensi La	Connect Kashmir Valley and Kargil. It is known as the Gateway to Zaskar.	Hence, Pair 2 is correct.

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Mangsha Dhura	Uttarakhand with Tibet. It is used by pilgrims going to Kailash-Manasarovar. (Not Himachal with Ladakh)	Hence, Pair 3 is incorrect.
Bomdila pass	Arunachal Pradesh with Lhasa City (China). Not Arunachal Pradesh with Myanmar	Hence, Pair 4 is incorrect.

Source: DR khullar

Q.43) Which of the following hills/ranges are the part of the Satpura Range?

1. Mahadeo hill
2. Rajpipla hill
3. Maikala range
4. Rajmahal hill

Select the correct answer using the code given below:

- a) 1 and 4 only
- b) 2, 3 and 4 only
- c) 1, 2 and 3 only
- d) 1 and 3 only

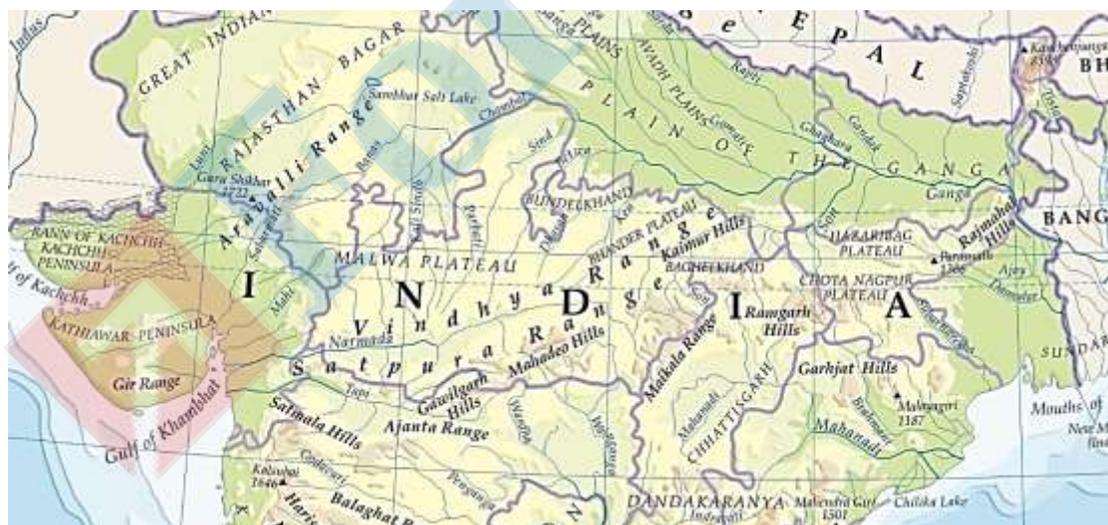
Ans) c

Exp) Option c is the correct answer.

Satpura Range is part of the Deccan plateau. The hills stretch for some 560 miles (900 km) across the widest part of peninsular India, through Maharashtra and Madhya Pradesh. The range forms the watershed between the Narmada (north) and Tapti (south) rivers.

Option 1, 2 and 3 are correct. The Satpura Range includes the **Mahadeo** Hills to the north, the **Maikala** Range to the east, and the **Rajpipla** Hills to the west.

Although it is economically poor, the Satpura Range contains some worked manganese and coal deposits in its south-eastern flanks. It is largely forested, dissected plateau country, and it contains valuable teak stands in the west.



Option 4 is incorrect. The Rajmahal Hills are not part of Satpura range. Rajmahal hills forms the northeastern edge of the Chotanagpur Plateau. These hills are mostly made of basalt and are covered by lava flows {Basaltic Lava}. They run in north-south direction and rise to average elevation of 400 m (highest mount is 567 m). These hills have been dissected into separate plateaus.

Source: DR Khullar chapter 3

Q.44) Duncan Passage is a strait in the Bay of Bengal that separates which of the following two Islands?

- North Andaman and Middle Andaman
- Middle Andaman and Southern Andaman
- Southern Andaman and Little Andaman
- Little Andaman and Car Nicobar

Ans) c

Exp) Option c is the correct answer.

Duncan Passage is about 48 km wide passage which separates **South Andaman** (Rutland Island) in the north from **Little Andaman** in the south. Hence, option c is correct answer.



Knowledge Base:

Duncan passage and Ten degree channel:

The Duncan passage is not similar to ten degree channel. Duncan passage separates two parts of the Andaman Island groups (South and Little Andaman), while the Ten degree channel separates the Andaman and the Nicobar groups.

Source: DR Khullar

Q.45) Consider the following statements regarding 'Carbon Border Tax (CBT)':

- It is a proposed tax or fees to be levied on import items by the European Union based on the quantity of carbon emitted during manufacturing of such products.
- India also imposes similar tax under the PAT (Perform, Achieve and Trade) scheme.
- As per UNCTAD, such a tax will widen income inequality between 'developed' and 'developing' countries.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

India, China, South Africa, Brazil and other countries have opposed the European Union's proposal to levy a Carbon Border Tax (CBT).

Statement 1 is correct: The CBT is a component of European Green Deal which aims to make Europe carbon neutral by 2050. It aims to levy import duty based on the quantity of carbon emitted in manufacturing of such products.

Statement 2 is incorrect: The Perform, Achieve and Trade (PAT) scheme does not provide for a levy of any carbon tax. This scheme aims at establishing a market mechanism to enhance the cost effectiveness through certification of excess energy saving which can be traded.

Statement 3 is correct: UNCTAD estimates that a CBAM at \$44 per tonne will reduce global carbon emissions by not more than 0.1 per cent but will have an adverse distributional impact because it will decrease global real income by \$3.4 billion, with developed countries income rising by \$2.5 billion while developing countries' incomes fall by \$5.9 billion. It may, thus, create more income inequality.

Source: <https://www.downtoearth.org.in/news/climate-change/eu-s-carbon-border-tax-is-it-regressive-and-protectionist-or-an-incentive-for-global-decarbonisation--86681>

Q.46) Which of the following statements regarding the process of formation of Aravalli's is correct?

- a) It is formed as a result of faulting in the ground surface due to endogenetic forces.
- b) It is formed because of gradual sedimentation bordered by two rigid masses.
- c) It is formed by magnetic intrusions and unwarping of crustal surface.
- d) It is formed due to folding of crustal rocks by compression due to endogenetic forces.

Ans) d

Exp) Option d is the correct answer.

The Aravalli's are eroded stub old, folded mountain ranges stretched for a distance of 800 km. from Himmat nagar in Gujarat to Delhi, spanning Haryana, Rajasthan, Gujarat, and Delhi.

Statement a is incorrect. The Block mountains, also known as fault block mountains, are the result of faulting caused by tensile and compressive forces motored by endogenetic forces coming from within the earth.

Statement b is incorrect. The Geosynclines, which are long narrow depressions of water are characterized by gradual sedimentation and generally bordered by two rigid masses which are called forelands.

Statement c is incorrect. The Dome mountains are originated by magnetic intrusions and up warping of the crustal surface Examples, normal domes, lava domes, batholithic domes, laccolithic domes, salt domes etc.

Statement d is correct. The Aravalli mountains are result of denudation and folding of crustal rocks by compressive forces generated by endogenetic forces coming from within the earth. They have now become relict folded mountains.

Source: Savindra Singh Physical Geography (chapter Mountain Building)
GC Leong (chapter-earth crust)

Q.47) Which of the following statements correctly describes Ferrell's Law?

- It describes the movement of cold ocean currents near the coasts providing relief to people.
- It states that any object in the northern hemisphere will deflect to its right due to earth's rotation.
- It describes the interval of the occurrence of La Nina and El Nino in the Indian Ocean.
- It shows the relationship between planet's distance from sun and amount of time it takes to revolve around the sun.

Ans) b

Exp) Option b is the correct answer.

Several laws effect the movement of wind and geographical systems in the planet and solar system. Ferrel's law is one among them.

Option b is correct - According to the Ferrel's Law, If a body moves in any direction on the earth's surface, there is a deflecting force arising from the earth's rotation, which deflects it to the right in the northern hemisphere and to the left in the southern hemisphere. It causes an apparent deflection of the path of an object that moves within a rotating coordinate system.

Source: <https://nios.ac.in/media/documents/316courseE/L-3%20PRESSURE%20AND%20WINDS.pdf>

Q.48) Which of the following are located on/found within Lakshadweep Islands?

- Barren Island
- Narcondam Island
- Baratang Islands
- Dhinodhar Hills

Select the correct answer using the code given below:

- 1, 2 and 3 only
- 2 and 3 only
- 4 only
- None of these

Ans) d

Exp) Option d is the correct answer.

Option 1 is incorrect: Barren Island is in the **Andaman and Nicobar islands**. It is India's only live volcano, erupting once again in 2017.

Option 2 is incorrect: Narcondam Island is classified as a dormant volcano by the Geological Survey of India. The Mountain house second tallest point in the **Andaman and Nicobar Islands**.

Option 3 is incorrect: Baratang Island lies 150 km from **Port Blair** in Andman Islands and has only mud volcano in India.

Option 4 is incorrect: Dhinodhar hills are located at the Kutch district of Gujarat.

Source: <http://www.walkthroughindia.com/offbeat/only-7-extinct-and-active-volcanoes-in-india/#:~:text=Only%20%20Extinct%20and%20Active%20Volcanoes%20in%20India,caves%20and%20mangrove%20forest.%203%20Narcondam%20Island.%20>

Q.49) Consider the following statements with reference to the Anticyclone:

- An anticyclone is an area of high pressure where air moves apart from centre and sinks.
- It typically indicates bad weather with high winds and excessive precipitation.
- The anticyclone compresses air with reducing humidity and leading to fewer clouds within the anticyclone.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: An anticyclone, commonly known as a high, is an area of high pressure where air moves apart from the centre of the anticyclone and sinks. Anticyclones are regions of relatively high pressure on horizontal surfaces, or high geo potential height on isobaric surfaces, around which air circulates clockwise in the Northern Hemisphere and counterclockwise in the Southern Hemisphere.

Statement 2 is incorrect: Anticyclones are often regions of clear skies. It typically indicates fair weather. Winds in an anticyclone blow clockwise in the Northern Hemisphere and counterclockwise in the Southern Hemisphere.

Statement 3 is correct: Air at the centre of an anticyclone is forced away from its area of high pressure and replaced by a downward blast of air from higher altitudes. The air compresses and heats up as it moves downward, reducing its humidity and leading to fewer clouds within the anticyclone. Although not as actively researched as cyclones, anticyclones are important because the clear, dry conditions usually associated with them may allow strong night-time radiates cooling and cold surface temperatures. The convectively stable air of anticyclones may allow air pollutants to concentrate near the Earth's surface.

Source: <https://sciencing.com/weather-occurs-during-high-pressure-system-23025.html>

<https://www.sciencedirect.com/topics/earth-and-planetary-sciences/anticyclone>

Q.50) India time and again demands for restoration of Generalized System of Preferences (GSP) by USA. Consider the following statements regarding GSP:

1. Gaining competitive edge over Bangladesh in exports to US.
2. Increase in export of steel and steel products to the US.
3. Increase in export of all textile and apparel products.

Which of the statements given above is/ are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

GSP is the largest and oldest US trade preference program which promotes economic development by eliminating duties on the eligible products from the designated beneficiary countries. **In 2019, US withdrew GSP preference to India.**

Statement 1 is correct: In 2013, USA had revoked GSP status to Bangladesh on the issue of workers' rights. Restoration of GSP status to India will make Indian exports to US more competitive and helps **India gaining a competitive advantage over Bangladesh.**

Statement 2 is correct: Exporters of Indian steel are likely to get benefitted due to reduced tariff related barriers. This will **increase the export of steel and steel products.**

Statement 3 is incorrect: Certain textile products are excluded from GSP regime and are included in 'dutiable products not eligible for GSP'. Hence, **some of the textile products** shall not benefit irrespective of whether or not India enjoys GSP status.

Source: <https://foreignpolicy.com/2022/04/13/us-india-bangladesh-trade-gsp/>

<https://ustr.gov/issue-areas/trade-development/preference-programs/generalized-system-preferences-gsp/gsp-program-i-0>

<https://www.outlookindia.com/business/indo-us-trade-policy-forum-meet-likely-to-be-held-in-early-2023-news-245635>



Q.1) Which of the following statements are correct regarding the Indo-Brahm River theory of the evolution of the Himalayan rivers?

1. The Indo-Brahm River flowed from Assam to Punjab.
2. As per this theory, initially Yamuna was a tributary of the Indus River.
3. According to this theory, upheavals in the western Himalayas led to dismemberment of the Indo-Brahm River into three subsystems.

Select the correct answer using the code given below:

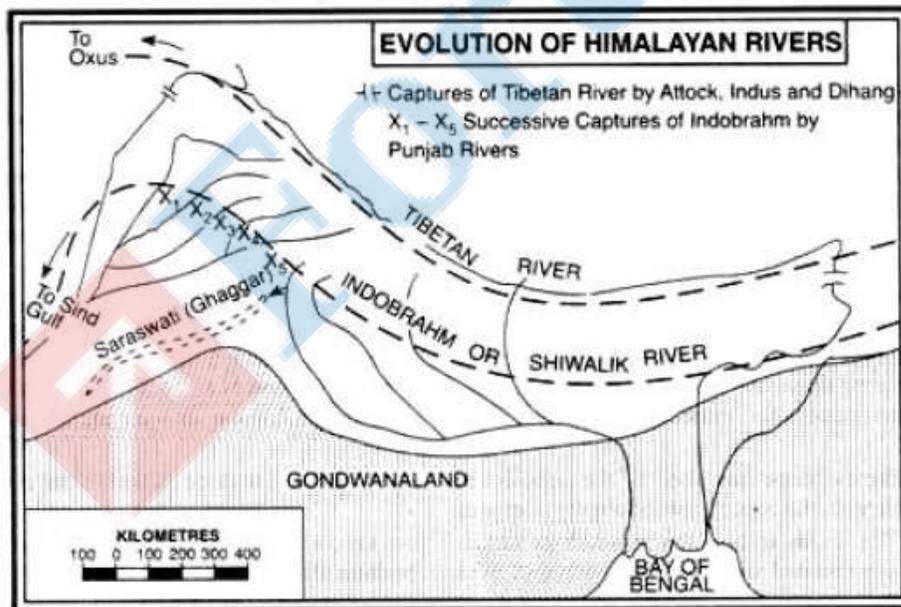
- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Indo-Brahm River theory of evolution of the Himalayan rivers tried to explain complex features of the Himalayan rivers such as the longitudinal **courses** of the Indus, the Satluj and the Brahmaputra. It also explains presence of features like deep **gorges** cut by the rivers across the Himalayas and still **westerly flowing tributaries** in their upper reaches. Some geologists believe that there was a **mighty river named Siwalik or the Indo-Brahma**. It flowed northwest from Assam to Punjab from there, it took a southerly turn to join a gulf.

Statement 1 is correct: As per **Indo-Brahm River theory of evolution of the Himalayan rivers** a mighty river which flowed from Assam to Punjab and even beyond up to the Sind. **In the Eocene Epoch** the river flowed along the foot of the Himalayas first westward and then north-westward as far as north-western Punjab where it turned southward more or less along the course of the modern Indus and **emptied itself into the Arabian Sea**. The river came into being **due to earth movements which took place in the Tertiary period** and is believed to be the **successor of the Himalayan Sea**.



Statement 2 is correct: As per **Indo-Brahm River theory of evolution of the Himalayan rivers** it is supposed that the Yamuna was first a tributary of the Indus. During the **late Pleistocene and early Holocene** ages, it joined with the Sarswati somewhere near Suratgarh and **continued to flow as Ghaggar**

and finally joined the Indus. Later, it changed its course due to **tectonic disturbance along the Aravali axis and became the tributary of Ganga.**

Statement 3 is correct: As per **Indo-Brahm River theory of evolution of the Himalayan rivers**, the mighty **Indo-Brahm River** got dismembered into the following systems and subsystems:

- the Indus and the five tributaries of the Indus in Punjab
- the Gangs and its Himalayan tributaries
- the stretch of the Brahmaputra in Assam and its Himalayan tributaries

The dismemberment was the result of the following two events

- Upheavals in the western Himalayas** including the Potwar Plateau in the Pleistocene age and
- Headward erosion** by the tributaries of the Indo Brahma River.

As a result of the above-mentioned dismemberment of the Indo Brahma River, the Indus and its tributaries, the Gangs and its tributaries and the Brahmaputra and its tributaries came into being.

Source: India a comprehensive geography by D.R. Khullar, Chapter 4

Q.2) Consider the following statements regarding Indian Monsoon:

- During Summer, intense low pressure in the north-western part of the subcontinent helps in the northward shift in the position of the Intertropical Convergence Zone (ITCZ).
- The onset of monsoon in India denotes withdrawal of easterly jet stream from its position over the north Indian plains.
- The retreating southwest monsoon season is marked by a great fall in temperature.

Which of the statements given above is/are correct?

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: In the summer season, During April and May when the sun shines vertically over the Tropic of Cancer, the large landmass in the north of Indian ocean gets intensely heated. **This causes the formation of an intense low pressure in the northwestern part of the subcontinent. Since the pressure in the Indian Ocean in the south of the landmass is high as water gets heated slowly, the low pressure cell attracts the southeast trade winds across the Equator. These conditions help in the northward shift in the position of the ITCZ.** The southwest monsoon may thus, be seen as a continuation of the southeast trade winds deflected towards the Indian subcontinent after crossing the Equator. These winds cross the Equator between 40°E and 60°E longitudes.

Statement 2 is incorrect: **The shift in the position of the ITCZ is also related to the phenomenon of the withdrawal of the westerly jet stream (and not the easterly jet stream) from its position over the north Indian plain, south of the Himalayas.** The easterly jet stream sets in along 15°N latitude only after the western jet stream has withdrawn itself from the region. This easterly jet stream is held responsible for the burst of the monsoon in India.

Statement 3 is incorrect: The months of October and November are known for retreating monsoons. **The retreating southwest monsoon season is marked by clear skies and rise in temperature.** The land is still moist. Owing to the conditions of high temperature and humidity, the weather becomes rather oppressive. This is commonly known as the 'October heat'.

Source: <https://ncert.nic.in/textbook/pdf/kegy104.pdf>

Q.3) With reference to Indian soils, consider the following statements:

1. Laterite soils are rich in Volcanic ash content.
2. Peninsular soils have High content of Iron oxide.
3. Peaty soils have large amounts of organic material.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2, and 3

Ans) c

Exp) Option c is the correct answer.

Indian soils, as in other parts of the world, reflect a combination of factors that have contributed to their formation.

Option 1 is incorrect: India is not situated on an active volcanic belt or in proximity to any significant volcanic activity. The Deccan Plateau, which is a result of volcanic eruptions that occurred millions of years ago, is an exception. **However, the volcanic ash from these eruptions has been mostly weathered and eroded over time, leading to its minimal presence in Indian soils.** In contrast, countries like Japan, Indonesia, and Iceland have higher volcanic ash content in their soils due to their location along active volcanic belts.

Whereas Laterite soils are rich in **bauxite or ferric oxides**. They are very **poor** in lime, magnesia, **potash and nitrogen**.

Option 2 is correct: The **peninsular** region is primarily composed of ancient crystalline rocks such as granites, gneisses, and schists, which are rich in iron and other minerals. **These rocks, over time, have weathered to form soils that are rich in iron oxide.**

Option 3 is correct: Peaty and marshy soils are soils with **large amounts of organic matter** and considerable amounts of soluble salts. **The most humid regions have this type of soil. They are black, heavy and highly acidic.**

Source: Indian Comprehensive Geography by D R Khullar – Chapter-7

Q.4) Which of the following are classified as ‘Minor Forest Produce’ under the Forest Rights Act of 2006?

1. Bamboo
2. Medicinal plants and herbs
3. Tendu or Kendu leaves
4. Sandalwood

Select the correct answer from the code given below:

- a) 1, 2 and 3 only
- b) 1, 2 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) option a is the correct answer.

Minor Forest Produces provide both subsistence and cash income for people who live in or near forests. They form a major portion of their food, fruits, medicines and other consumption items and also provide cash income through sale.

Option 1 is correct: Bamboo was recognized as a Minor Forest Produce way back in 2006, now its selling rights have been given to villages. Bamboo was given the status of a minor forest produce (MFP) in the Forest Rights Act, 2006 (Scheduled Tribes and Traditional Forest Dwellers [Recognition of Forest Rights] Act).

The Indian Forest Act 1927 was amended in 2017 to remove bamboo for the category of trees. As a result, anyone can undertake cultivation on non-forest land without the need of a felling and transit permission.

Option 2 and 3 are correct: Section 2(i) of the said Act defines a Minor Forest Produce (MFP) as all non-timber forest produce of plant origin and includes bamboo, brushwood, stumps, canes, Tusser, cocoon, honey, waxes, Lac, tendu/kendu leaves, medicinal plants and herbs, roots, tuber and the like.

Option 4 is incorrect: Sandal wood is not declared as a minor forest produce under FRA, 2006

Source: <https://trifed.tribal.gov.in/program/non-timber#:~:text=Under%20Forest%20Rights%20Act%2C%202006,roots%2C%20tubers%20and%20the%20like.>

0like.

Q.5) With reference to features of Hoysala temple architecture, consider the following statements:

1. Multiple shrines were constructed around a central pillared hall.
2. The Hoysala temple followed the ground plan of Panchayatan style of temple making.
3. The main building material was soft soapstone.
4. Temple was built on an upraised platform called Jagati.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

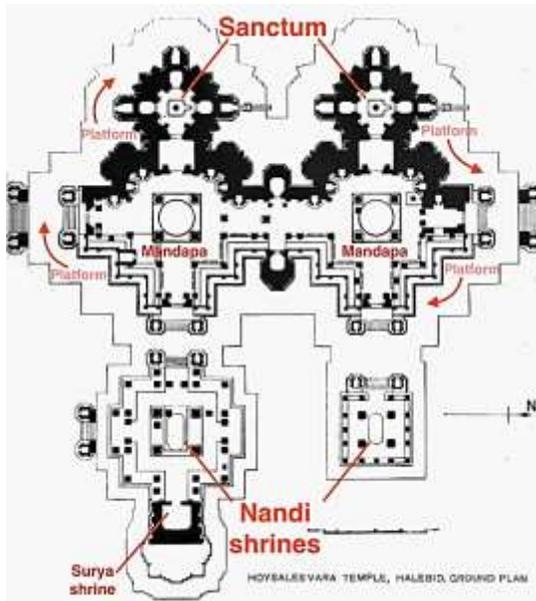
In the region of Karnataka near Mysore, the temples built under the Hoysala rulers developed a distinct style of their own known as the Hoysala School of art. It developed in the period from 1050-1300 A.D with the prominent seats being Belur, Halebid and Sringeri. For example, Chennakesava temple, Somanathapura, Hoyasaleswara temple at Halebid, Vijayanarayana temple at Belur.

Statement 1 is correct: Multiple shrines in Hoysala architecture were built around a central pillared hall.

Statement 2 is incorrect: The Hoysala temple follow Stellate plan. Unlike the crucified ground plan of the Panchayatan style, the shrines led out in the shape of an intricately designed star called Stellate plan.

Statement 3 is correct: soft soapstone or Chlorite schist was the main building material for Hoysala temples.

Statement 4 is correct: The temples were built on an upraised platform known as Jagati. It has around 1 metre height.



Knowledge Base: other features of hoysala temple art are:

- 1) Massive emphasis was laid on the decoration of the temple through sculptures. Both the interior and exterior walls, even the jewellery worn by the deities were intricately carved.
- 2) All the chambers had Shikharas which were interconnected by an arrangement of horizontal lines and mouldings. This resolved the tower into an orderly succession of tiers
- 3) The walls and stairs of the temple followed a zigzag pattern.

Source: Nitin Singhania, chapter 1

Q.6) In the context of recently published Forest (Conservation) Rules 2022, consider the following statements:

1. The rules allow private parties to cultivate plantations and sell them to the companies who need to meet compensatory afforestation targets.
2. The consent of Gram Sabha for diversion of forest land has been made mandatory.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Forest (Conservation) Rules 2022 were recently published by the Ministry of Environment, Forest and Climate Change under the Forest Conservation Act 1980.

Statement 1 is correct: The rules make a provision for private parties to cultivate plantations and sell them as land to companies who need to meet compensatory afforestation targets. Prior to the updated rules, state bodies would forward documents to the FAC (Forest Advisory Committee) that would also include information on the status of whether the forest rights of locals in the area were settled.

Statement 2 is incorrect: The consent of Gram Sabhas is no longer needed for the diversion of land. The new rules state that a project, once approved by the Forest Advisory Committee, will then be passed on to the State authorities who will collect the compensatory fund and land, and process it for final approval.

Previously consent of Gram Sabha, or the governing body in villages in the area, was required to give written consent to the diversion of the forest.

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/national-commission-for-scheduled-tribes-position-on-new-forest-conservation-rules-will-be-same/article66330603.ece>
<https://blog.forumias.com/forest-conservation-rules-2022/>

Q.7) Consider the following pairs of waterfalls and their location:

Waterfall	Location
1. Kunchikal Waterfall	Karnataka
2. Dudhsagar Waterfall	Maharashtra
3. Jog Waterfall	Goa
4. Dhuandhar Waterfall	Madhya Pradesh

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

Ans) b

Exp) Option b is the correct answer.

A waterfall is a point in a river or stream **where water flows over a vertical drop** or a series of steep drops. Waterfalls represent major interruptions in river flow. The Indian River system has some unique and picturesque waterfalls.

Pair 1 is correct: Kunchikal Waterfalls is in the Shimoga district of Karnataka. It is created by the Varahi River. It is India's highest waterfall with a height of 455 meters.

Pair 2 is incorrect: Dudhsagar waterfall is located in Goa (and not in Maharashtra). It gets water from the Mandovi river. This waterfall is also **known as the Sea of Milk**. It is surrounded by dense jungle, high peaks, and the greenery of the Western Ghats. During the Monsoon season, it becomes one of the most famous natural phenomena in Goa.

Pair 3 is incorrect: Jog Waterfall is located in the Shimoga District of Karnataka (and not in Goa). It gets its water from the **Sharavathi River**. It is the **second-highest plunge waterfall in India**. It is associated with the **Linganamakki Dam** across the Sharavati River. Due to its rich ecological surrounding region, Jog Falls is declared as one of the **UNESCO ecological hotspots** in the world. So, pair 3 is incorrectly matched.

Pair 4 is correct: Dhuandhar waterfall is in Jabalpur, Madhya Pradesh. It is formed on Narmada River. When the moonlight falls on the white marble rocks, they take on a silvery appearance. The Ropeway facility provides a magnificent view from the top.

Source: India a comprehensive geography by D.R. Khullar, Chapter 4

Q.8) Consider the following statements regarding ‘Bardosila’:

1. These are the evening thunderstorms of hot weather season in Assam.
2. These showers are useful for tea, jute and rice cultivation.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Due to the apparent northward movement of the Sun temperature start rising from March, toward the end of May a low-pressure trough is developed which extends from the Thar Desert in the northwest to the Chotanagpur plateau in the east. In the eastern and North-Eastern parts of the subcontinent, violent thunderstorms at a speed of about 60 km to 80 km per hour are experienced. Their direction is mainly from the North-West hence they are called the Norwesters.

Statement 1 is correct: The Norwesters occur in the month of Baisakh and thus are locally known as Kalbaisakhi in Bengal and **Bardosila in Assam**. These are the local Storms of Hot Weather Season.

Statement 2 is correct: Apart from its destructive effects of the local storms during hot weather, **they are also useful for the cultivation of tea, jute and rice.**

Source: <https://ncert.nic.in/ncerts/l/kegy104.pdf>

Q.9) Consider the following statements with reference to effects of soil erosion:

1. Soil erosion can cause water pollution in nearby waterbodies.
2. Soil erosion of the top layer reduces the ability for water to infiltrate deeper levels.
3. There is a greater chance of increased soil acidity due to soil erosion.

Which of the above given statements is/are correct?

- a) 1 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: **Soils erosion** from agricultural lands carry pesticides, heavy metals, and fertilizers which are washed into nearby waterbodies like streams and waterways. This **leads to water pollution** and damage to marine and freshwater habitats. Accumulated sediments can also cause clogging of water ways and raises the water level leading to flooding.

Statement 2 is correct: When the soil under the topsoil becomes compacted and stiff, **it reduces the ability for water to infiltrate in the deeper levels, keeping runoff at greater levels.** This further increases the risk of more serious erosion.

Statement 3 is correct: **When the structure of the soil becomes compromised, and organic matter is greatly reduced, there is a higher chance of increased soil acidity,** which will significantly impact the ability for plants and crops to grow.

Source: Indian Comprehensive Geography by D R Khullar – Chapter-7

<https://www.conserve-energy-future.com/causes-effects-solutions-of-soil-erosion.php>

Q.10) For the first time, Indian constitution was translated into which of the following script recently?

- a) Mahajani
- b) Modi
- c) Ol Chiki
- d) Khmer

Ans) c

Exp) Option c is the correct answer.

Recently for the first time Indian Constitution was Translated into Ol Chiki script. It is a script of Santhali language. An assistant professor in the Santali language at the Sidho-Kanho-Birsha University in Purulia, West Bengal, Sripati Tudu started this initiative. He wanted the document to be more accessible and available for a wider group that may not necessarily be familiar with languages in which a translation of the Constitution is available.

Santali (Santhali) was a mainly oral language until the development of Ol Chiki **by Pandit Raghunath Murmu in 1925**. Ol Chiki is alphabetic, sharing none of the syllabic properties of the other Indic scripts, and is now widely used to write Santali in India.

Knowledge Base:

Any Indian national can translate the Constitution in their own language. The department of Official Languages under the Union Ministry of Home Affairs oversees the implementation of the provisions of the Constitution relating to official languages and the provisions of the Official Languages Act, 1963. No permission is needed for translations. The individual also has the right to generate income by selling their translation of the Constitution.

Source: <https://blog.forumias.com/translated-into-ol-chiki-for-first-time-santals-get-to-read-indias-constitution-in-their-own-script/>

Q.11) Which of the following rivers flowing through India, originate outside India?

- 1. Satluj
- 2. Brahmaputra
- 3. Indus
- 4. Yamuna
- 5. Gandak

Select the correct answer using the code given below:

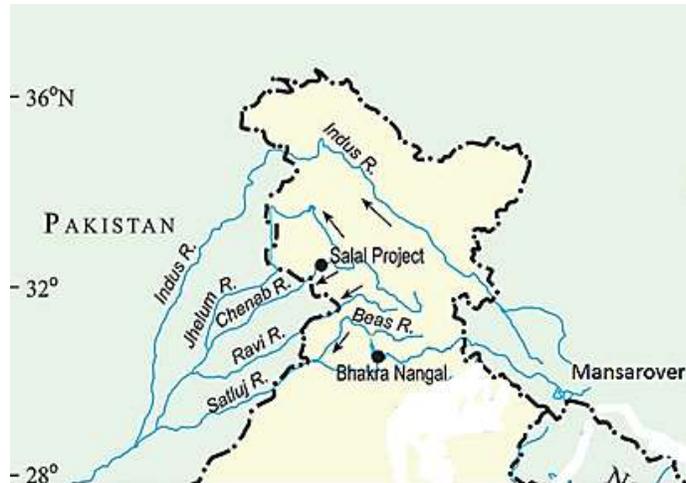
- a) 1, 2 and 4 only
- b) 2, 3 and 4 only
- c) 1, 2, 3 and 5 only
- d) 1, 2, and 5 only

Ans) c

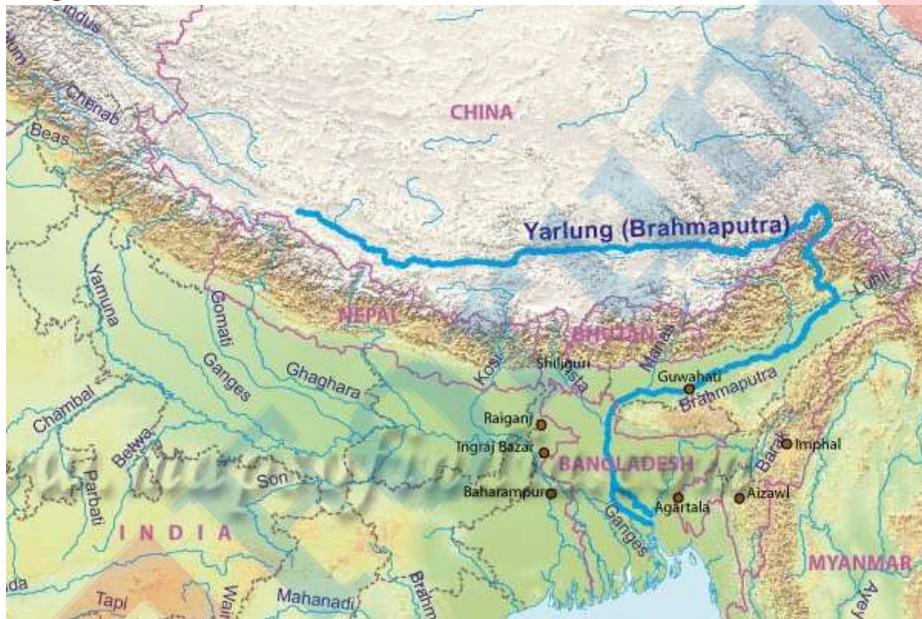
Exp) Option c is the correct answer.

The Himalayas are drained by many rivers. These rivers originate from the **snowy mountains of Himalayas** and flows. Due to **high atmospheric pressure** at Himalayas Mountain **water vapours freeze as ice and in the summer due to heat ice begin melting** as water and it flows from Himalayas to the downwards plain areas as rivers.

Option1 is correct: River Sutlej originates outside India, near Rakastal at Mount Kailash, Tibet plateau. It enters India through Shipki la Pass. The river Sutlej is known as **Langqen Zagbo inside Tibet/China**. The river is the **easternmost tributary of the Indus River**. The Sutlej River usually runs according to a **west to southwest** itinerary moving into India via the **Shipki La Pass** located in Himachal Pradesh.

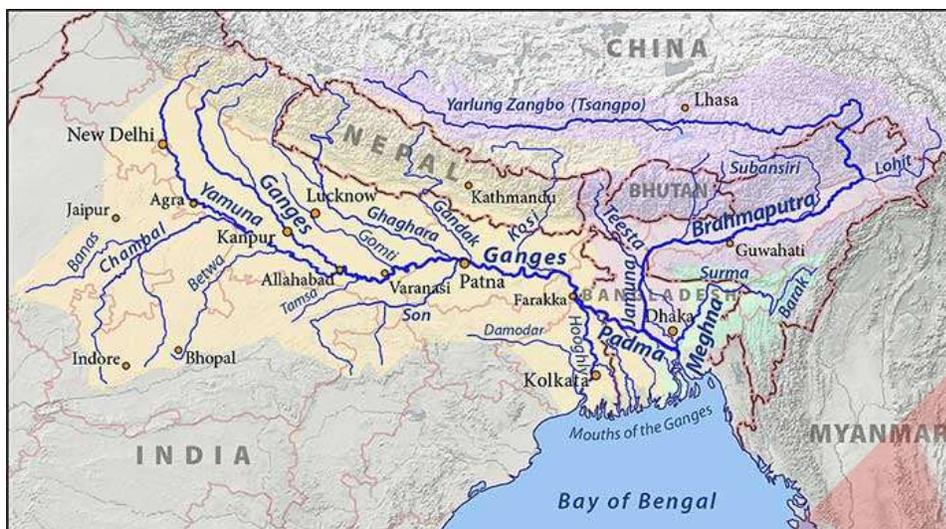


Option 2 is correct: The Brahmaputra is a trans-boundary river which originates from the Kailash ranges of Himalayas. After flowing through Tibet, it enters India through Arunachal Pradesh and flows through Assam and Bangladesh before it joins the Bay of Bengal. It is also known as the Yarlung Tsangpo in Tibet, the Siang/Dihang River in Arunachal Pradesh, Lohit and Brahmaputra in Assam, and Jamuna River in Bangladesh.



Option 3 is correct: The Indus is a transboundary river of Asia and a trans-Himalayan River of South and Central Asia. The Kailash range glaciers at Manasarovar Lake are the source of the Indus River. The Indus River has a length of around 2880 km, of which only 710 km are in the Indian state of Jammu & Kashmir. The Indus River known as Singhi Khamban or Lion's Mouth near its origin.

Option 4 is incorrect: The source of Yamuna lies in the Yamunotri Glacier on the southwestern slopes of Banderpooch peaks, which lie in the Mussoorie range of the Lower Himalayas, north of Haridwar in Uttarakhand. So, option 4 is incorrect.



Statement 5 is correct: Gandak River rises in the glacial of southern Tibet at altitude of 7,620 mt near Tibet Nepal border. Gandak River, also called **Narayani River**, is formed by the union of the Kali and Trisuli rivers. After merging from this junction to the Indian border the river is called the Narayani. **The Gandak River**, is one of the major rivers **left bank tributary of the Ganges** in India. Its total catchment area amounts to 46,300 km², **most of it in Nepal. In the Nepal Himalayas, it is notable for its deep canyon.**
Source: India a comprehensive geography by D.R. Khullar, Chapter 4

Q.12) Consider the following statements regarding the river Sukapaika:

1. It originates in Andhra Pradesh.
2. Recently, National Green Tribunal (NGT) ordered to revive and rejuvenate the river Sukapaika.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Sukapaika river located in Odisha is one of the several **distributaries of the Mahanadi River**. Sukapaika's riverbed has suffered **massive erosion** and the surface of the river is witnessing unusually **high growth of hyacinth**. The river which stopped flowing 70 years ago in Odisha's Cuttack district is set to be rejuvenated now.

Statement 1 is incorrect: **Sukapaika river** is one of the **distributaries of the river Mahanadi**. It originates from Ayathur Village in **Cuttack district of Odisha (and not in Andhra Pradesh)**. It branches away from the Mahanadi at Ayatpur village in Cuttack district and flows for about 40 kilometres before re-joining its parent river at Tarapur in the same district. In the process, it drains a large landmass comprising over hundreds of villages. So, statement 1 is incorrect.

Statement 2 is correct: **The National Green Tribunal (NGT) has directed** the Odisha government **to revive and rejuvenate a dead Sukapaika river in next six months** by earmarking a dedicated fund for the purpose. It is alleged that the river Sukapaika in Cuttack district became dead after its mouth was closed, restricting its free flow in the 1950s. The entire riverbed was **converted into a dumping ground for garbage and solid**

and liquid waste. Some petitioners had moved the tribunal seeking its revival. The Odisha Government has started working on revival plans following a recent direction by NGT.

Source : <https://www.thehindu.com/news/national/other-states/national-green-tribunal-directs-to-revive-sukapaika-river-in-odisha-in-next-six-months/article65958091.ece>

<https://www.thehindu.com/news/national/breathing-life-into-a-dead-river-in-odisha/article66045196.ece>

Q.13) Consider the following statements with reference to the Contour Ploughing:

1. In this practice, ploughing is done perpendicular to the slope.
2. It is helpful in water conservation.
3. It can lead to decreased usage of fertilizer.

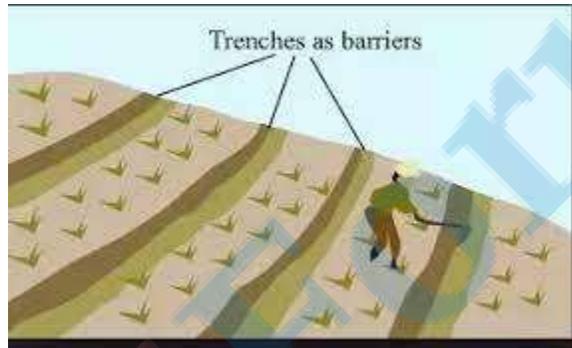
Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Contour ploughing is a farming practice where plowing and/or planting is done across a slope following its elevation contour lines. These contour lines create a water break which reduces the formation of rills and gullies during times of heavy precipitation, allowing more time for the water to settle into the soil. **In contour ploughing, the ruts made by the plow run perpendicular rather than parallel to the slopes, generally furrows that curve around the land and are level.**



Statement 2 is correct: Contour ploughing is a well-established agronomic measure that contributes to soil and water conservation. The soil is ploughed along the contour. This decreases the velocity of runoff and thus soil erosion by concentrating water in the downward furrows. Contour ploughing purposely builds a barrier against rainwater runoff which is collected in the furrows.

Statement 3 is correct: Contour ploughing has been proven to reduce fertilizer loss which would lead to less usage of fertiliser. Because contour cropping reduces fertility loss through erosion and leaching, it reduces the need for fertilizer application. Reduced demand for fertilizer means reduced production costs.

Source: Indian Comprehensive Geography by D R Khullar – Chapter-7

Q.14) Consider the following statements regarding the Cold Weather Season in India:

1. Weak temperate cyclones from the Mediterranean Sea cause rainfall in the north-western parts of India.
2. The cold winds coming from Turkmenistan bring cold wave along with frost and fog over the northwestern parts of India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The climatic conditions of India can best be described in terms of an annual cycle of seasons. The meteorologists recognise the following four seasons : (1) the cold weather season (2) the hot weather season (3) the southwest monsoon season (4) the retreating monsoon season.

Statement 1 is correct: Winter monsoons do not cause rainfall as they move from land to the sea. Key factors for this are- little humidity and anti-cyclonic circulation on land. So, most parts of India do not have rainfall in the winter season. However, there are some exceptions to it such as- in **north-western India, some weak temperate cyclones from the Mediterranean Sea cause rainfall in Punjab, Haryana, Delhi and western Uttar Pradesh. Although the amount is meagre, it is highly beneficial for rabi crops.**

Statement 2 is correct: One of the main reasons for the excessive cold in north India during cold weather season is that the cold winds coming from the **Caspian Sea and Turkmenistan** during February bring cold wave along with **frost and fog over the north-western parts of India.**

Source: <https://ncert.nic.in/textbook/pdf/kegy104.pdf>

Q.15) Consider the following Pairs:

Festivals/Fairs	Description
1. Byanjana Dwadashi	It is a vaishnavite festival celebrating variety of foods.
2. Medaram jatra	It is considered as Asia's largest tribal festival.
3. Minjar Mela	Held in Gujarat, this fair is associated with blooming of Cotton flowers.
4. Jagra fair	In this fair, songs are sung after invoking the deity of Mahasu

How many pairs given above are correctly matched?

- a) One pair only
- b) Two pairs only
- c) Three pairs only
- d) All four pairs

Ans) c

Exp) Option c is the correct answer.

Festivals and fairs form an intrinsic part of Indian culture being an outpouring medium of our beliefs and emotions.

Pair 1 is correct: Byanjana Dwadashi is celebrated by adherents of Vaishnavism sect within Hinduism. The festival celebrates a variety of food (Byanjana in Odia) on the 12th day (Dwadashi) of the Sukla Paksha or waxing phase of the moon. It is to commemorate an episode of the Mahabharata, where Yashoda observes that her son Krishna is pale and weak. She prepares a lot of delicacies and feeds him. Krishna and his friends – the Gopala Balakas or cowherd boys – also eat with him.

Pair 2 is correct: Telangana's Medaram Jatara, considered to be Asia's largest tribal fair celebrated over four days every two years at Medaram village of Mulugu district. It celebrates the valour of Adivasi icons Sammakka and Sarakka, who are considered to be protectors of the community.

Pair 3 is incorrect: Minjar Mela is held in Chamba, Himachal Pradesh. The inflorescence of the maize plant is called Minjar. When flowers bloom on the maize, Minjar Mela is also celebrated and in this fair, tourists from all over the country come from far and wide to take part.

Pair 4 is correct: In Jagra fairs, Bisu songs are sung after invoking the deity of Mahasu. This awakening of Mahasu Devta takes place in Himachal at Shimla, Kinnaur and Sirmaur; simultaneously in Uttarakhand. It is held when the kharif crop ripens in September.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1847058>

<https://www.downtoearth.org.in/news/food/byanjana-dwadashi-how-a-500-year-old-festival-in-odisha-symbolises-community-food-security-and-balanced-diet-81632>

<https://indianexpress.com/article/cities/hyderabad/medaram-jatara-telangana-7776436/>

Q.16) Which of the following trees are the characteristic trees of the Tropical Evergreen forests of India?

1. Mahogany
2. Sandalwood
3. Babul

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1 only

Ans) d

Exp) option d is the correct answer.

Tropical Evergreen forests are one of the most dominant parts of Natural vegetation in India. They flourish in areas that have rainfall of over 200 cm.

Option 1 is correct: Mahogany and Rosewood trees are found in the **tropical evergreen forest**. The tropical evergreen forest is also called tropical rain forest. The Mahogany is a reddish-brown, straight-grained timber possessing 3 tropical hardwood species belonging to the genus Swietenia.

Option 2 is incorrect: Sandalwood is a dry deciduous forest species native to China, India, Indonesia, Australia, and the Philippines.

Option 3 is incorrect: Babul is found in tropical thorn forests predominantly in Rajasthan, south-western Punjab, western Haryana, Kutch and neighboring parts of Saurashtra.

Source: Khullar

Q.17) Consider the following statements regarding various local winds in India:

1. Kali Andhi are violent dust storms occurring in the northwestern parts of the Indo-Gangetic Plains.
2. Loo are the strong, cold and moist winds blowing during the night over the peninsular India.
3. Shamal are the hot and dry winds blowing over the coasts of Tamil Nadu during the summer season.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

Local winds occur on a small spatial scale. They also tend to be short-lived lasting typically several hours to a day. There are many such winds around the world, some of them cold, some warm, some wet, some dry. Few of the popular winds in India and the world are discussed below:

Statement 1 is correct: Black storms, locally called Kali Andhi are violent dust squalls that occur in the late-spring in the northwestern parts of the Indo-Gangetic Plain region of the Indian Subcontinent. They are usually brief, but they can block out the sun, drastically reduce visibility and cause property damage and injuries. They are a common precursor to the arrival of the monsoon in the northern plains. It is quite common in Punjab in the Cholistan and Thar deserts in Pakistan and Rajasthan in India.

Statement 2 is incorrect: A striking feature of the hot weather season is the 'loo'. These are strong, gusty, **hot, dry winds** blowing during the day over the **north and northwestern India**. Sometimes they even continue until late in the evening. Direct exposure to these winds may even prove to be fatal. Dust storms are very common during the month of May in northern India. These storms bring temporary relief as they lower the temperature and may bring light rain and cool breeze.

Statement 3 is incorrect: Shamal are the hot, dry and dusty wind from the north or northwest in Iraq, Iran, and the Arabian Peninsula. In June and July it blows almost continuously, but usually under 50 km (about 30 miles) per hour. The wind causes great dust storms, especially in July, when Baghdad may experience five or more such storms. The shamal is part of a widespread flow toward a low-pressure centre over Pakistan.

Source: <https://www.weatheronline.co.uk/reports/wind/The-Andhi.htm>

https://dbpedia.org/page/Black_storm

<https://ncert.nic.in/textbook/pdf/iess104.pdf>

<https://www.britannica.com/science/shamal>

Q.18) Read the following paragraph about a soil type found in India:

“This soil is formed under conditions of high temperature and heavy rainfall with alternate wet and dry periods. This soil hardens greatly on losing moisture. The continuous stretch of this soil is found on the summits of Western Ghats at 1000 to 1500 m above mean sea level, Eastern Ghats, the Rajmahal Hills, Vindhyan, Satpuras and Malwa Plateau. It lacks fertility due to intensive leaching but when manured and irrigated, it is suitable for growing plantation crops like tea, coffee, rubber, cinchona, coconut and arecanut.”

Which of the following soil types is described in the above paragraph?

- a) Red Soil
- b) Black Soil
- c) Laterite Soil
- d) Alluvial Soil

Ans) c

Exp) option c is the correct answer.

Laterite soils are mostly the **end products of weathering**. They are formed under conditions of **high temperature and heavy rainfall with alternate wet and dry periods**. Heavy rainfall promotes **leaching**

(nutrients get washed away by water) of soil whereby lime and silica are leached away, and soil rich in oxides of iron and Aluminum compounds is left behind. They **harden greatly on losing moisture**. Laterite soils are red in color due to little clay and more gravel of red sandstones. The continuous stretch of laterite soil is found on the summits of Western Ghats at 1000 to 1500 m above mean sea level, Eastern Ghats, the Rajmahal Hills, Vindhyan, Satpuras and Malwa Plateau. They are well developed in south Maharashtra, parts of Karnataka etc. and are widely scattered in other regions. **Laterite soils lack fertility due to intensive leaching**. When manured and irrigated, some laterites are suitable for growing **plantation crops** like tea, coffee, rubber, cinchona, coconut, arecanut, etc. In some areas, these soils support **grazing grounds and scrub forests**.

Source: Khullar

Q.19) The intensity and the amount of Monsoon rainfall in India vary from one region to other. Consider the following statements in this regard:

1. The rain displays a declining trend from west to east over the west coast.
2. The rain increases from the southeast towards the northwest over the North Indian Plain.
3. In Rajasthan, the rainfall decreases from southeast towards the northwest.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

The average annual rainfall in India is about 125 cm, but it has great spatial variations. The monsoon rainfall has a declining trend with increasing distance from the sea. Kolkata receives 119 cm during the southwest monsoon period, Patna 105 cm, Allahabad 76 cm and Delhi 56 cm.

Statement 1 is correct, but Statement 2 is incorrect: The rain which comes in spells, **displays a declining trend from west to east over the west coast, and from the southeast towards the northwest over the North Indian Plain** and the northern part of the Peninsula.

Monsoonal rainfall is largely governed by relief or topography. For instance the windward side of the Western Ghats register a rainfall of over 250 cm. Again, the heavy rainfall in the north-eastern states can be attributed to their hill ranges and the Eastern Himalayas.

Statement 3 is correct: South-eastern districts viz. Pratapgarh, Banswara, Jhalawar, Baran and Sirohi receive highest rainfall over other districts during all the months and seasons in Rajasthan. These districts get the rain when the Bengal branch of the south-west Monsoon current is trapped by the Aravallis.

Source: <https://ncert.nic.in/textbook/pdf/iess104.pdf>

https://imd.pune.gov.in/hydrology/rainfall%20variability%20page/rajasthan_final.pdf

Q.20) “The earlier capital city of this dynasty is believed to be the origin of the world-famous Kohinoor diamond. They built the first monument in the world using lime mortar and granite. They used grey granite materials to build tombs which displayed intricate stone works.”

Which of the following is referred to in the above paragraph?

- a) Qutb Shahi Dynasty
- b) Mamluk Dynasty of Delhi Sultanate
- c) Mughal Dynasty
- d) Bahmani Sultanate

Ans) a

Exp) Option a is the correct answer.

The Qutb Shahi dynasty **also called Golconda Sultanate** ruled the Deccan region in South India. **After the collapse of the Bahmani Sultanate, the Qutb Shahi dynasty** was established in 1512 AD by Sultan-Quli Qutb-ul-Mulk. The dynasty came to an **end in 1687 AD** when the Mughal ruler **Aurangzeb annexed Golconda** into the Mughal empire.

Option a is correct: Qutb Shahi Indo-Islamic architecture includes the **Char Minar, tombs of the Qutb Shahis and Golconda Fort**. Their **capital was Golconda (1519–1591)** and the **origin of the Kohinoor diamond has been traced to Golconda city** in Andhra Pradesh and it was mined from the **Royalaseema diamond mine** when it was under the rule of the **Kakatiya dynasty**.

Charminar is a ceremonial Gateway built by Qutb Shahi rulers in **1591 A.D to celebrate the foundation of Hyderabad** and it was the **first monument in the world constructed using lime mortar and granite**. Qutb Shahi rulers used **Grey granite material for constructing these tombs** and tombs displayed with intricately carved stonework.

Option b is incorrect: The Delhi Sultanate ruled India between **1206 and 1526 with Delhi** as its capital. Their rule saw the development of early Indo-Islamic architecture, the most prominent being the **Qutb Minar complex**, a group of monuments surrounding the **Qutb Minar**.

Option c is incorrect: **The Mughal emperor Shah Jahan** (reign 1628–58 AD). The use of the **double dome and parklike surroundings** were favourite devices of Shah Jahan period architecture. White marble was a favoured building material during his period. He constructed some of the famous monuments in India for instance **Red Fort, TajMahal etc.,**

Option d is incorrect: **The Bahmani Sultanate was founded in 1347 by Ala-ud-Din Bahman Shah**. It later split into five successor states that were collectively known as the Deccan sultanates. **The Gulbarga Fort, Haft Gumbaz, and Jama Masjid in Gulbarga, Bidar Fort and Madrasa Mahmud Gawan** in Bidar are some of their major architectural contributions.

Source: <https://indianexpress.com/article/research/kohinoor-diamond-uk-british-supreme-court-government-golconda-london-2759254/>

<https://timesofindia.indiatimes.com/city/hyderabad/the-worlds-first-lime-mortar-building/articleshow/1890818895.cms>

<https://hyderabad.telangana.gov.in/tourist-place/qutub-shahi-tombs/#:~:text=They%20resemble%20Persian%2C%20Pathan%20and%20Hindu%20architectural%20styles%20that%20makes%20use%20of%20grey%20granite%2C>

Q.21) Which among the following factors determine the climate of India?

1. Distribution of land and water
2. Distance from the sea
3. Latitude
4. Altitude
5. Relief

Select the correct answer using the codes given below:

- a) 1, 2 and 4 only
- b) 3, 4 and 5 only
- c) 1, 2, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

India's climate is controlled by a number of factors. Some of the important factors are discussed here briefly as follows:

Option 1 is correct: Distribution of Land and Water- India is flanked by the Indian Ocean on three sides in the south and girdled by a high and continuous mountain-wall in the north. As compared to the landmass, water heats up or cools down slowly. This differential heating of land and sea creates different air pressure zones in different seasons in and around the Indian subcontinent. Difference in air pressure causes reversal in the direction of monsoon winds.

Option 2 is correct: Distance from the Sea- With a long coastline, large coastal areas have an equable climate. Areas in the interior of India are far away from the moderating influence of the sea. Such areas have extremes of climate. That is why, the people of Mumbai and the Konkan coast have hardly any idea of extremes of temperature and the seasonal rhythm of weather. On the other hand, the seasonal contrasts in weather at places in the interior of the country such as Delhi, Kanpur and Amritsar affect the entire sphere of life.

Option 3 is correct: Latitude play important role in determining the climate of India. The Tropic of Cancer passes through the central part of India in east-west direction. Thus, northern part of the India lies in sub-tropical and temperate zone and the part lying south of the Tropic of Cancer falls in the tropical zone. The tropical zone being nearer to the equator, experiences high temperatures throughout the year with small daily and annual range. Area north of the Tropic of Cancer being away from the equator, experiences extreme climate with high daily and annual range of temperature.

Option 4 is correct: Altitude- Temperature decreases with height. Due to thin air, places in the mountains are cooler than places on the plains. For example, Agra and Darjiling are located on the same latitude, but temperature of January in Agra is 16°C whereas it is only 4°C in Darjiling.

Option 5 is correct: Relief- The physiography or relief of India also affects the temperature, air pressure, direction and speed of wind and the amount and distribution of rainfall. The windward sides of Western Ghats and Assam receive high rainfall during June-September whereas the southern plateau remains dry due to its leeward situation along the Western Ghats.

Source: <https://ncert.nic.in/textbook/pdf/kegy303.pdf>

<https://ncert.nic.in/textbook/pdf/kegy104.pdf>

Q.22) Which of the following rivers are tributaries of the Brahmaputra River?

1. Kameng
2. Tista
3. Barak
4. Subansiri
5. Manas

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 2, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) c

Exp) Option c is the correct answer.

The Brahmaputra, one of the largest rivers of the world, has its origin in the Chemayungdung glacier of the Kailash range near the Manasarovar Lake. From here, it traverses eastward longitudinally in a dry and flat region of southern Tibet, where it is known as the Tsangpo, which means the purifier. The Rango Tsangpo is the major right-bank tributary of this river in Tibet. It emerges as a turbulent and dynamic river after carving out a deep gorge near Namcha Barwa under the name of Siang or Dihang. It enters India west of

Sadiya town in Arunachal Pradesh. With a total length of 2,900 km the Brahmaputra is one of the longest rivers of the world and passes through Tibet, India and Bangladesh.

Option 1, 2, 4 and 5 are correct: Streams merging with the Brahmaputra from the right are **Subansiri, Kameng, Belsiri, Dhansiri, Nyera Ama, Manas, Sankosh, Champaman, Gangadhar, Raidah, Dharla and Tista**. Those pouring in the main river from the **left are the Dibm, Burhi Dihing, Noa Dihing, Dikhu, Dhansiri and Kalang**. After receiving its **main left bank tributaries Dibang or Sikang and Lohit** it is known as the **Brahmaputra**.

Option 3 is incorrect: The **Barak River** rises from the **Manipur hills, south of Mao in Senapati district of Manipur** at an elevation of 2,331 m. It flows 900 kilometres through the **states of Manipur, Nagaland, Mizoram and Assam** in India. Further it enters Bangladesh and bifurcates into Surma river and Kushiya river which converges again to become Meghna River.



Map: Brahmaputra and its tributaries

Source: India a comprehensive geography by D.R. Khullar, Chapter 4

Q.23) Which among the following soils in India are poor in nitrogen content?

1. Black soil
2. Red and yellow soil
3. Arid soil
4. Laterite soil

Select the correct answer from the codes given below:

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

On the basis of genesis, colour, composition and location, the soils of India have been classified into multiple types. Few of them are discussed below:

Option 1 is correct: Black soil covers most of the Deccan Plateau which includes parts of Maharashtra, Madhya Pradesh, Gujarat, Andhra Pradesh and some parts of Tamil Nadu. In the upper reaches of the Godavari and the Krishna, and the north western part of the Deccan Plateau, the black soil is very deep. These soils are also known as the 'Regur Soil' or the 'Black Cotton Soil'. Chemically, the black soils are rich

in lime, iron, magnesia and alumina. They also contain potash. But **they lack in phosphorous, nitrogen and organic matter.** The colour of the soil ranges from deep black to grey.

Option 2 is correct: Red soil develops on crystalline igneous rocks in areas of low rainfall in the eastern and southern part of the Deccan Plateau. Red loamy soil is found along the piedmont zone of the Western Ghat. Yellow and red soils are also found in parts of Odisha and Chattisgarh and in the southern parts of the middle Ganga plain. The soil develops a reddish colour due to a wide diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form. **These soils are generally poor in nitrogen, phosphorous and humus.**

Option 3 is correct: Arid soils range from red to brown in colour. They are generally sandy in structure and saline in nature. In some areas, the salt content is so high that common salt is obtained by evaporating the saline water. Due to the dry climate, high temperature and accelerated evaporation, they lack moisture and humus. **Nitrogen is insufficient and the phosphate content is normal.**

Option 4 is correct: The laterite soils develop in areas with high temperature and high rainfall. These are the result of intense leaching due to tropical rains. With rain, lime and silica are leached away, and soils rich in iron oxide and aluminium compound are left behind. Humus content of the soil is removed fast by bacteria that thrives well in high temperature. These soils are poor in organic matter, nitrogen, phosphate and calcium, while iron oxide and potash are in excess.

Source: <https://ncert.nic.in/ncerts/l/kegy106.pdf>

<http://viduketha.nsf.gov.lk:8585/slsipr/PR6943/PR6943-130.pdf>

Q.24) Arrange the following eastward flowing rivers of India from North to South.

1. Brahmani
2. Subarnarekha
3. Penner
4. Baitarani
5. Vaigai

Select the correct answer using the code given below:

- a) 2-4-1-3-5
- b) 2-1-4-5-3
- c) 2-1-4-3-5
- d) 1-2-4-3-5

Ans) a

Exp) Option a is the correct answer.

The important eastward flowing rivers of India from North to South are as follows:

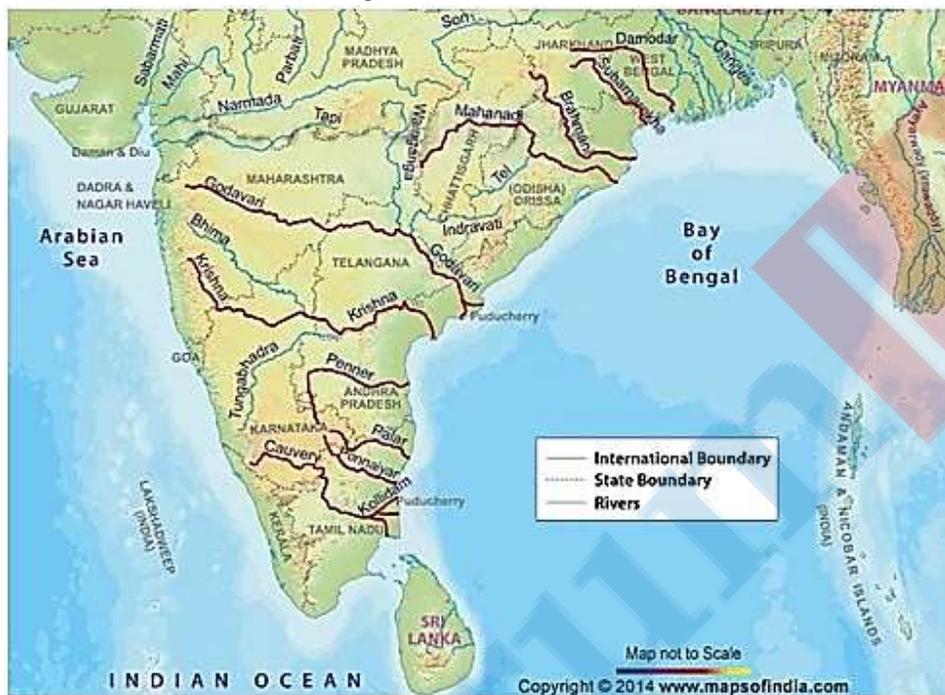
Option 2: The Subarnarekha originates from the **Ranchi Plateau in Jharkhand** forming the boundary between West Bengal and Odisha in its lower course. It joins the Bay of Bengal forming an estuary between the Ganga and Mahanadi deltas. Its total length is 395 km.

Option 4: The Baitarani is one of six major rivers of Odisha. **Venerated in popular epics and legends, the Baitarani River is a source of water for agricultural irrigation.** A major portion of the river basin lies within the state of Odisha, while a small patch of the upper reach lies in **Jharkhand state**. Due to **drainage into the Bay of Bengal**, its water becomes salty as it heads towards the end of the river.

Option 1: The Brahmani is a major seasonal river in the **Odisha state of eastern India**. The Brahmani is formed by the confluence of the Sankh and South Koel rivers **in southern Bihar state**, the Brahmani flows for 480 km. It winds generally south-southeast and then turns east to **join northern branches of the Mahanadi River**, which then empties into the Bay of Bengal.

Option 3: The Pennar (also known as Penna, Pinakini, Pennar, Penner, Penneru, Pennai) is one of the major rivers of the peninsula. The Pennar rises in the **Chennakesava hill of the Nandidurga range, in Chikkaballapura district of Karnataka** and flows towards the east eventually draining into the Bay of Bengal. The river's total length is 597 km.

Option 5: The **Vaigai** originates in **Varusanadu Hills of western Tamil Nadu**. It initially flows northeast through the Kambam and Varushanad valleys. In its central reaches the Vaigai flows eastward into the **Vaigai reservoir at Narasingapuram**. Later it bends to the southeast, passing Madurai on its **course to its mouth on Palk Strait**, which separates the south-eastern coast of India from Sri Lanka.



Map: Important eastward flowing rivers of India



Map: Major rivers of Odisha

Source: India a comprehensive geography by D.R. Khullar, Chapter 4

Q.25) Recently the President of India laid the foundation for a 150 feet bronze statue for Lachit Barphukan in Assam. Which of the following statements are correct regarding Lachit Barphukan?

1. He was a military commander of the Ahom kingdom.
2. He was a contemporary of the Mughal emperor Akbar.
3. Lachit Divas is celebrated in Assam to commemorate the victory of Lachit Barphukan in the battle of Saraighat.

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The Ahom kingdom (1228–1826 AD) was a late mediaeval kingdom in the Brahmaputra Valley in Assam. It maintained its sovereignty for nearly 600 years having successfully resisted Mughal expansion in Northeast India.

Statement 1 is correct: Ahom king Chakradhwaj Singha appointed Lachit Borphukan as commander of the Ahom army in August 1667. **Lachit Barphukan** was known for his leadership in the **Battle of Saraighat**. The Battle of Saraighat was a **naval battle fought in 1671 between the Mughal Empire, and the Ahom Kingdom on the Brahmaputra River** at Saraighat, now in Guwahati, Assam, India.

Statement 2 is incorrect: Lachit Borphukan (1622–72) is not a contemporary of AKbar (1542–1605 AD). However he is a contemporary of Aurangzeb (1618–1707 AD). Borphukan was born on November 24, 1622 and died in 1672 shortly after the battle of Saraighat. **Aurangzeb** sent a large army, under the command of Raja Ram Singh, son of the Amber king Raja Jai Singh, to regain Guwahati. This invasion was successfully thwarted by Ahmos under Borphukan.

Statement 3 is correct: On 24 November each year, Lachit Divas is celebrated statewide in Assam to commemorate the heroism of Lachit Borphukan and the victory of the Assamese army at the Battle of Saraighat in 1671 against Mughals.

Source: <https://indianexpress.com/article/explained/explained-culture/lachit-borphukan-ahom-general-assamese-identity-8285843/>
<https://www.indiatoday.in/india-today-insight/story/why-assam-celebrates-ahom-commander-lachit-borphukan-who-defeated-aurangzeb-s-army-1918732-2022-02-28>

Q.26) Consider the following statements about the Cloud Forest 25 (CF25) initiative, recently seen in the news:

1. It is a proposed initiative between 25 countries having temperate forests.
2. As a part of this initiative, India issued Cloud Forest Bond to ensure the protection of cloud forests.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

A recent study report, **Cloud Forest Assets Financing** a Valuable Nature-Based Solution released by Earth Security, a global nature-based asset management advisory firm has proposed that dedicated financial bonds can help capture economic value of cloud forests in 25 countries. It also suggested that Finance should be mobilised for cloud forest protection through payments schemes targeting 25 developing countries, public finance institutions, private sector.

Statement 1 is incorrect: It is a proposed initiative between 25 cloud forest range countries, i.e., forest ranges that are on top tropical mountains, which are largely covered in mist. These twenty-five countries are Indonesia, Tanzania, Democratic Republic of Congo, Colombia, Peru, Venezuela, Mexico, Papua New Guinea, Brazil, Ethiopia, Ecuador, Cameroon, Bolivia, China, Laos, Kenya, Malaysia, Angola, Uganda, Madagascar, Philippines, Gabon, Vietnam, Republic of Congo and Myanmar.

Statement 2 is incorrect: India did not issue such bond. The report Cloud Forest Assets Financing suggests creation of Cloud Forest Bonds which provide a way for these countries to improve their debt position and create new, long-term income streams from the services provided by nature. The bonds could be in the form of new bond issuances, debt-swaps, or results-based financing instruments, which could be tailored to the circumstances of each country. The bond would also help to ensure the protection of cloud forests, which are not currently protected areas, but should be treated as vital infrastructure.

Knowledge Base:

Cloud Forests are montane rainforests They refer to the vegetation of tropical mountainous regions where there is heavy rainfall and persistent condensation resulting from the cooling of the moisture being pushed upwards by the mountains. They are usually characterized by a persistent, frequent and seasonal low-lying layer of mist and cloud cover usually at the canopy level.

Cloud forest bonds will provide governments with financial actors like philanthropy, public finance and private investment to capture the economic value of the ecosystem services of the cloud forests. Such a tool will encourage carbon storage and provide funding to set up sovereign-level carbon finance schemes as well as payments for ecosystem services. The report proposes to mobilise financing for cloud forest protection through payments schemes under which hydropower projects and other industrial water users benefiting from cloud forests pay for this service.

Source: <https://www.downtoearth.org.in/news/forests/dedicated-financial-bonds-can-help-capture-economic-value-of-cloud-forests-in-25-countries-report-86978>

Q.27) Consider the following statements about the Machchhu river, recently seen in news:

1. It originates from Madla hills in the state of Gujarat.
2. It drains into the Gulf of Khambhat.
3. It flows through Morbi district of Gujarat, which is very famous for ceramic industry.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Recently, a suspension bridge collapsed over the river Machchu, in Gujarat's Morbi district, which killed almost 135 people.

Statement 1 is correct: The Machchhu river originates from Madla hills in the Surendranagar district of Gujarat. The suspension bridge, or Jhulta Pul, was built by the ruler of the princely state of Morbi, Sir Waghji Thakor, in 1877 on this river.

Statement 2 is incorrect: The river flows downstream and ends into the Great Rann of Kachchh and not into the Gulf of Khambat.



Statement 3 is correct: The river originates in the Surendranagar district and then flows through the district of Morbi. The Morbi district is famous for its ceramic industry. Around 70% of India's ceramics are produced in Morbi, and ceramic tiles manufactured here are exported to countries in the Middle East, East Asia, and Africa.

Source: <https://indianexpress.com/article/explained/morbi-tragedy-river-bridge-8240531/>

Q.28) Which among the following can be considered as factors responsible for foggy weather in some parts of India during winter season?

1. Western disturbances
2. High variability in the wind speed
3. Supply of moisture from water bodies like rivers
4. Presence of PM 2.5 (Particulate Matter 2.5) particles in the air

Select the correct answer using the codes given below:

- a) 2 and 3 only
- b) 1, 3 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

'Advective' and 'Radiation', two different forms of fog in India generally form in the sub tropics, around latitude 25°. The former category of fog forms in the coastal areas due to constant moisture feed from the water bodies and the latter forms on a humid night with clear skies, after the passage of a Western Disturbance.

Factors responsible for fog in different regions in India:

Statement 1 is correct: Dense fog in Delhi and North India (from December till the end of January) is the most common feature of the winter season which leads to massive delays and cancellations of flights and trains. **The reason for fog in North India is entirely because of a weather system called Western Disturbance.** A Western Disturbance affecting the hills of Jammu and Kashmir may sometimes lead to a sudden reversal of winds from the normal dry and cool northwesterly to humid easterlies or southeasterlies which could cause widespread fog in the plains of North India.

Statement 2 is incorrect: Light variable or calm winds (speed below 5kmph) do not allow fog to lift and lead to further continuation of fog for a longer duration. Whereas high variability in the wind speed helps in clearing the foggy skies.

Statement 3 is correct: Fog in East India has also been very thick and dense causing major flight and rail delays. However, the reason for fog formation in this part of the country is primarily due to its proximity to water bodies (River Ganga) and slow wind speed.

Statement 4 is correct: Many studies in the past have identified PM2.5 (particulate matter or aerosol particles with a diameter of fewer than 2.5 micrometres) as a major pollutant, responsible for haze and fog formation over Indo-Gangetic plains including Delhi. The recent study explains that complex chemical reactions involving Hydrochloric Acid (HCl), which is directly emitted into the atmosphere from the burning of plastic waste and from a few industrial processes, are primarily responsible for high PM2.5 chloride and the subsequent haze and fog formation over Delhi during chilly winter nights.

Knowledge Base: In the hilly areas of the Northeast, characteristics of fog are completely different from what they are in the plains of East India. The terrain of Northeast India is a mix of everything, from hills and valleys to mountains, which is conducive for trapping fog for longer durations. **Northeast is well known for dense fog throughout the winter season due to persistent flow of moist air from River Brahmaputra.**

Source: <https://www.skymetweather.com/content/weather-news-and-analysis/reasons-behind-formation-of-fog-in-india/>

<https://www.outlookindia.com/national/explained-what-cause-fog-and-haze-in-delhi-in-the-winters-news-246908>

Q.29) Which of the following water bodies/drainage systems has a Centripetal Drainage pattern in India?

- All Streams from Vindhyan range
- Loktak Lake Manipur
- Rivers originating from Amarkantak hills
- Rivers of Indo-Gangetic plains.

Ans) b

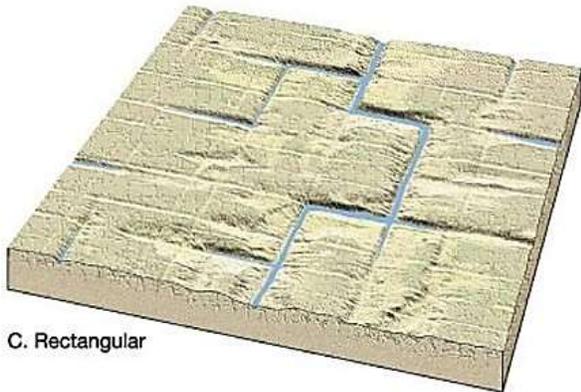
Exp) Option b is the correct answer.

The flow of water through well-defined channels is known as 'drainage' and the network of such channels is called a 'drainage system'. The Drainage pattern refers to the system of flow of surface water mainly through the forms of rivers and basins. It depends upon factors such as slope of land, geological structure, amount of volume of water and velocity of water.

In Centripetal Drainage Pattern, the streams converge from all sides in the low-lying basins, wherein, stream flows towards a central depression. It is similar to the radial drainage system, with the only exception that radial drainage flows out whereas the centripetal drainage flows in. **The Loktak lake in Manipur is a classic example of this type of drainage pattern.**

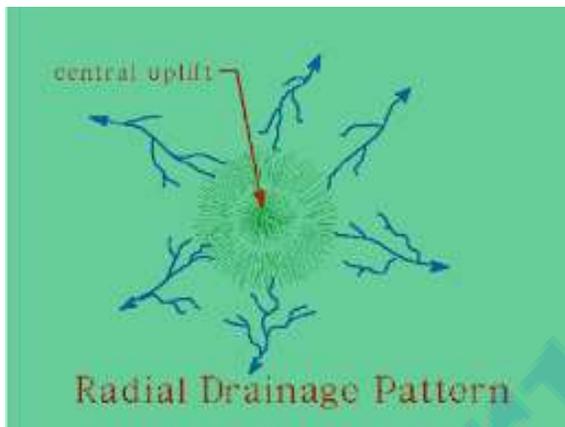
The streams of Ladakh, Tibet, and the Baghmata and its tributaries in Nepal also follow this pattern of drainage

Option a is incorrect: Streams from Vindhyan range follow a rectangular drainage pattern which is prevalent in the faulted area. It grows in a tightly packed rocky ground. The streams choose the path of least resistance and hence congregate in areas with the weakest exposed rock.

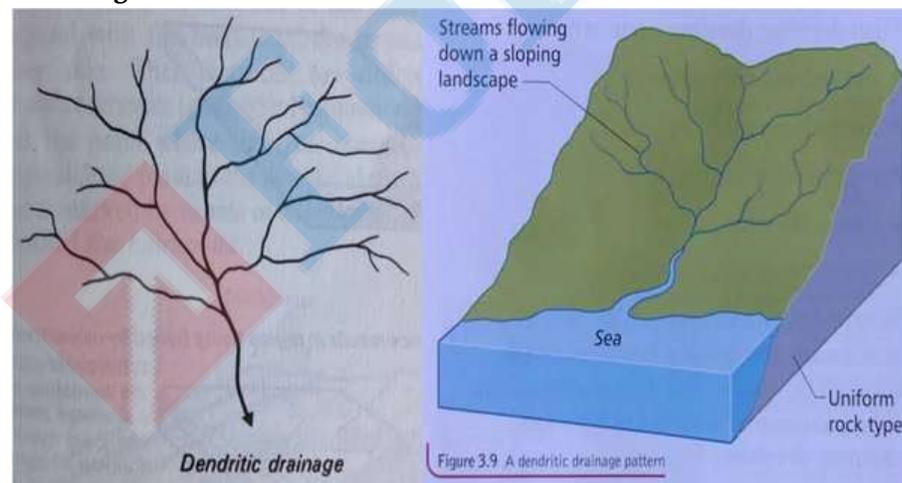


C. Rectangular

Option c is incorrect: Streams originating from the Amarkantak hills such as Narmada, Son and Mahanadi follow Radial drainage pattern. In this, the tributaries from a summit follow the slope downwards and drain down in all directions.



Option d is incorrect: Rivers of Indo-Gangetic plains follow Dendritic drainage pattern. It forms a branching structure similar to tree roots.



Source: NCERT, India-Physical Environment, Class 11, pg. 25

Q.30) With reference to the Mahakaleshwar temple in Madhya Pradesh, consider the following statements:

1. The temple is located on the bank of river Narmada.
2. Kalidasa's work Meghadutam describes this temple.
3. The present-day five-storeyed temple structure was built by Jai Singh I, king of Ajmer.
4. Of the 12 jyotirlinga sites, it is the only site where jyotirlinga faces south.

Which of the statement/s given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 2 and 4 only
- d) 2 only

Ans) c

Exp) Option c is the correct answer.

Recently the Prime Minister Narendra Modi inaugurated the first phase of the **Shri Mahakal Lok corridor in Madhya Pradesh's Ujjain on Tuesday**. After Vishwanath temple in Varanasi and the Kedarnath shrine in Uttarakhand, **Mahakal temple is the third 'jyotirlinga' site to see a major upliftment exercise**

Statement 1 is incorrect: The Mahakaleshwar temple is situated on the side of the river Shipra, tributary of river Chambal. It is located in the ancient city of Ujjain in the state of Madhya Pradesh, India. **Omkareshwar temple is located on the bank of river Narmada.** It is located at Khandwa district in Madhya Pradesh, India.

Statement 2 is correct: The Mahakal temple finds a mention in several ancient Indian poetic texts. In the **early part of the Meghadutam (Purva Megha) composed in the 4th century, Kalidasa** gives a description of the Mahakal temple. **It is described as one with a stone foundation, with the ceiling on wooden pillars.**

Statement 3 is incorrect: The present-day five-storeyed structure was built by the Maratha general Ranoji Shinde in 1734, in the Bhumija, Chalukya and Maratha styles of temple architecture. Jai Singh I (1611 – 1667) were not even alive during this period.

Statement 4 is correct: Of the 12 jyotirlinga sites in India, **Mahakal is the only jyotirlinga facing the south**, while all the others face east. Puranas say that Lord Shiva pierced the world as an endless pillar of light, called the **jyotirlinga (considered a manifestation of Shiva)**. Other important jyotirlinga sites include **Somnath and Nageshwar in Gujarat, Viswanath at Varanasi.**

Source: <https://indianexpress.com/article/explained/explained-culture/mahakal-temple-in-ujjain-why-it-holds-special-significance-in-hinduism-8202228/>
<https://shrimahakaleshwar.com/temple>

Q.31) Consider the following statements regarding the differences between peninsular and Himalayan drainage system:

1. Unlike Peninsular rivers, the Himalayan rivers are mostly perennial with relatively large catchment areas.
2. Compared to Peninsular rivers, the Himalayan rivers generally form larger deltas and have higher erosional activity.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The Indian drainage system consists of a large number of small and big rivers. The rivers originate from the **lofty Himalayan ranges covered with glaciers** are named as the Himalayan rivers and rivers which originate in the **Peninsular Plateau and central highlands** are named as Peninsular rivers.

Statement 1 is correct: The Himalayan rivers have **large basins and catchment areas**. These rivers are perennial in nature meaning water flows throughout the year in these rivers. These rivers receive water **both from the monsoons and snowmelt**. The perennial nature of these rivers makes them **useful for irrigation**. These rivers have relatively **small basins and catchment areas**. The Peninsular rivers receive **water only from rainfall** and water flows in these rivets in the rainy season. Therefore, these rivers are **seasonal or non-perennial**.

Statement 2 is correct: The Himalayan rivers form big deltas at their mouths. The **Ganga, Brahmaputra delta is one of the largest in the world**. These rivers also bring large sediments due to **high erosional activity in the basin**. **Some of the Peninsular rivers, such as the Narmada and the Tapi form estuaries other rivers such as the Mahanadi, the Godavari, the Krishna and the Cauvery form deltas** but several small streams **originating from the Western Ghats** and flowing towards the west enter Arabian Sea without forming any delta. Peninsular rivers flow mostly in graded **valleys** and **have little erosional activity to perform**.

Source: India a comprehensive geography by D.R. Khullar, Chapter 4

Q.32) Which of the following factors can be considered responsible for soil erosion?

1. Mining Operations
2. Over irrigation
3. Overgrazing
4. Lack of Crop Rotation

Select the correct answer using the code given below:

- a) 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Soil erosion is the removal of soil by the forces of nature or man-made causes.

Option 1 is correct: Mining operations often require the clearing of large areas of land to access the resources beneath the surface. **When vegetation is removed, it exposes the soil to the elements, making it more susceptible to erosion.**

Option 2 is correct: Over-irrigation can **increase topsoil erosion** and can cause the contamination of downstream resources due to movements of water-soluble chemicals. Over-irrigation causes **sheet erosion** where the toper of soil gets eroded.

Option 3 is correct: Overgrazing leads to **loosen structure of the soil** and the soil is easily **washed away** by rain and wind. Moreover, soil is pulverized by the hoofs and teeth of animals, especially by sheep and goats and thus proves detrimental to top soil when heavy showers fall on it. Soil erosion due to overgrazing is common **in the Hilly areas** of Himachal Pradesh, Uttarakhand, Jammu and Kashmir and in the dry areas of Rajasthan, Madhya Pradesh, Maharashtra, Karnataka and Andhra Pradesh.

Option 4 is correct: Much of the **soil erosion in India is caused by faulty methods of agriculture**. The most outstanding are wrong ploughing, **lack of crop rotation** and practice of shifting cultivation. If the fields are ploughed along the slope, there is no obstruction to the flow of water and the water washes away the top soil easily.

Source: Indian Comprehensive Geography by D R Khullar – Chapter-7

<https://www.permaculturenews.org/2016/06/15/crop-rotation-a-vital-component-of-organic-farming/>

[http://nwrn.eu/measure/crop-](http://nwrn.eu/measure/crop-rotation#:~:text=Judiciously%20applied%20(i.e.%20selecting%20a,thereby%20reducing%20downstream%20flood%20risk.)

[rotation#:~:text=Judiciously%20applied%20\(i.e.%20selecting%20a,thereby%20reducing%20downstream%20flood%20risk.](http://nwrn.eu/measure/crop-rotation#:~:text=Judiciously%20applied%20(i.e.%20selecting%20a,thereby%20reducing%20downstream%20flood%20risk.)

Q.33) Which of the following options represents the usability (use) of rivers and river water?

1. Provision of various types of sediments and minerals
2. Provision of irrigation and drinking water facility
3. Enables hydroelectricity production
4. Provision of waterways navigation
5. Storage of carbon

Select the correct answer using the code given below:

- a) 1, 2, 3 and 4 only
- b) 2, 3 and 5 only
- c) 1, 2, 3 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

The Rivers of India carry huge volumes of water per year, but it is unevenly distributed both in time and space. During the rainy season, much of the water is wasted in floods and flows down to the sea. We use river waters for a variety of purposes such as **irrigation, hydro-electric production, navigation** etc. **Large quantity of water is supplied to cities and villages for domestic consumption.** A large number of **industries also depend** upon water.

Option 1 is correct: Rivers and streams **transport water and sediment** downslope to lakes and oceans. This **natural processing, which sorts sediments and minerals** according to their physical properties, serves as a mechanism by which **potentially valuable earth deposits are concentrated to a point** where it is **economically feasible to extract them for human use.** These resources may be **metallic as in tin, gold and platinum placer deposits** or nonmetallic such as **deposits of sand and gravel.**

Option 2 is correct: Usability of Rivers Rivers are of great use for us because they comprise a great **source of freshwater for drinking purposes.** In fact, most of our requirements of freshwater are met by rivers. **The largest amount of river water is used for irrigation.** Almost **30 percent of the annual flow** of the Indian rivers is used for irrigation through **canals.**

Option 3 is correct: Large rivers have gem **waterpower potential.** The large rivers of **Himalayas Vindhyas, the Satpura, hills in the northeast, and Western and the Eastern Ghats** offer possibilities of large-scale waterpower development. The Himalayan rivers are mostly **perennial.** They however have issues of area for storage on account of **narrow valleys, high seismicity** of the region and vast alluvial plain with no variation of relief.

Option 4 is correct: The **Gangs and the Brahmaputra** in the north and north-eastern part of the country, the **Mahanadi, the Godavari and the Krishna** and the **lakes and tidal creeks** in coastal states possess some of the important and **useful waterways of the country.** In the past they were of great importance, which suffered a great deal with the advent of rail end roads.

Option 5 is correct: River ecosystems have **tremendous potential to store CO2,** however, with **changing climatic and anthropogenic activities,** these habitats are under threat, and river ecosystems are losing the very vital service of **storing carbon.** Unlike well documented terrestrial biodiversity, the **biodiversity in**

aquatic ecosystems is still unrecognized to some extent. They are also important as they provide **swimming, recreational facilities** to the visitors.

Source: India a comprehensive geography by D.R. Khullar, Chapter 4

<http://www.waterencyclopedia.com/Mi-Oc/Mineral-Resources-from-Fresh-Water.html>

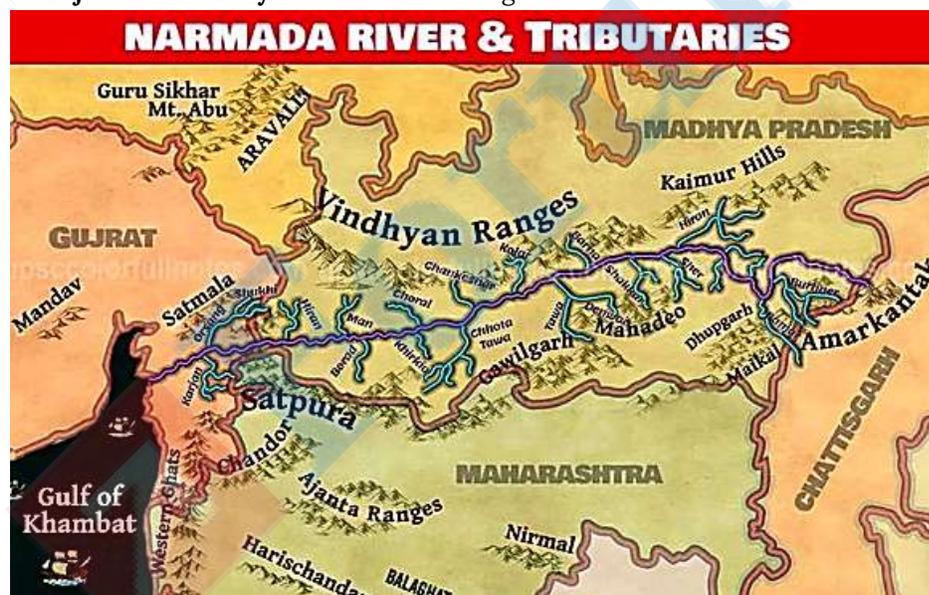
Q.34) Burhner, Banjar, Dudhi, Tawa, and Orsang rivers are tributaries of which of the following rivers?

- Krishna
- Godavari
- Tapi
- Narmada

Ans) d

Exp) Option d is the correct answer.

The Narmada is the largest of all the west-flowing rivers of the Peninsular India. It rises from the western flanks of the Amarkantak plateau in Shahdol district of Madhya Pradesh and flows westwards through a rift valley between the Vindhya Range on the north and the Satpura Range on the south. Its total length from its source in Amarkantak to its estuary in the Gulf of Khambhat is 1,310 km. It flows through Madhya Pradesh, Maharashtra and Gujarat. Tributaries and the main stem river drain the surrounding drainage basin of its surface water and groundwater, leading the water out into an ocean. Burhner, Banjar, Sher, Shakkar, Dudhi, Ganjaland and Tawa are the left bank and the Tendon, the Barn, the Kolar are right bank tributaries of the Narmada River. Sardar Sarovar Dam, Maheshwar Dam, Maan Dam, Indira Sagar Dam, Bargi Dam are important reservoirs on the river. It is also known as the Lifeline of Gujarat and Madhya Pradesh for its huge contribution to the states.



Map: Narmada River Flow

Source: India a comprehensive geography by D.R. Khullar, Chapter 4

Q.35) With reference to freedom fighter Alluri Sitarama Raju, consider the following statements:

- In response to the passage of Forest Act 1882, he initiated a Rampa rebellion against the British.
- He was given a title of Manyam Veerudu in recognition of his multiple victories against British troops.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Prime Minister Narendra Modi unveiled a 30-foot-tall bronze statue of Alluri Sitharama Raju at Bhimavaram in Andhra Pradesh. Alluri Sitharama Raju **born in present-day Andhra Pradesh in 1897 or 1898.**

Statement 1 is correct: The British passed the **Forest Act, 1882** which banned the villagers from practising shifting cultivation and forcing them to raise particular types of crops. **Alluri Seetarama initiated the famous “Rampa Rebellion” or Manyam Rebellion in 1922-1924 against** the British in response to this act.

Statement 2 is correct: During 1924-26, **he fought multiple times with the British troops, always winning against them.** This gave him the title of **Manyam Veerudu or the Hero of Jungle.** The Britishers were focused on capturing and defeating him. He was **captured by the British deployed Assam rifle battalion.**

Source: <https://amritmahotsav.nic.in/unsung-heroes-detail.htm?50>

<https://indianexpress.com/article/explained/explained-who-was-alluri-sitharama-raju-pm-narendra-modi-statue-8007693/>

Q.36) Consider the following statements with reference to the features and characteristics of Mountain Soils:

1. Mountain soils are typically shallow, with a limited depth.
2. Mountain soils usually have a high organic matter content.
3. The nutrient content of mountain soil is always very high.
4. Mountain soils are generally acidic in nature.

Which of the above given statements are correct?

- a) 2, 3 and 4 only
- b) 1, 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Mountain soils are found in mountainous regions and can belong to many known soil types.

Statement 1 is correct: Mountain soils tend to be shallow because they are formed from the weathering of the parent rock material and the accumulation of organic matter on steep slopes. Erosion also plays a significant role in limiting the depth of mountain soils.

Statement 2 is correct: Mountain soils often have a high organic matter content, especially in forested areas, where the accumulation of leaf litter and other plant debris contributes to the formation of humus-rich topsoil layers. The cool temperatures and high moisture content found in many mountain regions can slow down the decomposition of organic matter, leading to a build-up of organic material.

Statement 3 is incorrect: The nutrient content of mountain soils can vary greatly depending on factors such as the parent rock material, the slope, and the vegetation type. In general, nutrient availability tends to be lower in mountain soils due to the combination of steep slopes, high rainfall, and shallow soil depth, which can lead to increased leaching of nutrients and limited nutrient cycling.

Statement 4 is correct: Mountain soils are often acidic due to the weathering of parent rock material, which can release acidic components into the soil. Additionally, the high rainfall in many mountainous regions can lead to the leaching of basic cations, further contributing to soil acidity. The decomposition of organic matter, especially in forested areas, can also produce acidic compounds that contribute to soil acidity.

Source: Indian Comprehensive Geography by D R Khullar – Chapter-7

Q.37) With reference to the Indian geography, which of the following statements best describes the term 'Chos'?

- The high-altitude alpine grasslands in Uttarakhand
- Longitudinal valleys which are formed due to the collision between Eurasian and the Indian plate.
- Shifting sand dunes in eastern part of Marusthali
- Seasonal streams that erode parts of Punjab-Haryana plain adjoining the Shiwalik hills.

Ans) d

Exp) option d is the correct answer.

The southern slopes of Shiwalik range in Punjab and Himachal Pradesh are almost devoid of forest cover. The **northern part of Punjab-Haryana plain adjoining Shiwalik hills has been intensively eroded by numerous seasonal streams called chos.** The soil erosion by these streams has led to enormous gulying in the punjab plains.

Option a is incorrect Bugyals are alpine pasture lands, or meadows, in higher elevation range between 3,300 metres (10,800 ft) and 4,000 metres (13,000 ft) of the Himalayas in the Indian state of Uttarakhand, where they are called "nature's own gardens".

Option b is incorrect: Duns – the duns or duars are the valleys found in the Shiwalik range, these are open valleys between the Shivalik and the higher Himalayan foothills. These duns are longitudinal valleys which are formed due to folding which occurs when the Eurasian and the Indian plate collide with each other

Option c is incorrect: In the Thar Desert, the shifting sand dunes are locally known as Dhrian

Source: <https://www.egyankosh.ac.in/handle/123456789/80893>

Q.38) Increasing salinity has been a major problem of soils in various regions of India. In this context, which of the following practices can help to reduce the salinity levels in the soil?

- Application of Gypsum in upper layers of the soil.
- Adding rice straw and rice husk to the soil.
- Performing Deep tillage

Which of the statements given above is/are correct?

- 2 and 3 only
- 1 and 2 only
- 1 only
- 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Soil salinity is the amount of dissolved salts in the soil solution. The process of accumulating soluble salts in the soil is known as salinization. Salinity becomes a problem when enough salts accumulate in the root zone to negatively affect plant growth. Excess salts in the root zone hinder plant roots from withdrawing water from surrounding soil. This lowers the amount of water available to the plant, regardless of the amount of water actually in the root zone.

Option 1 is correct: liberal application of Gypsum in upper 15 cm thick soil to convert the alkalies into soluble compounds is a method that is predominantly employed to treat Soil Salinity. Gypsum is used to add large amounts Ca^{2+} ions that displace the Na^{+} ions from the exchange sites, and when flushed with clean water both salts and Na are removed from the soil (gypsum is used instead of limestone because of higher solubility and no increase in soil pH).

Option 2 is correct: The organic residues such as rice husks and rice straw can be added to the soil to promote formation of mild acid as a result of their decomposition and hence reduce the soil alkalinity and salinity.

Option 3 is incorrect: Deep tillage should be ignored on saline soils because it increases evaporation and could bring salts from the subsoil to the surface. To treat soil salinity, it is advisable to restrain from deep tillage/heavy machinery so that there is no transfer of soil salts to the root zone area, which induces salinization.

Source: Khullar and <https://eos.com/blog/soil-salinization/>

Q.39) Which among the following climate types is represented by the code 'BWh' as given in the Köppen climate classification?

- Tropical wet
- Subtropical dessert
- Tundra
- Humid subtropical

Ans) b

Exp) Option b is the correct answer.

The most widely used classification of climate is the empirical climate classification scheme developed by V. Koeppen. Koeppen identified a close relationship between the distribution of vegetation and climate. It is an empirical classification based on mean annual and mean monthly temperature and precipitation data. He introduced the use of capital and small letters to designate climatic groups and types. Koeppen's scheme is still popular and in use.

Major climate types according to Koeppen are as follows:

Group	Type	Letter Code	Characteristics
A-Tropical Humid Climate	Tropical wet	Af	No dry season
	Tropical monsoon	Am	Monsoonal, short dry season
	Tropical wet and dry	Aw	Winter dry season
B-Dry Climate	Subtropical steppe	BSh	Low-latitude semi arid or dry
	Subtropical desert	BWh	Low-latitude arid or dry
	Mid-latitude steppe	BSk	Mid-latitude semi arid or dry
	Mid-latitude desert	BWk	Mid-latitude arid or dry
C-Warm temperate (Mid-latitude) Climates	Humid subtropical	Cfa	No dry season, warm summer
	Mediterranean	Cs	Dry hot summer
	Marine west coast	Cfb	No dry season, warm and cool summer
D-Cold Snow-forest Climates	Humid continental	Df	No dry season, severe winter
	Subarctic	Dw	Winter dry and very severe
E-Cold Climates	Tundra	ET	No true summer
	Polar ice cap	EF	Perennial ice
H-Highland	Highland	H	Highland with snow cover

Thus, Hot desert climates are denoted as BWh and are typically found under the subtropical ridge in the lower middle latitudes or the subtropics, often between 20° and 33° north and south latitudes. In these locations, stable descending air and high pressure aloft clear clouds and create hot, arid conditions with intense sunshine.

Source: <https://ncert.nic.in/ncerts/l/kegy212.pdf>

<https://skybrary.aero/articles/hot-desert-climate-bwh>

Q.40) With reference to the United Nations Educational, Scientific and Cultural Organization (UNESCO)'s 2003 Convention for the Safeguarding of the Intangible Cultural Heritage, consider the following statements:

It aims to preserve the underwater archaeological heritage of a nation.

1. Recently India has been elected to the Intergovernmental committee of this convention.
2. This convention is a binding multilateral agreement.

Which of the statement/s given above is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) is a specialised agency of the United Nations aimed at promoting world peace and security through international cooperation in education, arts, sciences and culture.

Statement 1 is incorrect: The aim of UNESCO's 2003 convention is to safeguard the intangible cultural heritage and to ensure respect for the intangible cultural heritage of the communities, groups and individuals concerned and also to provide for international cooperation and assistance. **UNESCO 2001 Convention aims to protect the underwater cultural heritage of a country.**

Statement 2 is correct: India has been elected to the Intergovernmental Committee of UNESCO's 2003 Convention for the Safeguarding of the Intangible Cultural Heritage (ICH) for the 2022-2026 cycle. India has served as a member of the ICH Committee twice – from 2006 to 2010 and from 2014 to 2018.

Statement 3 is correct: The 2003 convention is a binding multilateral agreement. In fact the 2003 Convention is the first binding multilateral instrument for the safeguarding of the intangible cultural heritage of a nation.

Source:

<https://en.unesco.org/underwater-heritage/2001>

<https://indianexpress.com/article/india/india-elected-unesco-panel-intangible-cultural-heritage-8015585/>

<https://ich.unesco.org/en/legislation-00034#:~:text=The%202003%20Convention%2C%20which%20is,the%20cultural%20and%20natural%20heritage.>

Q.41) Consider the following statements about a soil type found in India:

1. The color of this soil has been attributed to the presence of titaniferous magnetite.
2. They have been formed due to solidification of lava spread over large areas during volcanic activity in Deccan Plateau.
3. They are very suitable for the cultivation of cotton.
4. "Self-Ploughing" is a remarkable feature of these soils.

Which of the following soil type has been described by the above statements?

- a) Alluvial Soil
- b) Black Soil
- c) Arid Soil
- d) Red Soil

Ans) b

Exp) Option b is the correct answer.

Black soil is characterized by a thick, dark-colored soil horizon rich in organic matter. The parent material for most of the black soil is the volcanic rocks that were formed in the Deccan Plateau (Deccan and the Rajmahal trap).

- 1) These are the regions of high temperature and low rainfall. It is, therefore, **a soil group typical to the dry and hot regions of the Peninsula.**
- 2) These soils are best suited for cotton crops. Hence these soils are called **regur and black cotton soils.**
- 3) **The black color is due to the presence of a small proportion of titaniferous magnetite or iron and black constituents of the parent rock.**
- 4) The black soil is highly **retentive to moisture.** It swells greatly on accumulating moisture. In the rainy season, the soil gets very sticky and hence ploughing and other agricultural activities demand more effort. But, in summer, as the moisture evaporates the soil shrinks and is seamed with broad and deep cracks. The lower layers can still retain moisture. The cracks permit **oxygenation** of the soil to sufficient depths. Remarkably self-ploughed by loosened particles falling from the ground into the cracks, the soil 'swallows' itself and retains soil moisture.

Source: Khullar

Q.42) Consider the following statements regarding the Soil Alkalinity:

1. It occurs when the pH value of the soils declines below 6.
2. In general, it results in a reduction of agricultural productivity.
3. Salt tolerant crops cannot be grown on alkaline soils.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1 and 2 only

Ans) a

Exp) option a is the correct answer.

Statement 1 is incorrect: Alkaline soil is referred to by some gardeners as “sweet soil.” The pH level of alkaline soil is above 7, and it usually contains a great deal of sodium, calcium, and magnesium. Since alkaline soil is less soluble than acidic or neutral soil, availability of nutrients is often limited. It is due to this that stunted growth and nutrient deficiency are common.

Statement 2 is correct: As a result of soil alkalinity, **soil fertility is reduced.** Soil alkalinity or salinity is a condition that results from the accumulation of soluble salts in soil. An excessive accumulation of salts in the soil profile causes a decline in agricultural productivity. Soil salinity affects plants directly through the reduced osmotic potential of the soil solution and the toxicity of specific ions such as boron, chloride, and sodium.

Statement 3 is incorrect: Soil alkalinity limits the choice of crops to only salt tolerant crops. Those crops which are tolerant towards the salt levels in the soil can be grown in alkaline soils.

Source: Khullar, <https://omexcanada.com/blog/soil-ph>

Q.43) Consider the following statements about Alpine Forests in India:

1. In India, they are only found in the Eastern Ghats.
2. Silver fir, and junipers are the common vegetation that can be found in this type of forests.
3. They form more than 20 percent of the total Forest Area in India

Which of the statements given above is/are **incorrect**?

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) c

Exp) option c is the correct answer.

Statement 1 is incorrect: The Alpine forests occur **along the Himalayas at altitudes ranging between 2,900 to 3,500 m or even up-to 3800 m above sea level**, (But the average height of Eastern Ghats is only about 1,822 m) depending upon the location and the variety of species.

Statement 2 is correct: **Silver fir, junipers, pines and birches** are the common trees of these forests. However, they get progressively stunted as they approach the snow-line. Ultimately, through shrubs and scrubs, they merge into the Alpine grasslands. These are used extensively for grazing by nomadic tribes,

Statement 3 is incorrect: They form only 2.1 percent of the Total Forest Area in India.

Source) NCERT

Q.44) Consider the following pairs about the river confluences and the rivers which meet at these points:

River	Rivers
Confluences	
1. Dev Prayag	Alaknanda and Pindar Ganga
2. Vishnu Prayag	Dhaulti Ganga and Vishnu Ganga
3. Karna Prayag	Mandakini and Alaknanda
4. Rudra Prayag	Bhagirathi and Alaknanda

How many of the above pairs are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

Ans) a

Exp) Option a is the correct answer.

The Ganga is the most important river of India both from the point of view of its basin and cultural significance. It rises in the Gangotri glacier near Gaumukh (3,900 m) in the Uttarkashi district of Uttarakhand. Here, it is known as the Bhagirathi. It cuts through the Central and the Lesser Himalayas in narrow gorges.



Pair 1 is incorrect: At Devprayag, the Bhagirathi meets the Alaknanda. It is the last Prayag of the Alaknanda river, from here the confluence of Bhagirathi and Alaknanda is known as Ganga.

Pair 2 is correct: At Vishnu Prayag (also known as Joshimath), Dhauli Ganga and Vishnu Ganga meet. From here the confluence of these two rivers is known as Alaknanda.

Pair 3 is incorrect: At Karna Prayag, Alaknanda meets Pindar river that originates from the Pindar glacier, below the Nanda devi mountain range.

Pair 4 is incorrect: Mandakini meets Alaknanda at Rudra Prayag. The confluence is named after god Shiva, who is also known as Rudra.

Source: India: Physical Environment, Class 11, pg. 25

Q.45) With reference to the freedom fighters who are famously known as Chapekar brothers, consider the following statements:

1. They organised the 'Society for the Removal of Obstacles to the Hindu Religion' to overthrow British.
2. They were hanged by the British for their role in assassinating the British Plague Commissioner of Poona.
3. They were influenced by Tilak's idea of militant nationalism.
4. Tilak mentioned Chaphekar brothers as founders of the revolutionary movement in India.

Which of the statement/s given above is/are correct?

- a) 1, 2 and 3 only
- b) 1, 2 and 4 only
- c) 2, 3 and 4 only
- d) 3 only

Ans) a

Exp) Option a is the correct answer.

The Chapekar brothers, Damodar Hari Chapekar (1869 -1898), Balkrishna Hari Chapekar (1873 - 1899) and Vasudeo Hari Chapekar (1880- 1899) belonged to Maharashtra. and under the influence of Tilak engaged themselves in revolu-tionary activities

Statement 1 is correct: They organised a **society, known as the 'Society for the Removal of Obstacles to the Hindu Religion'**, for imparting **military training** to Indian youth for overthrow-ing the British.

Statement 2 is correct: In 1897 Damodar and Balkrishna attacked and killed Mr Rand, the British Plague Commissioner of Poona. Mr Rand had adopted policies to forcibly evacuate people from Poona during the plague epidemic in 1897. They were hanged for avenging the poor handling of plague in Pune in 1897 by British officers.

Statement 3 is correct: They were influenced by the Tilak's militant nationalism. During the 1890s, Tilak propagated a spirit of militant nationalism, including use of violence, through Ganapati and Shivaji festivals and his journals Kesari and Maharatta. Two of his disciples—the Chapekar brothers, Damodar and Balkrishna—murdered the Plague Commissioner of Poona, Rand.

Statement 4 is incorrect: Lala Lajpat Rai also known as the lion of Punjab mentioned Chapekar brothers as founders of the revolutionary movement in India.

Source: <https://amritmahotsav.nic.in/event-detail.htm?47074>

<https://timesofindia.indiatimes.com/city/pune/forgotten-heroes-will-come-alive-at-chapekar-wada/articleshow/6312610.cms>

Spectrum: The brief history of India - First Phase of Revolutionary Activities (1907-1917) (pg no 287)

Q.46) In India, Tropical Wet Evergreen forests are predominantly found in which of the following regions?

1. Western slopes of Western Ghats
2. Purvanchal Hills
3. Northwestern Rajasthan.
4. Andaman and Nicobar Islands.

Select the correct answer from the code given below:

- a) 1, 2, 3 and 4
- b) 1, 2 and 4 only
- c) 3 and 4 only
- d) 1 and 2 only

Ans) b

Exp) option b is the correct answer.

The tropical evergreen forests usually occur in areas receiving more than 200 cm of rainfall and having a temperature of 15 to 30 degrees Celsius.

Options 1, 2 and 4 are correct : The Tropical Wet Evergreen forests are found along the western side of the Western Ghats (500 to 1370 metres above sea level), some regions in the Purvanchal hills running from Northeast to Southwest direction and in the Andaman and Nicobar Islands.

Option 3 incorrect: Tropical thorn forests are found in arid and semi-arid regions of western Rajasthan. These extend from western Indo -Park border and gradually merge with the dry deciduous mixed forests of the Aravalli hills and the south-eastern plateau.

Source: Khullar

Q.47) This river originates in the Trimbak Plateau of Maharashtra. From its source, it flows eastwards and joined by a large number of tributaries namely Manjra, Penganga, Wardha, Wainganga, Indravati and Pranhita. It flows through Maharashtra, Andhra Pradesh, Telangana, Chhattisgarh and Odisha. It is the largest river system of the Peninsular India.

Which of the following rivers is described in the above paragraph?

- a) Mahanadi
- b) Godavari
- c) Krishna
- d) Kaveri

Ans) b

Exp) Option b is the correct answer.

The Godavari River has one of the largest basin areas of 3,12,812 sq km (9.5% of India) which is larger than even that of the Brahmaputra in Indian territory. The source of this river is in the **Trimbak Plateau of North Sahyadri near Nashik in Maharashtra** which is only 80 km from the shore of the Arabian Sea. 48.6 percent of its basin area lies in **Maharashtra**, 23.8 per cent in **Andhra Pradesh and Telangana**, 20.7 percent in **Madhya Pradesh and Chhattisgarh**, 5.5 per cent in **Odisha** and only 1.4 percent in **Karnataka**. The Godavari is the **largest river system of the Peninsular India** and is next only to the Ganga and the Indus Systems regarding sanctity, utility and is held in **reverence as Vridha Ganga or Dakshin Ganga**. Its total length is **1,465 kilometres**. From its source it flows eastwards in a narrow rocky bed unto Nashik, but the river valley opens out below this point. It has both left and right bank tributaries, but the **left bank tributaries are more in number and larger in size** than the right bank tributaries. The Manjra is the only important right bank tributary. **The Penganga, the Wardha, the Wainganga, the Indravati and the Sabari are important left bank tributaries**. Below Rajahmundry, the river divides itself into two main streams, the **Gautami Godavari on the east and the Vashishta Godavari on the west** and forms a **large delta before it pours into the Bay of Bengal**.

Source: India a comprehensive geography by D.R. Khullar, Chapter 4

Q.48) Consider the following pairs:

Region	Description
1. Khadar	Newer and younger deposits of the flood plains
2. Bhangar	Contains Kankar soil with calcareous deposits.
3. Bhabar	Smaller streams disappear underground here

Which of the pairs given above are correctly matched?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Great Northern Plains is made up of the soils brought down and deposited by the rivers flowing from the Himalayas in the North and the Great Indian plateau in the South. The plains are categorized in different regions based on their features.

Pair 1 is correct. The newer, younger deposits of the flood plains are called **khadar**. They are renewed almost every year and so are fertile, thus, ideal for intensive agriculture.

Pair 2 is correct. **Bhangar** is the largest part of northern plain and is composed of the oldest alluvial soil. They lie above the flood plains and resemble terraces. The soil of this region is locally known as **kankar** and is composed of **calcareous deposits**.

Pair 3 is correct. There is a strip of plain about 10–15 km broad along the outer slopes of the Siwaliks in Punjab, Haryana and Uttar Pradesh. This region is known as '**bhabar**'. This strip of bhabar is made of gravel and coarse sand. The **smaller streams disappear** under ground in the 'bhabar' region during the summer season and their water surfaces again after crossing the bhabar.

Source: <https://www.nios.ac.in/media/documents/316courseE/ch16.pdf>

Q.49) Most of the rivers originating from the Himalayas in Northern India flows towards east and nearly 77% of the drainage is oriented towards the Bay of Bengal. Which of the following is the most appropriate reason for this drainage system?

- The Indian plateau slopes towards eastern side due to upliftment of Delhi ridge.
- The perennial nature of river forces them to take longer course.
- The rivers have many tributaries creating eastward pressure.
- Coriolis force is high around Tropic of Cancer forcing most rivers to deflect rightward.

Ans) a

Exp) Option a is the correct answer.

The Himalayan drainage system has evolved through a long geological history. It mainly includes the Ganga, the Indus and the Brahmaputra River basins which drains into Bay of Bengal. The reason for the same is as follows:

Option a is correct – It is opined that in due course of time Indo- Brahma River was dismembered into three main drainage systems **The dismemberment was probably due to the Pleistocene upheaval in the western Himalayas, including the uplift of the Potwar Plateau (Delhi Ridge), which acted as the water divide between the Indus and Ganga drainage systems.** Likewise, the downthrusting of the Malda gap area between the Rajmahal hills and the Meghalaya plateau during the mid-pleistocene period, diverted the Ganga and the Brahmaputra systems to flow towards the Bay of Bengal

Option b is incorrect – **Although being Perennial is one of the condition but not necessary condition.** The Peninsular rivers like Godavari and Krishna are non-perennial but still drains in Bay of Bengal.

Option c is incorrect – **Both the east and west flowing rivers have tributaries.** For example River Narmada has several tributaries like Tawa, Heran, Banjar, Beda etc. Even Tapi river has tributaries like Purna, Girna etc. Similarly, east flowing rivers also has several tributaries. It is also not the reason for rivers to flow eastward.

Option d is incorrect – **It is not related to the drainage pattern of rivers. Drainage pattern evolves over ages and not due to mere deflection.** Coriolis force is least at equator and increases towards poles. It creates deflection to the right of moving object in Northern Hemisphere whereas the rivers have taken a left course. The option was meant to confuse the aspirant.

Source: India – Physical Environment – The Drainage System

Q.50) Consider the following statements regarding Attukal Pongala festival:

- It is a one-month long festival of Tamil Nadu dedicated to Goddess Bhadrakali.
- During the festival, a large congregation of women can be seen.
- A sacrificial offering known as Kuruthitharpanam is included in this event.

Which of the statements given above are correct?

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Attukal Pongala is a festival that is celebrated by women in Kerala's Thiruvananthapuram.

Statement 1 is incorrect: Celebrated at the Attukal Bhagavathy Temple in Thiruvananthapuram, Kerala, India, Attukal Pongala is a ten-day festival during which millions of women gather on a ninth day and

prepare a spiritual food made of rice in clay or earthen pots and offer it to the goddess of the temple. **This festival is dedicated to Attukal Bhagavathy, also known as Goddess Kannaki or Bhadrakali.**

Statement 2 is correct: Every year, women in large numbers gather at the Attukal Temple to celebrate and offer sweets in earthen pots to Attukal Devi. Interestingly, **it is one of the largest women-gathering festivals that is recorded around the world.**

Statement 3 is correct: Attukal Pongala Mahotsavam begins in the month of Kumbham as per Malayalam calendar. It is celebrated every year and falls in the month of February or March. During the 10-days festivities, **a sacrificial offering known as Kuruthitharpanam is included in the religious event.**

Source: <https://www.firstpost.com/india/attukal-pongala-2022-find-history-significance-and-why-the-festival-is-important-to-women-10377381.html>

<https://www.india-tours.com/fairs-and-festivals/attukal-pongala.html>

Q.1) Consider the following statements with reference to the Particularly Vulnerable Tribal Groups (PVTGs) in India:

1. The classification of certain tribes as PVTGs was first started during the First Five-year Plan.
2. Only those tribes whose population falls below 2500 can be listed as PVTGs.
3. The classification of PVTGs as a separate group was first done on the recommendations of Xaxa committee.

Which of the above given statements is/are **incorrect**?

- a) 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Particularly Vulnerable Tribal Groups (PVTGs) are more vulnerable among the tribal groups. Due to this factor, more developed and assertive tribal groups take a major chunk of the tribal development funds, because of which PVTGs need more funds directed for their development.

Statement 1 is incorrect: In 1975, the Government of India initiated to identify the most vulnerable tribal groups as a separate category called PVTGs and declared 52 such groups. In 1993 an additional 23 groups were added to the category, making it a total of 75 PVTGs.

Statement 2 is incorrect: There is no fixed population number below which only certain tribes would be listed as PVTGs. There are 12 PVTGs having a population above 50,000 and the remaining groups have a population of 1000 or less. The Government of India follows the following criteria for the **identification of PVTGs**.

- 1) Pre-agricultural level of technology
- 2) Low level of literacy
- 3) Economic backwardness
- 4) A declining or stagnant population

Statement 3 is incorrect: In 1973, the Dhebar Commission created Primitive Tribal Groups (PTGs) as a separate category, who are less developed among the tribal groups. In 2006, the Government of India renamed the PTGs as PVTGs.

Xaxa committee was appointed in 2013, under chairmanship of Prof. Virginius Xaxa. The Committee was mandated to examine the socio-economic, educational and health status of tribal communities and recommend appropriate interventional measures to improve the same.

Source : <https://vikaspedia.in/social-welfare/scheduled-tribes-welfare/particularly-vulnerable-tribal-groups>

<https://indianexpress.com/article/explained/state-of-denotified-tribes-house-panel-development-programme-7854312/>

Q.2) Which among the following best defines the term “Gross Reproduction Rate”?

- a) The average number of daughters, a group of women would have if she survived all her childbearing years.
- b) The average number of sons, a group of women would have if she survived all her childbearing years
- c) The average number of children, a group of women would have if she survived all her childbearing years
- d) The number of live births in a year per thousand of the population.

Ans) a

Exp) Option a is the correct answer.

The **gross reproduction rate (GRR)** is the average number of daughters a group of women would have if she survived all of her childbearing years, which is roughly to the age of 45, subject to the age-specific fertility rate and sex ratio at birth throughout that period.

- 1) It is often regarded as the extent to which the generation of daughters replaces the preceding generation of women and so on and so forth.
- 2) If the value is equal to one that indicates that women will replace themselves. If the value is more than one that indicates that the next generation of women will outnumber the current one.
- 3) If the value is less than one that indicates that the next generation of women will be less numerous than the current one.

Source: <https://unstats.un.org/unsd/demographic/products/dyb/DYBNat/NotesNatStatTab03.htm>

Q.3) Consider the following statements regarding the trends of migration as per Migration in India Report 2020-21:

1. Migration rate in rural areas is higher than that of the urban areas.
2. Migration rate of males is higher than the migration rate of female.
3. Intra-state migration is more pronounced than inter-state migration.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Migration is the **movement of people** away from their usual place of residence, across either **internal** (within country) or **international** (across countries) borders. Migration may be interpreted as a spontaneous effort to achieve a **better balance between population and resources**. Migration may be **permanent, temporary or seasonal**. **Migration in India 2020-21** report was released by the **Ministry of Statistics and Programme Implementation (MoSPI)**.

Statement 1 is incorrect: As per **Migration in India report**, the all-India migration rate was 28.9 per cent for July 2020-June 2021, with 26.5 percent migration rate in rural areas and 34.9 percent in urban areas.

Data depicts that the rate of migration is higher in urban areas compared to rural areas. So, statement 1 is incorrect.

Statement 2 is incorrect: As per Migration in India report, **females recorded a higher share of migration rate of 47.9 percent**, with 48 per cent in rural areas and 47.8 per cent in urban areas. The **migration rate for males was seen at 10.7 per cent**, with 5.9 per cent in rural areas and 22.5 per cent in urban areas. Among females, the highest level of migration rate was seen **for marriage**, while males mostly migrated due to **employment related reasons**. So, **statement 2 is incorrect**.

Statement 3 is correct: A significant share of migration took place within the same state. **92.6% of females and 65.6% of males had moved within the same state** while 7.2% of females and 31.4% of males moved to another state. 2.9% of males and 0.2% of females had moved to another country. **Overall, the intra-state migration was 87.5% and inter-state migration was 11.8%.**

Source: Class 11th NCERT Human Geography Chapter: The World Population Distribution, Density and Growth

<https://factly.in/data-plfs-migration-report-indicates-that-more-than-70-in-india-migrate-due-to-marriage/>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1833854>

https://mospi.gov.in/sites/default/files/publication_reports/Migration%20in%20India%202020%20211655182158691_0.pdf

Q.4) Consider the following pairs of population trends and respective shape of pyramids:

Type of Pyramid Population trends

- | | |
|-------------------------|---|
| 1. Expansive pyramid | It represents situation of high fertility and high mortality in an area. |
| 2. Stationary pyramid | It indicates high mortality and very low life expectancy levels in an area. |
| 3. Constrictive pyramid | Exclusively associated with least developed countries. |

How many pairs given above is/are correctly matched?

- Only one pair
- Only two pairs
- All three pairs
- None of the pairs

Ans) a

Exp) Option a is the correct answer.

A population pyramid is popularly known as “age pyramid” or “age and sex pyramid”. It is a graphical representation of age structure or the distribution of population according to various age groups

Pair 1 is correctly matched: Expansive Pyramid: The population pyramid with broad base and with successive decline in the share of population of higher age groups is known as expansive pyramid. This pyramid **represents situation of high fertility, high mortality**, low life expectancy, higher population growth rates and low share of old age persons. It indicates expansion of population. Expansive age pyramids are common for developing countries mainly in Africa and Asia.

Pair 2 is incorrectly matched: Stationary Pyramid: A pyramid is described stationary when the share of population remains constant in different age groups over the period of time. **It represents situation of low fertility, low mortality and high life expectancy.** It indicates slow population growth or stable population. The stationary or near stationary population pyramid displays somewhat equal share of juvenile and adult age groups.

Pair 3 is incorrectly matched: Constrictive Pyramid: A pyramid with a narrow base is called constricted pyramid. It represents low fertility, low mortality, high life expectancy and ageing of population. **It is typically associated with very advanced countries which have a high level of literacy**, easy access to birth control measures and very good health and medical facilities.

Source: Class 11th NCERT Human Geography Chapter: Population Composition

http://wwjmr.com/upload/types-and-significance-of-population-pyramids_1523552342.pdf

Q.5) With reference to 'Southern Ocean', consider the following statements:

1. It is the only ocean that completely encircles the Earth.
2. It has no northern boundary and is fed by water from the other oceans.
3. It is known as 'Global sink' as it plays a vital role in absorbing and storing carbon from the atmosphere.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Southern Ocean, also known as the Antarctic Ocean, is the **fourth-largest ocean on Earth** and surrounds Antarctica. It is the body of water surrounding Antarctica and extending to the **southernmost tip of South America, Africa, and Australia**. It is known for its **strong winds and currents, as well as its cold temperatures and high levels of salinity**. The Southern Ocean is also home to a diverse array of marine life, including penguins, seals, and whales.

Statement 1 is correct: The Southern Ocean is the **only ocean that completely encircles our planet**, uninterrupted by any significant land mass. It comprises the southernmost waters of the world ocean, generally taken to be south of 60° S latitude and encircling Antarctica.



Southern Ocean

Statement 2 is correct: The Southern Ocean has **no clear northern boundary**, as it is **fed by water from the other oceans**. The currents that flow into the Southern Ocean from the other oceans help to mix the water and create the unique oceanography of the Southern Ocean.

Statement 3 is correct: The Southern Ocean is known for its high albedo capacity. **The Southern Ocean is known as the "Global sink"** as it plays a vital role in absorbing and storing carbon from the atmosphere, which helps to mitigate the impacts of climate change.

Source: <https://www.theguardian.com/australia-news/2022/sep/08/the-southern-ocean-absorbs-more-heat-than-any-other-ocean-on-earth-and-the-impacts-will-be-felt-for-generations>

<https://www.nationalgeographic.com/environment/article/theres-a-new-ocean-now-can-you-name-all-five-southern-ocean>

<https://www.sciencedirect.com/topics/earth-and-planetary-sciences/southern-ocean>

Q.6) Which of the following statements are correct regarding the Conurbation?

- a) It is a large urban area that resulted from the merging of originally separate towns or cities.
- b) It is a group of villages which is generally administered by a single authority.
- c) It is a residential area with substandard housing that is overcrowded, unhealthy and socially undesirable.
- d) It is a type of rural settlement which is fragmented into several units physically separated from each other.

Ans) a

Exp) Option a is the correct answer.

A conurbation is a **region comprising a number of metropolises, cities, large towns, and other urban areas.**

Statement a is correct: The term conurbation means a **large area of urban development that resulted from the merging of originally separate towns or cities.** Conurbations have a large **population** and provide **market access, employment opportunities and better social services.** Greater London, Manchester, Chicago and Tokyo are examples of Conurbation.

Statement c is incorrect: A slum is a residential area with substandard housing that is poorly serviced and/or overcrowded, and therefore unhealthy, unsafe, and socially undesirable.

Statement d is incorrect: Hamleted settlements are the settlements fragmented into several units physically separated from each other bearing a common name. These units are locally called panna, para, palli, nagla, dhani, etc. in various parts of the country. This segmentation of a large village is often motivated by social and ethnic factors. Such villages are more frequently found in the middle and lower Ganga plain, Chhattisgarh and lower valleys of the Himalayas.

Knowledge Base: Conurbation is a collection of townships, suburbs, satellite towns, and other areas that connect two or more megacities. It is the **outcome of the coalescence of several expanding towns or urban nuclei.** They are an **element of urban ecology**, as they are functionally intertwined with megacities and large cities.

Source: [https://www.thecivilindia.com/infrastructure/national-capital-region/#:-:text=The%20National%20Capital%20Region%20\(NCR,Haryana%2C%20Uttar%20Pradesh%20and%20Rajasthan.](https://www.thecivilindia.com/infrastructure/national-capital-region/#:-:text=The%20National%20Capital%20Region%20(NCR,Haryana%2C%20Uttar%20Pradesh%20and%20Rajasthan.)

Class 11th NCERT Human Geography Chapter: Human Settlement

Q.7) Athabasca Basin region of Canada, Chu-Sarysu basin in Kazakhstan and McArthur River basin in Canada are well known for their:

- a) uranium deposits
- b) automobile industries
- c) Mica deposits
- d) Food processing industries

Ans) a

Exp) Option a is the correct answer.

Uranium (chemical symbol U) is a naturally occurring radioactive element. Uranium has three primarily naturally occurring isotopes: U-238, U-235 and U-234. Uranium is used in nuclear power generation. Specifically, U-235 can be concentrated in a process called “enrichment,” making it “fissile” and suitable for use in nuclear reactors or weapons. Some important sites of Uranium deposits in the world are discussed below:

- 1) Canada’s Athabasca Basin hosts several of the highest-grade uranium deposits on the planet. Located primarily in the mining friendly jurisdiction of Saskatchewan, the Athabasca Basin covers an area of almost 100,000 square kilometers and hosts the world’s largest producing uranium mine, Cigar Lake.

2) Kazakhstan has 15% of the world's uranium resources and an expanding mining sector. Chu-Sarysu basin/ province of Kazakhstan has more than half the country's known resources.

3) The McArthur River mine is the world's largest high-grade uranium mine located in northern Saskatchewan, Canada. The mine was discovered in 1988 and has been in production since 1999.

Source: <https://www.epa.gov/radiation/radionuclide-basics-uranium>

<https://investorintel.com/energy-oil-gas-uranium/canadas-athabasca-basin-the-worlds-richest-uranium-play/>

<http://large.stanford.edu/courses/2010/ph240/sagatov1/docs/u-kaz.pdf>

<https://www.geologyforinvestors.com/project-review-mcarthur-uranium-saskatchewan-canada/>

Q.8) Which among the following criteria are to be met for a settlement to be qualified as a 'Census Town'?

1. The population must be greater than 10000.
2. Population density has to be greater than 400 persons per sq. Km.
3. At least 75% of the male main working population should be employed in non-agricultural sectors.

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 2 only

Ans) b

Exp) Option b is the correct answer.

A Census town is a settlement that fulfils the criteria of being considered a town for the purposes of census. The criteria for being classified a census town are:

- 1) Population greater than 5000. **(Option 1 is incorrect)**
- 2) Population density greater than 400 persons per sq. Km. **(Option 2 is correct)**
- 3) At least 75% of the male main working population should be employed in non-agricultural sectors. **(Option 3 is correct)**

The number of census towns trebled from 1,362 to 3,894 during 2001-2011, accounting for 30% of the total rise in urban population of the country.

Source: <https://forumias.com/portal/answered-what-is-a-census-town-how-can-it-boost-indias-urbanization-process-discuss/>

file:///C:/Users/thiru/Downloads/ORGI_circular002_2021%20(1).pdf

Q.9) Consider the following statements regarding Global Gender Gap Report 2022:

1. The report was released by the World Economic Forum.
2. As per the report, Iceland has become the first country in the world to have achieved full gender parity.
3. India was ranked among the top ten countries in the report.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The Global Gender Gap index "benchmarks the current state and evolution of gender parity across four key dimensions (Economic Participation and Opportunity, Educational Attainment, Health and Survival,

and Political Empowerment)”. According to the WEF it is the longest-standing index, which tracks progress towards closing these gaps over time since its inception in 2006.

Statement 1 is correct: The Global Gender Gap Report is released by the World Economic Forum (WEF). The 2022 report ranks India at 135 out of 146 countries. In 2021, India was ranked 140 out of 156 countries. North America is the most advanced region in terms of closing the gender gap in 2022. The population-weighted average score for the region is 76.9%, while Europe has the second-highest level of gender parity, currently standing at 76.6%.

Statement 2 is incorrect: According to the World Economic Forum’s Global Gender Gap Report 2022, it will take 132 years to reach gender parity– with only 68% of the gender gap closed. **Though no country has achieved total gender equality, Iceland remains in the number one position with a gender gap score of 90.8 percent.**

Statement 3 is incorrect: World Economic Forum (WEF) **ranked India at 135 out of 146 countries in its Global Gender Gap (GGG) Index for 2022.** India’s overall score has improved from 0.625 (in 2021) to 0.629, which is its seventh-highest score in the last 16 years.

Source: <https://investinginwomen.asia/knowledge/global-gender-gap-report-2022/>

<https://indianexpress.com/article/explained/explained-how-gender-equal-is-india-as-per-the-2022-global-gender-gap-index-8026983/>

<https://www.kiva.org/blog/gender-equality-around-the-world-where-and-when-will-it-be-reached#:~:text=Though%20no%20country%20has%20achieved,of%20women%20in%20the%20workforce.>

<https://www.weforum.org/agenda/2022/07/gender-equal-countries-gender-gap/>

Q.10) With reference to ‘Atlantic Meridional Overturning Circulation (AMOC)’, consider the following statements:

1. It is a large system of ocean current that carry warm water from the tropics into the North Atlantic.
 2. It is driven by the cumulative impact of Coriolis force and high-speed velocity wind in the higher latitudes of northern hemisphere.
 3. It is important for marine biodiversity as it carries nutrients necessary to sustain ocean life.
 4. The phenomenon of global warming is responsible for increasing speed of the circulation in recent years.
- Which of the statements given above is/are correct?

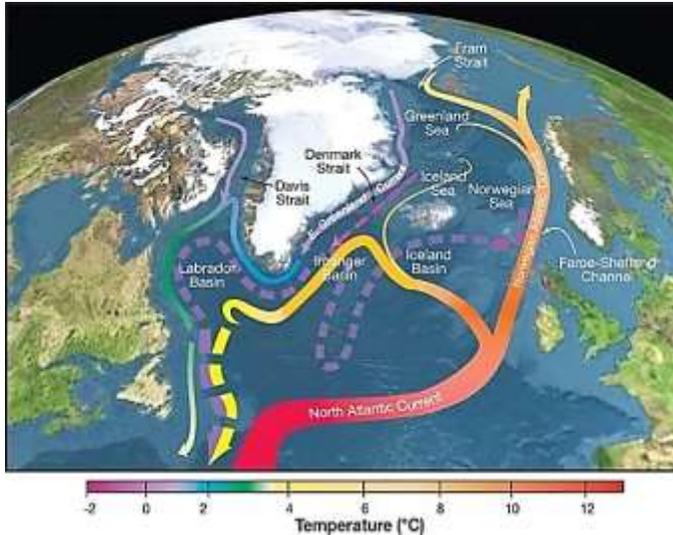
- a) 1 only
- b) 1 and 3 only
- c) 2, 3 and 4 only
- d) 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Recently, new study has suggested a link between **Atlantic Meridional Overturning Circulation (AMOC)** and the Indian Ocean and the rising temperatures in the Indian Ocean can help to boost the AMOC and delay slow down.

Statement 1 is correct: The Atlantic Meridional Overturning Circulation (AMOC) is a **large-scale ocean current system that carries warm water from the tropics northward** and cold water from the polar regions southward. It is an important component of the Earth’s climate system, as it helps to distribute heat around the planet and regulate global temperatures.



Atlantic Meridional Overturning Circulation (AMOC)

Statement 2 is incorrect: Atlantic Meridional Overturning Circulation (AMOC) is driven by **differences in the density of water in the Atlantic Ocean** (not by Coriolis force and high-speed winds), which are caused by differences in temperature and salinity. The warm water in the tropics is less dense than the cold water in the polar regions, so it sinks and flows northward. This creates a circulation pattern where warm water is transported northward and cold water is transported southward. This circulation pattern helps to distribute heat and regulate global temperatures.

Statement 3 is correct: Atlantic Meridional Overturning Circulation is important for marine biodiversity as it **helps to distribute nutrients throughout the ocean**, which are necessary to sustain marine life. The AMOC helps to **bring deep, nutrient-rich water to the surface, which can support the growth of phytoplankton and other marine organisms**. These organisms form the base of the marine food web, providing food for larger animals such as fish and whales. Additionally, the AMOC helps to regulate the ocean's temperature and pH, which can also have an impact on marine biodiversity.

Statement 4 is incorrect: The phenomenon of **global warming is actually thought to be one of the reasons for the decline of the Atlantic Meridional Overturning Circulation (AMOC)** in recent years. The warming of the ocean surface in the North Atlantic can reduce the density of the water, which can slow the circulation of the AMOC. Additionally, the melting of ice in the Arctic and Greenland can also contribute to a decline in the AMOC by adding freshwater to the ocean, which can further reduce the density of the water.

Source: <https://www.metoffice.gov.uk/weather/learn-about/weather/oceans/amoc>

<https://oceanservice.noaa.gov/facts/amoc.html>

<https://indianexpress.com/article/explained/explained-atlantic-ocean-current-system-slowing-implications-7445388/>

Q.11) Arrange the following types of coal in India in an ascending order based on the carbon content in them:

1. Lignite
2. Peat
3. Anthracite
4. Bituminous

Which one of the following options correctly describes the order?

- a) 1-2-3-4
- b) 2-1-3-4
- c) 1-2-4-3
- d) 2-1-4-3

Ans) d

Exp) Option d is the correct answer.

Coal is one of the most important primary fossil fuels, a solid carbon-rich material that is usually brown or black and most often occurs in stratified sedimentary deposits. India is rich in ancient coal fields like Gondwana coalfields (250 million years old) and tertiary coalfields (15–60 million years old).

Coal is found in a variety of forms depending on the degrees of compression and the depth and time of burial.

1) Option 2: Peat has less than 40 per cent carbon content. It is in the first stage of transformation from wood to coal. It has low calorific value and burns like wood.

2) Option 1: Lignite is often brown in colour. It carries 40 to 55 per cent carbon content. It is an intermediate stage which happens during the alteration of woody matter into coal. It has high moisture content, so it gives smoke when burnt. It is found in Rajasthan, Lakhimpur (Assam), and Tamil Nadu.

3) Option 3: Anthracite is the best quality of coal which carries 80 to 95 per cent carbon content. It ignites slowly with a blue flame. It has the highest calorific value. It is found in small quantities in Jammu and Kashmir.

4) Option 4: Bituminous carries 60 to 80 per cent of carbon content and a low level of moisture content. It is widely used and has high calorific value. It is found in Jharkhand, West Bengal, Odisha, Chhattisgarh and Madhya Pradesh.

Thus, the correct sequence of types of coal based on their carbon content is 2-1-4-3.

Source: NCERT- Contemporary India, Class 10

<https://www.indiatoday.in/education-today/gk-current-affairs/story/indian-coal-reserves-classification-of-coal-and-where-it-is-found-in-the-country-1338928-2018-09-13>

Q.12) Which one of the following options correctly describes the term “Demographic Window of opportunity”?

- a) It is a method used to calculate population changes between two consecutive years in a given area.
- b) It is a hypothetical demographic situation, where literacy rate among the country’s population reaches 100 percent.
- c) It is a demographic situation where the proportion of the working-age population is relatively high compared to the dependent population.
- d) It refers to a period, in a nation’s demographic evolution, when the proportion of dependent population is higher than working age population.

Ans) c

Exp) Option c is the correct answer.

Option a is incorrect: Demographic balancing equation is an equation that is used to calculate population changes from one year to the next in a given area, based on number of births, deaths, and migrations. The general form of the equation is a mass balance equation, in which end population = starting population ± natural increase ± net migration, where natural increase = births – deaths, and net migration = immigrants – emigrants.

Option c is correct: The demographic window of opportunity refers to a period of time in a country’s demographic transition where the **proportion of the working-age population is relatively high compared**

to the dependent population (children and the elderly). During this period, there is a potential for rapid economic growth and development, as the working-age population can support a larger number of dependents and there is a higher ratio of productive workers to non-productive dependents.

Source: <https://www.yourarticlelibrary.com/paragraphs/short-paragraph-on-demographic-window/39529>

<https://www.investopedia.com/terms/d/demographic-dividend.asp>

https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Demographic_cycle#:~:text=The%20demographic%20cycle%2C%20or%20population,economic%20history%20of%20industrialized%20countries.

<https://www.investopedia.com/terms/d/demographics.asp>

<https://www.oxfordreference.com/display/10.1093/oi/authority.20110803095709792;jsessionid=85F7D77F39BD82D67CAED12A7345AE43#:~:text=An%20equation%20that%20is%20used,births%2C%20deaths%2C%20and%20migrations.>

<https://www.oxfordreference.com/display/10.1093/oi/authority.20110803095709792;jsessionid=85F7D77F39BD82D67CAED12A7345AE43#:~:text=An%20equation%20that%20is%20used,births%2C%20deaths%2C%20and%20migrations.>

Q.13) Consider the following pairs of minerals and their largest producing state in India (as of 2020-21):

Minerals	Largest Producer
1. Iron Ore	Karnataka
2. Bauxite	Odisha
3. Manganese	Madhya Pradesh

Which of the above given pairs are correctly matched? Which of the above given pairs are correctly matched?

- 1 and 3 only
- 1 and 2 only
- 2 and 3 only
- 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Pair 1 is incorrect: Odisha is the leading producer of iron ore accounting for 51.1% of total production followed by Chhattisgarh (18.0%), Karnataka (16.9%), Jharkhand (10.4%) and remaining (3.32%) production was reported from Andhra Pradesh, Madhya Pradesh, Maharashtra and Rajasthan

Pair 2 is correct: Odisha with 76.3% contribution is the leading producer of bauxite followed by Gujarat (7.3%), Chhattisgarh (3.5%), Jharkhand (7.3%), Madhya Pradesh (3.1%), and Maharashtra (2.3%).

Pair 3 is correct: Madhya Pradesh is the largest producer of Manganese Ore contributing 34.3% in the total output of the country in 2020-21.

Source: https://mines.gov.in/writereaddata/UploadFile/Mines_AR_2021-22_English.pdf

<https://pib.gov.in/PressReleasePage.aspx?PRID=1806555>

Q.14) Consider the following statements with reference to Coffee Cultivation in India:

- Kerala is the largest producer of coffee in India.
- India produces both Arabica and Robusta varieties of coffee.

Which of the above given statements is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Karnataka is the largest coffee-producing state in India. It accounts for about 70% of the total coffee production in India.

Statement 2 is correct: Arabica coffee is cultivated in tropical regions whereas Robusta is the most widely cultivated variety of coffee. Traditionally, India has been a noted producer of Arabica coffee but in the last decade Robusta beans are grown substantially.

Source: <https://yourstory.com/smbstory/dipp-awards-gi-certification-five-varieties-indian-coffee>
<https://ncert.nic.in/ncerts/l/jess104.pdf>

Q.15) With reference to 'Atal Tunnel', consider the following statements:

1. The tunnel runs under the 'Rohtang Pass' situated in Pir Panjal Ranges of the Himalayas.
2. It is constructed by National Highway Authority of India in collaboration with IIT, Roorkee.
3. It connects the cities of Manali in Himachal Pradesh and Leh in the Union Territory of Ladakh.
4. It is India's first tunnel with a fully integrated tunnel control system.

Which of the statements given above are correct:

- a) 1 and 3 only
- b) 2 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

Recently, Atal Tunnel has officially been certified by the World Book of Records as the 'World's Longest Highway Tunnel above 10,000 Feet'.

Statement 1 is correct: Atal Tunnel runs under the 'Rohtang Pass' and shortens the distance between Solang Valley and Sissu by around 46 km. It is present on the Pir Panjal Range of Himalayas.

Statement 2 is incorrect: Atal Tunnel was built by the **Border Roads Organisation (BRO)**, which is an Indian government agency responsible for the **construction and maintenance of roads and bridges in the border areas of India**. The construction of the tunnel began in 2010 and was completed in October 2020, after 10 years of hard work.

Statement 3 is correct: Atal Tunnel connects the **valley of Lahaul-Spiti** in the Indian state of **Himachal Pradesh** with the rest of India. Specifically, it **connects the towns of Manali and Leh**, providing an all-weather road that is expected to provide a reliable connectivity to the region throughout the year, including during heavy snowfall. This is expected to provide a major boost to the economy and tourism of the region, and also enhance the strategic importance of the area.

Statement 4 is incorrect: Dr. Syama Prasad Mookerjee Tunnel is **India's first tunnel with a fully integrated tunnel control system**. It is located in **Jammu and Kashmir** and connects **Srinagar with the Kargil and Zojila passes**. This Tunnel was built by the Border Road Organization (BRO) and was inaugurated on May 3, 2021. It is considered a major engineering feat and is expected to provide a reliable year-round connectivity to the region.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1796961>

Q.16) Consider the following statements regarding the Population distribution in the world:

1. As per the UN World Population Prospects 2022, global population growth rate is continuously increasing for the last five decades.
2. Europe has the highest population density among all the continents.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

World population reached **8 billion** people at the end of 2022 according to the **United Nations**. Patterns of **population distribution and density** help in understanding the demographic characteristics of any area. As per **United Nations (UN) World Population Prospects 2022**, world population is projected to reach 8.5 billion in 2030, and to increase further to 9.7 billion in 2050 and 10.4 billion by 2100.

Statement 1 is incorrect: According to UN, it took the global population 12 years to grow from 7 billion to 8 billion, it will take approximately 15 years until 2037, for it to reach 9 billion. **This indicates that overall growth rate of global population is slowing. The UN population report said the global population is growing at its slowest rate since 1950, having fallen under 1% in 2020.**

Statement 2 is incorrect: **Population density** is the ratio between the numbers of people to the size of land (**Density of Population = Population/Area**). It is usually **measured in persons per sq. km. Asia (and not Europe) is the most populated continent in the world.** Asia has a population of approximately 4.5 billion (**59.55% of the world's population**) in an area of 17,212,000 square miles. The continent's **population density is 246.11 per square mile.** Europe has a population of 743 million (9.73% of the global population) in an area of 3,930,000 square miles. **The population's density is 187.84 per square mile.** So, statement 2 is incorrect.

Source: <https://www.worldatlas.com/articles/continents-by-population-density.html>

Class 11th NCERT Human Geography Chapter: The World Population Distribution, Density and Growth
<https://www.un.org/en/global-issues/population>

Q.17) Consider the following pairs of Nuclear Reactors and the state in which they are located:

Nuclear Reactors	State
1. Rawatbhata	Karnataka
2. Kaiga	Rajasthan
3. Kakrapar	Gujarat
4. Kalpakkam	Tamil Nadu

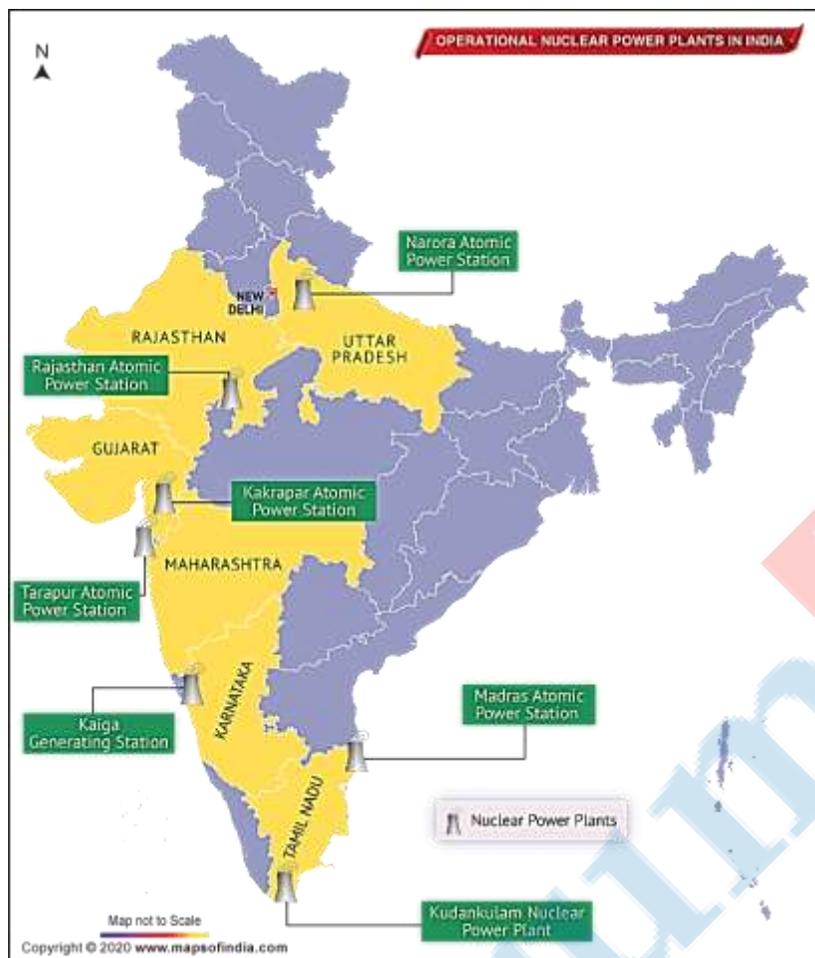
How many of the above given pairs are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All the four pairs

Ans) b

Exp) Option b is the correct answer.

Presently, India has 22 operating reactors, with an installed capacity of 6780 MWe. Among these eighteen reactors are Pressurised Heavy Water Reactors (PHWRs) and four are Light Water Reactors (LWRs).



Pair 1 is incorrect: Rawatbhata Nuclear Power Plant is located near the town of Rawatbhata in the **Chittorgarh district of Rajasthan, India**. The plant has a total installed capacity of 1,180 MW, with six heavy water reactors in operation.

Pair 2 is incorrect: Kaiga Nuclear Power Plant is situated near the village of Kaiga, in the **Uttara Kannada district of Karnataka, India**. The plant has four operational pressurized heavy water reactors with a combined capacity of 880 MW.

Pair 3 is correct: Kakrapar Nuclear Power Plant is located in the state of **Gujarat, near the city of Surat, India**. The plant consists of two pressurized heavy water reactors with a total capacity of 1,400 MW.

Pair 4 is correct: Kalpakkam Nuclear Power Plant is located in the **Kancheepuram district of Tamil Nadu, near the town of Kalpakkam, India**. The plant has two pressurized heavy water reactors with a combined capacity of 470 MW and is also home to the Fast Breeder Test Reactor (FBTR).

Source: <https://vikaspedia.in/energy/energy-basics/nuclear-power-reactors-in-india>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1897803>

Q.18) Consider the following statements with reference to Mediterranean agriculture:

1. It is usually characterized by the cultivation of crops adapted to hot dry summers and wet winters.
2. This type of agriculture can be found in Central Chile and Western Cape province of South Africa.

Which of the above given statements are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Mediterranean agriculture is not exclusive to the Mediterranean region but actually reflects a set of practices undertaken in the Mediterranean and climates similar to it. Under the most common climate classification system.

Statement 1 is correct: Mediterranean agriculture is characterized by the cultivation of crops adapted to hot, dry summers and mild, wet winters. In general, there is almost no precipitation or cloud cover during the summer months. Winter and spring months are when Mediterranean climate areas receive the vast majority of rain for the entire year.

Statement 2 is correct: The climate of Central Chile is of temperate Mediterranean type, with the amount of rainfall increasing considerably and progressively from north to south. **Similarly, the Western Cape province of South Africa has a Mediterranean climate with warm** to hot, dry, sunny summer weather and mild, rainy conditions in winter. Both places thus practice Mediterranean agriculture.

Source: <https://www.mdpi.com/2073-445X/12/3/716>

<https://www.cambridge.org/core/books/abs/agricultural-systems-of-the-world/mediterranean-agriculture/>

Q.19). Consider the following statements with respect to the Fertilizer industry in India:

1. Natural gas availability plays a key role in deciding the location of nitrogen-based fertilizer industry.
2. Rock Phosphate, a key component of fertilizer industry, is largely imported.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Fertilizers have played an essential role in agricultural production, providing vital nutrients for crops and registering increasing demands over the years. As an agrarian country, India is home to numerous small and marginal farmers and is often plagued by low productivity and low quality. Crops are mainly rainfed and cultivated on single piece of land over time, decreasing soil fertility in many regions. Thereby, increasing quantities of nitrogen fertilizers have been used in the country.

Statement 1 is correct. Urea/ Nitrogen Based industries are located near Natural gas source □ Natural Gas has Methane (CH₄), which when mixed with Oxygen, Nitrogen + heat in presence of catalysts produces Ammonia (NH₃), known as Haber process. This Ammonia (NH₃) can be used for making nitrogen-based fertilizers e.g. Urea. Therefore availability (and price) of Natural Gas, affects the location of Fertilizer industry.

Statement 2 is correct. Rock Phosphate is the key raw material for DAP and NPK fertilizers and India is 90% dependent on imports of it. **India imports Phosphorus** from Vietnam, Russian Federation, Kazakhstan, United Arab Emirates.

Source: <https://ncert.nic.in/textbook/pdf/jess106.pdf>

https://ibm.gov.in/writereaddata/files/07072020143656Apatite_RPH_2019.pdf

<https://pib.gov.in/PressReleasePage.aspx?PRID=1730947>

<https://irade.org/Final%20Report%20-%20Natural%20Gas%20-%20Fertilizer.pdf>

Q.20) With reference to the recent cyclonic events, consider the following pairs:

Cyclone	Location
1. Asani	Indian Ocean
2. Hinnamnor	West Pacific
3. Ian	North Atlantic
4. Bonnie	Mediterranean sea

How many pairs given above are correctly matched?

- Only one pair
- Only two pairs
- Only three pairs
- All four pairs

Ans) c

Exp) Option c is the correct answer.

Tropical cyclones are low pressure systems that form over warm tropical waters. They typically form when the sea-surface temperature is above 26.5°C.

Pair 1 is correctly matched: The severe **cyclonic storm Asani** was developed in **Bay of Bengal** and crossed the coast between Machilipatnam and Narasapur in Andhra Pradesh in May 2022.

Pair 2 is correctly matched: The **West Pacific** produced the only two category 5 storms that occurred globally in 2022. Both of these typhoons, **Hinnamnor** and Noru, occurred in 2022 during an active period from late August through September. Hinnamnor weakened as it approached South Korea but still made landfall as a category 2 typhoon and one of the strongest in history there. Noru caused severe damage to the Philippines and Southeast Asia.

Pair 3 is correctly matched: In **North Atlantic**, **Hurricane Ian** made landfall in southwestern Florida shortly after achieving a peak intensity of 155 mph, just shy of category 5 strength (≥ 157 mph).

Pair 4 is incorrectly matched: **Hurricanes Bonnie and Julia**, both formed in the Atlantic before crossing **Central America into the East Pacific**.

Source: <http://www.bom.gov.au/cyclone/tropical-cyclone-knowledge-centre/understanding/tc-info/>
<https://timesofindia.indiatimes.com/city/visakhapatnam/cyclone-asani-live-updates-may-10-2022/liveblog/91456588.cms>

<https://www.ncei.noaa.gov/access/monitoring/monthly-report/tropical-cyclones/202213>

Q.21) Consider the following statements with reference to Mixed Farming:

- This form of agriculture is highly predominant in less developed parts of the world.
- It is generally characterised by high capital expenditure on farm machinery.

Which of the statements given above is/are **incorrect**?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Mixed farming is a type of farming which involves both the growing of crops and the raising of livestock. It is defined as a system of farming on a particular farm which includes crop production, raising livestock, poultry, fisheries, beekeeping etc., to sustain and satisfy as many needs of the farmer as possible.

Statement 1 is incorrect: This **Mixed farming form of agriculture is found in the highly developed parts of the world, e.g., North-western Europe, Eastern North America, parts of Eurasia** and the temperate latitudes of Southern continents. Mixed farms are moderate in size and usually the crops associated with it are wheat, barley, oats, rye, maize, fodder and root crops.

Statement 2 is correct: Mixed farming is characterised by high capital expenditure on farm machinery and building, extensive use of chemical fertilisers and green manures and also the skill and expertise of the farmers.

Source: <https://ncert.nic.in/ncerts/l/legy105.pdf>

<https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/integrated-farming>

Q.22) Which of the following best describes the Quinary Sector of the economy?

- It is the part of the economy which is directly involved in mining of valuable metals.
- It comprises industries that produce and distribute capital goods.
- It is a part of economy which focusses exclusively on the technological innovations.
- It is the part of the economy where the top-level decisions are made.

Ans) d

Exp) Option d is the correct answer.

The Quinary sector is considered the highest level within the economic classification system. It is mainly focused on high-level decision-making and includes top executives, government officials, research scientists, and other key individuals who are responsible for shaping policies and strategies in various industries.

Option c is incorrect: The fourth sector of the economy, **the quaternary sector, consists of intellectual activities often associated with technological innovation.** It is sometimes called the knowledge economy.

Source: <https://www.thoughtco.com/sectors-of-the-economy-1435795>

Q.23) Consider the following pairs about various approaches related to human geography and their central ideas:

Approach	Central Idea
1. Environmental determinism	Environment determines the patterns of human culture and societal development.
2. Environmental Possibilism	Culture is defined by the decisions that humans make in response to the limitations posed by the environment.
3. Neo-determinism	Environment will have no impact on the development of human culture

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- All the three pairs
- None of the above

Ans) b

Exp) Option b is the correct answer.

Human geography studies the inter-relationship between the **physical environment and socio-cultural environment created by human beings through mutual interaction** with each other. Human beings interact with their physical environment with the **help of technology**. **Technology indicates the level of cultural development of society**.

Statement 1 is correct: Environmental determinism is the belief that the **environment, most notably its physical factors such as landforms and climate, determines the patterns of human culture and societal development**. Environmental determinists believe that ecological, climatic, and geographical factors alone are responsible for human cultures and individual decisions. Also, social conditions have virtually no impact on cultural development.

Statement 2 is correct: Environmental possibilism states that the environment sets limitations for cultural development, but it does not wholly define culture. **Culture is instead defined by the opportunities and decisions that humans make in response to dealing with such limitations**. **Humans create possibilities with the resources obtained from the environment**. This utilizing scope of the environment by humans with developed technology shows possibilism (**Nature provides opportunities and human beings make use of these**).

Statement 3 is incorrect: Neo-determinism or stop and go determinism concept reflects a **middle path between the two ideas of environmental determinism and possibilism**. It means that **possibilities can be created within the limits which do not damage the environment** and there is no free run without accidents. The activities of man should be according to the laws of the environment, **otherwise, the environment also forces man to stop and adjust his activities**. For example, temperature rise due to greenhouse gases will lead to change in cultural sphere of temperate regions of Europe.

Source: Class 11th NCERT Human Geography Chapter: Human Geography Nature and Scope

Statement 1 & 2:

<https://old.amu.ac.in/emp/studym/100004166.pdf>

Statement 3:

<https://pcsstudies.com/human-geography-nature-and-scope/#:~:text=Neo%2Ddeterminism%20or,run%20without%20accidents.>

<https://www.sciencedirect.com/topics/earth-and-planetary-sciences/environmental-determinism>

Q.24) Consider the statements regarding Canal Irrigation in India:

1. It accounts for more than 20% of the total irrigation in the country.
2. Canal irrigation is mostly found in plain areas.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. A canal is an artificial channel that is constructed to carry water to the fields to perform irrigation. It is one of the most important sources of water irrigation. It accounts for **around 25% of total irrigation** in the country.

Statement 2 is correct. Canal irrigation is possible in areas that are extensive like plains and are **drained by perennial rivers**, such as the northern plains, coastal plains, deltas and broad valleys of the Indian

peninsula. The **plain areas of India are mostly canal irrigated**. States that follow canal irrigation system are Andhra Pradesh, Assam, Haryana, West Bengal, Punjab, Rajasthan, Bihar, Karnataka, Tamil Nadu and Uttar Pradesh.

Source: NCERT- Micro irrigation technician Class 11th – Page 32.

DR Khullar

Q.25) With reference to 'Flood Plain Zoning' in India, consider the following statements:

1. It is one of the most effective non-structural measures for flood management.
2. The flood plain areas are demarcated and regulated by the Ministry of Jal Shakti.
3. The Central Water Commission is the nodal agency for flood forecasting in India.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Despite huge losses to life and property in floods, only three states and one Union Territory (Manipur, Rajasthan, Uttarakhand, and Jammu & Kashmir) have enforced the law for floodplain zoning which aims to minimise the damage caused due to deluge. Experts have called for its immediate implementation in the country in view of frequent floods occurring due to climate change.

Statement 1 is correct: A flood plain is a generally flat area of land next to a river or stream. It stretches from the banks of the river to the outer edges of the valley. **Flood Plain Zoning has been recognized as an effective non-structural measure for flood management.**

Flood-plain zoning measures **aim at demarcating zones or areas likely to be affected by floods of different magnitude** or frequencies and probability levels, and specify the types of permissible developments in these zones, **so that whenever floods actually occur, the damage can be minimised.**

Statement 2 is incorrect: The **action for demarcation of flood plain areas and regulating the activities therein, is to be undertaken by respective state governments.** Ministry of Jal Shakti has continuously impressed upon the States the need to adopt flood plain zoning approach. A model draft bill for flood plain zoning legislation was also circulated by the Union Government to all the States. This bill envisages zoning of flood plain of a river according to flood frequencies and defines the type of use of flood plain. The states of Manipur, Rajasthan, Uttarakhand and erstwhile State of Jammu & Kashmir had enacted the legislation.

Statement 3 is correct: **The Central Water Commission is the nodal agency of the Government of India for flood forecasting.** In addition, the various State Governments have their own flood forecast stations to meet their respective particular needs.

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1805812#:~:text=Flood%2Dplain%20zoning%20measures%20aim,the%20damage%20can%20be%20minimised.https://www.outlookindia.com/national/flood-devastation-states-impervious-to-huge-losses-only-4-enforced-floodplain-zoning-law-news-221035>

<https://www.outlookindia.com/national/flood-devastation-states-impervious-to-huge-losses-only-4-enforced-floodplain-zoning-law-news-221035>

<https://education.nationalgeographic.org/resource/flood-plain>

file:///C:/Users/sahil/Downloads/Unit-6.pdf

Q.26) Consider the following pairs related to various agricultural revolutions happened in India:

List I (Revolution)	List II (Associated with)
1. Green Revolution	Fertilizer production
2. Golden Revolution	Honey and Horticulture
3. Silver Revolution	Cotton production

Which of the pairs given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correct. The Green revolution in India was started in the 1960s to 1970s. This revolution **aimed to increase fertilizer production**. The Green revolution **focused on increasing the use of fertilizer** to boost the growth of higher-yielding seeds. Also, there were certain drawbacks in the green revolution which were rectified with the help of green revolution.

Pair 2 is correct. The period between 1991 to 2003 is known as the period of Golden Revolution in India. The Golden revolution is related to the **production of honey and horticulture**. It is a part of the important agricultural revolutions of India.

Pair 3 is incorrect. The Silver Revolution is related to egg and poultry production. It was started in 1969-1978 and medical sciences and innovation played an important role in this revolution. The scientists led the spectacular Silver Revolution by the hybrid of cocks and hens which resulted in increases in poultry production. Hence this statement is incorrect.

Source: <https://timesofagriculture.com/agriculture-revolutions-in-india/>

Q.27) Read the following paragraph about a major crop grown in India:

“This crop can be grown under semi-arid climatic conditions and over inferior soils. It is a rainfed kharif crop which requires temperature between 21°C to 27°C. It can be grown under varied climatic and soil conditions. But the yields are highest in old alluvial soil. Yield is usually high in southern states and declines towards central parts of the country.”

The above description is about which of the following crops?

- a) Pulses
- b) Wheat
- c) Maize
- d) Jowar

Ans) c

Exp) option c is the incorrect answer.

Maize is a food as well as fodder crop grown under semi-arid climatic conditions and over inferior soils. It is a rainfed **kharif crop** which requires temperature between 21°C to 27°C. Maize can be grown under varied climatic and soil conditions. But the yields are highest in old alluvial soil. It is sown all over India except eastern and north-eastern regions. Yield level of maize is higher than other coarse cereals. It is high in southern states and declines towards central parts. It is grown in **semi-arid regions** (25 – 75 cm) where rice and wheat production are not possible.

Source: <https://ncert.nic.in/ncerts/l/legy205.pdf> and https://farmer.gov.in/m_cropstaticsmaize.aspx

Q.28) Consider the following statements related to Wind energy:

1. Production of wind energy releases less Carbon dioxide than solar energy.
2. India stands 4th globally in the total Wind power installed capacity.
3. In India, Tamil Nadu has the highest installed capacity of wind energy.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) option d is the correct answer.

Statement 1 is correct. The production of wind energy is **more efficient than production of solar energy**. Wind turbines **release less CO₂** to the atmosphere compared to solar energy production. A wind turbine produces 4.64 grams of CO₂/1kWh while the solar panel produces 70 grams of CO₂/1kWh. Wind power consumes less energy and produces more energy compared to solar panels.

Statement 2 is correct. India stands **4th globally in Renewable Energy Installed Capacity** (including Large Hydro), **4th in Wind Power capacity** & 4th in Solar Power capacity (as per REN21 Renewables 2022 Global Status Report).

Statement 3 is correct. **Tamil Nadu's installed wind power** capacity stood at 9,867 megawatts (MW), the **highest among all states**. The key reason behind maximum installations happening in Tamil Nadu is the state having good wind sites because of its coastal vicinity resulting in higher installations.

Source:

[https://pib.gov.in/PressReleasePage.aspx?PRID=1885147#:~:text=India%20stands%204th%20globally%20Renewables%202022%20Global%20Status%20Report\).](https://pib.gov.in/PressReleasePage.aspx?PRID=1885147#:~:text=India%20stands%204th%20globally%20Renewables%202022%20Global%20Status%20Report).) &

<https://energy.economictimes.indiatimes.com/news/renewable/tamil-nadu-install-s-highest-wind-power-capacity-till-30-june-2022/93166589>

Q.29) Industries using weight-losing raw materials are usually located near the regions where raw materials are located. In this context which of the following industries are based on weight losing raw materials?

1. Sugar mills
2. Pulp industry
3. Iron and steel industry
4. Copper smelting industries
5. Cotton industry

Select the correct answer using the code given below:

- a) 1, 3 and 4 only
- b) 1, 2, 3 and 4 only
- c) 2, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) b

Exp) Option b is the correct answer.

Location of industries is influenced by several factors like access to raw materials, power, market, capital, transport and labour, etc. There is strong relationship between raw material and type of industry. It is economical to locate the manufacturing industries at a place where cost of production and delivery cost of

manufactured goods to consumers are the least. Industries using weight-losing raw materials are located in the regions where raw materials are located.

Option 1 is correct. The sugar mills in India are located in sugarcane growing areas. Sugar industry in India is based on sugarcane which is a heavy, low value, weight losing and perishable raw material. Also the sugarcane contains sucrose and once you cut the sugarcane, the sucrose content starts to decline.

Option 2 is correct. Wood is the primary raw material for this industry, it is a weight losing raw material. Pulp mills must be located near the forests because this minimises the difficulty of transporting the bulk logs as well as cost also.

Option 3 is correct. In iron and steel industries, iron ore and coal both are weight-losing raw materials. Therefore, an optimum location for iron and steel industries should be near raw material sources.

Option 4 is correct. Copper smelting industries are located near raw material sources as it is a weight losing industry. Location near raw materials helps to reduce cost of transportation.

Option 5 is incorrect. Cotton is a “pure” raw material which **does not lose weight** in the manufacturing process. so other factors, like, power to drive the looms, labour, capital or market may determine the location of the industry. Hence this option is incorrect.

Source: NCERT – Class 12th – Chapter 8th – Page No- 86-89

Q.30) Which one of the following statements is correct regarding ‘Nadabet’, a place in India recently seen in the news?

- It is a newly commissioned ‘nuclear power project’ site.
- It is designated as an exclusive ‘natural farming’ site.
- It is a new India-Pakistan border viewing site.
- It is a new container port on the western coast.

Ans) c

Exp) Option c is the correct answer.

Nadabet is located in **Banaskantha district of North Gujarat (Kutch region)**. Here, a new **India-Pakistan border viewing point** has been inaugurated. This place is also known as **‘Wagah of Gujarat’**. This is a part of **Seema Darshan Project**, which is a joint initiative of the **Tourism Department of the State of Gujarat and Border Security Force (BSF)**. Focus of the project is to **develop border-tourism**.



Knowledge Base:

- Major tourist attractions:** Retreat ceremony during sunset, T-junction pillar depicting the BSF in action, zero point (Indo-Pak Border) and real stunning MIG-27 that was used in 1971 Indo-Pak War.

Other attractions include adventure activities like paintball, rappelling, rock climbing, human bungee slingshot etc.

2) **Historical significance:** In this region, **during Indo-Pak War of 1971**, BSF not only stalled the enemy trying to invade from the west, but also captured 15 enemy posts. BSF had captured 1,038 sq. km of Pakistan territory, but returned it to Pakistan after **Shimla Agreement** was signed.

3) Note: Attari-Wagah Border is in Punjab.

Source: <https://indianexpress.com/article/explained/seema-darshan-project-india-pakistan-border-nadabet-gujarat-explained-7865503/>

<https://www.visitnadabet.com/>

Q.31) 'Cropping Intensity' increases in which of the following conditions?

- When a greater number of crops are cultivated in a particular area during a specific period.
- When crops with less maturity period are replaced by plantation crops
- When the investment per unit of land increases substantially.
- When large amounts of fertilizers and pesticides are used over a land area.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: Cropping intensity refers to the number of crops grown on a piece of land during a certain period of time, usually a year. **By growing more crops in the same area during a specific time period, the intensity of cropping increases.** This can be achieved through multiple cropping systems or intercropping, where different crops are grown together or sequentially in the same field. It maximizes land use and increases productivity.

Q.32) Which of the following are the major regions of Iron and steel industries in world?

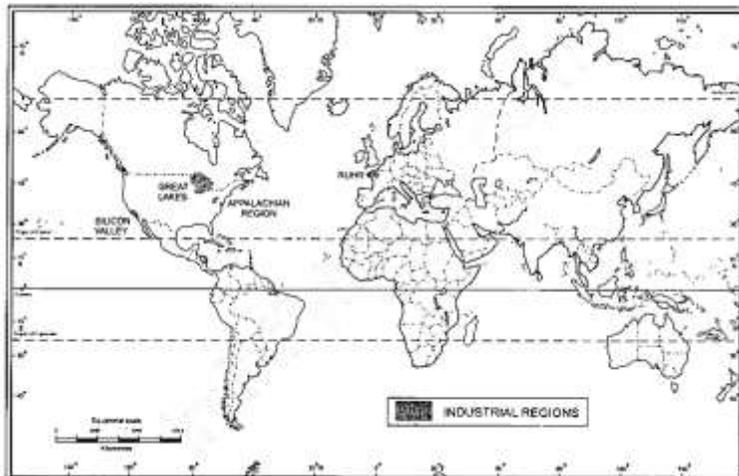
- Osaka-Kobe region
- Ruhr region
- Bokaro–Rourkela region
- Urengoy region

Select the correct answer using the code given below:

- 1 only
- 2 and 3 only
- 1, 2 and 3 only
- 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.



Option 1 is correct. Osaka-Kobe Region – The great Tokyo-Yokohama and Osaka-Kobe –Heemeji iron steel plants are market-based steel plants of Japan. It is located in the southern part of Honshu Island. Its major centres include Yawata, Nagasaki, Mauji and Shimonoseki. The region produces about 35% of the country's steel and entirely based on imported raw material.

Option 2 is correct. Ruhr region – The heaviest concentration of German steel plants is in a single area of the Ruhr Basin, the largest steel producing region of Europe. The entire Ruhr region is characterized by coke plants and blast furnaces. The Ruhr basin has the largest and high-grade coking coal deposits of Western Europe. Iron ore and coal are both locally available. Major steel centres of Ruhr Basin are Essen, Dortmund etc.

Option 3 is correct. Bokaro – Rourkela region – In India, there is a crescent shaped region comprising parts of Chhattisgarh, Northern Odisha, Jharkhand and western West Bengal, which is extremely rich in high grade iron ore, good quality coking coal and other supplementing raw materials. The Rourkela Steel plant was set up in 1959 in the Sundargarh district of Odisha in collaboration with Germany.

Option 4 is incorrect. The world's second largest gas field is **Urengoy, Russia**, which was discovered there in 1966 and was estimated to have initial reserves as great as 8.1 tcm (286 tcf).

Source: <https://ncert.nic.in/ncerts/l/legy208.pdf> and

<https://old.amu.ac.in/emp/studym/100007950.pdf>

Q.33) Many people around the world still lack access to safe water. In this context, Falkenmark Indicator is used to measure which of the following?

- It gives relation between economic poverty and water poverty
- It measures water scarcity as the amount of renewable freshwater that is available per person per year.
- It suggests policies that are needed to improve water management in a region.
- It shows the relation between Soil PH and water quality.

Ans) b

Exp) Option b is the correct answer.

One of the most commonly used measures of water scarcity is the 'Falkenmark indicator' or 'water stress index'. This method defines water scarcity in terms of the total water resources that are available to the population of a region; measuring scarcity as the amount of renewable freshwater that is available for each person each year. If the amount of renewable water in a country is below 1,700 m³ per person per year, that country is said to be experiencing water stress; below 1,000 m³ it is said to be experiencing water scarcity; and below 500 m³, absolute water scarcity.

Option a is incorrect: Water Poverty Index (WPI) and not Falkenmark indicator is used to measure the relationship between economic poverty and water poverty.

Option c is incorrect: The sustainability index (SI) and not Falkenmark indicator identifies policies that preserve or improve the desired water management characteristics of the basin in the future.

Option d is incorrect: Soil Ph is not measured by Falkenmark indicator.

Source: <https://smartwatermagazine.com/blogs/cristina-novo/what-happening-indias-drinking-water>
<https://www.igi-global.com/dictionary/falkenmark-water-stress-indicator/79325>

Q.34) Consider the names of the shifting cultivation and the regions in which they are being practiced:

List I	List II
(Shifting cultivation)	(Regions)
1. Dipa	Bastar District (Chhattisgarh)
2. Kumari	Western Ghats
3. Valre	Jharkhand

Which of the above pairs is/are correctly matched?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

In shifting agriculture, after two or three years of producing vegetable and grain crops on cleared land, the migrants abandon it for another plot. Land is often cleared by slash-and-burn methods—trees, bushes and forests are cleared by slashing, and the remaining vegetation is burnt. The ashes add potash to the soil. Then the seeds are sown after the rains. In different regions it is known by different local names.

Pair 1 is correct. Deepa Shifting Cultivation –This shifting cultivation is practiced in Bastar district of Chhattisgarh and locally known as Deepa.

Pair 2 is correct. Kumari Shifting Cultivation– This cultivation is practiced in Western Ghats especially in hilly regions of Kerala. Western Ghats are mountain ranges that runs parallel to western coast of India.

Pair 3 is incorrect. Valre or waltre Shifting Cultivation–This shifting cultivation is practiced in Southeastern Rajasthan and not in Jharkhand. Hence this statement is incorrect.

Source: <https://ncert.nic.in/textbook/pdf/jess104.pdf>

Q.35) Which among the following Indian cities has received the ‘World Green City Award 2022’?

- a) Hyderabad
- b) Pune
- c) Indore
- d) Gandhinagar

Ans) a

Exp) Option a is the correct answer.

Recently, **Hyderabad** has received the ‘World Green City Award 2022’ for the initiative ‘**Green Garland to the State of Telangana.**’ The award is given by **International Association of Horticulture Producers (AIPH)**. These awards are designed to champion ambitious **nature-oriented approaches to city design and operation.**

Knowledge Base:

- 1) The award is given for the following **6 categories**- Living Green for (1) Biodiversity (2) Climate Change (3) Health and Well Being (4) Social Cohesion (5) Water (6) Economic Recovery and Inclusive Growth.
- 2) **Hyderabad was selected as best across all the 6 categories.**
- 3) About '**Green Garland to the State of Telangana**' initiative
 - a. This is a **massive plantation drive** and all government departments, public and private sectors participate in this.
 - b. **Establishment of a nursery in every gram panchayat.** The Panchayati Raj Act and Municipal Act were amended to implement this programme properly.
 - c. **Developing urban parks** right in the middle of the city is another feature.

Source: <https://aiph.org/green-city/green-city-awards/>

<https://www.livemint.com/news/india/this-south-indian-city-hyderabad-bags-world-green-city-award-2022-beats-paris-montreal-11665805880922.html>

Q.36) Which of the following options best describes the term Sub-Urbanization?

It is a situation in which-

- a) a country's urban population is considerably larger than expected according to that country's level of economic development.
- b) large numbers of people move from urban areas into surrounding countryside or rural areas.
- c) increasing influence of urban way of life in rural areas leading to deterioration of rural culture.
- d) outward growth of urban areas engulfs surrounding villages and towns into a larger urban agglomeration.

Ans) d

Exp) Option d is the correct answer.

Suburbanization is a term to describe the growth and spatial reorganization of contemporary city.

Option a is incorrect: Overurbanization is a concept used by urbanization and development scholars to describe a situation in which a country's urban population is considerably larger than expected on the basis of that country's level of economic development.

Option b is incorrect: Counter urbanisation and not sub-urbanisation is when large numbers of people move from urban areas into surrounding countryside or rural areas. This process is exact opposite of Urbanization. It is both a demographic (population driven) and social process, but has to a lesser extent also involved the movement of some businesses and economic activities.

Option c is incorrect: This is not related to Sub Urbanization and only highly highlights the negative impact of Urbanization process on Rural and tradition culture.

Option d is correct: Suburbanisation can be defined as the outward growth of urban development which may engulf surrounding villages and towns into a larger urban agglomeration. Indeed, the suburbs are the outlying areas of a city which are close enough to the city centre to be accessible by commuters. Essentially it is a part of urbanisation, in that it increases the proportion of people that live in towns and cities in comparison to those in rural areas. As suburbs grow they attract both people from rural areas AND people from Inner city and CBD areas, who are attracted by the greater amount of space within the suburb. Suburbanisation results in the physical spreading of a city into surrounding countryside areas, known as URBAN SPRAWL, and this puts pressure on greenfield sites and on nature.

Source: [https://www.coolgeography.co.uk/A-](https://www.coolgeography.co.uk/A-level/AQA/Year%2013/World%20Cities/Counterurbanisation/Counterurbanisation.htm)

[level/AQA/Year%2013/World%20Cities/Counterurbanisation/Counterurbanisation.htm](https://www.coolgeography.co.uk/A-level/AQA/Year%2013/World%20Cities/Counterurbanisation/Counterurbanisation.htm)

[https://www.coolgeography.co.uk/A-](https://www.coolgeography.co.uk/A-level/AQA/Year%2013/World%20Cities/Suburbanisation/Suburbanisation.htm)

[level/AQA/Year%2013/World%20Cities/Suburbanisation/Suburbanisation.htm](https://www.coolgeography.co.uk/A-level/AQA/Year%2013/World%20Cities/Suburbanisation/Suburbanisation.htm)

Q.37) Consider the following statements regarding the Capability Approach to Development:

1. It was pioneered by Amartya Sen.
2. Capability Approach holds that it is more important to focus on the 'means' than the 'ends'.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) option a is the correct answer.

Capability Approach marked a paradigm shift in the concerns for process of development from those related to economic growth to those of inclusion and equitable distribution.

Statement 1 is correct: The evolution of this framework dates back to Aristotle, Adam Smith and Karl Marx. However, Prof. Amartya Sen pioneered this approach and it was further developed by Martha Nussbaum and a several other scholars.

Statement 2 is incorrect: While valuing something, the capability approach emphasized that we should be clear whether we value it as an end or a means to achieve a valuable end. Because of the difference of people's ability in converting the means into ends, capability approach holds that it is more important to focus on the ends than the means. Means cannot be taken as reliable proxies of ends unless all people have the same capacity to convert those means to ends. Hence capability approach focuses on people's ends which are expressed in terms of 'beings' like being literate, being employed, being mobile etc.

Source: <https://egyankosh.ac.in/bitstream/123456789/48844/1/Block-4.pdf>

Q.38) The Kolkhoz Model became the predominant form of agricultural enterprise in the first half of twentieth century in the erstwhile Soviet Union. In this context, the term Kolkhoz model is best related to which of the following?

- a) Market Gardening and Horticulture
- b) Dairy Farming
- c) Mixed Farming
- d) Collective Farming

Ans) d

Exp) Option d is the correct answer.

The basic principle behind Kolkhoz model of farming is based on social ownership of the means of production and collective labour. Collective farming or the model of Kolkhoz was introduced in erstwhile Soviet Union to improve upon the inefficiency of the previous methods of agriculture and to boost agricultural production for self-sufficiency. In this model, the farmers used to pool in all their resources like land, livestock and labour. However, they were allowed to retain very small plots to grow crops in order to meet their daily requirements.

Source: NCERT Human Geography Chapter 5

Q.39) Consider the following pairs with respect to the different types of settlements:

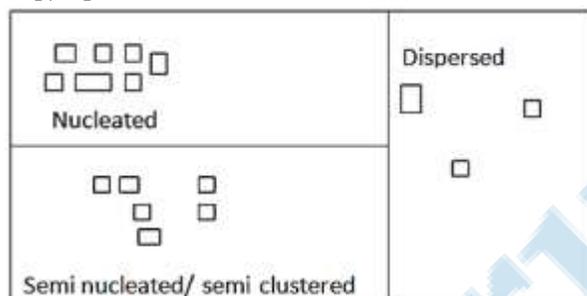
Type of settlement	Description
1. Clustered settlement	houses are closely built up
2. Semi clustered settlement	fragmentation of a large compact village
3. Hamleted settlement	A single isolated settlement in remote area

Which of the pairs given above are correct?

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.



Pair 1 is correct. The settlement in which the **houses are closely built up** and compact is known as clustered settlement. It is **found in fertile alluvial plains**. People live in compact villages for security reasons. The shape of clustered settlement normally varies from rectangular, radial, to linear.

Pair 2 is correct. Semi-clustered or fragmented settlements may result from tendency of **clustering in a restricted area of dispersed settlement**. More often such a pattern may also result from segregation or **fragmentation of a large compact village**. In this case, one or more sections of the village society choose or is forced to live a little away from the main cluster or village. In such cases, generally, the land-owning and dominant community occupies the central part of the main village, whereas **people of lower strata of society** and menial workers **settle on the outer flanks** of the village. Such settlements are widespread in the Gujarat plain and some parts of Rajasthan.

Pair 3 is incorrect. **Hamleted Settlement** is a fragmented settlement **divided into several units physically separated** from each other bearing a common name. These units are locally called panna, para, palli, nagla, dhani, etc. in various parts of the country. This segmentation of a large village is often motivated by social and ethnic factors. Such villages are more frequently found in the middle and lower Ganga plain, Chhattisgarh and lower valleys of the Himalayas.

Whereas dispersed settlement pattern in India appears in the form of **isolated huts or hamlets** of few huts **in remote jungles**, or on small hills.

Source: NCERT- Class 12th- Chapter 4th -Page No-33

Q.40) Which among the following Indian cities have earned the global recognition with their inclusion in the UNESCO's 'Global Network of Learning Cities (GNLC)' project?

1. Amravati
2. Warangal
3. Thrissur
4. Thanjavur
5. Nilambur

Choose the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 5 only
- c) 1, 4 and 5 only
- d) 2, 3, 4 and 5 only

Ans) b

Exp) Option b is the correct answer.

Options 2, 3 and 5 are correct: Warangal (Telangana), Thrissur and Nilambur (Kerala) have been included in the UNESCO's 'Global Network of Learning Cities' (GNLC) project.

About the cities:

City

Why a 'learning city'?

Warangal

- 1) Served as the capital of **Kakatiya dynasty** which was established in 1163.
- 2) It has also been chosen for Heritage City Development and Augmentation Yojana (**HRIDAY**) of Government of India.
- 3) It hosts **second biggest grain market of Asia**, located in Enumamula and emerging hub for IT sector activities.

Thrissur

- 1) Also known as '**cultural capital**' of Kerala.
- 2) It is a **major academic hub** and has institutions like Kerala Kalamandalam, Kerala Agricultural University Kerala University of Health Sciences etc.
- 3) Also regarded as a **banking town**, having headquarters of major banks like South Indian Bank, Catholic Syrian Bank, Dhanalakshmi Bank, Manappuram General Finance and Leasing.
- 4) It is also a **major Centre for gold jewelry**. About 70% of Kerala's jewelry is manufactured in Thrissur.

Nilambur

- 1) It is located close to **Nilgiri range of western ghats** on the banks of Chaliyar river (forms part of Nilgiri Biosphere Reserve).
- 2) The city is an **eco-tourism destination** in Kerala.
- 3) It is also known as '**teak town**' due to abundance of Nilambur teak.
- 4) The bank of Chaliyar river is known **for gold reserves**.
- 5) **Silent Valley National Park** is located in this city.
- 6) **Major economic activities- agriculture, handicrafts, eco-tourism** etc.

Knowledge Base:

- 1) The GNLC initiative was launched by UNESCO in 2013 with the goal of promoting **social cohesion, economic development and sustainability in urban areas**.



(Picture credit: The Hindu)

1) For GNLC status, cities with a population of 5 lakh and above are considered. Due to its potential, Nilambur has been the first town to be included in GNLC with less than 1 lakh population.

Source: <https://www.newindianexpress.com/states/kerala/2022/sep/08/nilambur-thrissur-in-unesco-list-of-learning-cities-2495917.html>

Q.41) Consider the following statements with reference to Mica:

- Mica can be found in all three major rocks varieties- igneous, sedimentary and metamorphic.
- Kodarma district of Jharkhand is famous worldwide for mica.
- India is the largest producer of mica in the world.

Which of the statements given above is/are correct?

- 1 and 2 only
- 2 and 3 only
- 1 only
- 1 and 3 only

Ans) a

Exp) option a is the correct answer.

Statement 1 is correct: Mica is a non-metallic mineral. Mica, any of a group of hydrous potassium, aluminum silicate minerals. It is a type of phyllosilicate, exhibiting a two-dimensional sheet or layer structure. Among the principal rock-forming minerals, micas are found in all three major rock varieties—igneous, sedimentary, and metamorphic.

Statement 2 is correct: Kodarma district of Jharkhand state has been famous worldwide for mica mining, especially for ruby mica. The district had the monopoly in producing mica for years and mica was exported to many countries worldwide. Mica is also found in the area of Dhab, Dhodhakola, Khalagthambi, Dibour, Bandarchua, etc.

Statement 3 is incorrect: The largest mica producer in the world in 2022 was China, producing an estimated 100,000 metric tons of mica. India ranked 6th with 16000 metric tonnes production.

Source: <https://businessranker.com/largest-producer-of-mica-in-the-world/27/>

NCERT Land and Economy chapter 7, <https://www.britannica.com/science/mica>

<https://koderma.nic.in/history/>

Q.42) Read the following Paragraph:

‘This country holds the largest oil reserves in the world. The majority of this oil is within the Orinoco Belt, which is at the southern end of the eastern Orinoco River Basin in the country. This belt has currently the largest deposit of petroleum in the world with estimates placing the capacity at more than 200 billion barrels.’

Which country is described in the above paragraph?

- a) Saudi Arabia
- b) Venezuela
- c) Canada
- d) United States of America

Ans) b

Exp) option b is the correct answer.

With more than 300 billion barrels of proven oil reserves in 2021, **Venezuela** holds the title of the largest oil reserves in the world. The majority of this oil is within the Orinoco Belt, which is at the southern end of the eastern Orinoco River Basin in the country. This belt is currently the largest deposit of petroleum in the world with estimates placing the capacity at more than 200 billion barrels!

When it comes to **oil production**, Venezuela sits much lower among other world leaders. This is because unlike many other countries on this list, Venezuelan crude oil is very heavy and requires large investments in technology, manpower, and refineries to extract.

Moreover, while it used to be one of the largest exporters in the world, an oil crash in 2015, political unrest, and subsequent issues have limited Venezuela's potential.

Source: <https://www.worldatlas.com/articles/the-world-s-largest-oil-reserves-by-country.html>

Q.43) Consider the following statements regarding distribution of coal in India:

1. Gondwana coal makes up more than 90 percent of both coal reserves and coal production in India.
2. There are no tertiary coal reserves in India.
3. Jharia is the largest coal field in India.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) option b is the correct answer.

The coal bearing strata of India are geologically classified into two main categories, viz., Gondwana coal fields & Tertiary coal field.

statement 1 is correct: Gondwana coal comprises about 98 percent of the total reserves and 99 percent of the production of coal in India. In this system there are 113 major coal fields found all over India. Gondwana coal is said to be about 250 million years old.

Statement 2 is incorrect: Tertiary Coals are found in the states of Assam, Meghalaya, Nagaland, Arunachal Pradesh, Himachal Pradesh, West Bengal, Rajasthan, Kerala and Jammu and Kashmir. Tamil Nadu and the Union Territory of Pondicherry also have Tertiary coal reserves.

Statement 3 is correct: Jharia is the largest coal field followed by Raniganj. Other important coal mining centres are Singrauli in Madhya Pradesh (part of Singrauli coal field lies in Uttar Pradesh), Korba in Chhattisgarh, Talcher and Rampur in Odisha, Chanda–Wardha, Kamptee and Bander in Maharashtra and Singareni in Telangana and Pandur in Andhra Pradesh.

Source: <https://old.amu.ac.in/emp/studym/100004773.pdf>

Q.44) Consider the following natural resource regions:

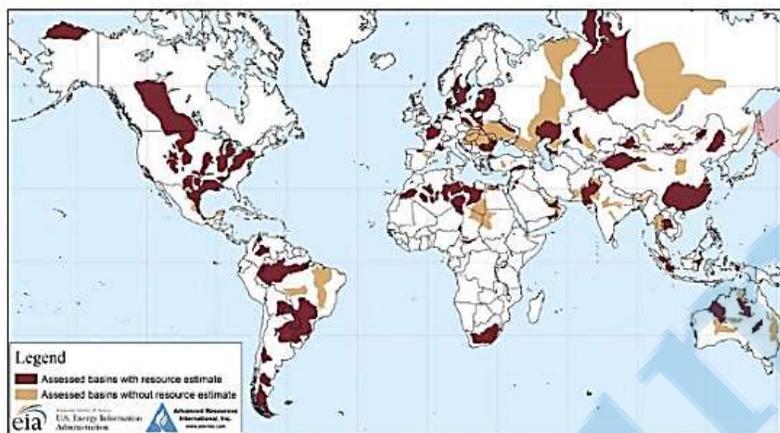
1. Troll field
2. Groningen
3. Hassi R'Mel

The above regions are famous for which of the following natural resources?

- a) Coal
- b) Manganese
- c) Natural Gas
- d) Diamond

Ans) c

Exp) option c is the correct answer.



1) Troll Fields – Troll is a natural gas and oil field in the Norwegian sector of the North Sea, one of the biggest in the North Sea, holding 40% of Norway's gas. It also possesses significant quantities of oil.

2) Groningen Gas field –It is a natural gas field in Groningen province in the northeastern part of the Netherlands. It is the largest natural gas field in Europe. This region of Groningen in the Netherland has a gas field that began operations in 1963.

3) Hassi R'Mel - In North Africa, the central basin of Algeria is the location of the Hassi R'Mel gas and condensate field, discovered in 1956 in a large anticline. The Hassi R'Mel Natural gas field recovered 82.32% of its total recoverable reserves, with peak production in 1999.

Source: <https://yearbook.enerdata.net/natural-gas/world-natural-gas-production-statistics.html>

Q.45) With reference to the territories in the news recently and the countries to which they belong, consider the following pairs:

Territories in News Countries

1. Transnistria Ethiopia
2. Nagorno-Karabakh Egypt
3. Falkland Islands Ukraine

Which of the pairs given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) None of the above

Ans) d

Exp) Option d is the correct answer.

Pair 1 is incorrect: Transnistria – officially called the Pridnestrovian Moldavian Republic – is a narrow strip of land between **Moldova and western Ukraine**. It is an **unrecognized break-away state** that left Moldova after the collapse of the Soviet Union in 1990. It has de-facto independence, but it is **not recognized so by the UN**. Transnistria retains its independence largely due the military support provided by the Russian army stationed in the Transnistrian territory. It is internationally recognised as part of Moldova.

THE HINDU

Tensions in Transnistria

The small region wedged between Moldova to its west and Ukraine to its east risks being dragged into the ongoing conflict

TRANSNISTRIA FACTFILE	
<ul style="list-style-type: none"> Split from Moldova in 1991-92 war, amid collapse of the Soviet Union. Becomes a self-declared independent state not recognised internationally Referendum in 2006 saw 97.2% vote in favour of joining Russia Its a separatist region that permanently hosts estimated 1,500 Russian "peacekeeping" troops 	
<ul style="list-style-type: none"> Population: 4,70,000 Area: 4,000 sq km 	
RECENT DEVELOPMENTS	<p>Apr 25-27, 2022: Transnistria officials claim series of incidents:</p> <ul style="list-style-type: none"> Explosions hit state security HQ in Tiraspol. Separatist authorities blame Ukrainian "infiltrators" Blasts at Mayak radio centre damage Soviet-era masts used to broadcast Russian news Attack on military unit in village of Parcani, just outside Tiraspol Shots fired from Ukraine towards Kolbasna village, location of large Russian arms depot <p>Russia could use flare-up of tensions as pretext for invasion. If Russia reinforces Transnistria, it might then move on to Ukraine's key port city of Odesa</p>

Pair 2 is incorrect: Nagorno-Karabakh is a **landlocked, mountainous and forested region** within the boundaries of Azerbaijan. It is a disputed territory **internationally recognized as part of Azerbaijan** but mostly governed by the Republic of Artsakh, de facto independent state with an Armenian ethnic majority backed by neighbouring Armenia. It is located in the **South Caucasus region**, which straddles the border between Eastern Europe and Western Asia and spans the southern part of the Caucasus mountains. It is roughly made up of modern-day Armenia, Azerbaijan, and Georgia. The capital of Nagorno-Karabakh is Stepanakert.



Pair 3 is incorrect: Falkland Islands is an archipelago in the South Atlantic Ocean. The Islands have internal self-governance, and the UK takes responsibility for their defence and foreign affairs. The Government of Argentina has recently launched a campaign demanding negotiation with the UK to settle the territorial dispute over the Falkland Islands. The dispute has been continuing since the early 19th century. Both countries fought a war in 1982 over the dispute. The result was UK's victory. At present, Falkland Island continues to operate as a self-governing British Overseas Territory.



Source: <https://blog.forumias.com/embroiling-transnistria-in-the-russia-ukraine-war/>
<https://www.thehindu.com/news/international/what-is-the-nagorno-karabakh-conflict-explained/article65459587.ece>
<https://blog.forumias.com/explained-why-armenia-and-azerbaijan-are-at-loggerheads-over-nagorno-karabakh/>
<https://blog.forumias.com/argentina-to-revive-falklands-issue-in-india/>

Q.46) Consider the following pairs regarding the different approaches to Human Development:

Approach	Description-
1. Income Approach	In it, the level of income reflects the level of economic freedom an individual enjoys.
2. Welfare Approach	It looks at human beings as beneficiaries or targets of all development activities.
3. Basic Needs Approach	It attempts to define the minimum resources needed for overall well being.

How many of the pairs given above are correctly matched?

- a) Only one pair.
- b) Only two pairs.
- c) All three pairs.
- d) None of the pairs.

Ans) c

Exp) option c is the correct answer.

There are many ways of looking at the problem of human development. Some of the important approaches are: (a) The income approach; (b) The welfare approach; (c) Minimum needs approach; and (d) Capabilities approach

Pair 1 is Correctly matched: In Income Approach, Human development is seen as being linked to income. The idea is that the level of income reflects the level of freedom an individual enjoys. Higher the level of income, the higher is the level of human development.

Pair 2 is correctly matched: Welfare approach looks at human beings as beneficiaries or targets of all development activities. The approach argues for higher government expenditure on education, health, social secondary and amenities. People are not participants in development but only passive recipients. The government is responsible for increasing levels of human development by maximising expenditure on welfare.

Pair 3 is correctly matched: Basic Needs approach was initially proposed by the International Labour Organisation (ILO). Six basic needs i.e.: health, education, food, water supply, sanitation, and housing were identified. The question of human choices is ignored and the emphasis is on the provision of basic needs of defined sections. It attempts to define the absolute minimum resources necessary for long term physical well being.

Source: NCERT Human Geography chapter 4 Human Development

Q.47) The Zabo or Ruza system is practiced largely in Phek district of Nagaland. In this context, is the Zabo or Ruza system related to which of the following?

- a) A water management system that includes rectangular-shaped stepwells to collect the subterranean seepage of an upstream reservoir or a lake.
- b) An indigenous farming system which combines forest, horticulture, agriculture, fishery and animal husbandry with soil and water conservation on one hill.
- c) An ecosystem-based strategy that focuses on long-term soil conservation through a combination of biological control, and habitat manipulation.
- d) An innovative farming technique that involves the growing of plants without soil.

Ans) b

Exp) Option b is the correct answer.

“The word “Zabo” means impoundment of water. “Zabo” is an indigenous farming system practiced largely in Phek district of Nagaland. Zabo is also known as “Dzüdü” or “Ruza” system in other parts of the district. It has a combination of forest, horticulture, agriculture, fishery and animal husbandry with well-founded soil and water conservation base on one hill. It has protected forest land towards the top of hill, water harvesting tanks in the middle and cattle yard and paddy fields beneath.

Rainwater that falls on forested hilltops is collected by channels that deposit the run-off water in pond-like structures created on the terraced hillsides. The channels also pass through cattle yards, collecting the dung and urine of animals, before ultimately meandering into paddy fields at the foot of the hill. Ponds created in the paddy field are then used to rear fish and foster the growth of medicinal plants.

Option a is incorrect. Jhalaras are typically rectangular-shaped stepwells that have tiered steps on three or four sides. These stepwells collect the subterranean seepage of an upstream reservoir or a lake. Jhalaras were built to ensure easy and regular supply of water for religious rites, royal ceremonies and community use.

Option c is incorrect. Integrated pest management, or IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and nontarget organisms, and the environment.

Option d is incorrect. Hydroponics farming techniques involve the growing of plants without soil, nourishing the plants through specialized nutrients that are added to water.

Source: <https://focus.nagaland.gov.in/wp-content/uploads/2018/03/ZABO-SYSTEM-OF-FARMING.pdf>

<https://www.thebetterindia.com/61757/traditional-water-conservation-systems-india/>

<https://ipm.ucanr.edu/what-is-ipm/>

<https://greentumble.com/10-sustainable-farming-methods-and-practices>

Q.48) Consider the following pairs

Integrated Steel Plant	Location
1. Visvesvaraiya Iron and Steel Plant	Madhya Pradesh
2. Rourkela Steel Plant	Orissa
3. Durgapur Steel Plant	West Bengal

Which of the pairs given above is/are correctly matched?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Steel Authority of India Limited (SAIL) has **five integrated steel plants** at **Bhilai** (Chhattisgarh), **Rourkela** (Odisha), **Durgapur** (West Bengal), **Bokaro** (Jharkhand) and **Burnpur** (West Bengal). It also has **three special and alloy steels plants** viz. Alloy Steels Plant at Durgapur (West Bengal), Salem Steel Plant at

Salem (Tamil Nadu) and **Visveswaraya Iron and Steel Plant at Bhadravati** (Karnataka). Some of the details are:

Pair 1 is incorrect: The **Visvesvaraiya Iron and Steel Works** is a **special steel** plant of SAIL at **Bhadravati, Karnataka**. Initially, it was called the **Mysore Iron and Steel Works**. It is located close to an iron ore producing area of Kemangundi in the Bababudan hills. Further, Limestone and manganese are also locally available. But this region has no coal. At the beginning, charcoal obtained by burning wood from nearby forests was used as fuel till 1951. Afterwards, electric furnaces were installed which use hydroelectricity from the Jog Falls hydel power project. **The Bhadravati River** supplies water to the plant. This plant produces specialised steels and alloys.

Pair 2 is correct. The **Rourkela Steel plant** is an **integrated steel plant** located in the **Sundargarh district of Odisha**. It was set up in 1959 in collaboration with Germany. The plant was located on the basis of proximity to raw materials, thus, minimising the cost of transporting weight losing raw material. This plant has a **unique locational advantage**, as it receives coal from Jharia (Jharkhand) and iron ore from **Sundargarh** and **Kendujhar**. **The Hirakud project** supplies power for the electric furnaces and water is obtained from the **Koel and Sankh rivers**.

Pair 3 is correct. **Durgapur Steel Plant** is an **integrated Steel Plant** in **West Bengal**. It was set up in collaboration with the government of the United Kingdom. It started production in 1962. This plant lies in **Raniganj** and **Jharia coal belt** and gets iron ore from **Noamundi**. It is on the main **Kolkata-Delhi railway route**. The Hydel power and water is obtained from the **Damodar Valley Corporation (DVC)** by this plant.

Source: https://steel.gov.in/sites/default/files/E-Book2014_0.pdf (page 6)

<https://magadhuniversity.ac.in/download/econtent/pdf/Iron%20and%20steel%20industries%20in%20india-converted.pdf>

<https://sail.co.in/en/plants/about-bhilai-steel-plant>

<https://sail.co.in/en/plants/visvesvaraya-iron-and-steel-plant>

Q.49) Consider the following pairs:

Mineral/Rock - Mining Method

1. Coal: - Open cast Mining
2. Platinum - Shaft Mining
3. Marble - Quarrying

Which of the pairs given above is/are correctly matched?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

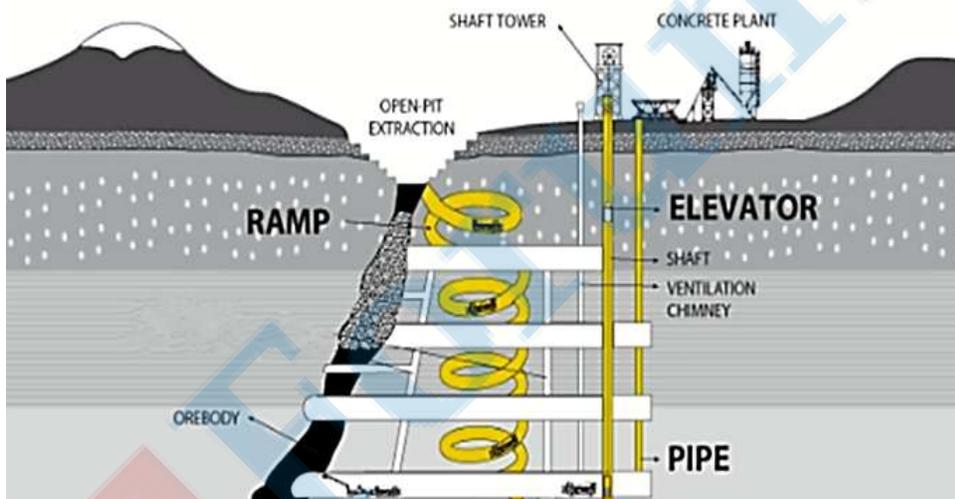
A naturally occurring substance that has a definite chemical composition is a **mineral**.

The process of taking out minerals from rocks buried under the earth's surface is called **mining**.

Pair 1 is correct: Minerals that lie at shallow depths are taken out by removing the surface layer; this is known as **open-cast mining**. Iron ore, bauxite, **coal** and copper etc are mined in this way.



Pair 2 is correct: Often the minerals are not found close to the surface of the Earth, but deeper down. In these cases, underground mining, also called shaft mining, is used. **Examples of shaft mining used for minerals like diamonds, gold and sometimes the platinum group metals (PGM).** Also, Deep bores, called **shafts**, have to be made to reach mineral deposits that lie at great depths. This is called **shaft mining**. Petroleum and natural gas occur far below the earth's surface. Deep wells are bored to take them out.



Pair 3 is correct: Minerals that lie near the surface are simply dug out, by the process known as **quarrying**. Marble, granite, and limestone are mines through quarries. Quarrying material for use in building materials was much more work.

Knowledge Base: Knowledge Base: Open-pit mining, also known as opencast mining, is a surface mining technique that extracts minerals from an open pit in the ground. Open-pit mining is the most common method used throughout the world for mineral mining and does not require extractive methods or tunnels. Quarrying is the process of removing rock, sand, gravel or other minerals from the ground in order to use them to produce materials for construction or other uses. So, a quarry is any such working on the surface of the earth where minerals are extracted. Quarries are also known by other names around the world: 'surface mine', 'pit', 'open pit' or 'opencast mine'.

Open Pit Mine	Quarry	Underground Mine with Shafts
Minerals are removed from a pit dug in the ground.	Minerals are removed from a shallow pit dug in the ground.	Minerals are removed through deep shafts dug in the ground.
Used where commercially useful minerals are found near the surface.	Generally, used for extracting building materials like dimension stone.	Used where the mineral occurs as veins in hard rock deep below the surface of the Earth.
Extracted using Earth moving machinery.	Extracted using Earth moving machinery.	Extracted using elevators that can carry minerals, extraction equipment as well as persons into the area where the mineral is available.

Source: <https://ncert.nic.in/textbook/pdf/hess403.pdf>
<https://www.nationalgeographic.org/encyclopedia/quarry/>

Q.50) Consider the following rivers and their respective location:

River	Location
1. Thamirabarani River	Andhra Pradesh and Telangana
2. Sukapaika River	Jammu and Kashmir
3. Bhogdoi River	Assam and Nagaland
4. Lukha River	Meghalaya

Which of the above-given pairs is/are correctly matched?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 4 only
- d) 3 and 4 only

Ans) d

Exp) Option d is the correct answer.

Pair 1 is incorrect: The Thamiraparani river is the only perennial (continuous flow of water) river in Tamil Nadu. This is the shortest river in the state, the Thamirabarani starts in Pothigai hills of the Western Ghats in the Ambasamudram taluk, flows through Tirunelveli and Thoothukudi districts and empties at Korkai into the Gulf of Mannar (Bay of Bengal). It thus originates and ends in the same state.

Pair 2 is incorrect: Sukapaika is one of the several distributaries of the mighty Mahanadi River in Odisha. It branches away from the Mahanadi at Ayatpur village in Cuttack district and flows for about 40 kilometres (km) before rejoining its parent river at Tarapur in the same district. Sukapaika river is an important system of the Mahanadi to control floodwater and maintain the flow in the river as well as the Bay of Bengal.

Pair 3 is correct: Bhogdoi river originates from Mokokchung in Nagaland where it is also known as Tsujenyong nullah and is the south bank tributary of the River Brahmaputra. It is an inter-state river (flowing between Assam and Nagaland) and joins Dhansiri river near its confluence with Brahmaputra.

Pair 4 is correct: The Lukha river is located in the southern part of east Jaintia Hills of Meghalaya where most of Meghalaya's rat-hole coal mines are located. It has become a victim of the unsustainable large-scale mining of coal and limestone, allegedly responsible for the pollution that turns the river its surreal winter hue. It **receives water from the Lunar River (Wah Lunar) and small streams draining from the Narpuh Reserve Forest** and the undulating hills of the area while flowing down.

Source: <https://www.downtoearth.org.in/news/water/thamirabarani-govt-atree-adopt-hyper-local-approach-to-restore-one-of-south-asia-s-oldest-rivers-85134>

<https://www.thehindu.com/news/national/breathing-life-into-a-dead-river-in-odisha/article66045196.ece>

<https://www.thehindu.com/news/national/other-states/detoxing-pilot-project-has-brought-a-river-back-from-dead-meghalaya/article36926683.ece>

<https://www.downtoearth.org.in/news/pollution/coal-mining-waste-discharge-encroachment-river-bhogdoi-has-been-dying-a-slow-death-78852>

SFG 2023 | LEVEL 2 | Test #33 – Solutions (CSAT) | 

Q.1) In a five-letter English word (which may or may not be a meaningful English word), there are two letters between M and G. Neither A nor N is at any end. A is second to the left of G. M is to the right of O. Which of the following words will be formed based on the given conditions?

- a) MANGO
- b) OMANG
- c) GONAD
- d) BOGAU

Ans) b

Exp) Option b is the correct answer.

From the given information, A is second to the left of G and there are two letters between M and G. Then we have two possibilities:

Case I: M A _ _ G

Case II: A _ G _ _ M

Case II can be eliminated because it forms a six-letter word, however, in the question we have been given a five-letter word. It is also given that M is to the right of O and neither A nor N is at an end. Hence, the final arrangement will be: **OMANG**

Based on the above condition, the word OMANG will be formed.

Q.2) In a queue, Sadiq is 14th from the front end and Joseph is 17th from the back end, while Jane is exactly in between Sadiq and Joseph. If Sadiq be ahead of Joseph and there are 48 persons in the queue, how many persons are between Sadiq and Jane?

- a) 5
- b) 6
- c) 7
- d) 8

Ans) d

Exp) Option d is the correct answer.

Sadiq's position from last = $(48 - 14) + 1 = 35$ th Number of persons between Sadiq and

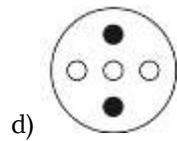
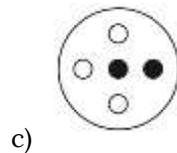
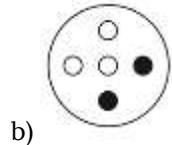
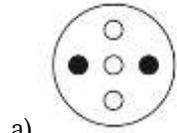
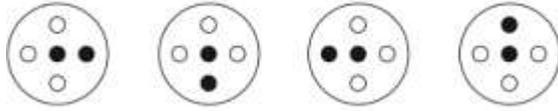
Joseph = $(35 - 17) - 1 = 17$

Since, Jane is in between Sadiq and Joseph, therefore position of Jane = $(35 + 17) / 2 = 26$ th

Therefore, Jane is at 9th position from both the boys.

Hence, the total number of persons between Sadiq and Jane = $(35 - 26) - 1 = 8$

Q.3) What comes next in the following sequence?



Ans) c

Exp) Option c is the correct answer.

The black dot on the outer side is moving 90° clockwise at each stage.

Q.4) Two statements are given below followed by a Question:

Statement 1: P is the brother of L, who is the daughter of Q, who is the sister of N.

Statement 2: M is the brother of K, who is the husband of L, who is the mother of G.

Question: How is Q related to G?

- Statement-1 alone is sufficient answer the Question.
- Statement-2 alone is sufficient to answer the Question.
- Both Statement 1 and Statement 2 are sufficient to answer the Question.
- Both Statement 1 and Statement 2 are not sufficient to answer the Question.

Ans) c

Exp) Option c is the correct answer.

From Statement 1:

Q is the sister of N.

L is the daughter of Q or Q is mother of L as Q is female

P is brother of L and L is daughter of Q. Thus, Q is the mother of P and L.

We can see that the statement 1 alone is not sufficient to answer the question of relationship between Q and G

From Statement 2:

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K is husband of L. And Thus, K is brother-in-law of P since P is brother of L
K also has a brother M. Thus, M is also brother-in-law of P.

Now L has a daughter G.

Now from statement 1 we know that Q is the mother of L,

Thus, Q is the grandmother of G

Clearly, both Statement 1 and Statement 2 together are sufficient to answer the Question, but neither Statement 1 alone nor Statement 2 alone is sufficient to answer the Question.

Q.5) Seven sportspersons namely Abhay, Brinda, Chandan, Deepa, Elizabeth, Fatimah, and Ganesh, are to be honored at the special luncheon. The sports persons are to be seated on the stage in a row. Abhay and Ganesh must be seated on the extreme right. Brinda must be seated at the center. Chandan and Deepa must be seated as far apart as possible.

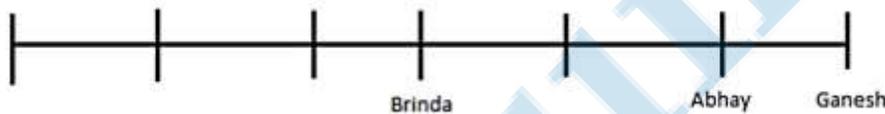
Who among the following cannot be seated at either end?

- Chandan
- Deepa
- Fatima
- Ganesh

Ans) c

Exp) Option c is the correct answer.

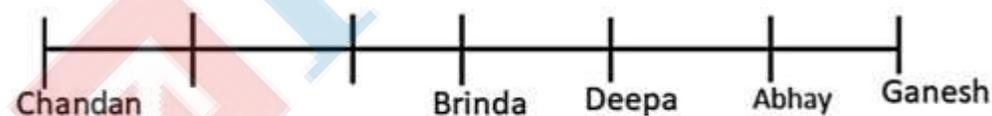
Abhay and Ganesh must be seated on the extreme right and Brinda must be seated at the centre.



Clearly, Abhay and Ganesh may interchange their seats and still satisfy the given condition, as shown below:



Chandan and Deepa must be seated as far apart as possible. Based on the above statements we get:



Again, Chandan and Deepa might interchange their seats and still satisfy the given condition. Clearly, Elizabeth and Fatima may sit in the empty seats in any order. So, they may occupy the empty seats in 2 ways. Chandan and Deepa might sit at the extreme left end. Fatima has to be in either of the two seats that are shown empty in the arrangement above. Hence, she cannot sit at either of the two ends.

Q.6) Shakuntala says, "If you reverse my age, then the reversed number represents my husband's age. He is senior to me and the difference between our ages is one-eleventh of the sum of our ages". What is the age of Shakuntala?

- a) 23
- b) 24
- c) 45
- d) 54

Ans) c

Exp) Option c is the correct answer.

Let x and y be the tens and unit's digits respectively of the numeral denoting the Shakuntala's age. Then, Shakuntala's age = $(10x + y)$ years. Husband's age = $(10y + x)$ years. As we know that difference between their ages is one-eleventh of their sum. So, we get,

$$(10y + x) - (10x + y) = (10y + x + 10x + y)/11$$

$$(9y - 9x) = (11x + 11y)/11 \quad 9y - 9x = x + y$$

$$10x = 8y$$

$$5x = 4y$$

Clearly, y should be a single-digit multiple of 5, which is 5. So, $x = 4$, $y = 5$.

Hence, Shakuntala's age = $10x + y = 45$ years.

Q.7) Find the next number in the given sequence: 16, 17, 21, 30, 46, ?

- a) 71
- b) 59
- c) 63
- d) 64

Ans) a

Exp) Option a is the correct answer.

The original series is 16, 17, 21, 30, 46, ?

Here we add perfect square (1, 4, 9, 16, and 25) to each term to get the next number. $16 + 1 = 17$

$$17 + 4 = 21$$

$$21 + 9 = 30$$

$$30 + 16 = 46$$

$$46 + 25 = 71$$

Thus, the next number in the series is 71.

Q.8) Ramesh says, "I have twice as many sisters as brothers". Sunita says, "We sisters have the same number of sisters as brothers". Assuming that Ramesh and Sunita are brother and sister, how many brothers and sisters does the family have?

- a) 3 brothers, 4 sisters
- b) 3 brothers, 6 sisters
- c) 5 brothers, 10 sisters
- d) 6 brothers, 3 sisters

Ans) a

Exp) Option a is the correct answer.

Let the number of brothers be "b"

and the number of sisters be "s".

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Since Ramesh is a brother, he will not count himself when talking about the number of brothers. So, $s = 2(b - 1)$ {Twice as many sisters as brothers}

Now, Sunita is a sister, and she will not count herself when talking about the number of sisters.

Therefore, $s - 1 = b$ or $s = b + 1$

Solving the two equations,

$$b + 1 = 2b - 2$$

we get $s = 4$ and $b = 3$

Q.9) Select the number which can be placed at the sign of the question mark (?):

92K	5P	460U
67H	6M	402R
77T	7Y	?

- a) 329H
- b) 953N
- c) 593L
- d) 539D

Ans) d

Exp) Option d is the correct answer.

The following logic applies here:

In a row:

Third number = First number \times Second number

Each letter is increased by +5.

From the first row - 92K, 5P, 460U

Third number = $92 \times 5 = 460$

For letters: K, P, U

Increasing K by 5 positions in alphabetic order will give us P and Increasing P by 5 positions in alphabetic order will give us U

From the second row - 67H, 6M, 402R

Third number = $67 \times 6 = 402$

For letters: H, M, R

Increasing H by 5 positions in alphabetic order will give us M and Increasing M by 5 positions in alphabetic order will give us R

From the third row - 77T, 7Y, ?

Third number = $77 \times 7 = 539$

For letters: T, Y, ?

Increasing T by 5 positions in alphabetic order will give us Y and Increasing Y by 5 positions in alphabetic order will give us D (as the alphabet ends at Z, we start counting from the beginning)

Q.10) Names of 6 friends Ram, Om, Rohit, Animesh, and Kavita are written on 6 different faces of a cube. If 'Sita' is in between 'Ram' and 'Om', and 'Rohit' is opposite to 'Animesh', then which name must be on the face opposite to 'Kavita'?

- a) Om
- b) Animesh
- c) Ram
- d) Sita

Ans) d**Exp) Option d is the correct answer.**

Here it is clearly mentioned that Rohit is opposite to Animesh. Also, Sita is in between Ram and Aum, which means that Ram and Aum must be opposite to each other.

Now, we are left only with Kavita and Sita. So, they will be facing each other.

Thus, people facing each other should be:

Ram <> Aum

Rohit <> Animesh

Kavita < > Sita

Hence, option (d) is correct.

Q.11) In a college, a physics lecture is held every second day, a chemistry lecture is held every third day, an electronics lecture is held every fourth day, a humanities lecture is held every fifth day, and a mathematics lecture is held every sixth day. How many times all five lectures are held on the same day in a period of 250 days if they all were held together on the first day of college?

- a) 3
- b) 5
- c) 10
- d) 18

Ans) b**Exp) Option b is the correct answer.**

All five lectures will be held together during the days that are LCM of (2, 3, 4, 5 and 6) and its multiples.

LCM of (2, 3, 4, 5 and 6) = 60

Hence, the five lectures will be held together on 1st day, 61st day, 121st day, 181st day and 241st day, i.e., a total of 5 days in 250 days.

Q.12) If the seventh day of a month is three days earlier than Monday, what day will it be on the 20th day of the month?

- a) Thursday
- b) Wednesday
- c) Tuesday
- d) Saturday

Ans) a**Exp) Option a is the correct answer.**

The seventh day of the month is three days earlier than Monday, which is Friday. This means the month begins at Saturday that is 1st of the month is Saturday.

7th is Friday

8th is Saturday

9th is Sunday

And 10th is Monday

Thus, counting ahead we can find that

20th is Thursday.

We can also apply weekly logic and find that 21st would be Friday as 7th is Friday so 20th would be Thursday.

Q.13) Vijay is facing west. He turns 45° in the anti-clockwise direction and then another 180° in the same direction and then 270° in the clockwise direction. Which direction is he facing now?

- North East
- North West
- South East
- South West

Ans) b

Exp) Option b is the correct answer.

Total movement in Anti - Clockwise direction = $45 + 180 = 225$ degrees

Total movement in Clockwise direction = 270 degrees

The difference = $270 - 225 = 45$ degrees

(towards clock wise because the total degrees in clockwise is more than that of anti-clockwise direction)

So, 45 degrees in clockwise direction from the West will be: North-West.

Q.14) Consider the following two statements and conclusions that follow:

Statements:

- A few of my friends are Officers.
- All officers are rude.
- Some rude persons are kind hearted.

Conclusions:

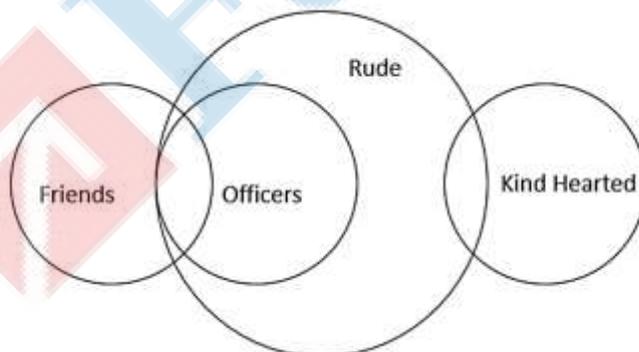
- A few of my friends are kind hearted.
- Some rude persons may not be officers.

Select the correct answer using code given below:

- Conclusion I follows
- Conclusion II follows
- Both Conclusion I and II follows
- Neither Conclusion I nor II follows.

Ans) b

Exp) Option b is the correct answer.



We can see that Conclusion I does not follow here as no connection has been made between friends and kind hearted.

However, we can see that Conclusion II follows as seen from the above figure that some rude persons may not be officers.

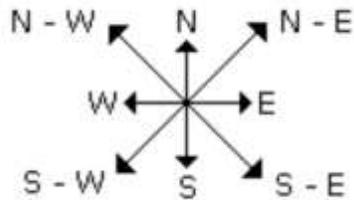
Q.15) If South-East becomes North, North-East becomes West and so on. What will West become?

- a) North-East
- b) North-West
- c) South-East
- d) South-West

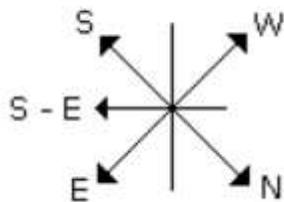
Ans) c

Exp) Option c is the correct answer

Standard directions are as followed:



However, if South-East becomes North, North-East becomes West



It is clear from the diagram that new name of West will become South-East.

Q.16) Pointing to a girl, Meera said, “Her father is the husband of my father’s only daughter who doesn’t have any brothers”. How is Meera related to the girl’s father’s mother?

- a) Mother
- b) Daughter
- c) Aunt
- d) Daughter in law

Ans) d

Exp) Option d is the correct answer

Since Meera has no brothers, she is her father’s only daughter.

So, the Husband of Meera’s father’s daughter – is Meera’s husband.

Thus, Meera’s husband is the girl’s father or the girl is Meera’s daughter.

The relationship between Meera and the Girl’s father (Meera’s husband) and mother (Meera’s mother-in-law) is Daughter-in-law.

Q.17) Five students Pawan, Qutub, Rohit, Saket and Tarun travel to five different locations Cuba, Kuwait, Dehradun, Bali and Haiti by different modes of transport, bus, train, airplane, car and boat from Mussoorie. The person who traveled to Dehradun did not travel by boat. Rohit went to Bali by car and Qutub went to Kuwait by airplane. Saket traveled by boat whereas Tarun traveled by train. Mussoorie is not connected by bus to Dehradun and Cuba.

Question: Where did Pawan travel to and by what mode?

- a) Haiti- Train
- b) Dehradun- Bus
- c) Haiti- Bus
- d) Chennai - Bus

Ans) c

Exp) Option c is the correct answer.

Step 1: Given, Rohit went to Bali by car and Qutub went to Kuwait by airplane.

Saket traveled by boat whereas Tarun traveled by train.

After these information, we are left with one person Pawan and one mode of transport that is bus, So, this is concluded that Pawan traveled by bus.

Step 2: Mussoorie is not connected by bus to Dehradun and Cuba.

So, it can be concluded that Pawan didn't travel to Dehradun and Cuba.

Given, Bali and Kuwait are already being traveled by Rohit and Qutub.

So, the only destination left for Pawan is Haiti

Peron	City	Mode
Rohit	Bali	Car
Qutub	Kuwait	Airplane
Saket		Boat
Traun		Train
Pawan	Haiti	Bus

Q.18) P, Q, R and S are four males. P is the eldest in the group but he is not the poorest, R is the richest but not the eldest, Q is elder than S but he is not elder than P or R, P is richer than Q but he is not richer than S. How the four persons can be arranged in decreasing order of their age and money?

- a) PQRS, RPSQ
- b) PRQS, RSPQ
- c) PRQS, RSQP
- d) PRSQ, RSPQ

Ans) b

Exp) Option b is the correct answer.

From the above information, the decreasing order of P Q R S agewise:

$P > R > Q > S$

From the above information, the decreasing order of P Q R S money-wise:

$R > S > P > Q$

Q.19) Shobhita wants to become a doctor, so she appears for the NEET exam. The NEET exam comprises six subjects: Physics, Chemistry, Biology, English, Hindi and one optional. She needs to get passing marks in all the six subjects to get admission to Medical College. She writes the exam and comes out of the centre with a sad face. Her father asks 'How did she perform?' Is there any way in which she can fail the

exam? She answered ‘Yes, she might fail’. Determine the number of ways in which Shobhita can fail the NEET exam?

- a) 76
- b) 63
- c) 78
- d) 84

Ans) b

Exp) Option b is the correct answer.

Shobhita will fail even if she fails in 1 subject or 2 subjects or 3 subjects or 4 subjects or 5 subjects or 6 subjects.

Total number of subjects = 6

Number of ways in which she will fail in one subject = $C(6,1)$

Number of ways in which she will fail in two subjects = $C(6,2)$

Number of ways in which she will fail in three subjects = $C(6,3)$

Number of ways in which she will fail in four subjects = $C(6,4)$

Number of ways in which she will fail in five subjects = $C(6,5)$

Number of ways in which she will fail in six subjects = $C(6,6)$

If she fails in either of the subjects, she will not pass the NEET exam. Hence the sum of all the above will give the number of ways in which she can fail the NEET exam.

$$\begin{aligned} \text{Number of ways in which Shobhita can fail the NEET exam} &= C(6,1) + C(6,2) + C(6,3) + C(6,4) + C(6,5) + C(6,6) \\ &= \frac{6!}{(5! \times 1!)} + \frac{6!}{(4! \times 2!)} + \frac{6!}{(3! \times 3!)} + \frac{6!}{(2! \times 4!)} + \frac{6!}{(1! \times 5!)} + \frac{6!}{(6! \times 0!)} \\ &= 63 \text{ ways} \end{aligned}$$

Q.20) Six movies A, B, C, D, E, F are to be released in a theatre everyday. Three of the movies will be released in the morning session before the Tea break whereas the other three will be released in the afternoon session after the tea break. Movie B should be released immediately before movie C and their release can't be separated by tea break, Movie D will be released either at first or at last. Movie C is to be released at fifth slot, Movie F is scheduled to be released immediately after D. Then which movie will be released at last?

- a) D
- b) A
- c) E
- d) Can't be determined.

Ans) d

Exp) Option d is the correct answer.

Step 1: Movie C is to be released at the fifth. Movie B should be released immediately before movie C and their release can't be separated by tea break, So movie B will be at 4th place.

Step 2: Movie D will be released either at first or at last. Movie F is scheduled to be released immediately after D. So D has to be at 1st place. And F will be at 2nd place

Sequence	Movie
1	D
2	F
3	

Tea break	Tea break
4	B
5	C
6	

There are two movies left A, E but we didn't have any specific information about others. So which movie got released at the end can't be known.

Q.21) 295 people visit the European Club. Members of European club, either love French cuisine or Russian cuisine or both. Consider two Statements and a Question

Statement-1: 198 club members love both French and Russian cuisine.

Statement-2: 58 club members love only Russian cuisine.

Question: Find the number of club members who love only French cuisine?

Question: Which one of the following is correct in respect of the statements and a question?

- Statement-1 alone is not sufficient to answer the Question.
- Statement-2 alone is not sufficient to answer the Question.
- Either Statement-1 or Statement-2 alone is sufficient to answer the Question
- Both Statement-1 and Statement-2 are required to answer the Question

Ans) d

Exp) Option d is the correct answer.

Given, 295 people visit the European Club. Members of European club, either love French cuisine or Russian cuisine or both.

$$n(F \cup R) = 295 \text{-----(1)}$$

Using Statement-1: 198 club members love both French and Russian cuisine.

$$n(F \cap R) = 198$$

$$\text{Formula for } n(F \cup R) = n(F) + n(R) + n(F \cap R) \text{-----(2)}$$

$$295 = n(F) + n(R) + 198$$

Question asks the number of club members who love only French cuisine, so in the above equation both $n(F)$ and $n(R)$ are unknown, so the question can't be answered using Statement one alone.

Using Statement-2: 58 club members love only Russian cuisine.

$$n(R) = 58 \text{-----(3)}$$

Here in equation 2 again, only $n(R)$ and $n(F \cup R)$ is known, so the question can't be answered using Statement -2 alone.

Using both statements and equation 1:

$$n(F \cup R) = 295$$

$$n(F \cap R) = 198$$

$$n(R) = 58$$

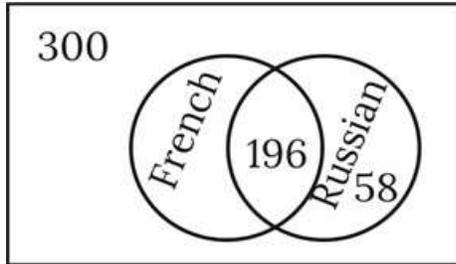
Put this in equation 2:

$$295 = n(F) + 58 + 198$$

$$n(F) = 39$$

The number of club members who love only French cuisine is 39.

Both Statement-1 and Statement-2 are required to answer the Question.



Q.22) A statement followed by Conclusion-1 and Conclusion-2 is given below. You have to take the Statement to be true even if it seems to be at variance from the commonly known facts. Read all Conclusions and then decide which of the given Conclusions logically follows/ follow from the **Statement**, disregarding the commonly known facts.

Statement: Some Cupcakes are almonds. Some almonds are cashews. All cashews are tea.

Conclusion-I: Certainly, some almonds are tea.

Conclusion-II: Some Cupcakes may not be cashews.

Question: which one of the following is correct?

- Only Conclusion-I
- Only Conclusion-II
- Both Conclusion-I and Conclusion-II
- Neither Conclusion-I nor Conclusion-II

Ans) c

Exp) Option c is the correct answer.

From Given Statement: Some Cupcakes are almonds, we draw Image 1 and 2.

From Some almonds are cashews, we draw Image 3 and 4

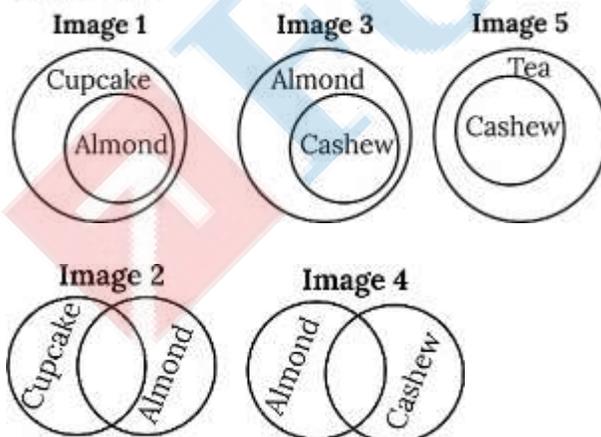
From All cashews are tea, we draw Image 5.

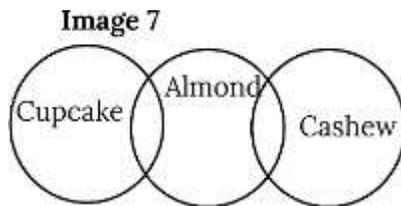
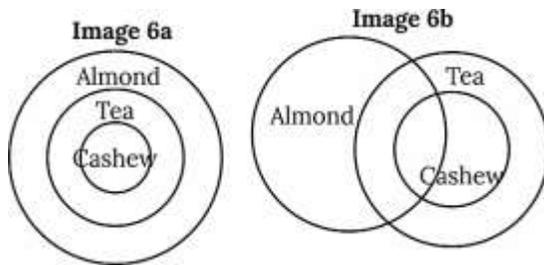
Conclusion: From Image 1, 2 and 5 we get Image 6a and 6b. Here it can be concluded that certainly some almonds are tea.

From Image 2 and 4 we get, Image7, from this we can conclude that Some Cupcakes may not be cashews.

Hence both Conclusion-I and Conclusion-II follows.

Statement 1





Q.23) A Statement followed by Conclusion -1 and Conclusion -2 is given below. You have to take the Statement to be true even if it seems to be at variance from the commonly known facts. Read all Conclusions and then decide which of the given Conclusions Logically follows/follow from the Statement, disregarding the commonly known facts.

Statement: Some rabbits are monkeys. All monkeys are camels. Some camels are wolves.

Conclusion -1: Certainly, some rabbits are wolves.

Conclusion -2: Certainly, some monkeys are wolves.

Question: which one of the following is correct?

- Only Conclusion-1
- Only Conclusion-2
- Both Conclusion-1 and Conclusion-2
- Neither Conclusion-1 nor Conclusion-2

Ans) d

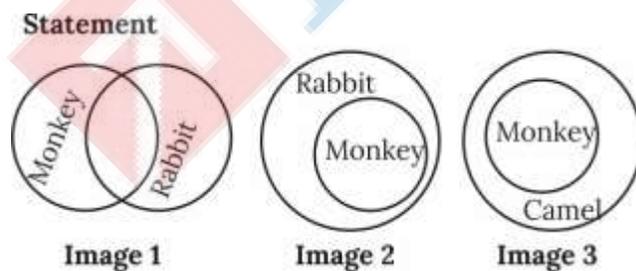
Exp) Option d is the correct answer.

Use the statement- Some rabbits Are monkeys. From this statement, we can draw image one and image two.

From the statement- All monkeys are camels, we draw image three.

From the statement, some camels are wolves, we draw images four and five.

From image one and three, the final image which we make is clear that certainly some rabbits are not wolves and certainly some monkeys are not wolves. Hence neither of the conclusion follows.



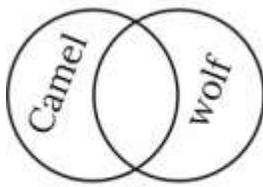


Image 4

From Image 1 & 3

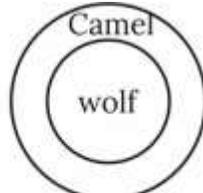
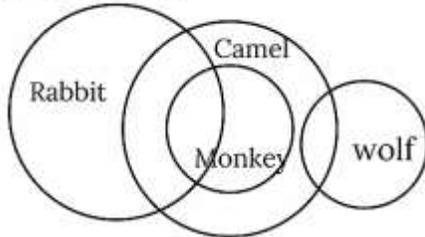


Image 5



Q.24) In the given expression what will be the next term?

M A A, Q E B, U I D, Y O H, _ _ _

- a) C U P
- b) M N Q
- c) J H U
- d) B U G

Ans) a

Exp) Option a is the correct answer.

First alphabet jumps three places. $M + 3 = Q$, $Q + 3 = U$, $U + 3 = Y$, So next term will be $Y + 3 = C$

Second alphabet is a series of vowels, A E I O, next term will be U.

Third alphabet in the given series moves ahead by a factor of two that is $A = 1$, $B = 1 \times 2 = 2$, $D = 2 \times 2 = 4$,

$H = 4 \times 2 = 8$, so next term will be $8 \times 2 = 16$ th alphabet, that is P

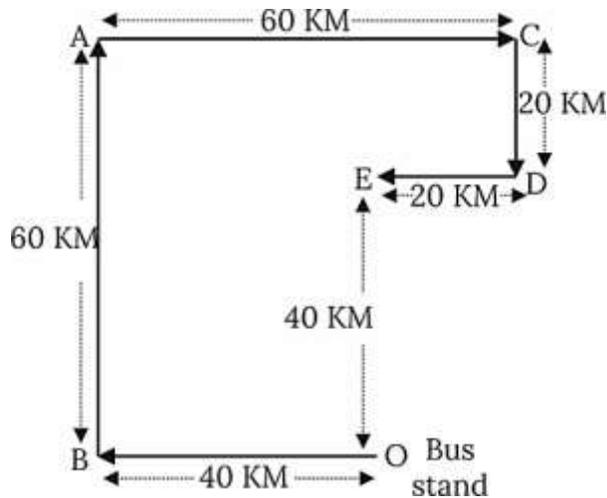
So, the next term is C U P

Q.25) A Volvo bus going towards Goa starts from the bus stand in the West direction. It travels for 40 km and then takes a right turn and moves for another 60 km. It again takes a right turn and moves for another 60 km. It again takes a right turn and moves for 20 km, there again it moves right for another 20 km. How far the bus has moved from its origin and what is its direction from the origin?

- a) 20 km, Northeast
- b) 40 km, North
- c) 50 km, Southwest
- d) 10 km North

Ans) b

Exp) Option b is the correct answer.



Q.26) Replace the incorrect term by the correct term in the given sequence where odd terms and even terms follow the same pattern.

4, 5, 9, 16, 20, 50, 43, 153, 90, 459

- a) 463
- b) 30
- c) 309
- d) 44

Ans) a

Exp) Option a is the correct answer.

The given expression comprises of two sequences:-

- 1) 4, 9, 20, 43, 90
- 2) 5, 16, 50, 153, 459

The first sequence is : $[(4 \times 2) + 1] = 9$, $[(9 \times 2) + 2] = 20$, $[(20 \times 2) + 3] = 43$, $[(43 \times 2) + 4] = 90$

So, in the 1st sequence, all terms are correct.

The second sequence is : $[(5 \times 3) + 1] = 16$, $[(16 \times 3) + 2] = 50$, $[(50 \times 3) + 3] = 153$, $[(153 \times 3) + 4] = 463$

In the second sequence in the question, last term (459) is incorrect, which will be replaced by 463.

Q.27) Following is a Matrix of certain entries, the entries follow a certain trend row wise. Choose the missing entry (?) accordingly.

6C	21E	4G
4B	8D	11F
8F	10H	14J
26E	59G	?

- a) 136P
- b) 150I
- c) 84I
- d) 95Q

Ans) b

Exp) Option b is the correct answer.

In the first column, $\{(4 \times 8) - 6\} = 26$,

$\{\text{position of B}(2) + \text{position of F}(6) - \text{position of C}(3)\} = 5$ th position alphabet (E)

Implies the rule for digits is : term in fourth row = (product of second row and third row) - first row.

For alphabet, term in fourth row = (sum of second row and third row) - first row

So, in the second column,

$\{(8 \times 10) - 21\} = 59$, $\{\text{position of D}(4) + \text{position of H}(8) - \text{position of E}(5)\} = 6$ th position alphabet (G)

So, in the third column,

$\{(14 \times 11) - 4\} = 150$, $\{\text{position of J}(10) + \text{position of F}(6) - \text{position of G}(7)\} = 9$ th position alphabet (I)

Q.28) You are given two identical Sequences in two rows:

Sequence-I	4	18	48	100	180	294
Sequence-II	0	A	B	C	D	E

Question: What is the entry in the place of D for the given Sequence-II?

- a) 36
- b) 64
- c) 48
- d) 100

Ans) c

Exp) Option c is the correct answer.

The first sequence follows the logic: $(n^3 - n^2)$, n begins with 2.

1st term $n = 2$, $(2^3 - 2^2) = 4$

2nd term, $n = 3$, $(3^3 - 3^2) = 18$

3rd term, $n = 4$, $(4^3 - 4^2) = 48$

5th term, $n = 5$, $(5^3 - 5^2) = 100$

6th term, $n = 6$, $(6^3 - 6^2) = 180$

7th term, $n = 7$, $(7^3 - 7^2) = 294$

Sequence-II is identical to Sequence -I, where n begins with 1, so $(1^3 - 1^2) = 0$

So D will be $(4^3 - 4^2) = 48$

Q.29) Six persons Bob, Derek, Cony, Mary, Juny, Klein are split in two groups of three each and made to stand in two rows, such that a man in one row is exactly facing a man in the other row. Mary is not at the end of any row and is to the right of Juny, who is facing Cony. Klein is to the left of Derek, who is facing Mary.

Which of the following groups of men are in the same row?

- a) Bob, Mary, Derek
- b) Cony, Derek, Klein
- c) Mary, Juny, Klein
- d) Bob, Derek, Cony

Ans) b

Exp) Option b is the correct answer.

Step 1: Mary is to the right of Juny, who is facing Cony.

So, Juny has to be at index three or index four so that Mary is to her right. Let's take row two and place Juny at index four. Then Mary will be at index five.

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Step 2: Juny is facing Cony. So, Cony will be at index one in the first row.

Step 3: Derek is facing Mary, so Derek will be at index two in the first row.

Step 5: Klein is to the left of Derek. So, Klein will be at index three in the first row.

Step6: Now we are left with Bob, so he will be seated at index six in second row.

index	1	2	3
1st row	Cony	Derek	Klein

2nd row	Juny	Mary	Bob
index	4	5	6

Q.30) Consider two Statements and a Question:

Statement-1: Robin at present is 28 years younger to his uncle.

Statement-2: Robin's sister who was born in 1974, is 36 years younger to her uncle.

Question: In which year Robin was born?

Question: Which one of the following is correct in respect of the Statement and the Question?

- Statement-1 alone is sufficient to answer the question
- Statement -2 alone is sufficient to answer the question
- Either Statement-1 alone or Statement -2 alone is sufficient to answer the question
- Both Statement-1 and Statement -2 are required to answer the question.

Ans) d

Exp) Option d is the correct answer.

Statement-1: Robin at present is 28 years younger to his uncle.

Here we do not know the age of Robin's uncle or in what year he was born so we cannot know in which year Robin was born. Hence Statement -1 alone is not sufficient to answer the question.

Statement -2: Robin's sister who was born in 1974, is 36 years younger to her uncle.

This statement gives us the year of birth of Uncle, that is $1974 - 36 = 1938$ ----- (1)

But this again is not giving us the year in which Robin was born.

Hence Statement -2 alone is not sufficient to answer the question.

Using both statements:

We conclude that Robin is $(36 - 28) = 8$ years elder to his sister.

Hence year of birth of Robin = $1974 - 8 = 1966$

So, Both Statement-1 and Statement -2 are required to answer the question.

Q.31) Consider two Statements and a Question:

In a six floor apartment six people namely Rehman, Shikhar, Reshav, Piku, Qureshi and Shobhit reside in a certain manner.

Statement-1: Rehman resides on the fourth floor. Shikhar resides on a floor which is even. Reshav didn't stay on the top floor.

Statement -2: Reshav is two floors below Piku who is 3 floors above Shikhar.

Question : Who resides on the top floor?

Question: Which one of the following is correct in respect of the Statement and the Question?

- Statement-1 alone is sufficient to answer the question

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- b) Statement -2 alone is sufficient to answer the question
 c) Both Statement-1 and Statement -2 are required to answer the question
 d) Neither Statement-1 nor Statement -2 is sufficient to answer the question.

Ans) d

Exp) Option d is the correct answer.

Given: In a six floor apartment, six people namely Rehman, Shikhar, Reshav, Piku, Qureshi and Shobhit reside in a certain manner.

Statement-1:

Step 1: Rehman resides on the fourth floor. So, he's on the 4th floor.

Shikhar resides on a floor which is even. so, Shikhar is at either two or six.

Reeshav didn't stay on the top floor. So Reeshav can be on any floor 3/5/1

We do not have information about other people's floor. So, we cannot find out with certainty on which floor Shikhar resides. Thus, who resides on the top floor can't be known. Hence statement one alone is not sufficient to answer the question.

Floor	Person
6	Shikhar
5	
4	Rehman
3	
2	Shikhar
1	

Statement : 2 Reeshav is two floors below Piku who is 3 floors above Shikhar.

Since Piku has to be three floors above Shikhar, so Shikhar will be at floor 1/2/3

If we place Shikhar at floor 1, Piku will be at floor 4

Reeshav is two floors below Piku, so Reeshav can be on floor 2 then. Still now we don't have clarity on who is on other floors. So, Statement 2 alone is not sufficient to answer the question.

Floor	Person
6	
5	
4	Piku
3	
2	Reshav
1	Shikhar

Using both Statement -1 and 2:

Step 1: Rehman stays on the fourth floor..

Step 2: Shikhar stays on a floor which is even. So he has to be on floor 2 or floor 6.

Step 3: Reeshav is two floors below Piku, who is 3 floors above Shikhar. So Shikhar can't be at floor 6, as then the condition that Piku is three floors above Shikhar will not be satisfied.

Hence, Shikhar has to be on floor two and Piku will be on floor 5th.

Step 4: Reeshav is two floors below Piku. So he is on Floor 3

Rank	Person
6	
5	Piku
4	Rehman
3	Reeshav
2	Shikhar
1	

Conclusion: Even using statement one and two, we cannot decide who stays on top floor so both statements are insufficient to answer the question.

Q.32) From China and Korea a set of 289 people visit Agra to see the Taj Mahal. Out of these tourists 73 are Chinese. All of them go to a multi cuisine restaurant to have their lunch, where 113 people declare that they love Chinese food. How many Koreans love Chinese food?

- a) 30
- b) 40
- c) 113 or more.
- d) 113 or less

Ans) d

Exp) Option d is the correct answer.

Given 289 people visit Agra. out of which 73 are Chinese. So $(289-73=216)$ are Koreans.

Given 113 people declare that they love Chinese food.

Case 1: If all of the 113 people are Koreans who love Chinese food. Then the maximum number of Koreans who love Chinese food is 113.

If all the Chinese love Chinese food then there will be $(113-73)$ equal to 40 people left. Then there will be 40 Koreans who love Chinese food. So, the minimum number of Koreans who love Chinese food is 40.

So Chinese food loving Koreans will range from 40 to 113.

Q.33) In English alphabet, first two letters takes jump of two places, next three letters takes jump of three places. Again, next two letter takes jump of two places and another next three letters take jump of three places and so on. The last letter takes a jump of seven places backwards. Which letter is at thirteenth from left end?

- a) P
- b) Q
- c) M
- d) N

Ans) a

Exp) Option a is the correct answer.

Let's write the alphabet:

AB CDE FG HIJ KL MNO PQ RST UV WXY Z

$A+2=C$, $B+2=D$, $C+3=F$, $D+3=G$, $E+3=H$, $F+2=H$, $G+2=I$, $H+3=K$, $I+3=L$, $J+3=M$

$K+2=M$, $L+2=N$, $M+3=P$. $N+3=Q$, $O+3=R$ $P+2=R$ $Q+2=S$ $R+3=U$, $S+3=V$, $T+3=W$ $U+2=W$, $V+2=X$
 $W+3=Z$, $X+3=A$, $Y+3=B$

The last letter takes jump of seven places, $z+7=F$

New series: CDFGHHIKLMMNPQRRSUVVWXXZAB

thirteenth from left end is P

Q.34) In a joint family of seven persons A, B, C, D, E, F, G there are two married couples. G is a housewife and her husband is a lawyer. B is the husband of C. A is an Engineer and is the grand daughter of G. D is the father in law of C who is a doctor and D is father of E who is a Professor. F is brother of A and son of B. Who is the lawyer in the family?

- a) G
- b) D
- c) F
- d) D

Ans) b

Exp) Option b is the correct answer.

Step 1: Use the statement: G is a housewife and her husband is a lawyer. A is an engineer and is the grand daughter of D. F is a brother of A. From this we get image 1.

Step 2: B is the husband of C. D is the father in law of C who is a doctor. And D is father of E who is a professor. from this we get Image 2. From which we can conclude that E is brother of F and D is father of B.

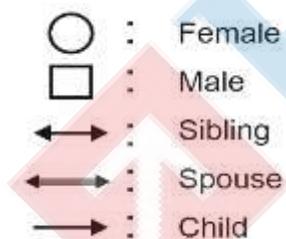
Step 3: F is son of B. From this we get Image 3.

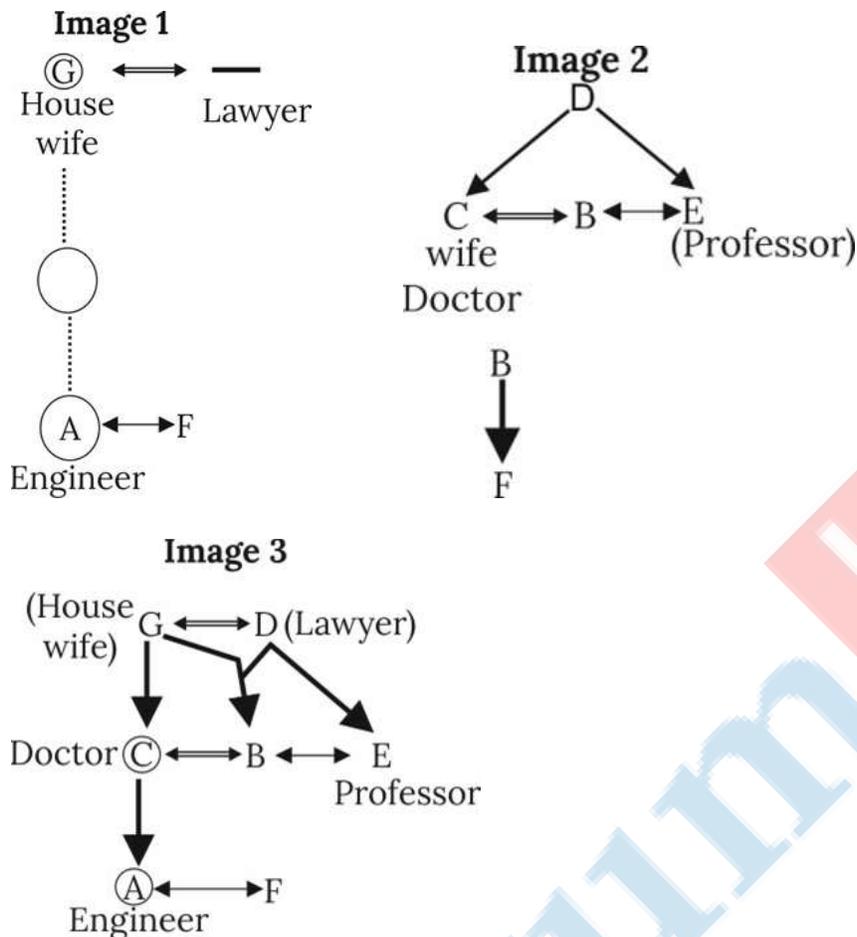
Now from Image 2 and 3 we get that : C is the mother of F.

From image 1 and 3 we get that since F and A are siblings , so B and C are parents of A and F.

From Image 1 and 2 we get that D is the husband of G, and G's husband was a lawyer, so D is a lawyer.

Codes:





Q.35) 6 friends Pandav, Rohan, Simmi, Tarun, Vishal and Pranav open their own companies. They opened their company in different year during six consecutive years. Pandav's company is older than Simi's. Rohan's company is older than that of Tarun and Vishal. Pranav's company is two years older than Tarun. Pandav's company was established either in the year 2002 or 2003. The first company was established in the year 2000. If Pranav's company is the oldest company, then which of the company is the youngest company ?

- Simi
- Tarun
- Rohan
- Can't be determined

Ans) d

Exp) Option d is the correct answer.

Step 1: Pranav's company is the oldest company. So, it was established in 2000.

Step 2: Pranav's company is two years older than Tarun. So, Tarun's company was established in 2002.

Step 3: Pandav's company was established either in the year 2002 or 2003. So now when Pranav's company was established in 2002, so Pandav's company was established in 2003.

Step 4: Rohan's company is older than that of Tarun and Vishal, so it has to be established in 2001.

Step 5: Pandav's company is older than Simi's. So, it can be established in 2004 or 2005.

Rohan's company is older than that of Tarun and Vishal. So it can be established in 2005 or 2004.

So which company is the youngest company can't be determined.

Year	Company's Owner
2000	Pranav
2001	Rohan
2002	Tarun
2003	Pandav
2004	
2005	

Q.36) Consider two Statements and a Question:

Statement-1: Two friends Mani and Sunny were talking about Hema's birthday. Mani says to Sunny that Hema's birthday was 6 months ago and the sum of digits of her birthday is the second smallest prime number.

Statement -2: Sunny replies that after three months from now Hema's birthday will be 9 months back and it had fallen on a Saturday.

Question : In which month is Hema's birthday ?

Question: Which one of the following is correct in respect of the Statement and the Question?

- Statement-1 alone is sufficient to answer the question
- Statement -2 alone is sufficient to answer the question
- Both Statement-1 and Statement -2 are required to answer the question
- Neither Statement-1 nor Statement -2 is sufficient to answer the question.

Ans) d

Exp) Option d is the correct answer.

Using statement 1: Hema's birthday was 6 months ago and the sum of digits of her birthday is the second smallest prime number (3)

So, the date of birth of Hema can be 03, 12. In which month they both are talking is not known, hence month of birth can't be known.

So, statement 1 alone is not sufficient to answer the question.

Using Statement 2: Three months from now Hema's birthday will be 9 months back and it had fallen on a Saturday.

Again, here in which month they both are talking is not known, hence month of birth can't be known.

So, statement 2 alone is not sufficient to answer the question.

Even using both the statements in which month they both are talking is not known, hence month of birth can't be known. So, Neither Statement-1 nor Statement -2 is sufficient to answer the question.

Q.37) In a certain code language DGJ is written as 37, MPS is written as 231, then how will be "VYB" written?

- 24
- 144
- 19
- 169

Ans) c

Exp) Option c is the correct answer.

$$D G J = 37, \text{ MPS} = 231$$

The logic is [(index of 1st alphabet x index of 3rd alphabet)-index of 2nd alphabet] = RHS(right hand side)

$$\{\text{Index of D}(4) \times \text{index of J}(10)\} - \text{index of G}(7) = 37$$

$$\{\text{Index of M}(13) \times \text{index of S}(19)\} - \text{index of P}(16) = 231$$

$$\{\text{Index of V}(22) \times \text{index of B}(2)\} - \text{index of Y}(25) = 44 - 25 = 19$$

Q.38) A, B, C, D, E and F not necessarily in that order are sitting in six chairs regularly placed around a round table. It is observed that:

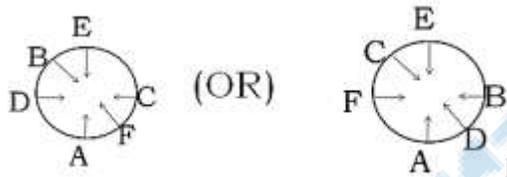
- A is between D and F
- C is opposite D
- D and E are not on neighbouring chairs

Which one of the following must be true?

- a) A is opposite B
- b) D is opposite E
- c) C and B are neighbours
- d) B and E are neighbours

Ans) d

Exp) Option d is the correct answer.



Fix the position of A and proceed according to the given conditions. There can be two cases as above in the figure. In both B and E are neighbours.

Q.39) Examine the following statements:

1. Either A & B got same marks or A got more marks than B
2. Either C & D got same marks or D got more marks than C
3. B got more marks than C

Which of the following conclusions can be drawn from the above statements?

- a) A got more marks than B
- b) B and D got same marks
- c) D got more marks than C
- d) A got more marks than C

Ans) d

Exp) Option d is the correct answer.

From S1: $A \geq B$

From S2: $D \geq C$

From S3: $B > C$

Now if B (who either got equal or less marks than A) got more marks than C, then A got more marks than C.

Q.40) Consider the following statements and conclusions:

Statement 1: All cups are books.

Statement 2: All books are shirts.

Conclusion A: Some cups are not shirts.

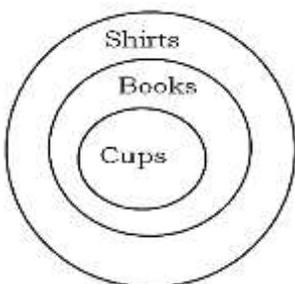
Conclusion B: Some shirts are cups.

Which of the conclusion given above is/are correct?

- a) Only conclusion A follows
- b) Only conclusion B follows
- c) Both Conclusion A and B follows
- d) Neither Conclusion (A) nor (B) follows

Ans) b

Exp) Option b is the correct answer.



Q.1) It is an archaeological site located on the banks of the river Ganga in Bihar's Saran district. It has a large pre-historic mound which is known for its continuous archaeological record from the Neolithic age to the reign of the Pal dynasty who ruled during the pre-medieval period.

Which of the following archaeological sites is described in the above passage?

- a) Chirand
- b) Utnur
- c) Kanispur
- d) Maski

Ans) a

Exp) Option a is the correct answer.

Chirand is an archaeological site in the **Saran district of Bihar, India**, situated on the northern bank of the Ganga River. It has a large pre-historic mound which is known for its continuous **archaeological record from the Neolithic age (about 2500–1345 BC) to the reign of the Pal dynasty who ruled during the pre-medieval period**. The excavations in Chirand have revealed stratified Neolithic, Chalcolithic, and Iron Age settlements, and transitions in human habitation patterns dating from 2500 BC to 30 AD.

Recently, it was in news due to threat of erosion and losing its existence as the water level in the river is rising due to heavy rains.

Option b is incorrect: Utnur is located in Telangana.

Option c is incorrect: Kanispur is located in Kashmir.

Option d is incorrect: Maski is located in Karnataka.

Source: <https://www.hindustantimes.com/cities/patna-news/famous-archaeological-site-in-bihar-faces-threat-of-erosion-101624801867323.html>

Q.2) Consider the following statements regarding the Early Vedic Period:

1. The practice of polygamy was present during the Early Vedic period.
2. The practice of widow remarriage was known to Early Vedic People.
3. Child marriage was widely practiced during the Early Vedic period.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Women had a respectable position in the early Vedic era. But the society was essentially patriarchal with a preference for male children and cattle. The birth of a son was preferred perhaps because of the martial nature of the society, which required male members for their clashes to establish dominance over the territories.

Statement 1 is correct: Monogamy was generally practiced in the Early Vedic period while **polygamy was prevalent among the royal and noble families**. Women were given opportunities as men for their spiritual and intellectual development. There were women poets like Apala, Viswavara, Ghosa and Lopamudra during the Rig Vedic period.

Statement 2 is correct: We also notice the practise of widow remarriage in the Rig-Veda/Early Vedic Period. The custom of sati was unknown. The wife occupied an honoured place and participated with her husband in religious ceremonies.

Statement 3 is incorrect: Though we notice the practice of levirate and widow remarriage in the Rig-Veda yet **there is no reference about pardah and child marriage.** The marriageable age in the period seemed to have been 16-17 years.

Source: History, Volume-1, Higher Secondary First Year, Tamil Nadu State Board

<https://www.arcjournals.org/pdfs/ijhsse/v2-i5/1.pdf>

<https://www.globalsecurity.org/military/world/pakistan/rig-vedic-period.htm#:~:text=Monogamy%20was%20generally,Rig%20Vedic%20period.>

Q.3) Which of the following statements is/are the features of Neolithic culture found in Kashmir?

1. Remains of the neolithic culture in Kashmir were found at the sites of Burzahom and Gufkral.
2. The practice of agriculture was known to the neolithic people of Kashmir.

Select the correct answer using the code below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The sites of northern Neolithic culture are found in Kashmir. The Neolithic culture of Kashmir region was contemporary with the Harappan civilization. Recent research has placed the beginning of the Neolithic culture in this region around the late fourth millennium BCE.

Statement 1 is correct: In Kashmir, excavations at **Burzahom, Gufkral and Kanispur have revealed significant materials belonging to Neolithic culture.** Burzahom and Gufkral have also revealed Megalithic and Early Historic phases.

Statement 2 is correct: People of Burzahom mainly practiced hunting and fishing economy and they also practiced agriculture on a small scale. **The people of Gufkral practised both agriculture and animal husbandry.** The Neolithic people in Kashmir used not only polished tools of stone, but also numerous tools and weapons made of bone.

Source: Ancient India by RS Sharma pg 22

<https://egyankosh.ac.in/bitstream/123456789/64778/1/Unit4.pdf>

Q.4) Which of the following statements about Ajatashatru, the king of Magadha is/are correct?

1. He maintained a friendly relationship with the kingdom of Vaisali throughout his reign.
2. He was instrumental in convening the first Buddhist Council at Rajagriha.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The reign of Ajatasatru was remarkable for his military conquests. He fought against Kosala and Vaisali. He won a great success against a formidable confederacy led by the lichchvis of Vaisali. This had increased his power and prestige.

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Statement 1 is incorrect: Ajatashatru did not have a friendly relationship with the kingdom of Vaisali. Despite his mother being a Lichchhavi princess, he did not hesitate to make war against Vaisali, which was ultimately destroyed after a 16-year-long conflict.

Statement 2 is correct: Ajatashatru is credited with convening the first Buddhist council at Rajagriha, which was presided over by the monk Mahakasyapa.

Source: Tamil Nadu History text book pg 50 ; Ancient India by RS Sharma pg 72

Q.5) Consider the following statements regarding James Webb Space Telescope:

1. It is a joint initiative of NASA, the European Space Agency (ESA) and the Canadian Space Agency.
2. It has observed, for the first time, the effect of gravitational lensing on a distant exploding star.
3. It revolves around the Sun, unlike Hubble Telescope which revolves around the Earth.
4. It is the first and the only telescope which is located at the Sun-Earth Lagrange-2 or L2 point.

Which of the options given above are correct?

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1 and 2 only
- d) 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

James Webb Space Telescope (JWT) is an **infrared observatory**, launched in 2021 at **1 million miles (or 1.5 million kilometers) away from the Earth**. Its aim is to complement and extend the discoveries of the Hubble Space Telescope. It **has longer wavelength and greatly improved sensitivity**. It is the **largest and the most power telescope** ever built.

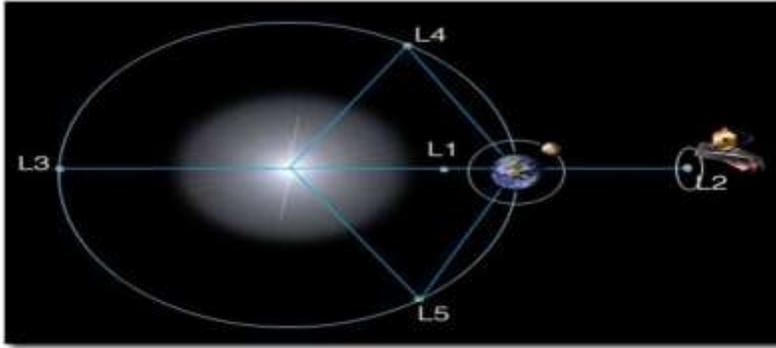
Statement 1 is correct: JWT is a joint initiative by **NASA, the European Space Agency and the Canadian Space Agency**.

Statement 2 is incorrect: Hubble Telescope is known to observe the effect of gravitational lensing on a distant exploding star, for the first time (2015). Other significant discoveries of Hubble Telescope include:

- 1) Helped **pin down the age for the universe** now known to be 13.8 billion years, roughly three times the age of Earth.
- 2) Helped determining the **rate at which universe is expanding**.
- 3) Discovered that **nearly every major galaxy has a black hole at its center**.
- 4) Created **3D map of dark matter**.

Statement 3 is correct: JWT will orbit around the Sun at the **Lagrange-2 (L2)**, which is 1.5 million kilometers away from the Earth. At this orbit, **the telescope is in line with the Earth as it revolves around the Sun**. Hubble Telescope revolves around the Earth at an altitude of approximately 535 kilometers.

Statement 4 is incorrect: **Lagrange point** or **liberation point**, in astronomy, a point in space at which a small body, under the gravitational influence of two large ones, will remain approximately at rest relative to them. **Apart from JWT, there are few other objects launched at L2. This includes NASA's- WMAP, Herschel Space Observatory** (Herschel was the largest infrared telescope launched, until JWT was launched in 2021) and **ESA's Planck** etc. The key feature of L2 orbit is that it lets the telescope stay in line with Earth as it moves around the Sun. This allows the satellite's large sunshield to protect the telescope from the light and heat of the Sun and Earth (and Moon). See picture below for the locations of different Lagrange points.



(Source: NASA)

Knowledge Base:

Popular images shared by JWT

- 1) **SMACS-0723:** It is a **cluster of galaxies about 4 billion light years away**, firstly discovered by the Hubble Telescope. JWT shared very high-resolution pictures of this cluster.
- 2) **WASP-96b (spectrum):** Webb's detailed observation of this hot, puffy **planet** outside our solar system reveals the clear signature of water, along with evidence of haze and clouds that previous studies of this planet did not detect.
- 3) **Southern Ring Nebula:** This planetary nebula, an expanding cloud of gas that surrounds a dying star
- 4) **Stephan's Quintet:** Webb's view of this compact group of galaxies, located in the constellation Pegasus
- 5) **Carina Nebula:** star-forming region in the southern constellation Carina

Source: [https://solarsystem.nasa.gov/missions/james-webb-space-telescope/in-](https://solarsystem.nasa.gov/missions/james-webb-space-telescope/in-depth/#:~:text=What%20is%20the%20James%20Webb,see%20stars%20forming%20planetary%20systems)

[depth/#:~:text=What%20is%20the%20James%20Webb,see%20stars%20forming%20planetary%20systems](https://solarsystem.nasa.gov/missions/james-webb-space-telescope/in-depth/#:~:text=What%20is%20the%20James%20Webb,see%20stars%20forming%20planetary%20systems).

<https://webb.nasa.gov/content/about/orbit.html#:~:text=Webb%20Orbit&text=The%20James%20Webb%20Space%20Telescope,second%20Lagrange%20point%20or%20L2>.

[https://www.rmg.co.uk/stories/topics/what-has-hubble-space-telescope-](https://www.rmg.co.uk/stories/topics/what-has-hubble-space-telescope-discovered#:~:text=Helped%20pin%20down%20the%20age,black%20hole%20at%20the%20centre)

[discovered#:~:text=Helped%20pin%20down%20the%20age,black%20hole%20at%20the%20centre](https://www.rmg.co.uk/stories/topics/what-has-hubble-space-telescope-discovered#:~:text=Helped%20pin%20down%20the%20age,black%20hole%20at%20the%20centre).

Q.6) Consider the following statements about agricultural practices followed by the people of Harappan Civilization:

1. Rice was the most important crop of the Harappan civilization.
2. Harappan people were unaware of the use of plough in the agriculture.
3. Evidence of multi-cropping has been found.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 3 only
- d) 1 and 2 only

Ans) c

Exp) Option c is the correct answer.

The Harappan civilization shared several cultural elements such as subsistence strategies with the early Harappan cultures. The Harappans ate a wide range of plant and animal products, including fish.

Statement 1 is incorrect: Wheat and barley were the two important crops of the Indus Valley Civilization. In some places, particularly Gujarat, they also cultivated some native millets. They fed local wild rice to their animals and probably began to cultivate it, **though rice does not become an important crop until post-Harappan times.**

Statement 2 is incorrect: Use of plough was observed during the Harappan age. Primitive ploughs were made of wood, and wood is a perishable material. Hence there is no possibility of finding an actual wooden plough from a Harappan site. However, a terracotta model of a plough has been discovered from Mohenjodaro. This shows that the Harappan people were aware of the plough. Apart from this, a ploughed field was also excavated in Kalibangan.

Statement 3 is correct: Archaeologists have found evidence of a ploughed field at Kalibangan (Rajasthan), associated with Early Harappan levels. **The field had two sets of furrows at right angles to each other, suggesting that two different crops were grown together.** Thus, providing evidences of multi-cropping during this period. The research also confirms that **Indus populations were the earliest people to use complex multi-cropping strategies across both seasons**, growing foods during summer and winter, which required different watering regimes.

Source: NCERT, Themes in Indian History, pg. 02-03

http://www.nationalmuseumindia.gov.in/uploads/collections/1611899593_Animals%20of%20the%20Harappan%20civilisation.pdf

<https://www.harappa.com/blog/rice-farming-india-much-older-thought-used-summer-crop-indus-civilization>

Q.7) Consider the following statements regarding the tribal assemblies during Rig Vedic period:

1. 'Vidhata' were the earliest assemblies dealing with social, religious and military functions.
2. Women were not part of the 'Samiti' in the Rig Vedic period.
3. The king was elected by the tribal assembly called the 'Sabha'.

Which of the statements given above is/are correct?

- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

During the Rig Vedic period, **tribal elements in society were stronger and social divisions based on the collection of taxes or accumulation of landed property were absent.** The society was largely **egalitarian**. There was no evidence of feudalism in the Rig Vedic period. The administrative machinery of the Aryans in the Rig Vedic period functioned with the tribal chief (called Rajan). Several **tribal or kin-based assemblies** such as the Sabha, Samiti, Vidatha, and Gana are mentioned **in the Rig Veda**.

Statement 1 is correct: Vidatha mentioned in the Rig Veda was the earliest and **most important assembly**. It was an assembly meant for **social, religious and military functions**. **Vidatha is frequently associated with women**. They actively participated in the deliberations with men. The **vidatha included women and elders as participants**. The vidatha collectively worshiped deities such as **Agni and Indra**.

Statement 2 is incorrect: The **Samiti** assumed importance only towards the **end of the Rig-Vedic period**. Samiti was a **folk assembly** in which people of the tribe gathered **for transacting tribal business**. It discussed **philosophical issues** and was concerned with religious ceremonies and prayers. **Women were allowed to attend the samiti during the Rig Vedic Age**. **Rajan was elected by the Samiti**. The Rig Veda stated that one could not rule without a samiti. So, statement 2 is incorrect.

Statement 3 is incorrect: The term **Sabha denotes both the assembly and the assembly hall**. Women who attended this assembly were called Sabhavati. As per Rig-Veda, Sabha was a place for dicing **and gambling assembly**, along with **dancing, music, witchcraft, and magic**. It discussed **pastoral affairs and performed**

judicial and administrative functions and exercised judicial authority. They did not elect Rajan. He was elected by the tribal assembly called Samiti. So, statement 3 is incorrect.

Knowledge Base: The term **Gana** means Jana, which means **count**. A Gana was **an assembly or troop**. The leader of the gana is generally called **Ganapati**.

Source: Class XI TN Board Book on Ancient History

Q.8) Consider the following pairs of major urban cities of Indus Valley civilization (IVC) and their characteristic features.

Cities	Characteristic features
1. Rakhigarhi	Westernmost of the excavated IVC sites.
2. Banawali	Presence of a well-planned fortified township laid in a radial pattern
3. Lothal	Important trading center
4. Harappa	The largest Indus valley site in India.

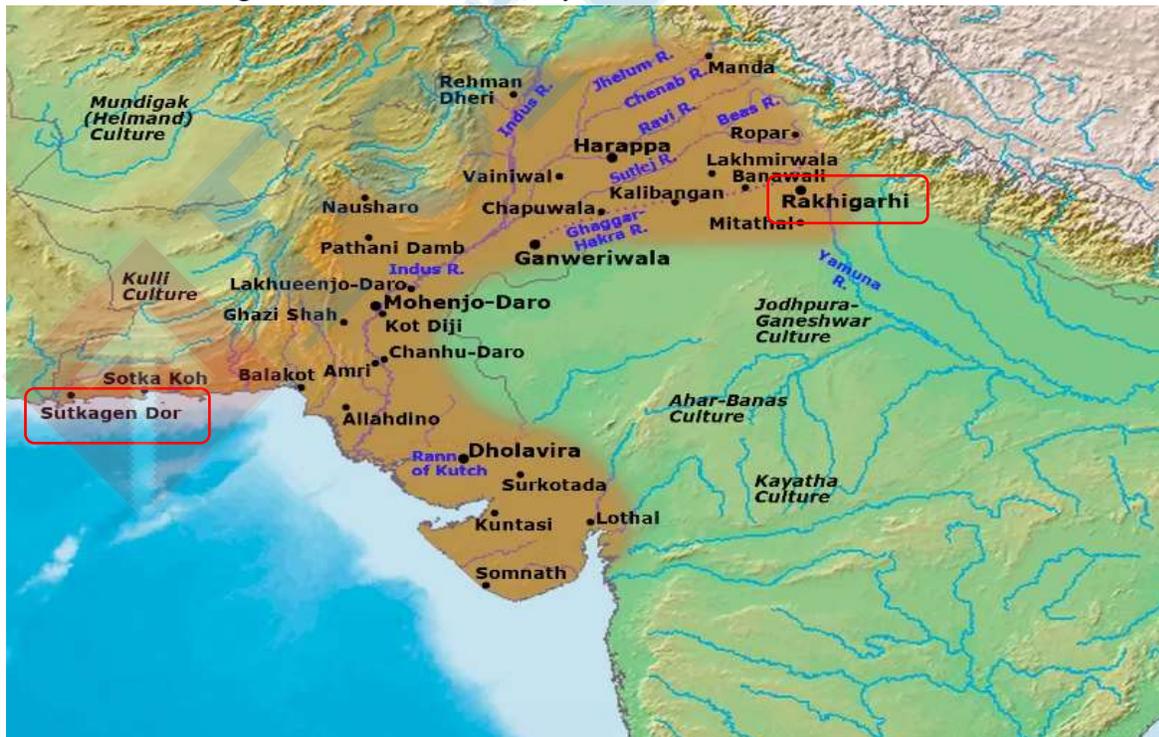
How many pairs given above are correctly matched?

- Only one pair
- Only two pairs
- Only three pairs
- All four pairs

Ans) b

Exp) Option b is the correct answer.

Pair 1 is incorrect: Rakhigarhi is the largest Harappan site located in India. **Sutkagendor is the westernmost among the excavated Indus valley sites.**



Pair 2 is correct: Banawali is a Harappan site located in the state of Haryana. It is marked by the presence of a well-planned fortified township laid in a radial pattern. The sophisticated red ware decorated with animal and floral designs comprising dish-on-stand, 'S'-shaped jar, perforated jar, vase, cooking handis, beaker, basin and goblet etc. have been excavated here.

Pair 3 is correct: Lothal was a thriving trade center in IVC, with its trade of beads, gems and ornaments reaching West Asia and Africa. Lothal was one of the southernmost sites of the ancient Indus Valley civilization. The city was inhabited during 3700 BCE and was a thriving trading port. **The dominant sight at Lothal is the massive dockyard which made this place an important site of international trade during the Harappan period.**

Pair 4 is incorrect: Rakhigarhi is the largest Harappan site in the India and not the Harappa. Harappa was the first excavated/ discovered site of the Indus Valley Civilization. It is located on the banks of the river Ravi. Important findings of this site are red sandstone male torso, granaries and bullock carts.

Source: <https://indianexpress.com/article/india/india-news-india/asis-excavation-harappan-site-rakhigarhi-reveals-drainage-system-copper-gold-jewellery-7906995/>
<https://haryanatourism.gov.in/Destination/ancient-site-of-banawali>

Q.9) In the context of the Age of the Buddha, consider the following statements.

1. The use of metallic money began during this age.
2. In republics during this period, real power lay in the hands of hereditary king.
3. The Indian legal and judicial system originated in this period.

Which of the statements given above is/are correct?

- a) 1, 2 and 3
- b) 1 and 3 only
- c) 1 and 2 only
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

The age of the Buddha (6th century BCE) is characterized by the Northern Black Polished Ware phase and the origin of the second urbanization in India. Urbanization strengthened the state, increased trade, and promoted reading and writing. A rural base contributed to the beginning of crafts, commerce, and urbanization in the mid-Gangetic basin. Other features of this period were -

Statement 1 is correct. The picture of material life in north India, especially in eastern UP and Bihar, can be drawn on the Pali text. **This phase saw the beginning of metal money.** The use of burnt bricks and ring wells appeared in the middle of the NBPW (Northern Black Polished Ware) phase i.e., in the 3rd century BC.

Statement 2 is incorrect. The republican system of government existed either in the Indus basin or in the foothills of the Himalayas in eastern UP and Bihar. The republics in the Indus basin may have been the remnants of the Vedic tribes, although some monarchies may have been followed by republics. **In the republics, real power lay in the hands of tribal oligarchies.** In the republics of Shakyas and Lichchhavis, the ruling class belonged to the same clan and the same varna. Although in the case of the Lichchhavis of Vaishali, 7707 rajas sat in the assembly held in the mote hall, the brahmanas were not mentioned in this context.

Statement 3 is correct. The Indian legal and judicial system originated in this period. Formerly people were governed by the tribal law, which did not recognize any class distinction. But by now the tribal community has been clearly divided into 4 classes. Civil and criminal law was administered by the royal agents. Although the brahmanical law books took into account the social status of different Varna in framing their laws, they did not ignore the customs of the non-Vedic tribal groups.

Source: NCERT Ancient India Class XI – R S Sharma; Chapter 13

Q.10) Consider the following statements regarding the asteroid 'Ryugu':

1. This asteroid is found in the main asteroid belt, located between the orbits of Mars and Jupiter.
2. NASA launched a spacecraft 'Hayabusa2' to collect samples from the asteroid Ryugu.
3. It is identified as a 'potentially hazardous asteroid' by NASA.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Asteroids are the rocky objects **revolving around the sun** and are too small to be called as planets. Most of the asteroids can be found orbiting the Sun between Mars and Jupiter within the main asteroid belt. Asteroids range in size from **Vesta – the largest at about 329 miles (530 kilometers) in diameter – to bodies that are less than 33 feet (10 meters) across**. Asteroid Ryugu is a small diamond-shape space rock. **Statement 1 is incorrect:** Ryugu orbits the Sun **between the orbits of the Earth and the Mars**. It does not lie in the main asteroid belt, which is located roughly between the orbits of the Mars and the Jupiter.

Statement 2 is incorrect: **Japanese Space Agency- JAXA launched the asteroid sample return mission Hayabusa2**. The sample reached the Earth in 2020, which according to scientists may hold answers to the origin of the Earth.

Statement 3 is correct: Ryugu, a near Earth asteroid, which means its **orbit is close to the Earth's orbit**. Hence, it is classified as a **"potentially hazardous"** object by the NASA. Though, the body **poses no imminent danger** to the Earth, the complex forces acting on asteroids as they loop around the sun make it difficult to accurately predict their trajectory more than a few decades into the future. For example, when it's exposed to the sun, an asteroid can release volatile compounds like water, and this outgassing can produce thrust that subtly changes its orbit.

Knowledge Base: NASA has also launched its mission- **OSIRIS Rex**, which is supposed to return samples from the **asteroid Bennu**. Bennu is also a near-Earth object. This is the **second such mission**, after the Hayabusa2 mission of JAXA.

Asteroids are classified into 3 categories:

- 1) **Near-Earth asteroids:** their orbits pass close by that of Earth. Asteroids which actually cross Earth's orbit are called as Earth-crossers.
- 2) **Main Asteroid Belts:** These objects revolve within the asteroid between Mars and Jupiter.
- 3) **Trojans:** These asteroids are located at the Lagrange points (L4 and L5), where gravitational pull between the sun and the planet are balanced.

Source: <https://www.wired.com/story/for-the-second-time-ever-an-asteroid-sample-returns-to-earth/>

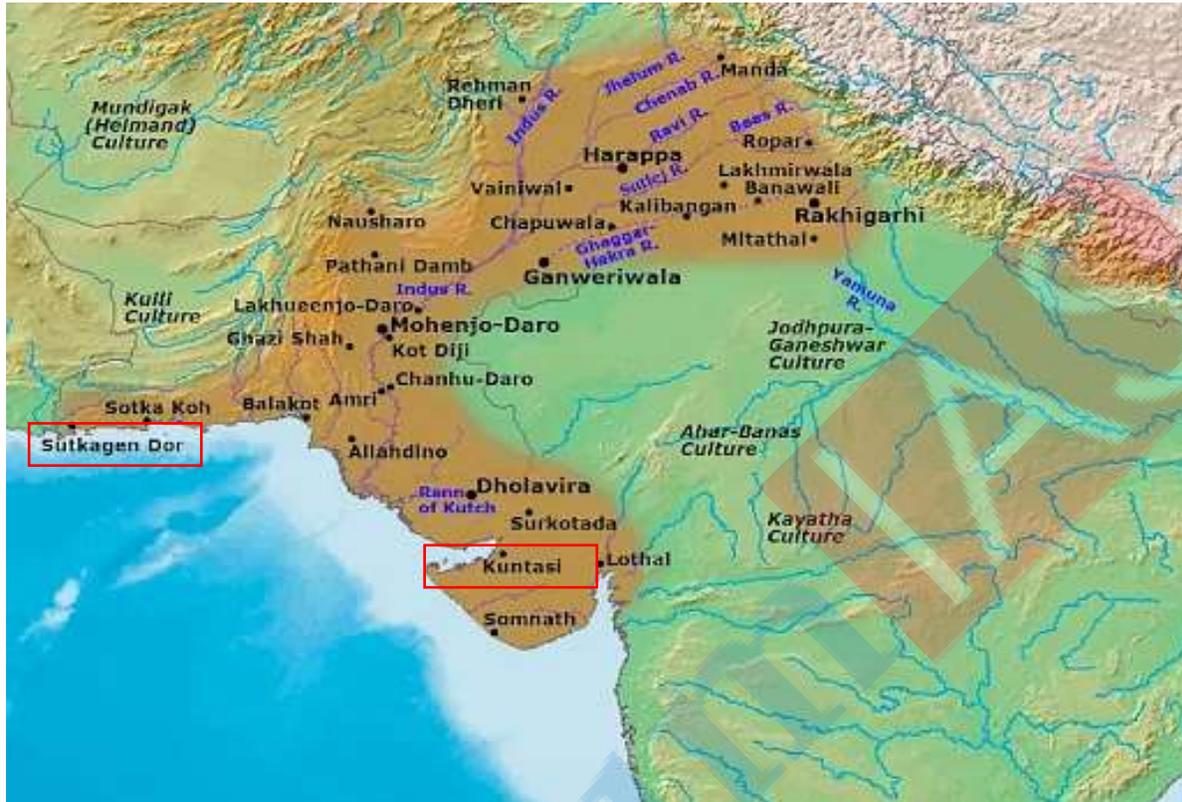
Q.11) Sutkagendor and Kuntasi are well known Harappan sites famous for which of the following?

- a) Copper mines
- b) Fire cult practices
- c) Gold mines
- d) Port facilities

Ans) d

Exp) Option d is the correct answer.

Harappa Civilization is known to be 4,700 years old civilization in the subcontinent, discovered in 1920. Ports and port cities played an important role in the economy of the Indus Valley Civilization:



Sutkagendor was one of the port cities of the Indus Valley Civilization. This Harappan site is located in the Makran district of Balochistan (Pakistan), on the banks of Dast river. As of now, it is the westernmost site of the Indus Valley Civilization that is known. Like most of the Harappan sites, Sutkagendor also has a citadel and defensive wall which is about 30 feet wide. **Archaeologists believe that this Harappan site would have been on the trade route from Lothal to Mesopotamia.**

Kuntasi is an archaeological site which is identified as a port belonging to the Indus Valley civilization. This site is located in Morbi District in Gujarat state and on the right bank of Phulki River.

Source: <https://www.indiatoday.in/magazine/heritage/story/19900331-excavations-throw-new-light-on-harappan-period-813812-1990-03-30>

<https://www.geeksforgeeks.org/harappan-civilization/>

Q.12) With reference to the history of ancient India, consider the following pairs.

Buddhist Councils	Significance
1. 1st Buddhist Council	Division of Buddhism into Mahasanghika and Sarvastivadins
2. 2nd Buddhist Council	Codified Sarvastivadin doctrines into Mahavibhasa.
3. 3rd Buddhist Council	Compilation of philosophical teachings of Buddha in Abhidhamma Pitaka

Which of the pairs given above are **incorrectly** matched?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Buddhist Councils marked important turning points in the early Buddhism. These councils resulted in sectarian clashes and resulted in the two major schools, Theravada and Mahayana. In total, 4 major Buddhist councils were convened.

Pair 1 is incorrect. The Division of Buddhism into Mahasanghika and Sarvastivadins was done in the 2nd Buddhist council.

According to tradition shortly after the death of the Buddha the first Buddhist Council was held in 483 BCE in the Saptaparni cave near Rajagriha. Mahakassapa presided over the assembly. All the teachings of the Buddha were divided into two Pitakas, namely: Vinaya Pitaka and Sutta Pitaka. The text of Vinaya Pitaka was established under the leadership of Upali and that of Sutta Pitaka was settled under the leadership of Ananda.

Pair 2 is incorrect. Codification of Sarvastivadin doctrines into Mahavibhassa was done in the 4th Buddhist Council.

The second Council was held at Vaishali in 383 BCE. The monks of Vaishali and Pataliputra had accepted certain rules which were declared as contrary to the teaching of the Buddha by the monks of Kaushambi and Avanti. The Council failed to bring about a compromise between the two opposing groups. **Hence the council ended in a permanent split in the Buddhist order into Sthaviravadins and Mahasangikas.** The former upheld the orthodox Vinaya Pitaka while the latter favoured the new rules and their further relaxation. Thus, the Buddhist order was split into two schools namely:

- 1) Sthaviravadins, and
- 2) Mahasangikas

The Sthaviravadins followed strict monastic life and rigid disciplinary laws as originally prescribed. The group which followed modified disciplinary rules was called the Mahasangikas.

Pair 3 is correct. The third Council was held at Pataliputra during the reign of Ashoka under the chairmanship of Moggaliputta Tissa. **In this Council the philosophical interpretations of the doctrines of the Buddha were collected into the third Pitaka called Abhidhamma Pitaka.** An attempt was made in this Council to free the Buddhist order from the dissidents and innovations. Heretical monks numbering sixty thousand were expelled from the order. The true canonical literature was defined and authoritatively settled to eliminate all disruptive tendencies.

Knowledge Base: The **fourth Council** was held during the reign of Kanishka in Kashmir. This council was a gathering of Hinayanists of north India. It compiled three commentaries (Vibhashas) of the three Pitakas. It decided certain controversial questions of differences that arose between the Sarvastivada teachers of Kashmir and Gandhara.

Mahayana developed after the fourth Buddhist Council. In opposition to the Hinayana group, which believed in orthodox teachings of the Buddha, those who accepted the new ideas belonged to the Mahayana sect. They made images of the Buddha and worshipped it as God. In the first century CE, during the period of Kanishka, some doctrinal changes were made.

Source: NIOS- Jainism, Buddhism and Ajivikas; Chapter 12

Q.13) Consider the following statements regarding religious beliefs and practices followed during the Indus Valley Civilisation (IVC):

1. Pipal tree was considered sacred by the people of the IVC.
2. Indra, Agni and Soma were the most important gods during the IVC.
3. People from the IVC had faith in the life after death.

Which of the statements given below is/are correct?

- a) 3 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

The numerous seals and figurines discovered in the excavations carried out at various sites connected with the Harappan culture point out to the religious beliefs of the Indus Valley people. Few of the important religious beliefs and practices are discussed below:

Statement 1 is correct: The Harappans seem to have worshipped tree spirits, several seals depict the Pipal tree. In many cases a figure is shown looking through the branches. Scholars believe that this represents the tree-spirit. In many cases worshippers are shown standing in front of the tree. In many other cases a tiger or some other animal is shown in front of the tree.

Statement 2 is incorrect: Religion of the Indus Valley Civilization ("IVC") is a debated topic and remains a matter of speculation. If the Indus script is ever deciphered, this may provide clearer evidence. From the excavated archaeological sources, it was assumed that mother goddess and a male deity (believed to be proto-shiva) were the important gods of the IVC. Apart from them, Harappan people also worshipped animals and trees. **Indra, Agni, and Soma were the important gods during the Rigvedic period.**

Statement 3 is correct: The people of Indus Valley disposed of their dead either by burial or by cremation. They buried their dead together with household pottery, ornaments and other articles of daily use. Even when they cremated the dead, they preserved the ashes of the bodies in clay urns. Both these practices show that **people believed in life after death.**

Source: Ancient India by R.S. Sharma,

http://indiansaga.com/history/religion_indusvalley.html

Q.14) Consider the following statements regarding the Later Vedic period:

1. People used iron tools for agricultural purposes during this period.
2. A new type of assembly called 'Vidhata' became prominent and powerful during this period.
3. The institution of 'gotra' appeared during the Later Vedic period.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1, 2 and 3
- d) 1 only

Ans) a

Exp) Option a is the correct answer.

The Later Vedic culture is dated to the period between 1000 BCE and 700–600 BCE. The Painted Grey Ware Culture of the Iron Age, which has been identified by archaeologists at many excavated sites, is associated with the Later Vedic culture. This period witnessed political, social, economic complexity and developments.

Statement 1 is correct: Archaeology has shown that iron began to be used around 1000 BC which is also the period of Later Vedic literature. The northern and eastern parts of India, to which the Aryans later migrated, was covered with thick rain forests which could not be cleared by copper or stone tools used by Rigvedic people. **The use of iron tools now helped later-Vedic people clear the dense rain forests in a more effective manner. Large tracts of forestland could be converted into cultivable pieces in relatively less time.** The iron plough could turn the soil from deeper portions making it more fertile.

Statement 2 is incorrect: In the Early Vedic Age tribal polities were dominant. The king was elected by the assemblies. In the Later Vedic period the assemblies became less important, **and the power of the king increased. The influence of assembly called vidhata disappeared**, while samiti and sabha continued in the period. The development of large kingdoms reduced the power of the assemblies.

Statement 3 is correct: The institution of gotra (literally meaning-cow pen) appeared during the later Vedic period. People practiced gotra exogamy (marrying outside the gotra). Gotra signified descent from a common ancestor and marriages could not take place between couples belonging to the same Gotra.

Source:

https://nios.ac.in/media/documents/SrSec315NEW/315_History_Eng/315_History_Eng_Lesson4.pdf

<https://egyankosh.ac.in/bitstream/123456789/64786/1/Unit9.pdf>

Q.15) Consider the following statements regarding Semi-Automated Offside Technology:

1. This technology was used for the first time in FIFA World Cup 2022, held in Qatar.
2. The onsite referee is freed from referring an 'offside' call decision to the Video Assistant Referee (VAR) room.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

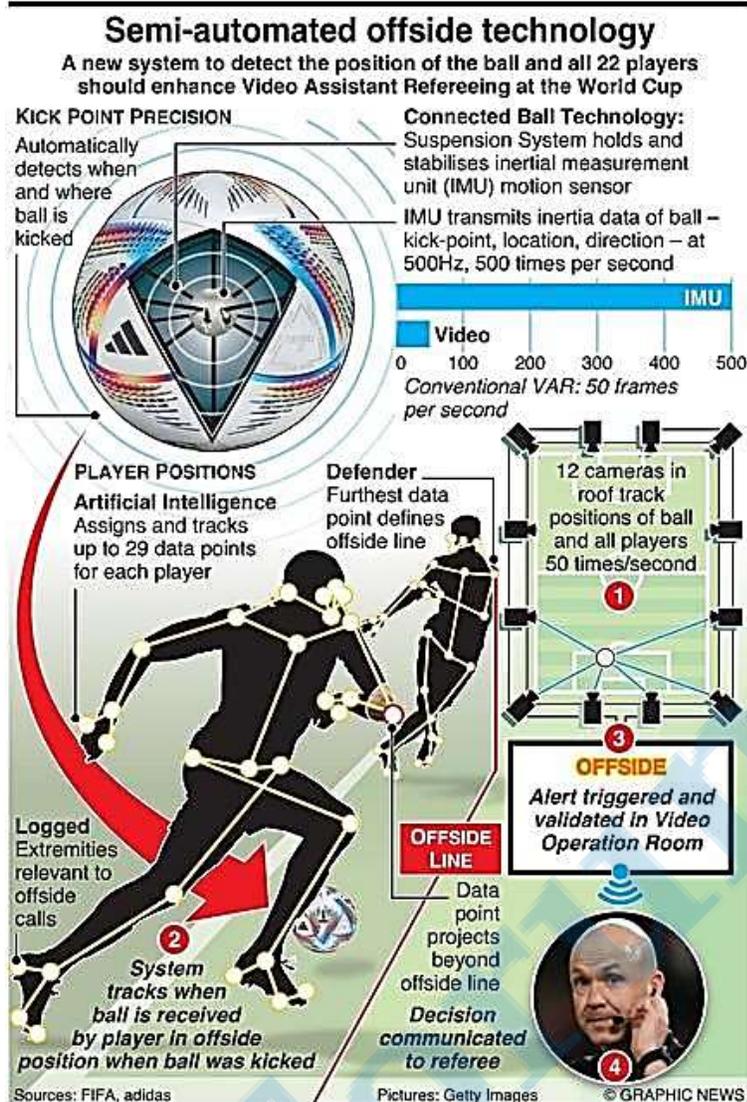
Exp) Option c is the correct answer.

In the sport of football, the **decisions pertaining to offside have remained a controversial issue**. With the help of Semi-Automated Offside Technology (SAOT) **refereeing decisions were made more objective**.

Statement 1 is correct: This technology was **used for the first time in FIFA World Cup 2022**. Periodic innovations had been made in the FIFA tournaments. For example, introduction of the **goal-line technology in 2014 (Brazil) and the Video Assistant Referee (VAR) in 2018 (Russia)**.

Statement 2 is correct: Earlier, the onsite referee had to refer a controversial 'offside' call decision to the VAR room. **In SAOT, alert automatically triggers to the VAR room**. This saves time by making quick and more accurate decisions.

Knowledge Base: SAOT in detail:



(Source: The Hindu)

Source: <https://sportstar.thehindu.com/football/fifa-world-cup/news/qatar-2022-new-features-semi-automatic-offside-technology-saot-in-soccer-world-cup/article66081895.ece>

Q.16) Which of the following is **incorrect** regarding the Mauryan polity and administration?

- The administration was highly centralized and there was royal absolutism in the empire.
- Princes from the royal family were appointed as the head of the provinces.
- The taking of Census was done during the Mauryan period.
- The state controlled almost all the economic activities under its realm.

Ans) a

Exp) Option a is the correct answer.

The ascendancy of the Mauryas had resulted in the triumph of monarchy in India. Other systems like republics and oligarchies that were prevalent in the pre-Mauryan India had collapsed. This marks the beginning of the centralized system in India.

Statement a is incorrect. There was no royal absolutism as Kautilya the foremost political theorist of ancient India supported the monarchical form of government, but he did not stand for royal absolutism. He advocated that the king should take the advice of his ministry in running the administration. Therefore, a council of ministers called Mantriparishad assisted the king in administration.

Statement b is correct. The Mauryan Empire was divided into four provinces with their capitals at Taxila, Ujjain, Suvarnagiri and Kalinga. **The provincial governors were mostly appointed from the members of royal family.** They were responsible the maintenance of law and order and collection of taxes for the empire.

Statement c is correct. The taking of Census was regular during the Mauryan period. The village officials were to number the people along with other details like their caste and occupation. They were also to count the animals in each house. The census in the towns was taken by municipal officials to track the movement of population both foreign and indigenous. The data collected were cross checked by the spies. The Census appears to be a permanent institution in the Mauryan administration.

Statement d is correct. **The economy was mostly state led and there was huge interference of royals in the economy. There were most than 27 officers for the economic purpose.** The state brought new land under cultivation with the aid of cultivators and Shudra laborers. State collected huge taxes from people to feed the large army. In times of emergency, peasants were compelled to raise more crops. Tolls were also levied on commodities brought to town for sale, and they were collected at the gate. Moreover, the state enjoyed monopoly in mining, sale of liquor, manufacture of arms, etc.

Source: Ancient History by R S Sharma

Tamil Nadu SCERT Higher Secondar First Year Volume I, Chapter 4: Emergence of State and Empire

Q.17) Consider the following statements regarding the Varna system during Vedic Age:

1. Upanayana ceremony was restricted to the Brahmins only.
2. First mention of Varna is found in Purusha Sukta hymn of Rigveda.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Varna means **to choose**, and it also means **colour**. The emergence of a **four-fold varna system** based on birth is a feature of later Vedic age. The **Dharmasutras and Dharmashastras** also contained rules about the ideal **occupations of the four categories or varnas**. **Brahmans, Kshatriyas, Vaishyas were known as Dwij meaning twice born**, 1st at time of birth and 2nd after Sanskar.

Statement 1 is incorrect: Upanayana is a **symbolic ceremony that marks an individual's entrance to Hinduism**. As per texts, the Upanayana ceremony was restricted to the **Trivarnikas or the upper castes of Brahmins, Kshatriyas and Vaisyas (and not only to Brahmins)**. Sudras were not allowed to undergo this Upanayana ceremony. So, statement 1 is incorrect.

Statement 2 is correct: The **first mention** of the Varna System can be seen in the hymn **Purush Sukta**. They are found in the Xth Mandala of **Rig Veda**, latest to be added to the text.

Source: Old XI NCERT of Ancient India

<https://www.outlookindia.com/national/there-flowed-a-river-in-search-of-the-vedic-saraswati-magazine-204044>

<https://egyankosh.ac.in/bitstream/123456789/75093/1/Unit-4.pdf>

Q.18) Consider the following statements with respect to the ancient Vajji state:

1. It was ruled by not one but many rulers in the sangha form.
2. Women were usually not allowed to participate in public assemblies.
3. Local shrines were maintained in both towns and villages.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Vajji was one of the sixteen mahajanapadas of ancient India. It was a confederacy of eight or nine clans. The most powerful dynasty was that of the Lichchhavis with their capital at Vaishali.

Statement 1 is correct. Vajji was under a different form of government, known as **gana or sangha**. In a gana or a sangha there were **not one, but many rulers**. Sometimes, even thousands of men ruled together, each one was known as a raja. These rajas performed rituals together. Both **Buddha and Mahavira belonged to ganas or sanghas**.

Statement 2 is correct. Various rulers met in assemblies, and decided what had to be done and how, through discussion and debate. For example, if they were attacked by an enemy, they met to discuss what should be done to meet the threat. However, **women, dasas and kammakaras could not participate in these assemblies**. Some of the most vivid descriptions of life in the sanghas can be found in Buddhist books.

Statement 3 is correct. **Chaityas (local shrines)** were indeed **maintained in both towns and villages**. Wise saints who followed different beliefs were respected and allowed to enter and leave the country freely.

Knowledge Base:

Other features of Vajji state:

- 1) They held full and frequent public assemblies.
- 2) They followed established rules.
- 3) They respected, supported and listened to elders.
- 4) Vajji women were not held by force or captured.

Source: Ancient History, Old NCERT, Chapter-10, Pg. 69

History, NCERT VI, Chapter-6, Pg. 61-62

Q.19) With reference to Judiciary in Mauryan Empire, which of the following statements is/are correct?

1. The kantakasodhana courts were to clear the anti-social elements from the society.
2. The dharmasthiya courts mostly dealt with criminal laws relating to robbery and murder.
3. The penalties in the Mauryan administration were based on hierarchy of varnas.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Mauryan administration is famous in history for its judicial system. The Mauryan legal system was based on idealism and not reformism. The king was the highest judicial officer. Gram Sabha was the lowest judicial unit. Above it were courts at sangrahan, dronamukha and janapada levels.

Statement 1 is correct. Kantakasodhana courts were presided over by three judges and three amatyas. **The main purpose of these courts was to clear the society of anti-social elements and various types of crimes, and it functioned more like the modern police,** and relied on a network of spies for information about such antisocial activities.

Statement 2 is incorrect. **The dharmasthiya courts mostly dealt with civil law relating to marriage, inheritance and other aspects of civil life.** The courts were presided over by three judges well versed in sacred laws and three **amatyas** (secretaries). Dharmasthiya also decided personal disputes such as those over stridhana (wife's wealth) and marriage.

Statement 3 is correct. The Mauryan legal system flowed from four sources: (i) dharma (following accepted principles); (ii) vyavahara (contemporary legal codes); (iii) charitra (customs); and (iv) rajasasana (the royal decree). **According to Arthashastra, penalties in the Mauryan period were based on varna hierarchies. It means that for the same kind of offence a Brahman was punished much less severely than a Shudra.**

Knowledge Base:

Kautilya mentions the existence of both civil and criminal courts. The chief justice of the Supreme Court at the capital was called Dharmasthikarin. There were also subordinate courts at the provincial capitals and districts under Amatyas. Different kinds of punishment such as fines, imprisonment, mutilation and death were given to the offenders.

Source: Ancient History by R S Sharma

Tamil Nadu SCERT Higher Secondar First Year Volume I, Chapter 4: Emergence of State and Empire

https://www.indianetzone.com/56/judiciary_system_mauryan_empire.htm

Q.20) Consider the following statements regarding Generative Artificial Intelligence (Gen AI):

1. It can create a wide variety of data by learning patterns from existing data.
2. It is capable of producing content that mimics human creativity.
3. It can be helpful in upscaling of low-resolution images to high-resolution images.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The recent buzz around generative AI has been driven by the simplicity of new user interfaces for creating high-quality text, graphics and videos in a matter of seconds. The new wave of generative AI systems, such as ChatGPT, have the potential to transform entire industries.

Statement 1 is correct: Generative AI (GenAI) is a type of Artificial Intelligence that can create a wide variety of data, such as images, videos, audio, text, and 3D models. It does this by learning patterns from existing data, then using this knowledge to generate new and unique outputs.

Statement 2 is correct: **GenAI is capable of producing highly realistic and complex content that mimics human creativity,** making it a valuable tool for many industries such as gaming, entertainment, and product design. Recent breakthroughs in the field, such as GPT (Generative Pre-trained Transformer) and Midjourney, have significantly advanced the capabilities of GenAI. These advancements have opened up new possibilities for using GenAI to solve complex problems, create art, and even assist in scientific research.

Statement 3 is correct: With such significant benefits, Generative AI can be used for distinct purposes such as-

- 1) Generative AI avatars have been used to protect the identity of interviewees in news reports about the

persecution of LGBTQ people in Russia.

- 2) **It helps in intelligent upscaling of low-resolution images to high-resolution images.**
- 3) It enhances old images and old movies by upscaling them to 4K and beyond, which generates 60 frames per second instead of 23 or less, and removes noise, adds colors and makes it sharp.
- 4) Generative AI can render any computer-generated voice into one that truly sounds like human voice. And so on.

Source: <https://analyticsindiamag.com/pros-and-cons-of-generative-ai/#:~:text=While%20generative%20AI%20coding%20can,in%20unique%20and%20innovative%20ways.https://generativeai.net/>

Q.21) Consider the following pairs of Vedic name and present name of rivers:

Vedic name of the river	Present name of the river
1. Vitasta	Ravi
2. Purushni	Jhelum
3. Sutudri	Satluj
4. Drishdvati	Ghaggar

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

Ans) b

Exp) Option b is the correct answer.

Rivers play a prominent part in the hymns of the Rigveda. The Vedic land is described as a **land of the seven rivers (Sapta sindhu)** flowing into the ocean. The **Nadisukta hymn** in the Rig Veda is a hymn of praise for rivers.

Pair 1 is incorrect: In Rigveda River Jhelum (and not Ravi) was called Vitasta (derived from the Sanskrit name Vyath). The present name Jhelum River has been adopted from the city of Jhelum. The name was brought to Kashmir by European travelers and found its way in official use. The **river** flows through Srinagar and Wular lake and enters Pakistan through a deep narrow gorge. So, pair 1 is incorrect.

Pair 2 is incorrect: The Ravi River was known as Purushni in the Vedic period. The river Ravi is a **transboundary river** that connects northwest India and East Pakistan. This is one of the six rivers of the **Indus basin**. The Ravi waters are **assigned to India under the Indus Waters Treaties**. So, pair 2 is incorrect.

Pair 3 is correct: Sutudri literally means that which **flows very fast**. Sutudri is a river of the Vedic times. It is the easternmost river flowing in Punjab. During post-Vedic period the name got changed to Satadru. **It has been identified with the modern Sutlej River.**

Pair 4 is correct: The River Ghaggar was known by the name Drishadvati in the Vedic period. It **was the main tributary of river Saraswati**. According to Manusmriti the Rishis composed the Vedas and other Sanskrit texts at the confluence of the Saraswati and Drishadvati rivers. The **main river Saraswati is represented by River Ghaggar** in present times.

Source: Old XI NCERT of Ancient India

Q.22) Consider the following statements with reference to the socio-economic conditions during the Mauryan Empire in ancient India:

1. There was a widespread use of metallic money for transactions.
2. The salaries of the officials were usually paid in cash.
3. Some artisans were exempt from payment of taxes because they rendered compulsory labour services to the State.

Which of the statements given above is/are correct?

- a) 3 only
- b) 2 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Mauryan economy was very developed for its time. The existence of a stable centralized government and the unity of the sub-continent made by the emperor resulted in a fairly advanced trade, which in turn led to improved socio-economic conditions.

Statement 1 is correct: An **important aspect of the urban economy** during Mauryan period was the **widespread use of metallic money for transactions** in cash. **Use of coinage** had become **prevalent in the 6th century BCE**, but now **due to development of commerce, coins** had become a **common occurrence**.

Statement 2 is correct: The cash was not only used in the trade even **the salaries of the government officials were paid in cash**. In fact costly salaries for soldiers and government officials ended up bankrupting the central treasury and became one of the key cause of downfall of the Mauryan Empire.

Statement 3 is correct: The **artisans** during the Mauryan period were **organized along guild lines**. Mauryan State **did not directly interfere with guilds, however** it did **take control of production and distribution** in some cases. The state did this **by directly employing some of the artisans** like armourers, shipbuilders, stone builders etc. **They were exempt from payment of taxes because they rendered compulsory labour services to the State**. Other artisans like spinners, weavers, miners etc. who worked for the State were taxed.

Source: <http://egyankosh.ac.in/bitstream/123456789/64794/1/Unit16.pdf>

Q.23) Which of the following statements about Vedic texts are correct?

1. The Rigveda contains hymns dedicated to various gods and goddesses.
2. The Yajurveda contains instructions on performing rituals and sacrifices.
3. The Samaveda is mainly composed of musical chants used during religious ceremonies.
4. The Atharvaveda is a collection of spells, charms, and prayers to ward off evil and diseases.

Select the correct answer using the code given below:

- a) 2 and 4 only
- b) 1 and 3 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

The Vedic literature is a collection of ancient texts that are considered to be the foundation of Hinduism. The word 'Veda' means knowledge or wisdom, and the Vedic literature is believed to contain the highest and most sacred knowledge that has been revealed to humanity.

Statement 1 is correct: The Rig Veda is the oldest of the four and consists of **1028 hymns or mantras**. These hymns were composed in Sanskrit and were primarily sung **in praise of various deities**, such as Agni, Indra, and Soma.

Statement 2 is correct: The Yajurveda consists of detailed **instructions** on the performance of **rituals and sacrifices**. It includes the **mantras and procedures** that were to be followed by the priests and the people who performed these rituals.

Statement 3 is correct: The Sama Veda is a collection of melodies and chants that were used during the performance of sacrifices. The Sama Veda is believed to be the origin of Indian classical music, as it contains the basic principles of melody, rhythm, and harmony.

Statement 4 is correct: The Atharvaveda is a collection of **spells, charms, prayers and incantations to ward off evils and diseases**.

Source: Tamil Nadu History textbook pg 28

Q.24) Which of the following factors contributed to the occurrence of the Iranian invasion of the Indian subcontinent in the 6th century BCE?

1. The presence of several small principalities that were unable to unify and mount a coordinated defense.
2. The wealth of Indian subcontinent made it an attractive target for plunder and conquest.
3. The existence of passes in the Hindukush mountains provided easy passage to the invading forces.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

During the first half of the sixth century B.C., north-west India was different from north-east India, where smaller principalities and republics merged with the Magadhan empire.

Statement 1 is correct: In north-west India, several small principalities like those of Kambojas, Gandharas, and Madras fought with each other, without any powerful kingdom to unite them into a single organized kingdom. **These small principalities could not offer stiff resistance to the invasion.** Unlike in North-east India, there was no strong empire like Magadha in North-west India to offer stiff resistance to Iranian Invasion.

Statement 2 is correct: The Indian subcontinent was known for its **rich resources, including gold, silver, and precious stones**. This made it an attractive **target for plunder and conquest**, and the Iranians were able to take advantage of this wealth.

Statement 3 is correct: The north-west region of India was also **accessible through the passes in the Hindukush mountains**. The pass could be easily crossed by the invading forces and was a significant factor in the success of the Iranian invasion of the Indian subcontinent.

Source: Ancient India by RS Sharma pg 75

Q.25) Which of the following statements best describes the term ‘Denisova,’ that was seen in the news recently?

- a) Ancient technique of water harvesting practiced in Mesopotamia.
- b) They are an extinct species of Hominid and a close relative to modern humans.
- c) Crater on the surface of the Mars where traces of water have been found.
- d) A new galaxy discovered by the Hubble telescope.

Ans) b

Exp) Option b is the correct answer.

The Nobel Prizes 2022 for medicine or physiology was awarded to Swedish geneticist Svante Paabo. He was given the award for his discoveries concerning the genomes of extinct hominins and human evolution.

Option b is correct: Svante Paabo also made the sensational discovery of a previously unknown hominin, Denisova. The Denisovans are an extinct species of Hominid and a close relative to modern humans. In 2008, a 40,000-year-old fragment from a finger bone was discovered in the Denisova cave in the southern part of Siberia. The bone contained exceptionally well-preserved DNA. The DNA sequence was unique when compared to all known sequences from Neanderthals and present-day humans. Comparisons with sequences from contemporary humans showed that **gene flow had also occurred between Denisova and Homo sapiens.**

Source: <https://www.nobelprize.org/prizes/medicine/2022/press-release/>
<https://www.livescience.com/denisovans-extinct-human-relative>

Q.26) Arrange the following events associated with ancient India in the correct chronological order:

1. Udayin laid the foundation of the new capital at Pataliputra
2. The Nanda dynasty was established by Mahapadma Nanda.
3. Shishunaga dynasty annexed the kingdom of Avanti.
4. Invasion of north-west India by Alexander the Great

Select the correct answer using the code given below:

- a) 1-2-3-4
- b) 2-1-3-4
- c) 1-3-2-4
- d) 2-3-1-4

Ans) c

Exp) Option c is the correct answer.

The correct Chronological order is

Event 1: The immediate successor of Ajatasatru was Udayin, a king of the Magadha empire who ruled from around 460 BCE to 440 BCE. **He laid the foundation of the new capital at pataliputra** situated at the confluence of the two river, the Ganges and the Son.

Event 3: The Shishunaga dynasty ruled over Magadha from 413 BCE to 345 BCE. **The founder of the dynasty, Shisunga, is said to have defeated the king of Avanti and made it a part of the Magadhan Empire.**

Event 2: Mahapadma Nanda conquered the Shishunaga dynasty in Magadha and established the Nanda dynasty in **345 BCE**. It lasted upto 321 BC. Mahapadma Nanda, is thought to have come from a low-caste background.

Event 4: The **invasion of north-west India by Alexander** the Great and the defeat of King Porus happened in **326 BCE**, which makes it the last event in the chronology.

Source: Tamil Nadu History text book pg 49-55

Q.27) With respect to women's condition in Ancient India, consider the following statements:

1. Women were not allowed to join Buddhist Sangha.
2. There was no female Upanishadic thinker in Ancient India.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect. The rules made for the Buddhist sangha were written down in a book called the Vinaya Pitaka. **All men, women and children could join the sangha.** However, children had to take the permission of their parents and slaves of their masters. Those who worked for the king had to take his permission and debtors that of creditors. Women had to take their husbands' permission.

Statement 2 is incorrect. Most Upanishadic thinkers were men, especially brahmins and raja. **But there is mention of women thinkers, such as Gargi,** who was famous for her learning, and participated in debates held in royal courts.

Source: Class 6th History NCERT, Chapter 7 (Our Past), Page 68, Page 128, Page 70

Q.28) Which of the following was/were the causes for the fall of the Mauryan empire?

1. The enormous expenditure on the army and payment to bureaucracy created financial crisis for the empire.
2. Maurya's neglected the North West frontier.
3. Oppressive rule in the provinces.

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: During Mauryan age huge expenditure was done on maintaining army and bureaucracy. Moreover, Ashoka during his reign made large grants to the Buddhist monks which made the royal treasury empty. The Mauryan kings who succeeded Ashoka faced the financial crunch. In the last they had to melt the images of gold.

Statement 2 is correct: Ashoka was so busy in carrying out religious activities that he seldom paid attention to north-west frontier of Mauryan Empire. The Greeks took advantage of this and set up a kingdom in north Afghanistan which was known as Bactria. This was followed by a series of foreign invasion which weakened the empire.

Statement 3 is correct: The provincial rulers in Magadhan Empire were often corrupt and oppressive. This led to frequent rebellions against the empire. During the reign of Bindusara, the citizens of Taxila complained against the misrule of wicked bureaucrats. Although Bindusara and Ashoka took measures to control the bureaucrats, this failed to check the oppression in provinces.

Source: class 11th.ancient India by RS Sharma.

Q.29) Consider the following statements about the impact of Alexander's invasion on India.

1. It led to direct trade contacts between the India and Greeks.
2. It aided Chandragupta Maurya to expand his empire in the North-west region of the subcontinent.
3. It gave rise to a new school of art in the North-west called as Gandhara school of art.

Which of the above statements is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The invasion of Alexander the Great during the reign of Dhana Nanda is a watershed moment in the Indian history. It marked the beginning of the interaction between India and the West, which spanned many centuries to follow.

Statement 1 is correct: Alexander's invasion led to the establishment of Greek Satrapies in the north-western region of the Indian subcontinent. This led to **opening up of trade routes** with the West which facilitated the movement of Greek merchants and craftsman to India.

Statement 2 is correct: Alexander's death on his way back home led to a **void in the north-west**, facilitating the **accession of Chandragupta Maurya** to the throne of Magadha. It also helped him to **conquer the numerous small chiefdoms in the north-west** and bring the region under his empire.

Statement 3 is correct: Gandhara is the ancient name of a region in northwest Pakistan. In 330 B.C., Alexander the Great conquered this region and, together with the Indo-Greek kings that succeeded him, introduced classical traditions that became an important part of Gandhara school of art.

Source: TN History book, Class 11

https://www.metmuseum.org/toah/hd/gand/hd_gand.htm

Q.30) Which of the following are the space missions related to the exploration of Mars?

1. Tianwen-1 Mission
2. Hope Mission
3. Beresheet 2 Mission
4. Cassini Mission

Which of the options given below is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 2, and 3 only
- d) 2, 3, and 4 only

Ans) a

Exp) Option a is the correct answer.

There are various mission to Mars by various countries. Some of the examples of the missions to Mars are as follows: Tianwen mission of china, Hope mission of UAE, MOM mission of India, Viking mission, Mars Pathfinder mission of USA, etc.

Statement 1 is correct: **Tianwen-I is China's first Mars mission, consisting of an orbiter and a rover named Zhurong.** It entered Mars orbit in February 2021 and Zhurong landed on May 14, 2021. Before Zhurong only NASA has successfully landed and operated spacecraft on Mars.

Statement 2 is correct: The **Hope Mars Mission**, also called the Emirates Mars Mission, is the **first uncrewed, interplanetary satellite spearheaded by the United Arab Emirates (UAE).** In fact, the Hope satellite is the first planetary science mission led by an Arab-Islamic country. The Hope spacecraft was launched successfully on July 19, 2020 aboard a Japanese rocket and arrived successfully in orbit around Mars on Feb. 9, 2021.

Statement 3 is incorrect: **Israel launched the Beresheet 2 mission, which aims to land an unmanned craft on the moon in 2024.** It is a private mission to the Moon by Israeli non-profit SpaceIL organisation.

Statement 4 is incorrect: **Cassini mission is a space-research mission by NASA, the European Space Agency, and the Italian Space Agency to send a space probe to study the planet Saturn. Cassini mission was launched in 1997, flying past Venus and Jupiter on its way to Saturn.** It arrived in orbit of saturn in 2004. Cassini was orbiting Saturn for 13 years, since 2004 to 2017.

Source: <https://www.planetary.org/space-missions/tianwen-1>
<https://www.space.com/hope-mars-mission-uae>
<https://www.timesofisrael.com/israel-uae-to-launch-joint-space-projects-including-beresheet-2-moon-mission/>
<https://www.planetary.org/space-missions/cassini>

Q.31) Consider the following statements regarding coins during the Northern Black Polished Ware (NBPW) culture:

1. The coins made of metal can be seen during this phase.
2. The coins were punch marked with marks of several natural figurines.
3. The coins were used for paying wages.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Northern Black Polished Ware (NBPW) is an urban Iron Age of the Indian Subcontinent, lasting c. 700–200 BCE. It developed beginning around 700 BCE, in the late Vedic period, and peaked from c. 500–300 BCE, coinciding with the emergence of 16 great states or Mahajanapada in Northern India, and the subsequent rise of the Mauryan Empire.

Statement 1 is correct: During NBPW phase, coins made of metal appear. The coins made during this period were largely made of silver (and not that of gold) along with a few made from copper.

Statement 2 is correct: The coins of this period are called as punch-marked coins as pieces of these metals were punched with certain marks such as hill, trees, fish, bull, elephant, crescent, etc. The earliest hordes of these coins have been largely found in eastern Uttar Pradesh and Magadha.

Statement 3 is correct: The Pali texts indicate plentiful use of money and show that wages and prices were paid in it. The use of money had become so universal that even the prices of dead mouse was estimated in it.

Source: Old NCERT, R. S Sharma, p.g. 80

Q.32) The Pali texts from the age of Buddha give descriptions about the three types of villages based on their typical characteristic features. In this context, consider the following pairs:

Type of village	Characteristics
1. Typical Village	It was inhabited by several castes and communities.
2. Suburban Village	It was a typical craft village which also served as a market.
3. Border villages	It was mainly inhabited by fowlers and hunters.

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) All three pairs
- d) None of the above

Ans) c

Exp) Option c is the correct answer.

The Pali texts mention several villages and towns and the pattern in which people inhabited these places. The Pali texts particularly speak about three types of villages.

Pair 1 is correct: The Typical village was inhabited by several castes and communities. Its number seems to have been largest compared to the other two types of villages. These villages were generally headed by a village headman called Bhojakas.

Pair 2 is correct: The suburban villages were in the nature of craft villages, for instance a carpenters village laying in the vicinity of Varanasi is known as Suburban village. These villages served as market for other villages and linked the towns with the countryside.

Pair 3 is correct: The Border villages were situated on the limits of the countryside which merged into the forests. People living in these villages were mainly fowlers and hunters, who led a backward life.

Source: Old NCERT, R. S Sharma, p.g. 80–81

Q.33) With reference to administration in the Mauryan Empire, consider the following statements:

1. A well-knit system of espionage reported on the public, ministers, officers and foreign kings.
2. The Mauryan Empire was divided into districts called as 'Tirtha'.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The Mauryan empire was probably the first empire in Ancient India to employ a **vast and well trained network of spies to aid the king in smooth functioning and rule** over such a vast empire. There were spies to report on the **general mood of the public so that any rebellion may be nipped early on.** Spies also worked in the **households of officials and ministers as barber, cook, etc and reported any corruption or treason** to the king. Lastly spies were also **placed in the courts of foreign kings so that any attack or plot may be preempted.**

Statement 2 is incorrect: **Tirtha** were the **most important and high-ranking officials of the Mauryan empire** like the **Mantrin** (ministers like Sannidhatri, Samaharta, Dauvarika, etc), **Purohita** (royal/ chief priest), **Senapati** (army commander in chief), **Yuvaraja** (crown prince) etc. According to Arthashastra they were paid in cash (*pana* - coin).

Source: Old NCERT Class 11th, Ancient India by RS Sharma, Ch-14

Q.34) Consider the following statements with reference to Jorwe culture:

1. The Pravara–Godavari valleys is the nuclear zone of this Jorwe culture.
2. Daimabad is the largest excavated Jorwe site in the Tapi valley.
3. Traces of a mud fortification wall were found at the Jorwe culture.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Jorwe culture was a Chalcolithic archaeological culture which existed in large areas of what is now Maharashtra state in Western India, and also reached north into the Malwa region of Madhya Pradesh.

Statement 1 is correct. The Jorwe culture was first discovered at the site of Jorwe, and was later found to have extended over a large area, covering practically the **whole of modern Maharashtra**, except the coastal Konkan district. The **Pravara–Godavari valleys** seem to have been the **nuclear zone of this culture**. The peripheral zone extended up to the Tapi river in the north and the Krishna in the south. The main excavated sites are Daimabad, Inamgaon, Theur, Songaon, Chandoli, Bahal, Prakash, Jorwe, and Nevasa.

Statement 2 is incorrect. **Prakash is the largest Jorwe site in the Tapi valley, Daimabad is the largest Jorwe site in Godavari valley**, and Inamgaon in the largest Jorwe site in Bhima valley. All three settlements were 20 ha or more in size. These large sites represented permanent agricultural villages. Jorwe, Bahal, and Nevasa are medium-sized settlements. The average Jorwe culture settlements were, however, much smaller—usually 1–2 ha.

Statement 3 is correct. At Daimabad, there **were traces of a mud fortification wall with bastions**. The excavators identified the houses of a butcher, lime maker, potter, bead maker, and merchant. There was an elliptical structure with approach paths plastered with cow dung; clusters of pots seem to have contained offerings including copper objects, shaped stones, and tool hafts made of cattle bones. The artifacts included microliths, copper objects, beads, and terracotta figurines. There was also a terracotta cylinder seal depicting a horse-drawn cart or chariot.

Source: A History of Ancient and Early Medieval India: From the Stone Age to the 12th Century by Upinder Singh. Chapter 5.

Q.35) Global Lighthouse Network, recently seen in news, is an initiative of which of the following international organizations?

- a) World Bank
- b) World Economic Forum
- c) International Monetary Fund
- d) United Nations Industrial Development Organization (UNIDO)

Ans) b

Exp) Option b is the correct answer.

The **World Economic Forum** recently announced the **addition of three factories and industrial sites, from India, to its Global Lighthouse Network**. The three manufacturers from India to be added in the network include **Cipla, Dr Reddy's Labs and Mondelez**.

Option b is correct: The Global Lighthouse Network is a World Economic Forum's initiative in collaboration with McKinsey & Company. The World Economic Forum's Shaping the Future of Advanced Manufacturing and Value Chains platform has set up the Global Lighthouse Network. **Global Lighthouse Network is a community of over 100 manufacturers that are showing leadership in applying Fourth Industrial Revolution technologies** such as artificial intelligence, 3D-printing and big data analytics in **modern Industries**.

Source: <https://initiatives.weforum.org/global-lighthouse-network/home>
<https://www.businesswire.com/news/home/20221011005778/en/World-Economic-Forum-Recognises-Dr.-Reddy%E2%80%99s-Hyderabad-Factory-as-Part-of-its-Global-Lighthouse-Network>

Q.36) Which of the following statements are correct regarding the Mesolithic Period in India?

1. The Mesolithic period is characterized by the use of microlith tools.
2. Hunting, gathering and fishing were the means of subsistence for people during this period.
3. Bagor archaeological site is an important Mesolithic site in India.

Select the correct answer using the code below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 2 and 3
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

The Mesolithic period, which lasted from around 10,000 B.C. to 6,000 B.C., marks the transition between the Paleolithic and Neolithic Ages. Mesolithic sites have been found in various places including Langhani in Gujarat, Adamgarh in Madhya Pradesh, and parts of Rajasthan, Uttar Pradesh, and Bihar.

Statement 1 is correct: Use of microliths was a characteristic feature of the Mesolithic period.

Microliths are tiny stone artifacts, often no more than five centimeters in size, that were found in Mesolithic sites. Microliths were used for various purposes, including hunting, fishing, and gathering.

Statement 2 is correct: The use of bow and arrow also began during this period. Along with hunting and fishing, the people of this period also engaged in some plant gathering. This is to indicate that hunting, gathering and fishing were the primary means of subsistence for people.

Statement 3 is correct: Bagor is a site of late Mesolithic settlement in Northwestern India. The archeological site of Bagor is one of the largest Mesolithic sites discovered in India and is spread across an area of about 10,000 square meters. At Bagor and Tilwara the Mesolithic culture is represented by different types of microliths including backed points and blades, backed blades/points and truncations as well as triangular and trapezoidal geometrics.

Source: Tamil Nadu History text book pg 14

Q.37) Consider the following statements about town planning in the Indus Valley Civilization.

1. The technology of using baked bricks for construction was not known during this period.
2. The citadel was usually built on an upraised mud brick platform.
3. The roads and streets were generally laid out in an approximate grid pattern.

Which of the statements given above is/are correct?

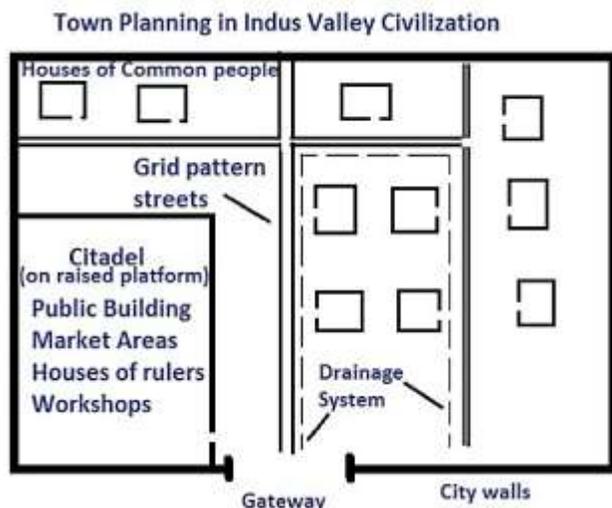
- a) 1, 2 and 3
- b) 1 and 3 only
- c) 2 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

The most unique feature of the Harappan civilization was the development of urban centers. Harappa, Mohenjo-Daro, Dholavira, Lothal, etc. were some of the major towns during this period. The settlement is divided into two sections, one smaller but higher i.e., citadel and the other much larger but lower i.e., lower town.

Statement 1 is incorrect: The Harappans knew the art of brick making and used them extensively in their architectural setup. They used baked and unbaked bricks along with stones for construction. The houses were built of mud bricks while the drainages were built with burnt bricks. Bricks, whether sun-dried or baked, were of a standardized ratio, where the length and breadth were four times and twice the height respectively. Such bricks were used at all Harappan settlements.



Statement 2 is correct: The citadel was built on an upraised mud brick platform. Several buildings in the lower towns were also built on platforms which served as foundations for them. There was huge mobilization of labor for such building and platform constructions.

Statement 3 is correct: One of the most distinctive features of Harappan cities was the carefully planned drainage system. The roads and streets were laid out along an approximate “grid” pattern, intersecting at right angles. It implies that streets with drains were laid out first and then houses built along them.

Source: NCERT, Themes in Indian History, pg. 5-8

Q.38) With reference to the Harappan script and seals, which of the following statement is **incorrect**?

- Harappan script has not been deciphered so far.
- Unlike Mesopotamian and Egyptian script, Harappan Script contained few words.
- Harappan Script were largely pictographic in nature.
- Harappan Script was developed from Mesopotamian and Egyptian Scripts.

Ans) d

Exp) Option d is the correct answer.

The Harappan invented the art of writing like the people of ancient Mesopotamia. Although the earliest specimen of Harappan script was noticed in 1853, but the complete script was discovered by 1923.

Statement a is correct: Harappan script has **not been deciphered till now**. Some try to connect the Harappan script with the Dravidian or Proto-Dravidian language, other connect with the Sanskrit language and still others with the Sumerian Language.

Statement b is correct: Unlike the Mesopotamians and Egyptian, the Harappans did **not write long inscriptions**. Most of the inscriptions were notably recorded on the seals **and contain only few words**. These seals may have been used by propertied people to mark and identify their private property.

Statement c is correct: The **Harappan scripts were mainly pictographic in nature and very few alphabets were used**. For instance, altogether, there are about 250-400 pictographs and in the form of letter and each letter stands for some sound, idea or object.

Statement d is incorrect: Attempts have been made to compare the **Harappan script with Egyptian and Mesopotamian script**. But, Harappan script is an indigenous product of the Indus Region, and it **does not show any connection** with the scripts developed in Western Asia.

Source: Ancient India, R.S. Sharma, Chapter the Harappan Civilisation

Q.39) Consider the following pairs of terms used in Vedic period and their meaning:

Term	Meaning
1. Goghna	Head of the village
2. Vrajapati	Officer in Charge of Pastoral Lands
3. Bhagadugha	Revenue collector

Which of the pairs given above is/ are correctly matched?

- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

Pair 1 is incorrect: According to the Vedas, a **guest** who is served beef as part of the hospitality ritual was referred as **Goghna** in a Hindu household. The **Gramini** was the officer appointed by the king to look after the administration of villages.

Pair 2 is correct: Vrajapati was in charge of pasture lands in the Rig Vedic administration. Vrajapati was an officer who enjoyed authority over a large stretch of land or pasture ground.

Pair 3 is correct: Bhagadugha refers to officials (revenue collectors) during Vedic age. He is mentioned in texts as the person **responsible for collection of royal shares in produce**.

Q.40) Consider the following statements regarding the Vikram-S rocket, that was recently seen in news:

- 1. It was developed and launched by Indian Space Research Organization (ISRO).
- 2. It is launched as a part of Gaganyaan mission
- 3. Vikram-S rocket is powered only by a solid-fuelled propulsion system.

Which of the statements given above is/are correct?

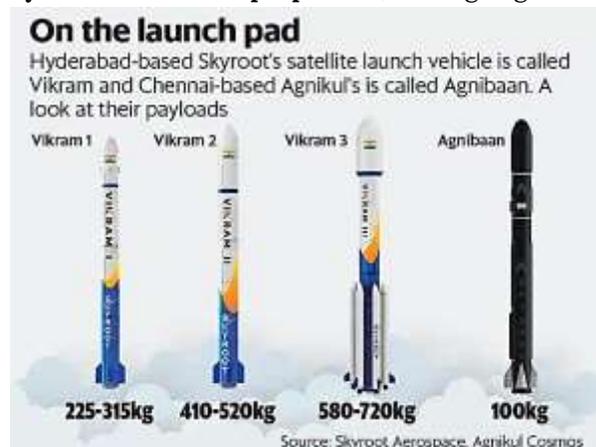
- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 2, and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The Vikram-S rocket is developed by Hyderabad-based private space-tech start-up Skyroot Aerospace. Skyroot Aerospace have become the **first ever private space company in India to launch a rocket into space** and will open a new avenue for India's space sector. **It was Launched from Indian Space Research Organisation's (ISRO) launchpad in Sriharikota.**

Statement 2 is incorrect: This rocket is part of Mission Prarambh of Skyroot Aerospace, which is aimed at carrying three payloads into space. The payloads include Andhra Pradesh-based N Space Tech India, Chennai-based start-up Space Kidz and Armenian BazoomQ Space Research Lab. **Statement 3 is correct:** Vikram-S rocket is a single stage suborbital space launch vehicle. It is powered by the solid-fuelled propulsion, cutting edge avionics and all carbon fibre core structure.



Source: <https://www.businesstoday.in/latest/trends/story/vikram-s-rocket-launch-heres-all-you-need-to-know-about-indias-first-private-rocket-launch-353362-2022-11-18>
<https://www.wionews.com/india-news/vikram-s-rocket-launch-live-indias-first-private-rocket-takes-off-535206>

Q.41) Consider the following statements about weights and measures during the Harappan Civilization:

1. Limestone and steatite were commonly used for making Weights.
2. The term 'adhaka' was used to denote the smallest unit of weight during the Harappan civilization.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Harrapans had developed proper weights and measures. Since, they were involved in commercial transactions, they needed standard measures.

Statement 1 is correct: During the Harappan period, exchanges were regulated by a precise system of weights. The weights were usually made of chert, limestone, steatite and were generally cubical, with no markings.

Statement 2 is incorrect: Āḍhaka is the Sanskrit name for a weight unit corresponding to '2.56 kilograms' used in Ayurvedic literature. **The Harappan's written language (if that is what the symbols found on Harappan seals are) has not been deciphered, so we do not know the names of the units used in the Indus valley civilization.**

Source: Tamil Nadu, History book

NCERT, Themes in Indian History, pg. 15-16

<https://www.indica.today/long-reads/length-measurement-and-speed-of-light-in-ancient-india/>

Q.42) Consider the following statements with reference to Ashoka's policy towards Tribals:

1. Tribal people were encouraged to observe dhamma.
2. He promoted the policy of assimilation of tribals into mainstream society.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. Ashoka maintained **intimate contacts with the tribal people who were exhorted to observe dhamma.** Their contact with dhammamahamatras appointed by Ashoka enabled them to imbibe rudiments of higher culture prevalent in the gangetic basin.

Statement 2 is correct. Ashoka launched a **systematic and deliberate policy of acculturation of tribals.** As a result dhamma was preached and men started mingling with God. This implies that tribal and other people would take to the habits of a settled taxpaying, peasant society and develop respect for paternal power and royal authority and for monks, priests and officers who helped enforce his authority. Ashoka policy laid stress on giving up killing of animals. He claims that hunters and fishermen had given up killing and practiced dhamma. This means that they had taken to the sedentary agricultural life.

Source: class 11th ancient India by RS Sharma.

Q.43) Which of the following were the probable reasons behind the rise of Jainism and Buddhism in India?

1. Resentment by Kshatriyas against the domination of the priestly castes.
2. Ambitions of economically affluent Vaishyas to raise their social status.
3. Use of the languages of common people to spread their thoughts to the masses.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The primary cause for the rise of Jainism and Buddhism was the religious unrest in India in the 6th century B.C. The complex rituals and sacrifices advocated in the Later Vedic period were not acceptable to the common people. The sacrificial ceremonies were also found to be too expensive. The teachings of Upanishads, an alternative to the system of sacrifices, were highly philosophical in nature and therefore not easily understood by all.

Statement 1 is correct: The rigid caste system prevalent in India generated tensions in the society. Higher classes enjoyed certain privileges which were denied to the lower classes. **Owing to the suppression under the caste hierarchies, the Kshatriyas had resented against the domination of the priestly class, which also gave a way for the rise of these religions.** Also, both Buddha and Mahavira belonged to Kshatriya origin.

Statement 2 is correct: **The growth of trade led to the improvement in the economic conditions of the Vaisyas. As a result, they wanted to enhance their social status but the orthodox Varna system did not allow this.** Therefore, they began to extend support to Buddhism and Jainism. It was this merchant class that extended the chief support to these new religions, in the hope of climbing up the social ladder.

Statement 3 is correct: Both Buddhism and Jainism **used local languages** in spreading their thoughts and teachings to the common people. This led to popularization Jainism and Buddhism. **Buddhism used Pali whereas Jainism used Prakrit language.**

Source: TN History, Class 11.

Q.44) Maurya's were succeeded by which of the following native rulers?

1. Shungas in the northern region
2. Satvahanas in the Deccan and central India.
3. Shakas in north eastern region.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Option 1 is correct. Sunga dynasty succeeded the Mauryas in the Magadha region. Brihadratha, the last ruler of the Maurya Dynasty, was assassinated in 185 BCE. The commander-in-chief of his guard, Brahmin General Pusyamitra Sunga, killed Brihadratha and ascended the throne. He established the Sunga Dynasty, which prospered from approximately 187 to 78 BCE. Pusyamitra was succeeded after 36 years by his son, Agnimitra, beginning the dynasty of ten Sunga rulers overall. They conducted wars with both foreign and indigenous powers, including the Kalinga, the Satavahana Dynasty, and the Indo-Greek Kingdom.

Option 2 is correct. In the Deccan and in central India, the Satavahanas succeeded the Mauryas, although after a gap of about 100 years. The Satavahana rule is believed to have started around the third century BC, in 235 BC and lasted until the second century AD. Simuka was the founder of the Satavahana dynasty. Their capital cities varied at different times. Pratishthana (Paithan) and Amaravati were its capitals. Some experts believe their rule started in the first century BC only. They are referred to as Andhras in the Puranas. The Satavahana kingdom chiefly comprised of modern-day Andhra Pradesh, Telangana and Maharashtra. At times, their rule also included parts of Karnataka, Gujarat and Madhya Pradesh.

Option 3 is incorrect. After the decline of the Mauryan Empire, northwest India was constantly under attack from various **invaders from Central and West Asia**. The Indo-Greek rule lasted from about 180 BC till about 55 BC. The Sakas (also written Shakas), alternatively known as Indo-Scythians, invaded northwest India in the first century BC onwards. Shakas, established kingdoms in the north-western and western parts of the subcontinent. Rudradaman I was the most famous Shaka ruler. He ruled from 130 AD to 150 AD. His kingdom covered areas such as Konkan, the Narmada valley, Malwa, part of Gujarat and Kathiawar.

Source: class 11th. Ancient India.

Q.45) Recently, the term 'Wright Mons' was seen in news. It is related to:

- a) first airplane model designed by Wright Brothers.
- b) comet look-like asteroid discovered in Kuiper Belt.
- c) mountainous feature found on Pluto.
- d) type of Crypto Ransomware appeared online.

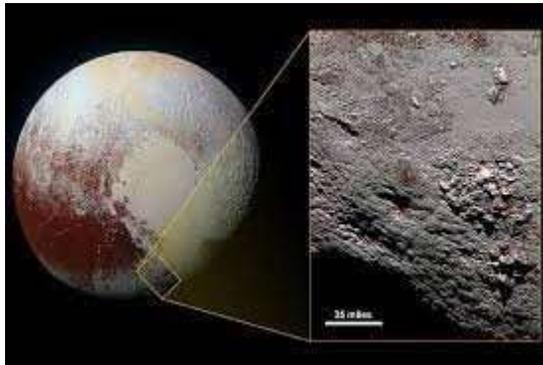
Ans) c

Exp) Option c is the correct answer.

The National Aeronautics and Space Administration's (NASA) **New Horizons probe** has reported new findings of Pluto. The probe reported that icy lava flows have recently (no more than a billion years ago) covered substantial tracts of its surface. The findings drew particular attention to a mountainous feature named Wright Mons.

Wright Mons is a **mountainous feature found on Pluto**. It was informally named by the New Horizons team in honour of the Wright brothers. It is about 150 km across its base and has a central depression (a hole) 40-50 km wide, with a floor at least as low as the surrounding terrain.

Scientists claim that Wright Mons is a volcano and cite the lack of impact craters as evidence that it is not likely to be older than 1-2 billion years.



Wright Mons

The volume of Wright Mons exceeds 20 thousand cubic kilometres. Although considerably less than the volume of Mars's biggest volcanoes, this is similar to the total volume of Hawaii's Mauna Loa, and much greater than the volume of its above sea-level portion.

Source: Pluto: 'Recent' volcanism raises puzzle – how can such a cold body power eruptions? -ForumIAS Blog

Q.46) Which of the following statements about the Shishunaga Dynasty is/are correct?

1. Shishunaga Dynasty was overthrown by Mauryans to establish their rule over Magadh region.
2. The second Buddhist Council was held during the reign of King Kalashoka of the Shishunaga dynasty.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The Shishunaga dynasty is considered to be one of the earliest ruling dynasties in ancient India.

Statement 1 is incorrect: The Shishunaga dynasty was overthrown by **Mahapadma Nanda**, who established the **Nanda dynasty** in Magadha. The Nanda dynasty was later overthrown by Chandragupta Maurya, who founded the Mauryan Empire.

Statement 2 is correct: The Buddhist council during the **reign of King Kalashoka**, who belonged to the Shishunaga dynasty, was held at Vaishali. This council is known as the Second Buddhist council and was convened to settle some disputes among the Buddhist monks.

Source: Tamil Nadu History text book pg 50 ; Ancient India by RS Sharma pg 72

Q.47) Which of the following statements is/are correct regarding the Chalcolithic Age?

1. The people of the Chalcolithic Age knew spinning and weaving and manufactured cloth.
2. The people of the Chalcolithic Age usually buried their dead within the surroundings of their houses.
3. Terracotta objects were completely absent in the Chalcolithic cultures.

Select the correct answer using the code below:

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The Chalcolithic Period in India is characterized by the use of both stone and copper tools and weapons. This period saw the emergence of agriculture and animal husbandry, leading to the rise of settled communities and the development of distinct cultures across different regions of the Indian subcontinent.

Statement 1 is correct: The people of the Chalcolithic Age **had a sophisticated knowledge of spinning and weaving**, as evidenced by the discovery of spindle whorls in Malwa and cotton, flax, and silk threads in Maharashtra. These discoveries suggest that the people of this period had developed advanced techniques for **manufacturing cloth**.

Statement 2 is correct: Disposal of the dead by burial was a common custom. Adults as well as children were usually buried in a north-south orientation; the head towards the north and the legs towards the south. **Adults, and also children, were buried in a pit which was dug into the house floor.** It is interesting to note that during the Jorwe period, in the case of adults, the portion below the ankle was purposely chopped off. These practices like **burying the dead within the precincts of the house** and chopping off the feet could possibly **suggest a belief in which the dead were restrained from turning into ghosts, who could become malevolent.**

Statement 3 is incorrect: **Terracotta objects are found at majority of chalcolithic sites.** These are in the form of human and animal figurines. **The stylized terracotta bulls (which are mostly miniature sized) found in the Chalcolithic levels at Kayatha**, some with a prominent hump, some with horns twisted backward, and some with the horns projecting forward horizontally, are of special interest. Considering the occurrence of numerous terracotta bull figurines at several of these Chalcolithic sites it can be suggested that bull was a sacred animal.

Source: Ancient India by RS Sharma pg 26-31

Q.48) Consider the following statements regarding the religious beliefs of Early Vedic period:

1. People used to worship forces of the nature.
2. The Doctrine of Karma emerged during this period.
3. The people did not perform any sacrifices for worship.
4. The Early Vedic people did not build temples for worship.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1, 2 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

The Early Vedic Period or the **Rig Vedic period began in 1500 BC** and continued up to 1000 BC. The religion during this period was simple and people **worshiped the natural forces** of nature.

Statement 1 is correct: During Early Vedic period people worshiped the **forces of nature** such as the Sun, the Fire, the Wind, the Dawn, the Water, the rain god Indra, and Earth. Vedic **hymns were composed in praise of nature**. Rigveda mentions that thirty-three gods and goddesses were worshiped by the Aryans.

Statement 2 is correct: **The idea of Karma first appears in the oldest Hindu text the Rigveda.** In ancient texts karma referred simply to **ritual and sacrificial action**. Vedic religion had attached **profound importance to the Doctrine of Karma or Action**. In other words, a good soul who performed good deeds was rewarded whereas the evil soul was punished for evil deeds.

Statement 3 is incorrect: The Early Vedic people followed a **simple mode of worship**. Their religion primarily consisted of some **obligations and prayers**. They also performed certain **ritual sacrifices known as yajnas** to please their gods. Apart from **offering animal sacrifices, they offered fruits, milk, ghee, wine, grains, etc.** by throwing them into the **fire** as part of yajnas. The fire was considered sacred and believed to act as an intermediary between man and God. So, statement 3 is incorrect.

Statement 4 is correct: There is no reference found for temples in Vedas. **The Early Vedic people did not build any temples or shrines.** They also **did not worship any idols or images** of Gods. They performed sacrifices and nourished gods through sacrificial ceremonies. They only worshiped various manifestations of nature.

Source: Old XI NCERT of Ancient India

Q.49) Consider the following statements regarding fashion during the Indus Valley Civilisation (IVC):

1. It is believed that the Harappan people knew the art of making clothing from leather.
2. It is believed that Indigo and turmeric were used for dyeing cloths during the IVC.
3. Both men and women from the IVC used necklaces as a form of Jewellery.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Small fragments of cloth preserved in the corrosion products of metal objects show that the Harappans wove a range of grades of cotton cloth. **The Harappans also probably knew the art of making clothing from leather.**

For ex, At Dholavira, marks are seen on the basal stone slab of the trough indicating use of ropes to lift the water from the well, probably with leather bags.

Statement 2 is correct: A good number of Dyeing facilities were found in the sites of Indus valley civilization. Their presence in the IVC sites indicates that cotton cloth was probably dyed a range of colors. A colored cloth, dyed red with madder, was also found in one of the IVC sites. **It is believed that indigo and turmeric were also used as dyes.**

Statement 3 is correct: Figurines and finds in graves show that Harappans of both sexes wore jewellery: hair fillets, bead **necklaces and bangles for men;** bangles, earrings, rings, anklets, belts made of strings of beads, pendants, chokers and **numerous necklaces for women,** as well as elaborate hairstyles and headdresses.

Source:

https://www.lkouniv.ac.in/site/writereaddata/siteContent/202003241550006972anil_kumar_HARAPPAN_CIVILIZATION%201.pdf

<https://www.harappa.com/answers/what-did-indus-people-wear-and-what-material-were-their-clothes-made>

Q.50) With reference to the Shigella Bacteria, consider the following statements:

1. It is one of the leading causes of bacterial diarrhea worldwide.
2. There are currently no vaccines for infection caused by Shigella bacteria.
3. An outbreak of Shigella bacteria recently occurred in the State of Kerala.

Which of the statements given above is/are correct?

- a) 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Shigella is a genus of bacteria that causes an infection called shigellosis.

Statement 1 is correct: Shigella is a bacterium that belongs to the **Enterobacter family** – a group of bacteria that **reside in the intestine**, not all of which cause disease in humans. It mainly affects the intestine and results in diarrhoea, sometimes bloody, stomach pain, and fever. It is the **second leading cause of bacterial diarrheal worldwide** and the third leading cause of death in children less than 5 years old.

Statement 2 is correct: The cornerstone of shigella treatment is the maintenance of hydration and electrolyte balance. Antibiotics are also recommended for reducing illness duration and for preventing transmission. However, currently, there are **no vaccines available for shigellosis**.

Statement 3 is correct: The Kerala health department identified Shigella bacteria outbreak as the cause for the food poisoning incident in Kasaragod district of Kerala.

Knowledge Base:

- 1) Shigellosis is a food- and water-borne infection, and can happen when someone consumes contaminated food.
- 2) Shigellosis is primarily a disease of poor and crowded communities that **do not have adequate sanitation or safe water**.
- 3) The incubation period of shigellosis is typically 1–4 days.
- 4) The disease is easily **spread by direct or indirect contact** with the excrement of the patient. Shigella is generally transmitted through contaminated food or water, or through person-to-person contact.
- 5) There are four types of Shigella bacteria that affect humans – Shigella sonnei, Shigella flexneri, Shigella boydii, and Shigella dysenteriae. The fourth type causes the most severe disease because of the toxin it produces.

Source: [https://indianexpress.com/article/explained/explained-shigella-bacteria-killed-girl-eating-shawarma-kerala-](https://indianexpress.com/article/explained/explained-shigella-bacteria-killed-girl-eating-shawarma-kerala-7902768/#:~:text=Shigella%20is%20a%20bacterium%20that,%2C%20stomach%20pain%2C%20and%20fever.)

[7902768/#:~:text=Shigella%20is%20a%20bacterium%20that,%2C%20stomach%20pain%2C%20and%20fever.](https://indianexpress.com/article/explained/explained-shigella-bacteria-killed-girl-eating-shawarma-kerala-7902768/#:~:text=Shigella%20is%20a%20bacterium%20that,%2C%20stomach%20pain%2C%20and%20fever.)

<https://blog.forumias.com/explained-what-is-shigella-the-bacteria-that-killed-a-girl-after-she-ate-shawarma-in-kerala/>

Q.1) Which of the following source(s) helps us to reconstruct the social and political conditions of the Shunga dynasty?

1. Malavikagnimitra of Kalidasa.
2. Mahabhasya of Patanjali
3. Ayodhya Inscription of Dhandeva

Select the correct answer from the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Our knowledge about the later Mauryas and Shunga rulers is based upon Puranas, Malavikagnimitra of Kalidasa, and Mahabhasya of Patanjali,

Option 1 is correct: Malavikagnimitra of Kalidasa refers to the conflict **between Pushyamitra and Yajnasena**, King of Vidarbha (the eastern Maharashtra area) and the victory of the Shungas. The Malavikagnimitra narrates the story of military encounter between prince Vasumitra and Yavana army on the banks of Sindhu.

Option 2 is correct: According to Patanjali's Mahabhasya, there were Greek incursions during the rule of the Sungas.

Option 3 is correct: The Ayodhya Inscription of Dhandeva provides information about the Shunga rule especially about Pushyamitra Shunga. It mentions that Pushyamitra Shunga performed two Ashwamedha Yagyas (Horse Sacrifices).

Source: Tamil Nadu History Text Book pg 74-75

[https://content.patnawomenscollege.in/History/Sunga%20Dynasty%20and%20Kanva%20Dynasty%20\(1\).pdf](https://content.patnawomenscollege.in/History/Sunga%20Dynasty%20and%20Kanva%20Dynasty%20(1).pdf)

<https://historicalindia.org/article/shunga-empire#:~:text=Pushyamitra%20is%20recorded,in%20the%20northwest.>

Q.2) Which of the following statements is correct about the Besnagar pillar inscription?

- a) It praises the military achievements of Gautamiputra Satakarni
- b) It describes the personality and achievements of Samudragupta
- c) It describes Ashoka's visit to the Rampurva village and his commitment to animal welfare
- d) It was erected by Heliodorus, a Greek ambassador to India, in the honor of the god Vasudeva

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: Nashik and Nanaghad inscriptions throws light on the reign of Gautamiputra Satakarni

Option b is incorrect: Allahabad pillar inscription describes the personality and achievements of Samudragupta

Option c is incorrect: The Rampurva bull, an Ashokan sculpture, has inscriptions in Brahmi script and Prakrit language, and is located in the Rampurva village in Bihar. The inscriptions describe Ashoka's visit to the village and his commitment to animal welfare.

Option d is correct: The Besnagar Garuḍadhvaja Pillar inscription is an ancient inscription found on a pillar at Besnagar, in the Vidisha district of Madhya Pradesh, India. The inscription is written in Prakrit language

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and Brahmi script and dates back to the 2nd century BCE. **The pillar was erected by Heliodorus, a Greek ambassador to India, in honor of the god Vasudeva, who is identified with the deity Krishna.**

Source: <https://www.indica.today/long-reads/besnagar-pillar-inscription-heliodorus/>

Q.3) Arrange the following events in a chronological order according to their occurrence in Indian history:

1. First Buddhist council
2. Alexander's invasion of India
3. Ashoka fought the Battle of Kalinga
4. Establishment of Nalanda university

Select the correct answer from the code given below:

- a) 1-2-3-4
- b) 2-1-3-4
- c) 2-4-1-3
- d) 4-1-3-2

Ans) a

Exp) Option a is the correct answer.

Option 1: First Buddhist Council was held soon after the Mahaparinirvan of the Buddha, **around 483 BC** under the patronage of King Ajatshatru and was presided by Mahakasyapa, a monk.

Option 2: **In 326 BC**, Alexander invaded India, after crossing the river Indus he advanced towards Taxila. He then challenged king Porus, ruler of the kingdom between the rivers Jhelum and Chenab.

Option 3: As per the 13th Major Rock Edict, **Ashoka fought this battle in the 8th year of his reign in 261BC**. It further mentions the bloodshed in this war, had a deep impact on Ashoka which ultimately changed his personality from a warrior to a saint as a result of which he gave up the policy of Digvijaya and adopted the policy of Dhammavijaya.

Option 4: Kumaragupta (Shakraditya) of the Gupta dynasty founded **Nalanda University in modern Bihar in the early 5th century AD**, and it flourished for 600 years until the 12th century.

Source: Ancient India by RS Sharma

Q.4) Which of the following statements regarding the rule of Indo-Greeks in ancient India are correct?

1. Their rule resulted in the development of a new art form known as Gandhara art.
2. They were the first rulers in India to issue gold coins that can be definitively attributed to the king.
3. Buddhism flourished under the rule of Indo-Greek kings.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Indo-Greek rule in India, which lasted from the 2nd century BCE to the 1st century CE, is significant for several reasons. One of the most notable legacies of the Indo-Greeks is the large number of coins they issued, which provide valuable insights into their reign and the history of the region.

Statement 1 is correct: A significant contribution of the Indo-Greeks was the introduction of Hellenistic art to the north-west frontier of India. This resulted in the development of new art form known as Gandhara art, which combined Greek and Indian artistic elements.

Statement 2 is correct: The Indo-Greeks were the first rulers in India to issue coins that can be definitively attributed to individual kings. Prior to their arrival, coins in India were punch-marked and could not be assigned with certainty to any dynasty.

Statement 3 is correct: Buddhism flourished under the Indo-Greek kings, and their rule, especially that of Menander, has been remembered as benevolent. Some historians even argue that, the Greek expansion into Indian territory may have been intended to protect Greek populations in India, and to protect the Buddhist faith from the religious persecutions of the Sungas

Source: Ancient India by RS Sharma pg:104

Q.5) With reference to the National Bioenergy Programme, consider the following statements:

1. It is a program to promote generation of green hydrogen from surplus biomass.
2. It aims to promote the manufacturing of pellets & briquettes for use in power generation.
3. It does not cover biomass from municipal solid waste.

Which of the statements given above is/ are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Ministry of New and Renewable Energy (MNRE), Government of India has notified the National Bioenergy Programme on November 2, 2022. It focuses on the usage of surplus/ waste biomass produced in agriculture, industries and urban areas for creation of various forms of bioenergy. The Programme is scheduled to be implemented for the period from FY 2021-22 to 2025-26.

Statement 1 is incorrect: The National Bioenergy Programme (NBP) is an initiative by the government to promote creation of energy in various forms such as Biogas, BioCNG, (all chiefly containing methane - CH₄) etc. from surplus and waste biomass. It is not related to production of Green hydrogen. Hence this statement is **incorrect**.

The government initiative to promote production of green hydrogen is known as the National Green Hydrogen Mission.

Statement 2 is correct: One of the sub components of this program is the - **Biomass Programme (Scheme to Support Manufacturing of Briquettes & Pellets and Promotion of Biomass (non-bagasse) based cogeneration in Industries)** to support setting up of pellets and briquettes for use in power generation and non-bagasse based power generation projects. Hence this statement is **correct**.

This programme has two other sub components. (More information in the Knowledge Base section).

Statement 3 is correct: Although the scheme has a sub component to promote usage of urban waste to create energy, municipal solid waste is not covered under this scheme, and will not be used for this purpose. Hence this statement is **correct**.

Hence this statement is **correct**.

Knowledge Base:

Other sub components of the scheme:

- 1) **Waste to Energy Programme** (Programme on Energy from Urban, Industrial and Agricultural Wastes /Residues) to support the setting up of large Biogas, BioCNG and Power plants (excluding MSW to Power projects). IREDA is to be the implementing agency.
- 2) **Biogas Programme** to support setting up of family and medium size Biogas in rural areas.

Source: <https://pib.gov.in/PressReleaseframePage.aspx?PRID=1877159#:~:text=has%20notified%20the-,National%20Bioenergy%20Programme,-on%20November%202022>

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[https://economictimes.indiatimes.com/industry/renewables/renewable-energy-ministry-to-continue-bio-energy-programme-till-2025-26-provides-rs-858-cr-for-phase-i/articleshow/95354084.cms?from=mdr#:~:text=excluding%20MSW%20\(municipal%20solid%20waste\)%20to%20power%20projects](https://economictimes.indiatimes.com/industry/renewables/renewable-energy-ministry-to-continue-bio-energy-programme-till-2025-26-provides-rs-858-cr-for-phase-i/articleshow/95354084.cms?from=mdr#:~:text=excluding%20MSW%20(municipal%20solid%20waste)%20to%20power%20projects)

Q.6) In the context of ancient Indian social structure, the term 'Anirvasita' refers to:

- Shudras living outside the village community.
- women who were prohibited from participating in Vedic rituals.
- the heterodox sects who rejected the authority of the Vedas and Brahmanical traditions.
- the artisan and craftsmen communities who were believed to be descendants of non-Aryan tribes.

Ans) a

Exp) Option a is the correct answer.

The Dharma Sutras made a distinction between different types of Shudras in ancient India. Sachudra meant cultured Shudra and asac-chudra meant uncultured Shudra. **Nirvasita Shudra lived in the village community and Anirvasita Shudra lived outside it.**

Source: <https://www.bbau.ac.in/Docs/FoundationCourse/TM/MPDC405/Block-2%20Ambedkar%20on%20women-1.pdf> https://www.mea.gov.in/Images/attach/amb/Volume_07.pdf

Q.7) Kanishka, one of the most important rulers of the Kushana dynasty, patronized which of the following personalities?

- Vasumitra
- Ashvaghosha
- Varahmihira
- Nagarjuna
- Charaka

Select the correct answer from the codes given below.

- 1, 2 and 3 only
- 3, 4 and 5 only
- 1, 2, 4 and 5 only
- 1, 2, 3, 4 and 5

Ans) c

Exp) Option c is the correct answer.

Kanishka was the most important ruler of the Kushana dynasty. He was the founder of the Saka era which starts from 78 A.D. He was not only a great conqueror but also a patron of religion and art. He patronized several jewels during his lifetime.

Option 1 is correct: Kanishka patronised Buddhist scholars like Vasumitra, Asvagosha and Nagarjuna. He convened the Fourth Buddhist Council to discuss matters relating to Buddhist theology and doctrine.

It was held at the Kundalavana monastery near Srinagar in Kashmir **under the presidentship of Vasumitra.** About 500 monks attended the Council. The Council prepared an authoritative commentary on the Tripitakas and the Mahayana doctrine was given final shape

Option 2 is correct: Asvagosha was a great philosopher, poet and dramatist. He was the author of Buddhacharita. He popularized the style of Sanskrit poetry known as kavya. He adorned the court of Kanishka.

Option 3 is incorrect: Varahmihira, an Indian Astronomer, was not contemporary of Kanishka. He was born in 505 AD. He is believed to be an author of Panch-Siddhantika ('Five Treaties'), a compendium of Greek, Roman, Egypt and Indian astronomy.

Option 4 is correct: Kanishka patronized Nagarjuna who came from south India. He was a great Buddhist philosopher and thinker who is believed to have given the concept of shunyata (emptiness).

Option 5 is correct: Kanishka also patronized a famous Indian physician, Charaka, who wrote Charak Samhita which is a comprehensive text on ancient Indian medicines. He is also known as the father of Ayurveda.

Source: Tamil Nadu, History book, pg. 80

<https://www.britannica.com/biography/Varahamihira>

<https://www.britannica.com/biography/Nagarjuna>

Q.8) Consider the following statements about the polity and administration during the reign of Satavahanas:

1. They stopped the practice of donating revenue of a village to the Buddhist Sangha.
2. Gaulmika was the provincial governor appointed directly by the king.

Which of the statements given above is/are **incorrect**?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

In the Deccan, the Satavahanas established their independent rule after the decline of the Mauryas. Their rule lasted for about 450 years. They were also known as the Andhras. The founder of the Satavahana dynasty was Simuka. He was succeeded by Krishna, who extended the kingdom up to Nasik in the west. The greatest ruler of the Satavahana dynasty was Gautamiputra Satakarni. He ruled for a period of 24 years from 106 to 130 A.D.

Statement 1 is incorrect: One of the practices started by Satavahana rulers in the first century A.D. was that of **donating revenue of a village to, either a Brahmana or the Buddhist Sangha**. This practice became much more widespread under the Gupta rulers.

Statement 2 is incorrect: The Satavahanas retained some of the administrative units of Ashokan times. **But unlike Mauryan times, certain military and feudal elements are found in the administration of the Satavahanas. For instance, the senapati was appointed provincial governor.** It was probably done to keep the tribal people in the Deccan who were not completely brahmanised under strong military control. **The administration in the rural areas was placed in the hands of gaulmika (village headman)** who was also the head of a military regiment consisting of 9 chariots, 9 elephants, 25 horses and 45 foot soldiers.

Source: Old NCERT, R S Sharma, pg. 117.

Q.9) Consider the following statements about the Chedi dynasty of Kalinga:

1. King Simuka was the founder of the Chedi dynasty.
2. The Hatigumpha inscription in Udayagiri give information about this dynasty.
3. King Kharavela of Chedi dynasty was the contemporary of Satavahana king Satakarni I.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Kalinga is known to be a powerful kingdom as early as the time of the Kurukshetra battle. The region was ruled by Nandas and later by the Mauryans as well.

Statement 1 is incorrect: Hatigumpha inscription mentions **Mahameghavahana as the founder of the Chedi dynasty of Kalinga** which came to be known as Mahameghavahana dynasty after his name. **King Simuka was the founder of Satavahana dynasty.**

Statement 2 is correct: **The third ruler of the Chedi dynasty was King Kharavela who flourished during the second half of the 1st century B.C. The Hatigumpha inscription in Udayagiri near Bhubaneswar furnishes detailed accounts about the Chedi dynasty.**

Statement 3 is correct: King Kharavela of Chedi dynasty was contemporary of Satavahana king Satakarni I. Evidence of this can be found in Hatigumpha inscription which mentions **“In the second year his rule king Kharavela invaded the territory of the Satavahana king Satakarni I and marching up to the river Krishna stormed the city of Asika.”**

Source: <https://odisha.gov.in/about-us/history>

Q.10) With reference to the Pradhan Mantri Bhartiya Janurvarak Pariyojana, consider the following statements:

1. Under this scheme, the subsidised fertilisers in the country are to be sold under a single brand name.
2. Only subsidised urea is included in its purview.
3. The farmer will now be subsidised for fertiliser cost only through Direct Benefit Transfer.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

The Ministry of Fertilisers & Chemicals recently announced on August 24, 2022 that it has been decided to implement One Nation One Fertiliser by introducing a “Single Brand for Fertilisers and Logo” under the fertiliser subsidy scheme named “Pradhan Mantri Bhartiya Janurvarak Pariyojna” (PMBJP).

Statement 1 is correct: Under the Pradhan Mantri Bhartiya Janurvarak Pariyojana or the One Nation One Fertiliser (ONOF) scheme, all the subsidised fertilisers in India will be sold under a single brand name - BHARAT. Hence this statement is **correct**.

Statement 2 is incorrect: All types of fertilisers which are subsidised fully or partly by the government and/ or whose maximum retail price is announced by the government like DiAmmonium Phosphate, Urea, Muriate of Potash, NPK, etc are included under this scheme. Hence this statement is incorrect as this scheme is not exclusively applicable to subsidised urea.

Statement 3 is incorrect: This scheme pertains to marketing and has no bearing on the method/ mechanism or calculation method of the subsidies on fertilisers. They shall continue to be administered as they are now. This means that the government will fix the MRP at which these fertilisers are to be sold to the farmers and not transfer the purchase cost to their accounts (this means no DBT for fertiliser subsidy). The subsidy will continue to go to the companies who are manufacturing the fertiliser. Hence this statement is **incorrect**.

Source: <https://indianexpress.com/article/explained/everyday-explainers/one-nation-one-fertiliser-scheme-explained-risks-challenges-drawbacks-811071/>

Q.11) Which of the following dynasties immediately succeeded the Sunga dynasty to rule over the Magadha Region?

- The Kanva dynasty
- The Nanda dynasty
- The Saka dynasty
- The Sisunaga dynasty

Ans) a

Exp) Option a is the correct answer.

Kanva dynasty, also called Kanvayanas, the successors of the Shungas in the North Indian kingdom of Magadha, who ruled about 72–28 BCE.

The last Sunga ruler, Devabhuti was murdered by his minister Vasudeva Kanva, who founded the Kanva dynasty. Hence, Kanvas ruled the mid-Gangetic valley after the fall of Sungas.

The Kanva dynasty ruled for 45 years.

Option b is incorrect: The Nanda dynasty ruled over Magadha during the the fifth century BCE. The Nandas overthrew the Shishunaga dynasty from the throne of Magadhan empire.

Option c is incorrect: The Saka Dynasty, also known as the Indo-Scythian Kingdom ruled parts of north-western India and Pakistan from around 2nd century BCE to the 4th century CE.

Option d is incorrect: The Sihshunaga Dynasty ruled the Magadha Kingdom in ancient India from **413 BCE to 345 BCE (before shunga dynasty)**. It is considered to be the third imperial dynasty of Magadha, following the Brihadratha and the Haryanka.

Source: Tamil Nadu History book, Pg. 74-75.

Q.12) With reference to ancient Indian history, 'Periplus of the Erythraean Sea' is best related to-

- Information regarding the social conditions of India during Vedic age.
- Account of Alexander's invasion of Indian subcontinent.
- Data on sea trade between India and Rome.
- Narration of society of North India during Gupta administration.

Ans) c

Exp) Option c is the correct answer.

Periplus of the Erythraean Sea is an anonymous work which gives us impartial and objective information on the Indo-Roman trade during **Early Historic period**. It informs us about the ports on India's coast-line, trade-centres in India, the trade-routes-connecting trade centres and ports, distance between centres, the list of items-of-trade, the annual volume of trade, the rates, types of ships etc.

In order to reconstruct the history of the **post-Mauryan period between c.200 BCE to 200 CE** a variety of sources are available, including both foreign as well as indigenous sources. Among the former, the most important is the **Periplus of the Erythraean Sea which gives rich data on sea trade between India and Rome.**

Source: BHIC-103E-DK-2proof.xps (egyankosh.ac.in)

JAKO201630932413446.pdf (koreascience.or.kr)

Q.13) Consider the following statements with reference to the comparison between Mauryan Empire and Gupta Empire:

- The Mauryan administration was more centralized as compared to the Gupta administration.
- System of taxation in Gupta Empire was very elaborate and extensive as compared to that of Mauryan Empire.

3. Gupta dynasty ruled for a longer time period than Maurya dynasty.

Which of the statements given above is/are correct?

- a) 1, 2 and 3
- b) 1 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: In the Mauryan period, political authority was concentrated in the hands of the king. But, the Gupta administration was decentralized in nature. It means that feudatories i.e. local Kings and smaller chiefs ruled a large part of their empire.

Statement 2 is incorrect: It was Mauryans (not Guptas) who introduced very extensive tax system and imposed heavy taxes on the people. Guptas were more liberal in imposing taxes on citizens.

Statement 3 is correct: The Mauryan Empire, which formed around 321 B.C.E. and ended in 185 B.C.E. ruled around 136 years. Whereas Sri Gupta founded the Gupta Empire c. 240-280 CE, The Gupta Empire ended around 550 CE when it disintegrated into regional kingdoms after a series of weak rulers and invasions from the east, west, and north. So, Guptas ruled for more than 250 years. Hence, Guptas ruled for longer time period than Mauryans.

Source:

https://nios.ac.in/media/documents/SrSec315NEW/315_History_Eng/315_History_Eng_Lesson7.pdf

<https://www.nationalgeographic.org/encyclopedia/mauryan-empire/#:~:text=The%20Mauryan%20Empire%2C%20which%20formed,most%20of%20the%20Indian%20region.>

Q.14) The Allahabad Pillar inscription, often known as the Allahabad Prashasti, is one of the most important epigraphic pieces of evidence of the Imperial Guptas. Consider the following statements about the Allahabad Prashasti:

- 1. It provides information about Dakshinapatha expedition of Samudragupta
- 2. It gives information about the tributes received by Samudragupta from many kings of south - east Asia.
- 3. It is written in both prose and verse style.
- 4. It is composed by Ravikirti.

Which of the statements given above is/are correct?

- a) 1 only
- b) 3 and 4 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Allahabad Pillar inscription is engraved on an Asokan pillar. It is written in classical Sanskrit, using the Nagari script. It consists of 33 lines composed by **Harisena**, court poet of Samudragupta,.

Statement 1 is correct: Samudragupta was the greatest of the rulers of the Gupta dynasty. The Allahabad Pillar inscription provides a detailed account of his reign. It refers to three stages in his military campaign:

- 1) Against some rulers of North India
- 2) **His famous Dakshinapatha expedition against South Indian rulers**
- 3) A second campaign against some other rulers of North India.

Statement 2 is correct: According to the Allahabad inscription, **neighbouring five frontier kingdoms and nine republican states of Punjab and western India** were conquered by the Samudragupta. They agreed to pay tribute and taxes to Samudragupta and obey his orders without any fight. **The inscription adds that Samudragupta also received tributes from many kings of south - east Asia.**

Statement 3 is correct: Allahabad inscription is written in **mixed prose and verse style, which is called “Champu kavya style”**. The word 'Champu' means a combination of poetry and prose. The inscription is written in **Sanskrit language**.

Statement 4 is incorrect: **Ravikriti was the court poet of Pulakesin II, the Chalukya King. Harishena** was the court poet of Samudragupta. Allahabad Pillar Inscription (Prayag Prasasti) was **composed by Harishena**. It was composed in Sanskrit.

Source: 11th Class Tamil Nadu Ncert + Lesson 9: GUPTA EMPIRE

https://nios.ac.in/media/documents/SrSec315NEW/315_History_Eng/315_History_Eng_Lesson7.pdf

Q.15) Consider the following statements with reference to the Employee State Insurance (ESI) Scheme:

1. This scheme was started during the tenure of Prime Minister Jawahar Lal Nehru.
2. Under the scheme, medical care is provided to the retired employees as well.
3. Atal Beemit Vyakti Kalyan Yojana was launched under the ESI Scheme.

Which of the above-given statements is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The promulgation of the **Employees' State Insurance Act, 1948(ESI Act)**, by the Parliament was the **first major legislation on social Security for workers** in independent India.

Statement 1 is correct: The ESI Act 1948, encompasses certain health-related eventualities that the workers are generally exposed to; such as sickness, maternity, temporary or permanent disablement, Occupational disease or death due to employment injury, resulting in loss of wages or earning capacity-total or partial. **The scheme was inaugurated in Kanpur on 24th February 1952 (ESIC Day) by then Honorable Prime Minister Pandit Jawahar Lal Nehru.**

Statement 2 is correct: Full medical care is provided under the ESI Scheme to an Insured person and his family members from the day he enters insurable employment. There is no ceiling on expenditure on the treatment of an Insured Person or his family member. **Medical care is also provided to retired and permanently disabled insured persons and their spouses on payment of a token annual premium.**

Statement 3 is correct: Atal Beemit Vyakti Kalyan Yojana (ABVKY) is a welfare measure for the employees covered under the **Employees' State Insurance (ESI) Act, 1948** in the form of cash compensation up to 90 days once in lifetime of the worker in the contingency of Insured Persons' (IPs') unemployment. The Scheme was introduced w.e.f. 01-07-2018 on pilot basis for a period of two years initially. The scheme was later extended for another one year i.e. from 1st July, 2020 to 30th June, 2021.

Source: <https://www.esic.gov.in/information-benefits>

Q.16) Which of the following information can be known from the coins of Samudragupta?

1. He was the follower of Buddhism
2. Played veena
3. Performed Ashvamedha Yajna
4. Marriage of Samudragupta to the Lichchavi princess Kumaradevi.

Select the correct answer from the options given below:

- a) 1 and 2 only
- b) 1, 3 and 4 only
- c) 2 and 3 only
- d) 2, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Samudragupta was most probably the first Gupta king to issue coins (although this is the subject of some dispute). Gupta coinage started out imitating that of the Kushans, but very soon new types were introduced.

Statement 1 is incorrect: Samundragupta does not issued any coins from which we can infer such information. Moreover, the coins have the images of Lakshmi.

Statement 2 is correct: The **Lyrical type** of Samudragupta is also a very beautiful and unique design. On this coin, the king is shown seated at ease on a high-backed couch, playing a **string instrument** like a veena. The fact that the king wanted to publicize an image of himself as a musician is remarkable and a window into the value system of the Gupta state. Samudragupta is known to have been a great patron of the arts and was indeed an accomplished musician and poet.



Statement 3 is correct: The **Ashvamedha type** of Samudragupta is arguably the most beautiful Gupta coin. Sacrificial horse standing and Queen standing left, holding towel in left hand, flywhisk in right over her shoulder needle.



Statement 4 is incorrect: The King and Queen type memorializes the most important event of early Gupta history: the **marriage of Chandragupta I** to the Lichchavi princess Kumaradevi. This marriage greatly improved the fortunes of the young and ambitious king, allowing him to begin his campaign of expansion.



Knowledge Base:

Sceptre type ("Standard" type) - King standing left, sacrificing at altar left and holding the royal scepter. This coin is undoubtedly one of the first Gupta coins. It is quite clear that the Samudragupta coin is derived from Kushan coins.



Archer type - King standing left, holding an Indian long bow in his left hand and an arrow in his right. The archer type became the prototypical Gupta coin, but it is relatively rare for Samudragupta, even though he invented the type.



Source: <http://coinindia.com/galleries-samudragupta.html>

Q.17) Consider the following pairs regarding various terminologies used during Chola period and their meaning:

Important Terms : Meaning

1. Kadaiyyar : Landless labourers
2. Eccoru : Palace Guard
3. Valilar : Sword bearers
4. Nattar : Settlement of traders

Which of the pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correct: In the Tamil region, large landowners were known as vellalar, ordinary ploughmen were known as uzhar, and **landless labourers were known as kadaiyyar and adimai.**

Pair 2 is incorrect: **Eccoru is a term referring to various supplies of cooked rice provided for officials.** This term was prevalent during the early Chola period but steadily declined over time.

Pair 3 is correct: Cholas maintained a well-organised army. The army consisted of three conventional divisions: infantry, cavalry (kudirai sevar) and the elephant corps (anaiyattal). **There were also bowmen (villaligal), sword-bearers (valilar) and spearmen (konduvar).** Two type of ranks in the army are also mentioned: the upper and the lower (perundanam and cirudanam).

Pair 4 is incorrect: **Nattar were the assembly of landholders of urs in nadu.** Nattar functioned as pillars of the state structure under the Cholas. They discharged many of the administrative, fiscal and judicial responsibilities of the state. They held hereditary land rights and were responsible for remitting the tax from the respective nadu to the state. **Whereas, Nagaram was a settlement of traders and not nattars.**

Source: <https://ncert.nic.in/ncerts/l/fess109.pdf>

https://www.uio.no/studier/emner/hf/iakh/HIS2172/h11/undervisningsmateriale/HIS2172_Heitzman.pdf

https://en.banglapedia.org/index.php/Gauda,_Janapada

Tamilnadu state board, History- Volume I

Q.18) Consider the following pairs:

Books	Authors
1. Harshacharita	Banabhatta
2. Raghuvamsha	Kalidasa
3. Panchasiddhantika	Vishakadutta

Which of the pairs given above is/are correctly matched?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

The Gupta and post Gupta period was marked by great progress in art, architecture and literature.

Pair 1 is correct. Harshacharita was written by Harshavardhana's court poet **Banabhatta**.

Pair 2 is correct. Kalidasa who lived in the court of **Chandragupta II** in the fifth century AD authored books like Meghadutam, Abhijnanashakuntalam, **Raghuvamsha**, Kumarasambhava and Ritusamhara.

Pair 3 is incorrect. Varahamihira was a great astronomer who has written a number of books on astronomy. His work **Panchasiddhantika** deals with five astronomical systems.

Source:

https://nios.ac.in/media/documents/SrSec315NEW/315_History_Eng/315_History_Eng_Lesson7.pdf

Q.19) Which of the following Gupta rulers was described as "equal to the gods: Dhanada (Kubera), Varuna (Sea-God), Indra and Antaka (Vama), who had no antagonist of equal power in the world"?

- a) Chandragupta I
- b) Samudragupta
- c) Chandragupta II
- d) Kumargupta

Ans) b

Exp) Option b is the correct answer.

The Gupta dynasty was established by **Shrighupta**, who probably belonged to the vaishya caste. His son **Ghatotkacha**, who carried the title of maharaja, appears to be some small king about whom nothing much is known.

Option a is incorrect: Chandra Gupta I, king of India (reigned 320 to 330 AD) and **founder of the Gupta empire**. He was the **grandson of Sri Gupta**, the first known ruler of the Gupta line.

Option b is correct: Samudragupta was one of the greatest rulers of the Guptas. The Allahabad Pillar inscription provides a detailed account of his reign. **The Allahabad Prasasti of Samudragupta describes him as "equal to the gods" like Dhanada (Kubera), Varuna (Sea-God), Indra and Antaka (Vama), who had no antagonist of equal power in the world.** dynasty.

Option c is incorrect: **Chandragupta II**, also known by his title **Vikramaditya**, as well as Chandragupta Vikramaditya, was the third ruler of the Gupta Empire in India, and was one of the most powerful emperors of the Gupta dynasty. Chandragupta continued the expansionist policy of **his father Samudragupta**, mainly through military conquest.

Option is incorrect: Kumaragupta was an emperor of the Gupta Empire of Ancient India. A **son of the Gupta emperor Chandragupta II**. He seems to have maintained control of his inherited territory, which extended from Gujarat in the west to Bengal region in the east.

Source: <https://egyankosh.ac.in/bitstream/123456789/20161/1/Unit-33.pdf>

Q.20) Consider the following statements with reference to the recent changes made in Beti Bachao Beti Padhao (BBBP) Scheme:

1. It aims to ensure at least 20% increment in enrollment of women at the secondary level in STEM (Science, Technology, Engineering, Mathematics).
2. One of the scheme's objective is also raising awareness about safe menstrual hygiene.
3. Mission Shakti has been launched to review the implementation of the BBBP scheme.
4. It now focuses on skilling of girls and women in non-traditional livelihoods.

Which of the above given statements are correct?

- a) 3 and 4 only
- b) 1, 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2 and 4 only

Ans) c

Exp) Option c is the correct answer.

Beti Bachao Beti Padhao (BBBP) Scheme was launched by Prime Minister on January 22, 2015 to address the declining Child Sex Ratio (CSR) and related issues of women's empowerment over a life-cycle continuum.

Statement 1 is incorrect: Among the revised aims of the BBBP scheme is **ensuring 1% increment (not 20%) in enrolment of women at the secondary level particularly in STEM (Science, Technology, Engineering, Mathematics) subjects**. Another key aim is skilling of girls and women every year (mainly in non-traditional livelihoods).

Statement 2 is correct: **Raising awareness about safe menstrual hygiene** and promulgating elimination of child marriages has been added to the aims of the revised BBBP Scheme

Statement 3 is correct: **'Mission Shakti' was launched during the 15th Finance Commission period 2021-22 to 2025-26**. Mission Shakti is an integrated women empowerment programme is launched as an umbrella scheme for the safety, security and empowerment of women for implementation. A national committee headed by the Secretary of MW&CD, formed under the larger **Mission Shakti will review the implementation of the BBBP scheme with states and UTs**.

Statement 4 is correct: The Government has expanded the mandate of the 'Beti Bachao Beti Padhao' scheme, by inclusion of skilling of girls in non-traditional livelihood (NTL) options in its flagship program.

Knowledge Base:

Non-Traditional Livelihoods" (NTLs): sectors and jobs where participation of women is and has historically been conventionally low or absent. Like STEM (Science, Technology, Engineering, Mathematics) subjects due to gender-based categorization of the work, in the society.

Source: <https://www.thehindu.com/news/national/skilling-of-girls-in-non-traditional-livelihoods-included-in-beti-bachao-beti-padao-scheme/article65998460.ece>

Q.21) Consider the following pairs with reference to the famous kings of different dynasties during Sangam period:

Dynasty of Sangam Famous King
Period

- | | |
|-------------------|-----------------------------|
| 1. Chola dynasty | Simha Vishnu |
| 2. Chera dynasty | Senguttuvan |
| 3. Pandya dynasty | Arya Padai
Neduncheliyan |

How many pairs given above are correctly matched?

- Only one pair
- Only two pairs
- All three pairs
- None of the pairs

Ans) b

Exp) Option b is the correct answer.

South India was ruled by three dynasties the Cheras, Cholas and Pandyas during the Sangam Age,

Pair 1 is incorrect: Simha Vishnu was a ruler of the Pallava Dynasty.

Pair 2 is correct: Senguttuvan (Red Chera) was most important Chera ruler. He established the Kannagi or Pattini Cult. Kannagi became object of worship. He was the first King from South India to send an ambassador to China. Among his military achievements, his expedition to the Himalayas was remarkable. He defeated many north Indian monarchs.

Pair 3 is correct: King Arya Padai Neduncheliyan was the greatest ruler of the Pandyas. There were two Neduncheliyans. The 1st was **Arya Padai Kadantha Neduncheliyan** who executed Kovalan. It is said that the curse of the Kannagi, who was the wife of Kovalan, is the reason Madurai was burnt and destroyed. The other was **Talaiyalanganattu Cheruvenra Neduncheliyan** (He who won the **battle at Talaiyalanganam**). He wore this title after defeating his enemies at the Battle of Talaiyalanganam, which is located in the Tanjore district. By this victory, Neduncheliyan gained control over the entire Tamil Nadu.

As two pair are correctly matched. Hence, correct option is b.

Source: 11th class Tamil Nadu History + LESSON 8: SANGAM AGE

Q.22) With reference to Vakataka dynasty, consider the following statements:

- King Pravarasena was the founder of the Vakataka dynasty.
- Prabhavati, daughter of Chandragupta II, married to the Vakataka prince Rudrasena II.
- Riddhapur inscription is related to the Vakataka dynasty.
- Most of the region ruled by Vakatakas was taken over by the Chalukyas after its disintegration.

Which of the statements given above are correct?

- 1 and 2 only
- 3 and 4 only
- 2, 3 and 4 only
- 1, 2 and 4 only

Ans) c

Exp) Option c is the correct answer.

Vakataka dynasty, Indian ruling house originating in the central Deccan in the mid-3rd century CE, the empire of which is believed to have extended from Malwa and Gujarat in the north to the Tungabhadra in the south and from the Arabian Sea in the west to the Bay of Bengal in the east.

Statement 1 is incorrect: By the third century, the Satavahanas had collapsed and the Sakas were no longer the powerful force they had been. The stage was set in the Deccan for a local power to stake its claim. It is in this scenario that **Vindhyashakti (not Pravarasena)**, a Brahmin chieftain about whom not much is known, **founded the Vakataka empire. Pravarasena was the son of the Vindhyashakti.**

Statement 2 is correct: **Gupta King Chandragupta II gave his daughter Prabhavati in marriage to the Vakataka prince Rudrasena II.** The political importance of this marriage lies in the fact that the Vakatakas occupied a geographically strategic position in the Deccan. This alliance served a useful purpose when Chandragupta-II undertook his campaign in western India against the Sakas.

Statement 3 is correct: Some famous inscriptions of this dynasty are the **Poona copper plate** inscriptions and the **Riddhapur inscriptions** issued by **Queen Prabhavatigupta** (Wife of Vakataka King **Rudrasena II**)

Statement 4 is correct: The Vakataka dynasty disappeared soon after the death of King Harishena. **Most of the regions occupied by the Vakatakas had been taken over by the Chalukyas by 550 CE.**

Source: <https://www.firstpost.com/living/the-vakatakas-a-forgotten-empire-tracing-the-history-of-a-once-powerful-kingdom-that-mysteriously-faded-away-6814501.html>
Lucent.

Q.23) There were many educational institutions and universities set up in many cities during Gupta period. With reference to this, who laid the foundation of the Nalanda University?

- Samudragupta
- Chandragupta II
- Skandagupta
- Kumaragupta

Ans) d

Exp) Option d is the correct answer.

Kumaragupta was the son and successor of Chandragupta II. His reign was marked by general peace and prosperity. He issued a number of coins and his inscriptions are found all over the Gupta empire. He also **performed an asvamedha sacrifice.** Most importantly, **he laid the foundation of the Nalanda University** which emerged an institution of international reputation. At the end of his reign, a powerful wealthy tribe called the 'Pushyamitras' defeated the Gupta army. **Hence, option d is correct.**

Knowledge Base:

Samudragupta: The Allahabad Pillar inscription provides a detailed account of his reign. It refers to three stages in his military campaign: 1. Against some rulers of North India
2. His famous **Dakshinapatha expedition** against South Indian rulers. 3. A second campaign against some other rulers of North India. During **Dakshinapatha expedition, he did not destroy and annex those kingdoms.** Instead, he defeated the rulers but gave them back their kingdoms. He only insisted on them to acknowledge his suzerainty.

Chandragupta II: He is also known as Vikramaditya. The greatest of the military achievements of Chandragupta II was his **war against the Saka satraps** of western India. Rudrasimha III, the last ruler of the Saka satrap was defeated, dethroned and killed. The famous Chinese pilgrim. **Fahien** visited India during the reign of Chandragupta II.

Skandagupta: According to the inscription on his **Bhitari pillar**, Skandgupta restored Gupta supremacy across the subcontinent by defeating his enemies, who could have been rebels or foreign invaders. He repelled an invasion by the Indo-Hephthalites (known as Hunas in India).

Source: 11th Class Tamil Nadu Ncert + Lesson 9: GUPTA EMPIRE

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Q.24) Chandragupta II was known for his deep interest in art and culture and nine gems or Navratna adorned his court. With reference to Navratna, consider the following statements:

1. Kahapanka was mainly an Architect.
 2. Sanku was related to the field of Astrology.
 3. Dhanvantri was a Physician.
- Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Chandragupta-II was known for his deep interest in art and culture and nine gems or Navratna adorned his court.

Statement 1 is incorrect: Kahapanaka: Kahapanka was an **Astrologer (not Architect)**

Statement 2 is incorrect: Sanku: Sanku was in the field of **Architecture (not Astrologer)**.

Statement 3 is correct: Dhanvantri was a great Physician.

Knowledge Base:

Other Gems of Chandragupta II Court were-

Amarsimha: Amarsimha was a Sanskrit lexicographer and a poet. His **Amarkosha** is a vocabulary of Sanskrit roots.

Harisena: Harisena is known to have composed the **Prayag Prasasti or Allahabad Pillar Inscription**.

Kalidasa: Kalidasa is the immortal **poet and playwright** of India and a peerless genius whose works became famous worldwide in modern world.

Vararuchi: Vararuchi is the name of another gem of Chandragupta Vikramaditya who was a **grammarian and Sanskrit scholar**.

Vetalbhatta: Vetalbhatta was an author and probably a magician.

Source :

https://books.google.co.in/books?id=_3O7q7cU7k0C&pg=PA158&redir_esc=y#v=onepage&q&f=false
Page 163 – Malwa through Ages by Kailash Chand Jain

Q.25) Which of the following schemes are implemented by the Ministry of Agriculture and Farmers Welfare?

1. National Agriculture Market (eNAM) scheme.
2. Operation Greens.
3. National Mission on Edible Oils–Oil Palm (NMEO–OP).
4. The Rashtriya Gokul Mission (RGM).
5. New Agricultural Marketing Infrastructure Scheme
6. Paramparagat Krishi Vikas Yojana (PKVY)

Select the correct answer using the code given below:

- a) 1, 2, 3 and 6 only
- b) 1, 3, 5 and 6 only
- c) 1, 5 and 6 only
- d) 2, 4 and 5 only

Ans) b

Exp) Option b is the correct answer.

Option 1 is correct: National Agriculture Market (eNAM) scheme is being implemented by the Ministry of Agriculture and Farmers welfare. National Agriculture Market. (eNAM) is a pan-India electronic trading portal which networks the existing APMC mandis to create a unified national market.

Option 2 is incorrect: Operation Greens scheme is a component of Pradhan Mantri Kisan SAMPADA Yojana and it is being implemented by the Ministry of Food Processing Industries (MoFPI). Operation Green The scheme aims to reduce post-harvest losses of perishable products such as Tomatoes, Onion and Potato referred to as TOP crops. Recently the scheme extends to cover other perishable products such as Mango, Banana, Apple, Pineapple, Carrot, Cauliflower, Beans etc.

Option 3 is correct: The National Mission on Edible Oils – Oil Palm (NMEO-OP) is a new Centrally Sponsored Scheme being implemented by the Ministry of Agriculture and Farmers' Welfare. The scheme lays special focus on the Northeast region and the Andaman and Nicobar Islands to improve the domestic production of palm oil.

Option 4 is incorrect: The Rashtriya Gokul Mission (RGM) is implemented by the Ministry of Fisheries, Animal Husbandry and Dairying. The scheme aims to enhance productivity of bovines and increase milk production in a sustainable manner using advanced technologies.

Option 5 is correct: The New Agricultural Marketing Infrastructure (AMI) is being implemented by the Ministry of Agriculture and Farmers' Welfare. The scheme provides assistance for construction, renovation of godowns and warehouses in the rural areas to enhance the storage capacity for agricultural produce.

Option 6 is correct: Paramparagat Krishi Vikas Yojana is being implemented by the Ministry of Agriculture and Farmers' Welfare. It is a component of Soil Health Management (SHM) of the major project National Mission of Sustainable Agriculture (NMSA). The scheme aims at supporting and promoting organic farming which in turn results in improvement of soil health.

Source: <https://agricoop.nic.in/en/Major#gsc.tab=0>

<https://www.mofpi.gov.in/Schemes/about-pmksy-scheme>

https://dahd.nic.in/schemes/programmes/rashtriya_gokul_mission

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1781430>

Q.26) Consider the following statements regarding the Chalukyas of Badami:

1. Chalukyas were the founders of Dravida style of temple architecture.
2. The Aihole Inscription mentions the victory of Harshavardhana over Pulakesin II of Chalukya dynasty.
3. Pattadakal is a UNESCO World Heritage site built by the Chalukyas of Badami.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Chalukyas set up their kingdom towards the **beginning of the sixth century A.D.** and ruled over an extensive area in the Deccan for about two centuries. **Pulakesin I** was the founder of the Chalukya dynasty. He established a small kingdom with **Vatapi or Badami** in Karnataka **as its capital. Pulakeshin II** was an important ruler belonging to the Chalukya dynasty. **Badami, Aihole and Pattadakal** were the centers of their art.

Statement 1 is incorrect: The earliest **Badami Chalukya** temples date back to around 450 A.D. in Aihole. Chalukyas were great patrons of the art. The **Vesara style (and not the Dravida style) of architecture was**

started by the Chalukyas of Badami. It was essentially a mixture of the Nagara and the Dravida styles. Pallavas were the founders of Dravida style of temple architecture. So, statement 1 is incorrect.

Statement 2 is incorrect: During the reign of Pulakesin II, Harshavardana attacked the kingdom. Pulakesin II emerged victorious. This information is derived from the Aihole Inscription, composed by the Jain poet Ravikirti. It has also been found in accounts of Hiuen Tsang. So, statement 2 is incorrect.

Statement 3 is correct: Pattadakal is a UNESCO World Heritage site built by the Chalukyas of Badami for royal commemoration and coronation. It was accorded World Heritage Status by UNESCO in 1987. It is a large complex of ten temples here – 4 in Nagara style and 6 in Dravida style. The Mallikarjuna and the Virupaksha temples at Pattadakal were built by two queens of Vikramaditya II, to commemorate the victory of the Chalukyas over the Pallavas.



Map: Chalukya dynasty

Source: Class XI TN Board Book on Ancient History

<https://whc.unesco.org/en/tentativelists/5972/>

<https://www.worldhistory.org/article/899/the-temples-of-pattadakal/>

Q.27) Which of the following foreign travellers visited India during the reign of Harshavardhana?

1. Hiuen-Tsang
2. Fa-Hien
3. Megasthenes

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Travelers who came to India wrote their own accounts which deal with its unique focus areas. Some travelers wrote about the **affairs of the court** while some focused on **contemporary style of architecture and monuments** or **depicted the social and economic life**. Every such account presents a true picture of the then Indian Civilisation.

Option 1 is correct: Hiuen-Tsang (629 to 645 CE) visited India during the rule of Harshavardhana. **Huen Tsang or Xuanzang** was a **Chinese Buddhist traveler** who compiled his work in Journey **to the West**. He admired Harshavardhan for his deep devotion towards **Buddhism**. He returned with over six hundred **Mahayana and Hinayana** texts.

Option 2 is incorrect: Fa-Hien (405-411 CE) was a **Chinese Buddhist** monk. He visited India during the reign of **Vikramaditya (Chandragupta II)**. He also visited **Lumbini**, the birthplace of the Buddha. His voyage is described in his work **Record of Buddhist Kingdoms**. His book details the **religious and social life** of Indians at that time. He wrote about cities like **Taxila, Pataliputra, Mathura, and Kannauj**. So, statement 2 is incorrect.

Option 3 is incorrect: Megasthenes (302-298 BCE) was **Seleucus Nicator's ambassador** who visited the country during the reign of Chandragupta **Mauryan**. On his visit to India, he wrote a **book called INDICA** based on India. It gives details of soils, rivers, plants, animals, **administration and the social and religious life of India**. As per him **endogamy and hereditary** occupation were two major aspects of the Indian caste system. So, statement 4 is incorrect.

Source: Old XI NCERT of Ancient India

<https://ncert.nic.in/textbook/pdf/lehs201.pdf>

Q.28) Which of the following temple belongs to the period of Chalukyas of Badami?

1. Ravana Phadi Cave Temple
2. Chennakeshava Temple
3. Ladhkan Temple of Aihole
4. Kailasa Temple of Ellora

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

The **Chalukyas of Badami** have made great contributions to Indian Art and Architecture. Building of **Stambha Mandapa (Navaranga) and Sukhanasi** (an external ornamented feature over the entrance to the garbhagriha or inner shrine) **along with the Garbhagriha** was a unique contribution of the Chalukyas. They built their temples using **red sandstone in Vesara style** (a mix of Nagara Dravida style). **Badami, Aihole and Pattadakal** were the centers of their art. Chalukyan architecture has a **small base design, horseshoe base, square Garbhagriha, inner pradakshina patha**. Some of these temples had flat roofs while some had sloping roofs.

Option 1 is correct: The Ravana Phadi Cave Temples is the earliest known monument built by the Badami branch of the Chalukyas. This rock-cut cave temple was built in the 6th century and is **dedicated to Shiva**. The interiors of Ravana Phadi are filled with carvings **depicting Hindu mythologies**. Sculptures of Shiva

along with Parvati and Lord Ganesha are present. It has a simple facade with two pillars at the entrance, flanked by a unique pair of dwarapala.

Option 2 is incorrect: Chennakeshava Temple is also referred to as **Keshava** or **Vijayanarayana temple of Belur**. It is a **12th-century Hindu temple in Karnataka**. The temple was commissioned by **Hoysala King Vishnuvardhana** in 1117 CE, on the banks of the Yagachi River in Belur, an early Hoysala Empire capital. The richly sculptured exterior of the temple narrates scenes from the **life of Vishnu and his reincarnations** and the epics, **Ramayana, and Mahabharata**. It also includes themes from **Shaivism and Shaktism** as well as from **Jainism and Buddhism**. So, option 2 is incorrect.

Option 3 is correct: The **Ladkhan temple of Aihole** belongs to the 5th century CE built by Chalukya dynasty. It was initially used as a **panchayat hall where Chalukya ruler Pulakesi I** performed horse sacrifices. Later it was turned into a temple – first **Surya Temple and then Shivalay**. Since it is early construction, the pillars are relatively carving free. The most beautiful part of the temple is the **lattice windows with intricate carvings** taking inspiration from northern temples.

Option 4 is incorrect: Kailasa Temple was built as a dedication to **Lord Shiva**. This Kailash temple was made by the **Rashtrakuta king, Krishna I** in the 8th Century A.D. The Kailasanatha temple (**Cave 16**) is one of the **34 cave temples** and monasteries known collectively as the **Ellora Caves**. This temple is considered as one among the most astonishing buildings in the history of architecture. So, option 4 is incorrect.

Source: Old XI NCERT of Ancient India

<https://ccrtindia.gov.in/template-architecture/>

<https://karnatakaturism.org/tour-item/pattadakal/>

<https://www.incredibleindia.org/content/incredible-india-v2/en/destinations/badami/bhutanatha-bhootanatha-temple1.html>

Q.29) Consider the following statements regarding the reign of Pallavas of Kanchipuram:

1. 'Ur' was a unit of administration during the Pallava period.
2. Kailasanathan temple at Kanchipuram was built by Pallavas in Dravidian style.
3. Bharavi and Dandin were the court poets of the Pallavas.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Pallavas established their authority over south Andhra Pradesh and north Tamil Nadu. They established the **capital as Kanchi/Kanchipuram**, which became an important **temple town and a center of trade and commerce**. The Pallavas rose to power during the reign of **Mahendravarman** and **Narasimhavarman I**. **Narasimhavarman I, also known as Mamalla**, expanded the empire. **The Shore Temple at Mamallapuram and the Kailasanatha temple** at Kanchipuram were built in **Narasimhavarman II period**.

Statement 1 is correct: **The inscriptions of the Pallavas mention a number of local assemblies. The Ur or village** was the **smallest administrative unit** in the Pallava Kingdom. It was **under the control of the village Sabha (village committees)**. They functioned through **subcommittees**, which looked after **irrigation, agricultural operations, making roads, local temples**, etc. The village Sabha remained almost **autonomous** in looking after the day to day administration of the village.

Statement 2 is correct: The Pallava rulers constructed **stone temples** in the seventh and eighth centuries **to house the images of gods**. The Pallavas also built many structural temples. **Kailasanathan Temple** was

built by the Pallavas during 650 AD– 705 AD. It is a **Dravidian style architecture temple**. Unlike the nagara temple, the Dravidian temple is **enclosed within a compound wall**. The front wall has an entrance gateway in its center, which is known as a **gopuram**.

Statement 3 is correct: Tamil bhakti literature in South India developed during Pallava's period. **Bharavi and Dandin** were court poets of Pallavas. **Bharavi wrote Kiratarjuniyam**. **Dandin composed Dashakumaracharita**. **Vaishnavite and Shaivite literature** flourished during this period. **Sanskrit was the chief language** among the royals and scholars. Some of the inscriptions are in a mix of **Tamil and Sanskrit**.



Map: Pallava Dynasty

Source: Class XI TN Board Book on Ancient History

<https://ncert.nic.in/textbook/pdf/kefa106.pdf>

Q.30) With reference to Mission Saksham Anganwadi and Poshan 2.0 scheme, consider the following statements:

1. The Scheme seeks to address malnutrition in children up to age of 18 years, and pregnant and lactating mothers.
2. Raw ration like rice and dal will be provided as Take-Home Ration (THR) to the beneficiaries.
3. Ayush practices will be incorporated to address malnutrition.
4. Food items should compulsorily include millets for at least once a week.
5. It is a centrally sponsored scheme.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 3, 4 and 5 only
- c) 2, 3, 4 and 5 only
- d) 1, 2, 4 and 5 only

Ans) b

Exp) Option b is the correct answer.

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Mission Saksham Anganwadi and Poshan 2.0 is an Integrated Nutrition Support Programme. Poshan 2.0 shall contribute to SDG 2 on Zero Hunger and SDG 4 on Quality Education.

Statement 1 is incorrect: Poshan 2.0 aims to address the situation of malnutrition among **children up to the age of 06 months to 6 years**, pregnant women and lactating mothers (PWLM) and for Adolescent Girls in the age group of 14 to 18 years in Aspirational Districts and North Eastern Region (NER).

Statement 2 is incorrect: Take-Home Ration (THR) **will not be given in the form of raw ration (Wheat, Rice, Dal etc.)**. Take Home Ration (THR) shall be prepared using locally available and culturally appropriate food ingredients. Take Home Ration must ensure dietary diversity and last mile delivery to the beneficiary. States can provide Hot Cooked Meals (HCM) also to the beneficiaries in lieu of THR but not the raw ration.

Statement 3 is correct: AYUSH practices will be integrated under Poshan 2.0 for wellness and nourishment. Using AYUSH formulations will help in addressing conditions like anaemia. The Science of AYUSH is a system that builds and promotes health and wellness and can address the requirements of nutrition by tapping into the country's indigenous traditional practices. AYUSH will promote campaigns of 'Yoga at Home, Yoga with Family' to practice yoga and stay healthy.

Statement 4 is correct: The food items for Take Home Ration (not raw ration) and Hot Cooked Meals (HCM) **should mandatorily include millets for at least once a week**.

Statement 5 is correct: **The scheme will be centrally-sponsored scheme**. Hence, will be implemented through the State Governments/ UT administrations based on a cost sharing ratio between the Central Government and the State Government.

Knowledge Base: other features include:

- 1) The '**Poshan Tracker**' application was rolled out. Technology under the Poshan Tracker will be used for identification of stunting, wasting, under-weight prevalence among children and last mile tracking of nutrition service delivery.
- 2) The Ministry of AYUSH shall extend technical support for scheme implementation.

Source:

<https://wcd.nic.in/sites/default/files/Final%20Saksham%20Guidelines%20with%20covering%20letter%20%281%29.pdf>

Q.31) Which of the following rulers assumed the title of 'Rajamalla', which means 'the Sovereign of the Mallas'?

- a) Pulakesin II
- b) Narasimhavarman I
- c) Vikramaditya I
- d) Adityavarman

Ans) c

Exp) Option c is the correct answer.

Vikramaditya I (655–680 AD) was the son of Pulakesin II and succeeded his father on the Chalukya throne. He adopted the title '**Rajamalla**' which means '**the Sovereign of the Mallas**'. He also defeated the Cheras, Cholas and Pandyas. He re-established the kingdom and **forced the Pallavas to flee the capital, Vatapi**. His other titles indicative of his military power include **Rana-rasika (lover of war)**, **Anivarita (unopposed)**.

Source: Old XI NCERT of Ancient India

Q.32) In the context of history of India, terms "Maitrakas" and "Maukharies" refers to-

- a) names of the ruling dynasties of the Ancient India
- b) official currencies in circulation in Pushyabhuti's Kingdom
- c) units of measurement prevalent during the Gupta Period
- d) provincial level units of administration of the Huna Dynasty

Ans) a

Exp) Option a is the correct answer.

“Maitrakas” and “Maukharies” are names of dynasties in the post Gupta period.

Maitraka dynasty was the Indian dynasty that ruled in Gujarat and Saurashtra (Kathiawar) from the 5th to the 8th century CE. Its founder, Bhatarka, was a general who, taking advantage of the decay of the Gupta empire, established himself as ruler of Gujarat and Saurashtra with Valabhi (modern Vala) as his capital. Although the early Maitraka kings were loosely feudatory to the Guptas, they were in fact independent. Under the powerful Shiladitya I (c. late 6th century), the kingdom became very influential; its rule extended into the regions of Malwa and Rajasthan. Later, however, the Maitrakas suffered at the hands of the Chalukyas of the Deccan and of the emperor Harsha of Kannauj.

The Maukharis (554 CE - 606 CE) rose as a power after the downfall of the Gupta Empire (3rd to 6th century CE) in the 6th century CE in northern India. The core area of their kingdom was situated in what is now the state of Uttar Pradesh in India with the capital at Kanyakubja (modern-day Kannauj city). Although the Maukharis had long existed as a feudatory dynasty, for nearly half a century beginning 554 CE, they established a powerful kingdom vying with other regional powers for political supremacy in India. **Therefore, option a is the correct answer.**

Source: <https://www.britannica.com/topic/Maitraka-dynasty>

https://www.worldhistory.org/Maukhari_Dynasty/

Q.33) Consider the following statements regarding Chola Architecture:

1. A tall curving shikhara crowned by a large amalaka is a signature style of the Chola temple architecture.
2. Chola temple architecture largely followed star-like ground-plans and a profusion of decorative carvings.
3. The Brihadeeswarar temple at Tanjavur is a masterpiece of Chola architecture.

Which of the statements given above is/are correct?

- a) 3 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The great Cholas established a powerful monarchy in the 9th CE at Thanjavur and in its surroundings. They enjoyed a long, eventful rule lasting for four and a half centuries with great achievements in all fields of royal endeavour such as military conquest, efficient administration, cultural assimilation and promotion of art.

Statement 1 is incorrect: The style of the sculptures during the period between the ninth and eleventh centuries in Bengal (including Bangladesh) and Bihar is known as **the Pala style. The ninth century Siddheshvara Mahadeva temple in Barakar in Burdwan District, shows a tall curving shikhara crowned by a large amalaka and is an example of the early Pala style.**

Statement 2 is incorrect: The hybridisation and incorporation of several styles was the hallmark of Chalukyan architecture and not the Chola architecture. **Hoysala temples are sometimes called hybrid or vesara as their unique style seems neither completely dravida nor nagara, but somewhere in between. They are easily distinguishable from other medieval temples by their highly original star-like ground-plans and a profusion of decorative carvings.**

Statement 3 is correct: **The Brihadeeswarar temple at Tanjavur marks the greatest achievement of the Chola architects. It is known in the inscriptions as Dakshina Meru, the construction of this temple was**

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inaugurated by the Chola King, Rajaraja I. A massive colonnaded prakara with sub-shrines dedicated to the ashatadikpalas and a main entrance with gopura (known as Rajarajantiruvasal) encompasses the massive temple. The temple walls are embellished with expansive and exquisite mural paintings.

Source: Fine arts NCERT 11th std.

<https://www.indianculture.gov.in/unesco/heritage-sites/great-living-chola-temples-0>

Q.34) Which of the following literary works are the creations of the Harshavardhana?

1. Kadambari
2. Priyadarsika
3. Rathnavali
4. Nagananda

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Harsha patronised literary and cultural activities. It is said the state spent a quarter of its revenue for such activities. Harsha gifted liberally for the promotion of education.

Option 1 is incorrect: Bana was a court poet of Harsha. He composed the following literary works:

- 1) Harshacharita
- 2) **Kadambari**

Option 2, 3 and 4 are correct: Whereas Harsha himself was a renowned litterateur; it is evident from the plays he wrote such as: **Priyadarsika, Rathnavali and Nagananda.**

Source: Tamil Nadu State Board- History, Volume-1

Q.35) Consider the following pairs with respect to the various schemes of the Government of India:

Schemes	Description
1. Raising and Accelerating MSME Performance (RAMP)	Supporting the COVID-19 related resilience and recovery in MSMEs.
2. Global Initiative of Academic Networks (GIAN) scheme	leveraging international scientists and entrepreneurs to engage with higher education in India.
3. Revitalizing Infrastructure and Systems in Education (RISE) Scheme	Joint research projects between Indian and globally ranked foreign institutions.

How many pairs given above are correctly matched?

- a) One pair only
- b) Two pairs only
- c) Three pairs only
- d) None of the pairs

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correct: Raising and Accelerating MSME Performance (RAMP) is a World Bank assisted Central Sector Scheme. It aims to **support (COVID-19) Resilience and Recovery Interventions of the Ministry of Micro, Small and Medium Enterprises (MoMSME).**

Pair 2 is correct: Global Initiative of Academic Networks (GIAN) has been launched by the Union Ministry of Human Resource Development (HRD) in 2015. GIAN aims at tapping the talent pool of scientists and entrepreneurs, internationally to encourage their engagement with the institutes of Higher Education in India.

Pair 3 is incorrect: Under the RISE scheme, all the Educational Institutes that provide higher studies will get funds for infrastructural development from the central government at much lower cost. The Scheme for Promotion of Academic and Research Collaboration (SPARC) aims at research collaborations between Indian Institutions and the best institutions in the world from 28 selected nations to jointly solve problems of national and/or international relevance.

Source:

<https://pib.gov.in/Pressreleaseshare.aspx?PRID=1837694#:~:text=It%20aims%20to%20scale%20up,enhancement%20of%20existing%20MSME%20schemes.>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1811360>

<https://blog.forumias.com/nit-kick-starts-programme-under-gian/>

<https://www.pmawasyojana.co.in/infrastructure-development-govt-higher-rise-scheme-educational-institutions/>

Q.36) Consider the following statements regarding the religious policy of Harshavardhana:

1. Harsha was a follower of the Mahayana school of Buddhism.
2. He summoned an assembly at Kanauj to highlight the teachings of Buddha.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Harshavardhana was one of the most important Indian emperors of the 7th Century. During the peak of his reign, Harshavardhana's empire extended from north India to the Narmada River in central India. His rule was renowned for peace, stability and prosperity, and attracted many artists and scholars from far and wide.

Statement 1 is correct: Harsha was a worshipper of Siva at least up to 631 CE. But he embraced Buddhism under the influence of his sister Rajyasri and the Buddhist monk Hieun Tsang. **He subscribed to the Mahayana school of thought.**

Statement 2 is correct: In the year 643 A.D., Harsha held a great religious assembly in his capital at Kanauj on the bank of the river Ganges. **The purpose of the assembly was to highlight the teachings of Buddha.**

On that occasion, Harsha also wanted to honour the Chinese Master of the Law, Hiuen Tsang. Harsha himself proposed the name of Hiuen Tsang to take the chair. The subject of discussion in the assembly related to Mahayana Buddhism.

Source: Tamil Nadu State Board- History, Volume-1

Q.37) He was a great Chola king who extended the influences of Chola empire upto the banks of the river Ganges in the north and across the Indian ocean. To commemorate his victory, he built a new capital called Gangaikonda Cholapuram. He assumed the titles Parakesari and Yuddhamalla.

Who among the following is described in the paragraph given above?

- a) Rajaraja Chola I
- b) Rajaraja Chola II
- c) Rajendra Chola I
- d) Rajendra Chola II

Ans) c

Exp) Option c is the correct answer.

The great Cholas established a powerful monarchy in the 9th CE at Thanjavur and in its surroundings. They enjoyed a long, eventful rule lasting for four and a half centuries with great achievements in all fields of royal endeavour such as military conquest, efficient administration, cultural assimilation and promotion of art.

Option a is incorrect: Rajaraja Chola I is considered as the greatest king of the Chola Empire who ruled between 985 and 1014 C.E. He laid the foundation for the growth of the Chola kingdom into an empire, by conquering the kingdoms of southern India and the Chola Empire expanded as far as Sri Lanka in the south, and Kalinga (Orissa) in the northeast. He streamlined the administrative system with the division of the country into various districts and by standardizing revenue collection through systematic land surveys. He built the magnificent Brihadisvara Temple in Thanjavur and through it enabled wealth distribution among his subjects.

Option b is incorrect: Rajaraja Chola II was not a great king like his predecessors, but he was successful in maintaining a vast Chola kingdom which included Madurai, Kongunadu, Thirunelveli, Nellore, Guntur, Vijayawada, Rajahmundry and Kalinga, given to him by his father. Northern Sri Lanka was also under his control. He succeeded his father Kulothunga II in 1150 A.D. His reign is considered as the start of downfall of the great Chola empire of South India.

Option c is correct: Rajendra Chola I was the great Chola king of South India who succeeded in 1014 C.E. as the Chola emperor. During his reign, he extended the influences of the Chola empire to the banks of the river Ganges in the north and across the Indian ocean. Rajendra's territories extended to coastal Burma, the Andaman and Nicobar Islands, Lakshadweep, Maldives, conquering the kings of Srivijaya (Sumatra, Java, and Malaya in South East Asia) and the Pegu islands with his fleet of ships. He defeated Mahipala, the Pala king of Bengal and Bihar. To commemorate his victory, he built a new capital called Gangaikonda Cholapuram. He also built a temple for Siva at Gangaikonda Cholapuram. He assumed titles Parakesari and Yuddhamalla.

Option d is incorrect: Rajendra Chola II is very well remembered for his role in "The Battle Of Koppam". He ruled between 1054-1063 A.D. He succeeded his brother Rajadhiraja Chola in 1054 A.D. He was successful in maintaining a vast empire which was given to him by his elder brother. No loss of territory was recorded during his reign.

Source: https://www.newworldencyclopedia.org/entry/Rajendra_Chola_I

<https://www.indiancontents.com/2017/08/rajendra-chola-ii-battle-of-koppam.html>

https://www.newworldencyclopedia.org/entry/Raja_Raja_Chola_I

<https://www.indiancontents.com/2017/09/rajaraja-chola-ii-construction-of.html>

Q.38) Vakatakas carved out a large kingdom in the western Deccan and were a dominant political force during their time. Vakatakas were the contemporaries of which of the following dynasties?

- Gupta Dynasty
- Gurjara-Pratihara Dynasty
- Maurya Dynasty
- Rastrakuta Dynasty

Ans) a

Exp) Option a is the correct answer.

In peninsular India, the **Vakatakas**, were a local power that **ruled over northern Maharashtra and Vidarbha**. Their history can be reconstructed on the basis of a large number of land grant charters issued to the brahmanas. This dynasty ruled south-western India **from 250-550 AD. Vakatakas were contemporaries of Guptas. Gupta King Chandragupta II gave his daughter Prabhavati in marriage to the Vakataka prince Rudrasena II.** The political importance of this marriage lies in the fact that the Vakatakas occupied a geographically strategic position in the Deccan. This alliance served a useful purpose when Chandragupta-II undertook his campaign in western India against the Sakas.

Source: 11th Class Tamil Nadu Ncert + Lesson 9: GUPTA EMPIRE

<https://www.financialexpress.com/india-news/capital-of-vakataka-dynasty-who-ruled-deccan-built-ajanta-caves-excavated-in-nagpur/1203151/#:~:text=The%20capital%20of%20the%20Vakataka,India%20from%20250%2D550%20A.D.>

Q.39) With reference to the ruler Parantaka I of the Chola Dynasty, consider the following statements:

- He defeated both the Pandyas and the Rashtrakutas.
- He took up the titles 'Madurai Kondan' and 'Kunjaramallan'.
- He took a keen interest in promotion of agriculture and local self-government.

Which of the statements given above is/are correct?

- 1 only
- 1 and 2 only
- 2 and 3 only
- 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Parantaka I (873 CE–955 CE) was a ruler of the **Chola kingdom** in Tamil Nadu. He was the son of Aditya I. He extended his boundary by conquering many parts of Southern India. He also extended his empire **up to Nellore in the north.**

Statement 1 is correct: Parantaka I captured the **Pandyan capital Madurai by defeating Rajasimhan II. kingdom.** He also won the **battle of Vallala** against **Rashtrakutas** in the Deccan. The best part of his reign was marked by increasing success and prosperity.

Statement 2 is correct: Parantaka I **assumed the title Madurai Kondan (Capturer of Madurai)** to commemorate his victory over the Pandya king. The **Uttaramerur inscriptions** speak about the stories of Parantaka I. He also took title of Panditavatsalan (fond of learned men), Kunjaramallan (the wrestler with elephants) and Surachulamani (the crest jewel of the heroes).

Statement 3 is correct: Parantaka I took a keen interest in the **internal administration** of his country. He laid out the rules for the **conduct of the village assemblies** in an inscription. He also introduced many **salutary reforms for the proper administration of local self-Government.** The **copper-plate inscriptions**

detail Parantaka I's **promotion of agricultural prosperity** by the **digging of numerous canals** all over the country.

Knowledge Base: The Vimana of the famous **Nataraja temple at Chidambaram** with a golden roof was provided by Parantaka I. He was devout and a **follower of lord Siva** (and not of lord Krishna). He was **religious but secular** and encouraged various faiths. He utilized the spoils of war to donate to numerous **temple charities**.

Source: Class XI TN Board Book on Ancient History

Q.40) Which of the following statements regarding the SMILE-75 initiative is correct?

- It aims to empower women of minority groups through educational, financial & digital literacy.
- It aims to provide micro-credit to street vendors.
- It aims to provide residential education to talented Schedule Caste students in private schools.
- It aims to provide alternate livelihood and rehabilitation to people involved in beggary.

Ans) d

Exp) Option d is the correct answer.

Statement a is incorrect: **Nayi Roshni (not SMILE-75)** is a scheme of the **Ministry of Minority Affairs for Leadership Development** among **women of minority groups**. Hence this statement is **incorrect**. This scheme plans to do so by providing such women with **education** (including adult education), as well as **training in digital skills** (using computers, internet, etc) as well as **financial literacy** (concepts like savings, insurance, investment, etc), so that they **feel more confidence** and are **empowered to take care of themselves** and improve their lives.

Statement b is incorrect: The **PM SVANidhi (Street Vendor's Atmanirbhar Nidhi) (not SMILE-75)** is a scheme for providing **micro-credit loans to street vendors**. Hence this statement is **incorrect**. It is a scheme of the **Ministry of Housing and Urban Affairs (MoHUA)** to provide **working capital loans (of up to Rs 10,000 for a 1-year term)** to street vendors registered with municipal bodies so that they may **resume their livelihood after the easing of lockdown** in later months of 2020.

Statement c is incorrect: The **SRESTHA Yojana (Scheme for Residential Education for Students in High Schools in Targeted Areas) (not SMILE-75)** is a scheme of **Ministry of Social Justice & Empowerment** to help in **socio-economic upliftment of meritorious students from Scheduled Caste**. Hence this statement is **incorrect**. This scheme aims to provide **residential education** to meritorious SC students in **reputed private schools, on government expense** (which they may have been otherwise unable to afford) in order to provide the them with the best education and opportunities to do better in life.

Statement d is correct: **SMILE-75 (Support for Marginalised Individuals for Livelihood & Enterprise)** is a scheme that aims to **remove the issue of beggary** from Indian cities. It provides **comprehensive rehabilitation including alternate livelihood for vulnerable and marginalised** people who have been **forced by life circumstances to resort to beggary**. This scheme has interventions like **housing, education, free medical facilities & skill development** to ensure that people do not have to beg in order to survive.

Knowledge Base:

- It is a Central Sector Scheme (100% Union funding) implemented by the Union Ministry of Social Justice & Empowerment.
- It was launched earlier in 2022 along with a scheme for upliftment and rehabilitation of Transgender people. However, it was relaunched in August this year as a part of "Azadi ka Amrit Mahotsav ", to celebrate 75 years of India's independence, hence the name SMILE-75.
- It will be launched in jurisdiction of 75 selected Municipal Corporations
- It will be a joint effort by Local Urban Bodies, Civil Society Organisations/Non-Government Organisations and experts on the phenomenon of beggary

- 5) Housing facilities will be provided in the form of 'Garima Grah' to ensure basic necessities like food, clothing, recreational facilities, etc are met.
- 6) The SMILE-75 scheme dovetails and converges many existing schemes of the government for the vulnerable and marginalised communities. To ensure rehabilitation, beneficiaries will be provided scholarships to attain meaningful education, skill development training in order to earn livelihood from alternate means, subsidised/ free medical facilities so that their healthcare expenses are taken care of, etc.
- 7) The SMILE-75 project has been provided with a budget of about 100 crores for a multi-year (not 1 year) period until 2025-26.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1851291>

<https://newsonair.com/2022/08/13/smile-75-scheme-brings-smile-on-faces-of-beggars-through-rehabilitation-skilling-employment/>

<http://www.nairoshni-moma.gov.in/>

<https://www.india.gov.in/spotlight/pm-street-vendors-atmanirbhar-nidhi-pm-svanidhi>

<https://shreshta.nta.nic.in/>

Q.41) Consider the following statements with reference to the ancient Chera Dynasty of South India:

1. The Pugalur inscription is related to the Chera dynasty.
2. Important seaports of Cheras were Puhar and Korkai.
3. Bow and arrow are engraved on most of the coins of Cheras.
4. Uraiyur was the capital of the Chera dynasty.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

The Cheras ruled over parts of modern Kerala. Their capital was Vanji. Perum Sorru Udhiyan Cheralathan, Imayavaramban Nedum Cheralathan and Cheran Senguttuvan were the famous rulers of this dynasty.

Statement 1 is correct: The **Pugalur inscription** which mentions **three generations of Chera rulers**, provides information on Chera kings.

Statement 2 is incorrect: The important seaports of Cheras were **Tondi and Musiri**. While **Puhar** was the famous seaport of Cholas and **Korkai** was the capital, principal center of trade and important port of the Early Pandyan Kingdom.

Statement 3 is correct: Most of the **coins of Cheras had bow and arrow** engraved on them, which was the emblem of the Cheras.

Statement 4 is incorrect: Initially, the **capital of the Cholas** was **Uraiyur**. Later it was shifted to Puhar. **While capital of Cheras was Vanji or Kuravur/Karur**. As many as 11 Sangam poets hailed from this place. It can be identified with Karur on the banks of the Amaravati river (a tributary of the Kaveri), in Tiruchirapalli district.

Source: 11th class Tamil Nadu History + LESSON 8: SANGAM AGE

A History of Ancient and Early Medieval India: From the Stone Age to the 12th Century by Upinder Singh

Q.42) Sangam literature is main source of history of ancient South India. In this reference, which of the following are the sources of Sangam Age?

1. Pattinappalai
2. Ettutogai
3. Mattavilasa Prahasana
4. Periyapuranam

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 1, 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

The corpus of Sangam literature includes Tolkappiyam, Ettutogai, Pattuppattu, Pathinenkilkanakku– and the two epics Silappathigaram and Manimegalai.

Statement 1 is correct: **Pattinappalai** is a Tamil poem in the **ancient Sangam literature**. It contains 301 lines, of which 296 lines are about the port city of Kaveripoompattinam, the early Chola kingdom and the Chola king Karikalan.

Statement 2 is correct: The Eight Anthologies, known as **Ettuttokai** or "Eight Collections" in the literature, is a classical Tamil poetic work of **Sangam Literature**. The Eight Anthologies called Ettuthokai namely Aingurunooru, Nattrinai, Aganaooru, Purananooru, Kuruntogai, Kalittogai, Paripadal, Padirrupattu.

Statement 3 is incorrect: The **Pallavas** were staunch supporters of both the Sanskrit and Tamil languages. Kanchi, their capital, had remained an important centre for Sanskrit learning. **Mahendravarman I**, the Pallava monarch, wrote the **Mattavilasa Prahasana**. Pallava Dynasty emerged after the end of Sangam Era. Hence, **Mattavilasa Prahasana is not a Sangam Literature**.

Statement 4 is incorrect: **Periyapuranam** is a Tamil poetic account depicting the lives of the 63 Nayanars. It was compiled **during the 12th century** by **Sekkilhar**. It provides evidence of trade with West Asia. Whereas Sangal Era ended during 200AD. . Hence, **Periyapuranam is not a Sangam Literature**.

Source: 11th class Tamil Nadu History + LESSON 8: SANGAM AGE

<https://www.wisdomlib.org/hinduism/essay/dasarupaka-critical-study/d/doc628555.html>

Q.43) Consider the following statements regarding the King Harshavardhana:

1. He was successful in establishing cordial relationship with China.
2. He played a crucial role in emancipation of the status of women by completely banning purdah and sati traditions.
3. Pataliputra and Kashi rose to prominence during Harsha's times.

Which of the statement/s given above is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) a

Exp) option a is the correct answer.

Harshavardhana was one of the most important Indian emperors of the 7th Century. During the peak of his reign, Harshavardhana's empire extended from north India to the Narmada River in central India. His rule

was renowned for peace, stability and prosperity, and attracted many artists and scholars from far and wide.

Statement 1 is correct: Harsha had cordial relations with China. The contemporary T'ang emperor, Tai Tsung, sent an embassy to Harsha's court in 643 and again in 647 CE. It highlights the nature of relationship between the two powers.

Statement 2 is incorrect: Harsha did not ban purdah system and sati tradition during his period. Rather position of women declined considerably during this period. Hieun Tsang's account provides information on the position of women and the marriage system during Harsha's times. **Women wore purdah.** Hieun Tsang, however, added that the purdah system was not followed among the higher class. He pointed out that Rajyasri did not wear purdah when listening to his discourse. **Sati was in practice.** Yasomatidevi, wife of Prabhakara Vardhana (Harsha's elder brother), immolated herself after the death of her husband.

Statement 3 is incorrect: Hieun Tsang, the Chinese pilgrim, spent nearly 13 years in India (630–643 CE). His book Si-Yu-Ki provides detailed information about the social, economic, religious and cultural conditions during the reign of Harsha. Hieun Tsang describes the structure, aesthetics and safety measures of the cities, towns and villages of India. In his view, India was the land of innumerable villages, numerous towns and big cities like China. **He pointed out that Pataliputra lost its prominence during Harsha's times and its place was taken by Kanauj.** The elegance of Kanauj with its lofty structures, beautiful gardens and the museum of rare collections is described.



Source: <https://www.culturalindia.net/indian-history/ancient-india/harshavardhan.html>

Tamil Nadu State Board- History, Volume-1

Q.44) With reference to the trade and commerce in ancient Indian History, the terms like Barygaza, Supara and Kalyan are-

- Taxes and Customs
- Ports for transmarine commerce
- Interest charged by moneylenders
- Guild system of traders

Ans) b

Exp) Option b is the correct answer.

In context of Ancient Indian History, Barygaza, Supara and Kalyan were the **important ports of transmarine commerce** by third century BC.

- In the 3rd century, **Bharuch port in Gujarat** was mentioned as Barugaza. It was known to the Greeks and Romans as **Barygaza**, and probably had a settlement of Greek traders.
- Sopara** was an ancient port town and the capital of the ancient Aparanta. The ancient port of Sopara was the most important port in western India. The site of this ancient town is located near the present-day **Nala Sopara (near Mumbai)**. In ancient times, it was the largest township on India's west coast, trading with Mesopotamia, Egypt, Cochin, Arabia and Eastern Africa.
- Kalyan** was once famous as a **port in ancient times**. Records of its existence as a premier port in the region have been found in ancient Greek manuscripts. The corporation is governed by Bombay Provincial Municipal Corporation Act 1949.

Source: Unit-3 (egyankosh.ac.in)

Q.45) With reference to the NAMASTE Scheme, consider the following statements:

- It envisages the safety and dignity of sanitation workers in India.
- It is a Centrally Sponsored Scheme run by Ministry of Social Justice and Empowerment.
- National Safai Karamchhari Financial Development Corporation (NSKFDC) would be the implementing agency for NAMASTE.

Which of the statements given above are correct?

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Government recently launched the National Action for Mechanised Sanitation Ecosystem (NAMASTE) scheme to ensure occupational safety and alternate livelihood for people involved in manual scavenging and sewer maintenance work in India's urban areas.

Statement 1 is correct: – It envisages the **safety and dignity** of sanitation workers in urban India. It provides for creating an enabling ecosystem that recognises sanitation workers as one of the key contributors to operations and maintenance of sanitation infrastructure. In doing so, it provides **sustainable livelihood** and enhances their occupational safety. It focuses on **capacity building** and improved **access to safety gear** and machines.

Statement 2 is incorrect: Namaste is a **Central Sector Scheme (not centrally sponsored scheme)** of the Ministry of Social Justice and Empowerment (MoSJE) as a joint initiative of the MoSJE and the Ministry of Housing and Urban Affairs (MoHUA).

Statement 3 is correct: National Safai Karamchhari Financial Development Corporation (NSKFDC) would be implementing agency for NAMASTE. Skill Development and trainings of Safai Mitras is being taken up with

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the support of the MoSJE through the National Safai Karamchari Finance Development Corporation (NSKFDC).

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1852627>

<https://indianexpress.com/article/upsc-current-affairs/upsc-essentials/upsc-essentials-one-word-a-day-namaste-8097077/>

Q.46) Consider the following statements regarding the Uttaramerur inscription:

1. It is a 10th century inscription belonging to the reign of Parantaka Chola.
2. It records an order issued by the ruler regarding implementation of the famine relief measures.
3. It mentions a written constitution prescribing mode of elections for the village assemblies.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Uttaramerur, which has a 1,250-year history, is situated in Kancheepuram district, about 90 km from Chennai. The Pallava king Nandivarman II established it around 750 A.D. The Pallavas, the Cholas, the Pandyas, the Sambuvarayars, the Vijayanagara Rayas, and the Nayaks successively ruled it. The village has three important temples, the Sundara Varadaraja Perumal temple, the Subramanya temple, and the Kailasanatha temple.

Statement 1 is correct: Uttaramerur inscription, dated around 920 A.D. in the reign of Parantaka Chola [907-955 A.D.] is an outstanding document in the history of India. It mentions about written constitution of the village assembly.

Statement 2 is incorrect: Uttaramerur inscription gives astonishing details about the constitution of wards, the qualification of candidates standing for elections, the disqualification norms, the mode of election, the constitution of committees with elected members, the functions of those committees, the power to remove the wrongdoer, etc. A variety of secular transactions of the village, dealing with administrative, judicial, commercial, agricultural, transportation and irrigation regulations, as administered by the then village assembly are found in this inscription. **Thus, Uttaramerur inscription did not contain any order from the Chola ruler regarding famine relief measures to the subjects of the kingdom.**

Statement 3 is correct: Uttaramerur inscription testifies to the historical fact that nearly 1,100 years ago, a village had an elaborate and highly refined electoral system and even a written constitution prescribing the mode of elections. It gives a vivid picture of the efficient administration of the village society in the bygone ages. The details of this system of elective village democracy are inscribed on the walls of the village assembly (grama sabha mandapa), a rectangular structure made of granite slabs.

Source: <https://www.thehindu.com/news/national/tamil-nadu/Uttaramerur-model-of-democracy/article16566830.ece>

Q.47) Consider the following statements regarding polity and administration during the times of Harshavardhana:

1. Hiranya was the tax paid by farmers and merchants in cash.
2. Kuntala was an official who look after foreign relations.
3. Criminal law system during the reign of Harsha was generally harsher than that of the Guptas.
4. The empire of Harsha was divided into several provinces called as Vishayas.

Which of the statements given above is/are correct?

- a) 3 only
- b) 2 and 4 only
- c) 1 and 3 only
- d) 1, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Harshavardhana was one of the most important Indian emperors of the 7th Century. During the peak of his reign, Harshavardhana's empire extended from north India to the Narmada River in central India. His rule was renowned for peace, stability and prosperity, and attracted many artists and scholars from far and wide.

Statement 1 is correct: Bhaga, Hiranya and Bali were the three kinds of tax collected during Harsha's reign. Bhaga was the land tax paid in kind. One-sixth of the produce was collected as land revenue. Hiranya was the tax paid by farmers and merchants in cash.

Statement 2 is incorrect: The ministerial administration during the reign of Harsha was the same as that of the imperial Guptas. The emperor was assisted by a council of ministers (Mantri Parishad) in his duties. The council played an important role in the selection of the king as well as framing the foreign policy of the empire. The prime minister was of the most important position in the council of ministers. Some of the key officials in Harsha's administration are as follows:

Avanti - Minister for Foreign Relations and War

Kuntala - Chief Cavalry Officer

Statement 3 is correct: Criminal law during the times of Harsha was more severe than that of the Gupta age. Mimamsakas were appointed to dispense justice. Banishment and the cutting of limbs of the body were the usual punishments. Trial by ordeal was in practice. Life imprisonment was the punishment for the violations of the laws and for plotting against the king.

Statement 4 is incorrect: The empire of Harsha was divided into several provinces. The actual number of such provinces is not known. **Each province was divided into Bhuktis. And each Bhukti was divided into several Vishayas.** They were like the districts. Each vishaya was further divided into Pathakas. Each such area was divided into several villages for the sake of administrative convenience.

Source: Tamil Nadu State Board- History, Volume-1

Q.48) With reference to social condition during Sangam period, consider the following statements:

1. There was no classification of people based on occupation in Southern India.
2. Lord Murugan was the chief deity of the Sangam age.
3. The practice of Sati was completely absent in Southern India during this time.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The word **Sangam** literally means **association**. Here, it implies an **association of Tamil poets**, flourished between the **3rd century B.C. and 3rd century A.D.** in South India (the area lying to the **south of river**

Krishna and Tungabhadra). The three chief Tamil kingdoms of this period were the **Cheras, the Cholas and the Pandyas**.

Statement 1 is incorrect: Famous poet **Tolkappiyam** refers to the **five-fold division of lands - Kurinji (hilly tracks), Mullai (pastoral), Marudam (agricultural), Neydal (coastal) and Palai (desert)**. The people living in these five divisions had their respective chief occupations as well as gods for worship. Tolkappiyam also refers to **four castes namely arasar (ruling class), anthanar (polity and religion), vanigar (carried on trade and commerce) and vellalar (agriculturist)**. So, occupation-based classification existed during the sangam age. So, statement 1 is incorrect.

Statement 2 is correct: The **primary deity of the Sangam period was Murugan**, who is hailed as **Tamil God**. The worship of Murugan has an ancient origin and the festivals relating to God Murugan were mentioned in the **Sangam literature**. Murugan was honoured with six abodes known as **Arupadai Veedu**. Other gods worshiped during the Sangam period were **Mayon (Vishnu), Vendan (Indiran), Varunan and Korravai**.

Statement 3 is incorrect: Sangam literature provides information about the **position of women** during the Sangam age. Along with males, **women poets like Avvaiyar, Nachchellaiyar, and Kakkaiyapadiyar flourished** in this period and contributed to Tamil. **The practice of Sati was also prevalent** in the higher strata of society. But it was **not obligatory** as there are **references to widows present** in society. However, their position was **miserable** as they were prohibited to decorate themselves. So, statement 3 is incorrect.
Source: Class XI TN Board Book on Ancient History

Q.49) With reference to the condition of women during Gupta period, consider the following statement:

1. The practice of sati was prevalent but mostly confined to the higher varnas.
2. The Women of the lower varnas were free to earn their livelihood.
3. Women from higher strata of society usually spoke Sanskrit.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Status of women continued to decline in Gupta period. The main reason for the subordination of women was their complete dependence on men for their livelihood.

Statement 1 is correct: **The practice of sati (self-immolation at the funeral pyre of the husband) gained approval** of the jurists. But it seems to have been **confined to the upper classes**. The first evidence of sati is found in an inscription (AD 510) at **Eran in Madhya Pradesh**.

Statement 2 is correct: Women of higher orders did not have access to independent sources of livelihood in pre-Gupta and Gupta times. However, **women of the two lower varnas were free to earn their livelihood gave them considerable freedom**, which was denied to women of the upper varnas.

Statement 3 is incorrect: Kalidasa who lived in the court of Chandragupta II in the fifth century AD. The notable feature of his works is that the **characters of higher caste speak in Sanskrit while those of lower caste and women speak in Prakrit**. So, we can deduce from the contemporary literature that Women used to speak in Prakrit. **This can also be established from the fact that women were not allowed to get formal education which was used to be in Sanskrit**.

Source: <https://www.historydiscussion.net/empires/history-of-the-gupta-empire-indian-history/600>

Q.50) The WEST Initiative was recently launched in which of the following context?

- a) To increase English proficiency among the school going children.
- b) To attract tourism from the European nations to India.
- c) To strengthen India's strategic relations with the West Asian nations on the lines of Act East Policy.
- d) To facilitate scientifically inclined women researchers for pursuing research in basic or applied sciences.

Ans) d

Exp) Option d is the correct answer.

Women in Engineering, Science, and Technology (WEST), a new I-STEM (Indian Science Technology and Engineering facilities Map) initiative called "Women in Engineering, Science, and Technology (WEST)" has been launched by Government of India in September 2022.

The WEST programme will cater to women with a STEM background and empower them to contribute to the science, technology, and innovation ecosystem.

Through the WEST initiative, I-STEM shall provide a separate platform to scientifically inclined women researchers, scientists, and technologists **for pursuing research in basic or applied sciences in frontier areas of science and engineering. (Hence, Option d is correct)**

I-STEM is a national web portal for sharing research equipment/facilities and is the umbrella under which many programmes for promoting collaborations in R&D and technological innovation among and between academia and industry, especially start-ups, are underway.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1857175>

Q.1) Palas, Pratiharas and Rashtrakutas were involved in the Tripartite Struggle. Which one of the following was the most important reason for the struggle?

- To gain control over the Raichur doab
- For exercising authority over the Bay of Bengal and maritime trade
- To gain control over the kannauj area of northern India
- For controlling the silk route in North-western India

Ans) c

Exp) Option c is the correct answer.

The Tripartite Struggle, also known as the Kannauj Triangle Wars, took place in the 8th and 9th centuries, between the three great Indian dynasties, the Palas, the Pratiharas, and the Rashtrakutas, **for control over the Kannauj area of northern India.** The Palas ruled India's eastern regions (Bengal region), while the Pratiharas oversaw India's western regions (Avanti-Jalaor region) and the Deccan area of India was dominated by the Rastrakutas. This war lasted for two centuries and was finally won by the Rajput Pratihara emperor Nagabhata II, who established the city as the capital of the Pratihara state, which ruled for nearly three centuries.

Source: A History of Medieval India by Satish Chandra

Q.2) Consider the following statements regarding Muhammad Bin Tughlaq:

- He Set up of a new department of Agriculture called Diwan-i-Amir Kohi.
- He built the Adilabad fort in Delhi.
- The famous Ramcharitmanas was written during his period.

Which of the statements given above is/are correct?

- 1 and 3 only
- 1 only
- 1 and 2 only
- 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Mohammad Bin Tughlaq/ Jauna Khan (c.1325–51 CE.) is considered an ill-fated idealist owing to his ambitious schemes and novel experiments, which ended in miserable failures because they were all far ahead of their time. Some of the reforms brought out by him are discussed below:

Statement 1 is correct: He set up a new department of Agriculture, Diwan-i-Amir Kohi. He launched a scheme by which takkavi loans (loans for cultivation) were given to the farmers to buy seed and to extend cultivation.

Statement 2 is correct: Adilabad Fort in Delhi was built in the 14th Century by Muhammad bin-Tughlaq and was a substantial part of the city of Jahanpanah. This is a fort that was built right near the Tughlaqabad Fort of Delhi. It is the fourth fort to have been built around Delhi.

Statement 3 is incorrect: Ramcharitmanas, is an epic poem in the Awadhi language, based on the Ramayana, and **composed by the 16th-century Indian bhakti poet Tulsidas. Tulsidas was a contemporary of Mughal Emperor Akbar. (Not Mohammad Bin Tughlaq)**

Source: Poonam Dahiya Ancient and Medieval India

<https://timesofindia.indiatimes.com/city/delhi/adilabad-tughlaqs-forgotten-fort/articleshow/3434127.cms>

Q.3) Which of the following factors contributed to the decline of the Rastrakuta Empire?

1. Continuous struggle with the contemporary kingdoms
2. Rise of feudatories
3. Invasion of Rastrakuta Empire by Dantidurga .

Select the correct answer from the code given below:

- a) 2 only
- b) 1 only
- c) 1 and 2 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

There were several reasons behind the sudden disintegration of the Rashtrakuta empire.

Statement 1 is correct: The **Rashtrakutas continuously engaged in the struggle with the Pratiharas**, the Chalukyas, the Pallavas, and the Palas who were relatively equally matched empires. These struggles posed great stress on the finances of the kingdom and weakened the military might of the Rashtrakuta dynasty.

Statement 2 is correct: The Rashtrakuta Empire was based on many small and big feudatories, and **these samantas took advantage of the bad situation of the kingdom to break away from the kingdom and found smaller kingdoms**. The Rashtrakuta dynasty came to an end when the last ruler, Kakka II (or Karka), was assassinated by Tailapa II, one of his samanthas.

Statement 3 is incorrect: Dantidurga was also referred to as Dantivarman or Dantiduga II. He was the founder of the Rashtrakuta dynasty. Invasions of Dantidurga is not a reason for the decline of Rashtrakutas.

Source: https://drive.google.com/file/d/1v5Tz__5mVbHe1C604Ynmoxcp927drUPC/view

<https://egyankosh.ac.in/bitstream/123456789/61922/1/Unit-10.pdf> (pg 158)

Q.4) Which among the following crafts were popularized by the Turks during their rule in parts of Medieval India?

1. Use of superior mortar
2. Use of armour for the horse
3. Glass-making
4. Paper-making

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

The foundation of the Islamic rule in India was laid down by the Turks. It is believed that Turks came to India during the Slave Dynasty. The Turks popularised a number of crafts and techniques such as:

- 1) **Use of iron stirrup**
- 2) **Use of Armour both for the horse and rider.**
- 3) **Improvement of Rahat** (Persian wheel through which water could be lifted from a deeper level for irrigation)
- 4) **Papermaking, glassmaking, the spinning wheel, and an improved loom for weaving.**
- 5) **Use of superior mortar**, which enabled the Turks to erect magnificent buildings based on the arch and dome.

Source: Ancient and Medieval India by Poonam Dahiya (Chapter-11 Delhi Sultanate)

Q.5) With reference to recent technological advancement in the country, which one of the following statements correctly describe ‘Digital Embossing Technology’?

- It is a technology used to design semiconductors through digitally embossed printing process.
- It is a technology used in designing and developing Braille Maps for Visually challenged students.
- It is a method of creating a three-dimensional object layer-by-layer using a computer created design.
- It is a type of printing that involves storing digital information on the object through embossing technique.

Ans) b

Exp) Option b is the correct answer.

Digital Embossing Technology is a novel digital printing process, **enables the structuring of surfaces**. This means that the feel of the surface now also corresponds to the optical design. In digital embossing, a transparent medium is printed in a layer of uncured UV paint. The resulting physical and chemical reactions produce a deep structure. Digital embossing **eliminates the need for printing plates, molds, chemicals, and solvents, emitting no pollutants or waste** and reduces overall energy use.

Digital Embossing Technology has been introduced, designed and implemented for the **first time in India by National Atlas & Thematic Mapping Organisation (NATMO)**. Visually challenged students from all over the country will have access soon to Braille Maps designed and developed using Digital Embossing Technology. The maps produced using this technology are not only useful for high-speed production of the maps but can also produce Braille Maps that can be used by more people for years together.

Knowledge Base:

National Atlas & Thematic Mapping Organisation (NATMO): It was established in 1997. It is a subordinate department under the **Department of Science & Technology, Ministry of Science & Technology**.

Its functions include:

- Compilation of the National Atlas of India in Hindi, English and other regional languages
- Preparation of thematic maps based on socio-economic, physical, cultural, environmental, demographic and other issues.
- Preparation of maps/atlasses for visually impaired
- Digital mapping and training using Remote sensing, GPS and GIS technology.
- Training and Research & Development.

Source: Digital Embossing Technology and NATMO: Visually challenged students will have access to user-friendly durable Braille maps using advanced technology-ForumIAS Blog

Digital Embossing (adler-coatings.com)

Q.6) In the context of the medieval history of India, who was Santarakshita?

- A Purohit /Brahmin who helped manage religious affairs of the Pala rulers.
- Senapati of Pala empire who fought bravely against South Indian Chola invasions.
- A notable Buddhist scholar.
- The Pala ruler who defeated the Pratihara king Vatsaraja.

Ans) c

Exp) Option c is the correct answer.

The Pala empire was founded by Gopala, probably in AD 750 when he was elected king by the notable men of the area to end the anarchy prevailing there. For about a hundred years, from the middle of the eighth to the middle of the ninth century, the Pala rulers dominated eastern India.

The Pala rulers were great patrons of Buddhist learning and religion. The Santarakshita and Dipankara, notable Buddhist scholars from the Nalanda university were invited to Tibet by the Tibetan king Trisong

Detsen, who had closer contacts with the Pala rulers. As a result, many Tibetan Buddhists came to the universities of Nalanda and Vikramsila for study, and Buddhism flourished in Tibet.

Source: https://www.bbc.co.uk/religion/religions/buddhism/subdivisions/tibetan_1.shtml

Old NCERT, Satish Chandra, pg. 14

Q.7) Consider the following statements with reference to the Sultanate period in Medieval India:

1. There was no clear law of succession during this period.
2. Ulemas had no role in the nomination of successor ruler.
3. The military superiority of the ruler was the key factor in determining succession.

Which of the above-given statements is/are correct?

- a) 3 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Delhi Sultanate, or the Sultanate of Delhi, was a Muslim empire based in Delhi that stretched over large parts of the Indian subcontinent during the period of Medieval India, for around 300 years (1206–1526)

Statement 1 is correct: There was no clear law of succession during the Sultanate period. All the sons had equal claim to the throne. Interestingly, the idea of primogeniture was fully acceptable neither to the Muslims nor to the Hindus. Iltutmish even nominated his daughter in preference to his sons.

Statement 2 is incorrect: Ulemas also played a crucial role in getting favorable public opinion for succession of ruler. Any nominations or successions were to be mostly accepted by the nobles.

Statement 3 is correct: Since there was no clear rule of succession during the sultanate rule, it was determined through a combination of factors, including heredity, military strength, and political alliances.

However, **military superiority remained the main factor in matters of succession.**

Source: Ancient and Medieval India by Poonam Dahiya (Chapter-11 Delhi Sultanate)

Q.8) Consider the following pair of various officials in the reign of Allaudin Khilji and their description:

Official	Description
1. Munhiyans	Secret Spies
2. Barids	Intelligence Officers
3. Diwan-i-Muskharaj	In charge of Religious Affairs
4. Ariz-i-Mumalik	In charge of Revenue

Which of the above given pairs are matched correctly?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1 and 4 only

Ans) a

Exp) Option a is the correct answer.

Allaudin introduced several reforms in administrative and military affairs during his rule.

Alauddin's measures to control the markets and price regulations were one of the most important policy initiatives of his reign. To ensure implementation, **each market was under the control of a superintendent called Shahna-i- Mandi who was assisted by an intelligence officer.**

Pairs 1 and 2 are correct: Alauddin received daily reports of the market from two other independent sources, **barids (intelligence officer) and munhiyans (secret spies).**

Pair 3 is incorrect: Alauddin established a separate revenue agency called as **Diwan-i-Muskharaj**. He also devised a scientific method for measuring land and calculating land revenue.

Pair 4 is incorrect: Alauddin kept a large and powerful standing army. **Ariz-i-Mumalik was in charge of military appointments.**

Source: Ancient and Medieval India by Poonam Dahiya (Chapter-11 Delhi Sultanate)

Q.9) Consider the following statements regarding the Turkish conquest of the Ganga valley during the 12th century:

1. Qutubuddin Aibak defeated Jaichandra in the battle of Chandwar near Kannauj.
2. The Buddhist monasteries, Nalanda and Vikramshila, were destroyed by Bakhtiyar Khalji.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Between 1192 and 1206, Turkish rule was extended over the Ganga Jamuna doab and its neighbouring area, Bihar and Bengal were also overrun by them.

Statement 1 is incorrect: Ghori (**not Qutubuddin Aibak**) defeated Jaichand in the battle of Chandwar near **Kannauj**. Ghori after returning to India from Ghazni in 1194, crossed the Jamuna with 50,000 cavalry and moved towards Kannauj. The Kannauj was ruled by the ruler Jaichandra. A battle was contested between the two at the Chandwar near Kannauj, where Jaichandra was defeated.

However, Qutubuddin Aibak was a trusted slave of Ghori, who ruled the upper doab region of India in the absence of Muizuddin who left India after the Battle of Tarain (against Prithviraj Chauhan).

Statement 2 is correct: Muhammad **Bakhtiyar Khalji** (general of Muhammad Ghori) conquered Bihar in 1197 CE and Bengal in 1202 CE and **destroyed the universities of Nalanda and Vikramshila**. Khalji thus became the viceroy of Bengal and Bihar.

Source: Old NCERT, Satish Chandra, pg. 71-73

Q.10) Consider the following statements regarding 'Smart Cities and Academia Towards Action & Research (SAAR) Program':

1. It is a joint initiative of Niti Aayog in collaboration with Urban Development Resource Centre.
2. The program will document various landmark projects undertaken by the Smart Cities Mission in India.
3. Under the SAAR program, the projects will be ranked with the parameters of accessibility and sustainability scores.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Smart Cities Mission, Ministry of Housing and Urban Affairs (MoHUA) has launched the “Smart Cities and Academia Towards Action & Research (SAAR)” Program.

Statement 1 is incorrect.

Smart Cities and Academia Towards Action & Research (SAAR) Program is a joint initiative of **Ministry of Housing and Urban Affairs, National Institute of Urban Affairs (NIUA)** and leading Indian academic institutions of the country.

Statement 2 is correct.

Under the program, 15 premier architecture & planning institutes of the country will be working with Smart Cities to **document landmark projects undertaken by the Smart Cities Mission.**

The documents **will capture the learnings from best practices**, provide opportunities for engagement on urban development projects to students, and enable real-time information flow between urban practitioners and academia.

Statement 3 is incorrect.

The program is **not intended to provide any ranking to the projects** undertaken under Smart Cities Mission. The first activity envisaged under SAAR is to **prepare a compendium of 75 landmark urban projects in India under the Smart City Mission.**

The compendium **will act as the first point of reference for future research in the field** and will help disseminate learnings from projects under the Mission. It will also **act as a repository for Urban Projects** and contribute to the dissemination of best practices and peer-to-peer learning.

Source: Launch of Smart cities and Academia Towards Action & Research (SAAR) -ForumIAS Blog

Q.11) Ziauddin Barani, one of the most famous historians, was a courtier of which of the following rulers?

- Mohammad Bin Tughlaq
- Muhammad Ghori
- Qutubuddin Aibak
- Iltutmish

Ans) a

Exp) Option a is the correct answer.

Zia-Ul-Barani (1283–1359)/ Ziauddin Barani was the most important political thinker of the Delhi Sultanate, particularly, during the reigns of Alauddin Khalji, Muhammad bin Tughlaq and Firoz Shah Tughlaq. He chronicled the reigns of eight sultans of Delhi, beginning with Ghiyās al-Dīn Balban (1266–87) and ending with Firūz Shāh (1351–88). **He was an influential courtier under Muḥammad bin Tughluq (1324–51), the ruler he served as an emissary and as a court advisor for 17 years.**

He represented and championed the idea of political expediency in Islamic history which he conveyed to the ruler by way of his nasihats (advice). He has often been criticized as a fundamentalist and a bigot for his emphasis on following the Shariat (laws of the Quran and the Prophet’s tradition) and his views on the Hindus, as compared to relatively liberal thinkers like Abul Fazl.

His major works include Fatawa-i-Jahandari (Edicts of World Rule), Tarikh-i-Feroze Shahi and many other nasihats.

Source: <https://egyankosh.ac.in/bitstream/123456789/84770/1/Unit-10.pdf>

Q.12) Consider the following statements regarding Mihir Bhoja:

1. He was one of the most successful and popular rulers of the Pratihara dynasty.
2. He was a devotee of Vishnu and adopted the title of 'Adivaraha.'
3. Karpuramanjari and Kavya Mimansa were the books written by him.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Pratiharas were also known as the Gurjara-Pratiharas, as they originated from the Gurjaras who were primarily pastoralists and fighters. The Gurjara-Pratiharas are known for their sculpture, their carved panels and the open pavilion style temples.

Statement 1 is correct: Mihir Bhoja (c.836–885 CE) Grandson of Nagabhata II, who had a long reign of over 46 years and proved to be the most successful and popular ruler of Pratiharas.

In the early years of his reign he was defeated by the Palas, Rashtrakutas and the Kalachuris, but he subsequently made a comeback. With the aid of feudatories such as the Chedis and the Guhilas, he won victories over the Palas and the Rashtrakutas.

Statement 2 is correct: Mihir Bhoja was a devotee of Vishnu and adopted the title of 'Adivaraha.'

Statement 3 is incorrect: Karpuramanjari and Kavya Mimansa were written by poet Rajashekhar. Pratihara ruler Mahendrapala's court was adorned by Rajashekhar, who was an eminent Sanskrit poet, dramatist and critic. Some of his important works are Vidhasalabhanjika, Bhrijika, Balaramayana etc.

Source: Poonam Dahiyal Ancient and Medieval India

<https://www.paperbackswap.com/Rajasekhara/author/>

Q.13) Consider the following statements regarding the Rashtrakuta Dynasty:

1. Due to the lack of royal patronage, Jainism declined completely during their rule.
2. During their rule, some women were allowed to participate in the administrative activities.
3. The Kailashnatha Temple at Ellora was built during the rule of Rashtrakutas.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The political history of the Deccan between c.753 and 975 CE was marked by the rise of the Rashtrakutas, who for a long time provided stability to the region.' Few aspects regarding their religious policy and administration are discussed below:

Statement 1 is incorrect: The Rashtrakuta kings presented an excellent example of religious tolerance and gave patronage to all the faiths such as Hinduism, Jainism, Buddhism, and Islam. Toleration was also shown between the members of the different sects. **Jainism continued to be a strong rival of Hinduism due to the generous patronage of the Rashtrakuta kings like Amoghavarsha I, Krishna II and Indra III** and the literary and religious activities of some famous monastic scholars. A great patron of Jainism, Amoghavarsha

I appointed a Jaina monk Gunabhadra as tutor to his heir-apparent Krishna II, extended patronage to many Jaina scholars and gave grants to several Jaina monasteries.

Statement 2 is correct: The condition of women seems to not have degraded during the rule of Rashtrakuta empire. **Women participated in religious and administrative activities with men. Ladies of the king's household also attended the court on festive occasions.** Princesses were also appointed to government posts, such as the Rashtrakuta princess Chandrobalabbe, a daughter of Amoghavarsha I, administered the Raichur doab for some time. According to Arab writers, in the Rashtrakuta Empire ladies did not veil their faces, which indicate towards the non-existence of the purdah system

Statement 3 is correct: The magnificent rock-cut Kailashnatha Temple at Ellora was built during the reign of the Rashtrakuta ruler Krishna I. The temple dedicated to Lord Shiva and is monolithic i.e. made of one single piece of rock.

Source: Poonam Dahiyal Ancient and Medieval India

<https://egyankosh.ac.in/bitstream/123456789/61922/1/Unit-10.pdf>

Q.14) Consider the following statements regarding the Rashtrakuta king Amoghvarsha I:

1. He built a new capital city of the Rashtrakuta kingdom at Manyakheta.
2. Kavirajamarga, the earliest Kannada work on poetics, was written by him.
3. Because of his religious temperament and peace-loving nature, he is sometimes called the 'Ashoka of the South'.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The political history of the Deccan between c.753 and 975 CE was marked by the rise of the Rashtrakutas, who for a long time provided stability to the region.' Few aspects regarding one of the most notable kings of the Rashtrakuta i.e., Amoghvarsha I are discussed below:

Statement 1 is correct: Amoghvarsha I was one of the most famous of the Rashtrakutas, he built a new capital city, that of Manyakheta (modern Malkhed).

Statement 2 is correct: He was a patron of literature and was an accomplished scholar in Kannada and Sanskrit himself. **He wrote the Kavirajamarga – the earliest Kannada work on poetics** and the Prashnottara Ratnamalika in Sanskrit, which is considered as a writing of high merit and was later translated into the Tibetan language.

Statement 3 is correct: Because of his religious temperament, his interest in the arts and literature and his peace-loving nature, he is often compared to emperor Ashoka and called "Ashoka of the South" and is also compared to Gupta king Vikramaditya in giving patronage to men of letters.

Source: Poonam Dahiyal Ancient and Medieval India

Q.15) Recently, terms like 'Held to Maturity', 'Available for Sale' and 'Fair Value Through Profit and Loss account' were seen in news. They are related to-

- a) Fixed Deposit of Non-Resident Indian in Schedule Banks
- b) Insurance Products underwritten in whole or in part by a Public Limited Company.
- c) Registered Accounts of Foreign Portfolio Investors by SEBI
- d) Investment Portfolios of Indian Banks

Ans) d

Exp) Option d is the correct answer.

The Reserve Bank of India proposed a new investment category for banks—**fair value through profit and loss (FVTPL)** account. This is a part of its initiatives to align lenders investment portfolio regulations with the global accounting standards.

Currently, the **Investment Portfolios of Banks** at present are **classified under three categories: held to maturity (HTM), held for trading (HFT) and available for sale (AFS)**.

- 1) **Held to maturity (HTM):** RBI said debt instruments with fixed or determinable payments and fixed maturity, with the intent of holding till maturity, shall now be classified as HTM. Corporate bonds have also been allowed to be held under HTM, which was not the case earlier.
- 2) **Available for Sale:** Debt instruments held by a bank till maturity or sold before maturity would be eligible for AFS. Equity instruments will also be classified under AFS.
- 3) **Fair Value Through Profit and Loss account:** It will be the residual category where all investments that do not qualify for inclusion in HTM or AFS shall be categorized. This category can have investments such as securitisation receipts (SRs), mutual funds, alternate investment funds, equity shares, derivatives (including those undertaken for hedging), among others.

Source: FVTPL Account: Banks may get a new investment category -ForumIAS Blog

Q.16) With respect to Krishnadeva Raya of the Vijayanagara Empire, consider the following statements:

1. He was known as the 'Andhrakavita Pitamaha'.
2. He built a new town called Nagalapuram.
3. One of the famous scholars Tenali Rama was in his court.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 and 3 only
- c) 3 only
- d) 1 and 2 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. Krishna Deva Raya, the greatest ruler of Vijayanagar, belonged to the Tuluva dynasty. He was a great patron of literature and arts and was **called Andhra Bhoja**.

Eight eminent scholars named Ashtadiggajas were in the palace of Krishna Deva Raya. One of the scholars, **Allasani Peddanna was the eldest and was called Andhrakavita Pitamaha**. His important works are **Manucharitam and Harikathasaram**.

Statement 2 is correct. Krishna Deva Raya **founded a new town named Nagalapuram**. The new town was near Vijayanagar. Famous Vitthalaswamy and Hazara Ramaswamy temples in Vijayanagara were also built by Krishnadeva Raya.

Statement 3 is correct. Eight eminent scholars named Ashtadiggajas were in the palace of Krishna Deva Raya they were- Allasani Peddanna, Nandi Thimmana, Madayyagari Mallana, Dhurjaty, Ayyalaraju Ramambhadru, Pingali Suranna, Ramarajabhushanudu, **Pandit Ramakrishna (he was called as Tenali Rama as he was from the village of Tenali)**. **Pingali Suranna and Tenali Ramakrishna were other important scholars**.

Knowledge Base: **Krishna Deva Raya** composed a Telugu literary work- **Amukthamalyadha** and Sanskrit literary work- **Jambavati Kalyanam and Ushaparinayam**.

Source: Tamil Nadu Board Textbook, Ch- 19, Pg- 212

Q.17) Consider the following statements regarding Karkota king Lalitaditya:

1. Kalhana's 'Rajatarangini' provides information about his rule.
2. He built the Martanda sun temple located near the city of Anantnag in the Kashmir Valley.
3. Hsuan Tsang visited Kashmir during the reign of this king.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Lalitaditya was a Kayastha and the fifth ruler of the Karkota dynasty of Kashmir. The Kashmir Valley was his kingdom but during his reign of 37 years, he expanded the empire from Central Asia to the Gangetic Plain. For his ambition and successful conquests, he has been called the Alexander of Kashmiri History.

Statement 1 is correct: A Sanskrit text titled 'Rajatarangini' by Kalhana is the primary source of information about Lalitaditya and the early years in the history of Kashmir. According to Kalhana, the Karkota dynasty of Kashmir was founded by King Durlabhavardana in 625 CE. King Lalitaditya was his great grandson. In the 8th century CE, the subcontinent was divided into small kingdoms that were at war with one another. This political condition was conducive for Lalitaditya to expand his empire, which he accomplished with strategy and valour.

Statement 2 is correct: Lalitaditya commissioned shrines of Vishnu, Shiva, Surya as well as statues and shrines dedicated to Buddha. **He built the Martanda sun temple located near the city of Anantnag in the Kashmir Valley of Jammu and Kashmir**. None of the temples or shrines built by Lalitaditya exist now, except for the ruins of the Martanda Sun Temple which serve as a reminder of this great Kashmiri king.

Statement 3 is incorrect: It was in 631 A.D that Hsuan Tsang reached Kashmir and was received by the king, **Durlabhavardhana of local Karkota Dynasty (not during King Lalithaditya, who attained power around 724 AD)** at the Buddhist monastery of Ushkar present day Baramullah. He travelled almost all the Buddhist monasteries of this land and recorded in his travel notes about 100 monasteries with 5000 thousand monks. Jayendra vihara has been most significant Vihar and it is widely believed that it is in this Vihar that this Chinese traveller has spent most of his times.

Source: Poonam Dahiya Ancient and Medieval India

<https://indianationfirst.in/religion-jammu-kashmir/king-lalitaditya-muktapida-ruler-of-karkota-dynasty-in-kashmir/>

<https://www.greaterkashmir.com/op-ed-2/xuanzang-rediscovering-the-ancient-chinese-traveller>

<https://egyankosh.ac.in/bitstream/123456789/67713/1/Unit-7.pdf> (page 113)

Q.18) Which of the following factors helped Kanauj becoming the political centre in the politics of early medieval north India?

1. Kanauj was secure as it was surrounded by hills from all sides.
2. Kanauj was surrounded by a large agrarian expanse to make plenty of land-grants.
3. Kanauj was well-connected by routes going towards east and towards south.

Select the correct answer using the code given below.

- a) 1 only
- b) 1 and 2 only
- c) 3 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

Kanauj, earlier known as Kanyakubja or Mahodaya, situated in the Kanauj district of present Uttar Pradesh assumed a lot of significance in the politics of early medieval north India.

Statement 1 is incorrect: Located in the fertile plains of the Ganga-Yamuna doab, Kanauj stood on an elevated area that could be easily fortified. **Thus, even though it was situated in plains, due to its favourable location, it could be easily fortified and was secure.**

Statement 2 is correct: Besides, Kanauj was rooted in a large agrarian expanse in the western Ganges plains. Land-grants could be made in plenty from this area. Naturally, the area attracted many brahmanas who settled here and for subsequent centuries the brahmanas of Kanauj came to be widely esteemed in the royal courts throughout the country.

Statement 3 is correct: Kanauj was also well-connected by routes going towards east into the Ganges plains as well as with those going to south.

Due to all these factors, it rose to power and became an important nodal point in north. With this development we see a shift of focus from Pataliputra in south Bihar to Kanauj. The latter also came to constitute a central theme in the politics of post-Gupta north India.

Source:

<https://mail.google.com/mail/u/0/?tab=rm&ogbl#inbox/FMfcgzGmvfRdrZNwdqBCbxFhsLjkHxC?projector=1&messagePartId=0.1>

NCERT History, Satish Chandra, Class 11

Q.19) With reference to Vijayanagara architecture, consider the following statements:

1. Construction of tall Raya Gopurams was an important feature of Vijayanagar temples.
2. Temple pillars of this architecture often had engravings of horses.
3. Lakshmi Narasimha temple in Hampi was built during the period of Krishna Deva Raya.

Which of the following statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct. The temple building activity further gained momentum during the Vijayanagar rule. The chief characteristics of the Vijayanagar architecture were **the construction of tall Raya Gopurams or gateways** and the Kalyanamandapam with carved pillars in the temple premises.

Statement 2 is correct. **Temple Pillars of Vijayanagara often depict charging horses or hippogriffs (Yali)** - horses standing on their legs with their forelegs raised and the riders on their backs. Horses on some of the pillars are between two and eight feet tall. The lines without hippogriffs are mostly rectangular, with mythical figures on either side.

Yalis have been the subject of South Indian temples since the 16th century, and they depict a **half-horse, half-lion, or half-elephant that may have served as a guardian or watchdog.**



Statement 3 is correct. The Lakshmi Narasimha temple was built in the year **1528 A.D.** It was constructed **during the rule of Krishna Deva Raya.** The temple is dedicated to Lord Narasimha, one of the ten avatars of Lord Vishnu, and Goddess Lakshmi. The Lakshmi Narasimha statue in temple, is one of the most imposing sculptures found in the ruined town of Hampi. It is the largest monolith statue in Hampi. The statue is located on the southern side of the Hemakuta group of temples that stand on the Hemakuta Hill.

Source: NCERT Class 12, Theme 7, Pg. 188 + <https://hampi.in/lakshmi-narasimha-temple>

Q.20) Which one of the following statements given below is correct regarding 'Africa 50'?

- It is an economic cooperation agreement between the governments of India, Japan and multiple African countries.
- It is a Comprehensive and Progressive Agreement for African Union between 50 countries of African Continent.
- It is an infrastructure investment platform founded by the African Development Bank and African states.
- It is a transatlantic agreement between African countries and South American countries to promote shared prosperity through economic partnership

Ans) c

Exp) Option c is the correct answer.

Option c is correct. Africa50 is an **infrastructure investment platform** that contributes to **Africa's economic growth** by developing and investing in bankable infrastructure projects, catalysing public sector capital, and mobilizing private sector funding, with differentiated financial returns and impact.

Currently, **Africa50 has 31 shareholders** comprising 28 African countries, the African Development Bank, the Central Bank of West African States (BCEAO), and Bank Al-Maghrib.

Power Grid Corporation of India Limited (POWERGRID) has signed a Joint Development Agreement with Africa50 to develop the Kenya Transmission Project. The Project aims to **develop power transmission lines** in Kenya under a public-private partnership framework.

Under the project, POWERGRID will provide **technical and operational know-how to the project**, while Africa50 will bring its **project development and finance expertise** and will act as a bridge between the Kenyan government and private investors.

Once completed, the project will be the **first Independent Power Transmission (IPT) in Kenya** and will set a **reference point in Africa as the first financing of transmission lines on a PPP basis.**

Source: POWERGRID and Africa50 in Joint Development Agreement, to pioneer Africa's first transmission PPP project in Kenya -ForumIAS Blog

Q.21) Arrange the following dynasties of the Delhi Sultanate in the chronological manner:

- First Ilbari dynasty
- Qutbi dynasty
- Tughlaq dynasty
- Khalji dynasty

Which one of the options given below correctly determines the chronology?

- 3-1-2-4
- 1-3-4-2
- 1-2-4-3
- 2-1-4-3

Ans) d

Exp) Option d is the correct answer.

Invasions by Mahmud of Ghazni and Mohd. Ghori into India ultimately resulted in the establishment of the Delhi Sultanate. Five different dynasties—the Slave, the Khalji, the Tughlaq, the Sayyids, and the Lodhi's are collectively referred to as the Delhi Sultanate. The rulers, termed as Sultans, were of Turkish and Afghan origin. The Sultanate's rule resulted in far-reaching changes in the Indian society, administration and cultural life. Some of the important dynasties of the Delhi Sultanate are discussed below in chronological manner:

- 1) Qutbi dynasty (c.1206–1211 CE) founded by Qutbuddin Aibak.** He was the founder of the Slave dynasty; considered by many scholars as the real founder of Muslim rule in India. He was a Turkish slave of Muhammad Ghori and played an important role in the expansion of the Turkish Sultanate in India after the Battle of Tarain.
- 2) First Ilbari dynasty (c.1211–1266 CE) founded by Iltutmish.** He belonged to the Ilbari tribe and hence his dynasty also known as the Ilbari dynasty. After becoming Sultan, he shifted his capital from Lahore to Delhi.
- 3) Khalji Dynasty (C. 1290–1320 CE):** Jalauddin Khalji (c.1290–1296 CE) laid the foundation of the Khalji dynasty.
- 4) Tughlaq Dynasty (C.1320–1414 Ce)/Dynasty of Qaraunah Turks:** Ghiyasuddin Tughlaq (c.1320–25 CE) was the founder of the Tughlaq dynasty and the first Sultan to take the title of Ghazi/ Slayer of Infidels.

Thus, based on the above explanation, correct chronology is option d i.e. 2-1-4-3

Source: Poonam Dahiya Ancient and Medieval India

Q.22) With reference to Pala ruler Dharmapala, consider the following statements:

- Khalimpur Copper Plate inscription provides information about the administrative system during his rule.
- He established the Vikramashila University in modern day Bihar.
- First phase of the tripartite struggle between the Palas, the Pratiharas, and the Rashtrakutas started during his reign.

Which of the above given statements is/are correct?

- 1 and 2 only
- 1 and 3 only
- 2 and 3 only
- 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Palas, Pratiharas, and Rashtrakutas engaged in a triangular contest for control of the Ganga-Yamuna doab and adjoining lands after the death of Harsha. The Palas emerged victorious and established their rule over eastern India from Pataliputra between the 9th and early 12th centuries.

Statement 1 is correct: Khalimpur Copper Plate Inscription issued by Dharmapala provides details about the administrative system during his period. It was issued by Dharmapala (775–810 CE) in the 32nd regnal year after his victory at Kannauj.

Statement 2 is correct: Vikramshila University is located in the present-day Bhagalpur district of Bihar. It was established by Dharmapala in response to a perceived decrease in the level of study at Nalanda.

Statement 3 is correct: The first phase of the tripartite struggle, which took place round about 790 AD, started with a clash between Dharmapala and Vatsaraja, the Pratihara king, resulting in the defeat of the former, and later on a common enemy from the Deccan, the Rastrakuta king Dhruva Dharavarsa, defeated both of them. Dhruva, however, could not consolidate his victory, as he had to return to the south to save his own kingdom.

Source: https://drive.google.com/file/d/1v5Tz__5mVbHe1C604Ynmoxcp927drUPC/view

S1: <https://www.egyankosh.ac.in/bitstream/123456789/73890/1/Unit-8.pdf> (page 140)

<https://www.peepultree.world/livehistoryindia/story/people/the-lord-of-the-north>

Q.23) Consider the following statements regarding the Delhi Sultanate:

1. The process of urbanization lost its momentum due to constant warfare during the Sultanate era.
2. The practice of sati was prevalent during the Sultanate period.
3. Use of iron stirrup was popularized in India during the Sultanate period.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Invasions by Mahmud of Ghazni and Mohd. Ghori into India ultimately resulted in the establishment of the Delhi Sultanate. Five different dynasties—the Slave, the Khalji, the Tughlaq, the Sayyids, and the Lodhi's are collectively referred to as the Delhi Sultanate. The rulers, termed as Sultans, were of Turkish and Afghan origin. The Sultanate's rule resulted in far-reaching changes in the Indian society, administration and cultural life.

Statement 1 is incorrect: During the Sultanate period, the process of urbanisation gained momentum. A number of cities and towns had grown during this period. Lahore and Multan (in the north west), Broach, Cambay, and Anhilwara (in the west), Kara and Lakhnauti in the east, Daulatabad, Delhi, and Jaunpur were important among them. Delhi remained the largest city in the east. The growth of trade and commerce was described by contemporary writers.

Statement 2 is correct: There was little change in the structure of the Hindu society during this period. The subservient position of women also continued, and the practice of Sati was widely prevalent. Ibn Batuta had mentioned with horror the scene of a woman burning herself in the funeral pyre of her husband with great beating of drums.

Statement 3 is correct: The Turks popularised a number of crafts and techniques such as:

- 1) Use of iron stirrup
- 2) Use of armour both for the horse and rider.
- 3) Improvement of rahat (Persian wheel through which water could be lifted from a deeper level for irrigation)
- 4) Paper-making, glass-making, the spinning wheel, and an improved loom for weaving.
- 5) Use of superior mortar, which enabled the Turks to erect magnificent buildings based on the arch and dome.

Source: Poonam Dahiyal Ancient and Medieval India

<https://www.ijtra.com/download.php?paper=status-of-women-during-sultanate-era-1206-1526-ad>

Q.24) With reference to the reign of Rashtrakutas in the Deccan, the terms ‘Nad Gavundas’ or ‘Desa Gramakutas’ refers to:

- village elders who helped headman in performing his duties.
- Brahmins who helped king in performing his duty according to Dharmashastra.
- hereditary revenue officers.
- persons responsible for maintaining law and order in the town.

Ans) c

Exp) Option c is the correct answer.

While the Palas and the Pratiharas were ruling over north India, the Deccan was being ruled by the Rashtrakutas, a remarkable dynasty which produced a long line of warriors and able administrators. The kingdom was founded by Dantidurga. The administration of the kingdom was divided into three heads: rashtra, visaya and bhukti.

Option c is correct: The nad gavundas or desa gramakutas were the hereditary revenue officer in the Rashtrakutas period. They appear to have discharged the same functions as the deshmukhs and deshpandes of later times in Maharashtra. This development, along with the petty chieftainships in north India had an important bearing on society and politics. As the power of these hereditary elements grew, the **village committees became weaker**. The central ruler also found it difficult to assert direct authority over them and to control them. Hence, the whole system of the government became feudalised.

Option a is incorrect: Village elders who helped headman in performing his duties were known as grama mahajanas or grama mahattara.

Option b is incorrect: The purohits helped king in performing his duty of protecting Brahmanas according to Dharmashastra.

Option d is incorrect: Law and order in the towns and in areas in their immediate vicinity was the responsibility of the koshta pala or kotwalas.

Source: Old NCERT, Satish Chandra, pg. 24

Q.25) Consider the following statements regarding ‘UV-C Disinfection Technology’:

- The technology has been developed under the joint collaboration of Indo-U.S. Science and Technology Forum.
- It will help in deactivation of bacteria and other bio-aerosols with appropriate dosages using UV light.
- The technology cannot be used in an indoor environment due to higher amount of radiation discharge.

Which of the statements given above is/are correct?

- 1 and 2 only
- 2 only
- 1 and 3 only
- 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: UV-C Disinfection Technology has been developed by the **Council of Scientific & Industrial Research (CSIR)** and not by Indo-U.S. Science and Technology Forum. The technology is meant for the mitigation of airborne transmission of Covid-19.

Statement 2 is correct: UV-C deactivates viruses, bacteria, fungus and other bioaerosols etc with appropriate dosages using **254 nm UV light**.

Statement 3 is incorrect: The disinfection system can be used in **auditoriums, large conference rooms, classrooms, malls etc.** which provides a relatively safer environment for **indoor activities** in the current pandemic. It can also be used in buildings, transport vehicles, etc.

Source: UV-C Disinfection Technology: Union Minister says, CSIR's newly developed Disinfection technology is being installed to combat the pandemic in railway coaches, AC buses, closed spaces etc - ForumIAS Blog

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1790527>

Q.26) Consider the following statements with reference to the Dagh and Chehra system during the Sultanate period in Medieval India:

1. It was introduced by Allaudin Khilji.
2. Dagh referred to the branding of the horse for identification purposes.
3. Chehra referred to the description of soldiers.

Which of the above given statements is/are correct?

- a) 2 only
- b) 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Alauddin Khilji was the first Sultan to have a large permanent standing army and paid them in cash from the royal treasury. He imported horses and according to historian Ferishta, he recruited 4,75,000 cavalymen. **Chehra and Dagh System was introduced by him.**

Statement 2 is correct: The system of Dagh was essentially branding horses. It meant to identify the quality of horses in the Imperial army. This allowed only good-quality horses to be part of the muster.

Statement 3 is correct: Chehra referred to physical description of troops. A "Chehra" or a "face" was a document or a record that contained information about the individual's ancestry, rank, and other personal details. These documents were maintained by the court officials.

Source: Ancient and Medieval India by Poonam Dahiya (Chapter-11 Delhi Sultanate)

Q.27) Consider the following statements regarding the contributions of Rajputs in the field of culture in Medieval India:

1. The Jain temple at Mount Abu was built by Chalukyan rulers of Gujarat.
2. Bhoj Shala was established as a centre of Sanskrit studies.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

After the break-up of the Pratihara kingdom, the medieval India saw the rise and dominance of Rajputas over central and northern India. The most important of these were the Gahadavalas of Kannauj, the Paramaras of Malwa, and the Chauhans of Ajmer. There were other smaller dynasties in different parts of the country, such as the Kalachuris in the area around modern Jabalpur, the Chandellas in Bundelkhand,

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the Chalukyas of Gujarat, the Tomars of Delhi, etc. They made significant contribution in the field of Indian culture.

Statement 1 is correct: The Jain temple at Mount Abu was built during Chalukya rule in Gujarat. It was built by **Vastupala**, the famous minister of the Chalukyan ruler Bhima in Gujarat, who was also a writer and a patron of scholars.

Statement 2 is correct: The Rajput rulers also patronized arts and letters. Many books and plays were written in Sanskrit during the period under their patronage. Ujjain and Dhara, the capitals of the Paramara rulers, were famous centres for Sanskrit learning. **Bhoj Shala** was established by Bhoja (c.1010–1055 CE), as a centre of **Sanskrit studies** and a temple of Sarasvati in present day Dhar (MP).

Source: Old NCERT, Satish Chandra, pg. 66–67

Q.28) He was an Arab merchant who visited India during the 9th century AD. He calls the Pala Kingdom as Ruhma and says that the Pala ruler was at war with his neighbors, the Pratiharas and the Rashtrakutas. The above passage refers to which of the following travelers?

- a) Al Masoodi
- b) Ibn Battuta
- c) Sulaiman
- d) Shihabuddin al-Umari

Ans) c

Exp) Option c is the correct answer.

Option a is incorrect: Al Masudi was an Arab, **who travelled India during 10th century**. Has given account of India in his book 'Muruj- ul-Zehab'. The book discusses India's political, economic and religious history.

Option b is incorrect: Ibn Battuta (1333 to 1342) was a Moroccan traveller. He visited India during the reign of Muhammad-Bin-Tughlaq. He has been appointed as judge by Tughlaq. His book 'The Travels' details about the much-mocked administrative reforms of Delhi Sultan Muhammad bin Tughluq.

Option c is correct: Pala's power is attested to by an Arab merchant, Sulaiman, who visited India in the middle of the ninth century and wrote an account of it. He calls the Pala Kingdom Ruhma, and says that the Pala ruler was at war with his neighbours, the Pratiharas and the Rashtrakutas, but his troops were more numerous than his adversaries. He tells us that it was customary for the Pala king to be accompanied by a force of 50,000 elephants, and that 10,000-15,000 men in his army were employed 'in fulling and washing clothes'. Even if these figures may be exaggerated, we can assume that the Palas had a large military force at their disposal. But we do not know whether they had a large standing army, or whether their forces consisted largely of feudal levies

Sulaiman also mentions Amoghavarsha as the fourth of the great monarchs of the world, the other three being the Khalif (Caliph) of Baghdad, the emperor of China, and the emperor of Rūm or Constantinople. The Rāshtrakūta kings kept on the best of terms with the Arabs of Sind, and enriched their subjects by encouraging commerce. Amoghavarsha possessed multitudes of horses and elephants, with immense wealth, and maintained a standing army regularly paid.

Option d is incorrect: Shihabuddin al-Umari from Damascus visited India during 14th century. He gives a vivid account of India in his book "Masalik albsar fi-mamalik al-amsar"

Source: A History of Medieval India by Satish Chandra

https://penelope.uchicago.edu/Thayer/E/Gazetteer/Places/Asia/India/_Texts/OXFHOI/3/3*.html

Q.29) Consider the following statements with reference to slaves during the reign of Iltutmish in Medieval India:

1. Bandagan were the special slaves appointed for military service.
2. Slaves could be promoted to the ruling class.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

During the reign of Sultan Shams-ud-Din Iltutmish (1211-1236), the third ruler of the Delhi Sultanate in India, slavery played a significant role.

Statement 1 is correct: The **Bandagans were special slaves purchased for military service by early sultans, especially Iltutmish.** They were carefully trained to maintain important political offices in the kingdom. They were totally dependent on the masters and the Sultan could trust them implicitly.

Statements 2 is correct: **The Sultans and the Muslim aristocracy in Medieval India usually gave a certain right and social status** to some of the slaves who perform well, and the slaves sometimes get the corresponding labour remuneration or even a larger amount of wealth. **The official slaves because of the close contact with the ruling class, the opportunity to be liberated and promoted, in the court,** their work will often be shared with a large number of servants and court servants.

Source: <https://ncert.nic.in/ncerts/l/gess103.pdf>

https://webofproceedings.org/proceedings_series/ESSP/SOSHU%202020/SOSHU20046.pdf

Ancient and Medieval India by Poonam Dahiya (Chapter-11 Delhi Sultanate)

Q.30) With reference to Munich security conference, consider the following statements:

1. The conference is an important forum for discussion and debate on security and foreign policy.
2. It is initiative of European Union to tackle Security challenges in Europe
3. This year's Munich Security Report had a special focus on Russia's Invasion of Ukraine.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Munich Security Conference is attended by heads of state and government, foreign and defense ministers, military leaders, and experts from around the world. The conference provides a platform for leaders to engage in dialogue and discuss solutions to current and emerging security challenges facing the international community. "Turning the Tide. Unlearning Helplessness" is the conference motto and the title of Munich Security report.

Statement 1 is correct: The Munich Security Conference is an annual conference that provides a platform for leaders, policymakers, experts, and academics to discuss and debate security and foreign policy issues.

Statement 2 is incorrect: The Munich Security Conference is not a regional initiative of the European Union. It is an independent forum that brings together leaders and experts from around the world to discuss security challenges. The conference is typically held in February and takes place in Munich, Germany.

Statement 3 is correct: The Munich Security Report is an annual report that presents data, analyses, and maps related to current security policy issues. The annual report of 2023: Re:vision placed greater focus on Russia-Ukraine conflict.

Source: <https://securityconference.org/en/about-us/about-the-msc/>

Q.31) Which among the following can be considered as reasons for multiple invasions by Turks in India during medieval period?

1. Lack of a strong centralized nationwide power
2. Comparatively stronger Army of Turks
3. Geographical proximity of India to Turks
4. Rich wealth and resources of Indian subcontinent

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1 and 2 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

There were several reasons for India being subjected to multiple invasions by Turks in medieval India.

Option 1 is correct: During the medieval period, India was divided into several small and weak kingdoms. The **lack of a strong centralized power made it difficult for Indian rulers to mount a united defense against foreign invaders**, making it easier for the Turks to conquer various regions.

Option 2 is correct: The **Indian armies were generally composed of infantry and elephants, which were slow and less effective compared to the fast-moving Turkish cavalry**. The Indian soldiers also lacked the advanced military equipment and training that the Turks had, making it difficult for them to withstand the Turkish invasions.

Option 3 is correct: India shares borders with the regions from where the Turks originated, such as Central Asia and Persia. **This geographical proximity made India an accessible target for invasions and conquests.**

Option 4 is correct: **India was known for its immense wealth, which attracted invaders seeking to acquire riches.** The fertile lands, abundant natural resources, and prosperous cities made India an attractive target for Turkish invaders.

Source: <https://egyankosh.ac.in/handle/123456789/73885>

http://www.govtgirlsekalpur.com/Study_Materials/History/CC5_MOD_2D.pdf

Ancient and Medieval India by Poonam Dahiya (Chapter-11 Delhi Sultanate)

Q.32) Consider the following pairs of types of lands during the Delhi Sultanate:

Type of Land	Meaning
1. Khalisa	Lands assigned to officials as payment for their services.
2. Iqta	Land under the direct control of the Sultan.
3. Inam	Land assigned or granted to religious institutions.

Which of the above-given pairs is/are matched correctly?

- a) 2 only
- b) 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

During the Delhi Sultanate period, the administration of land and revenue collection was organized through several types of land classifications, such as Iqta, Khalisa, and Inam.

Pair 1 is incorrect: Khalisa lands were those directly under the control of the Sultan and his central administration. Revenue collected from Khalisa lands went directly to the royal treasury and was used to fund the central government's expenses, such as the salaries of officials, the upkeep of the royal court, and the maintenance of the royal army. The Khalisa lands were critical for ensuring the financial stability of the Sultanate and served as a primary source of income for the central government.

Pair 2 is incorrect: The Iqta system was a form of land grant or assignment given to nobles, military officers, and other officials in lieu of their services to the state. The grantee, known as the Iqtadar or Muqti, was responsible for maintaining law and order, providing military support, and collecting revenue in their assigned territory. The Iqtadar would keep a portion of the revenue to maintain their troops, administration, and personal expenses while sending the rest to the central government. The Iqta system served as a decentralized form of governance and revenue collection.

Pair 3 is correct: Inam lands were grants or endowments given to religious institutions, scholars, or individuals for their services to the state or for religious and charitable purposes. These lands were generally exempt from land revenue and other taxes. Inam grants could be given for various reasons, such as to reward loyalty, support religious institutions, or promote learning and culture. The Inam system allowed the Sultans to foster good relations with the religious and intellectual elite, ensuring their support for the regime.

Source: Ancient and Medieval India by Poonam Dahiya (Chapter-11 Delhi Sultanate)

Q.33) Consider the following statements with reference to the account of Abdur Razzak regarding the Vijayanagar kingdom:

1. He mentioned that Vijayanagar had multiple layers of fortifications.
2. He mentioned that the Vijayanagara Empire was rich in diamonds.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Abdur Razzak, a Persian ambassador and chronicler, visited the Vijayanagara Empire during the reign of Deva Raya II (1424-1446). His accounts provide valuable insights into the political, social, and cultural aspects of the Vijayanagara Empire

Statement 1 is correct: According to Razzak, **Vijayanagara had multiple layers of fortifications, with each layer having its gates, watchtowers, and walls.** These fortifications demonstrated the empire's focus on security and defense against external threats.

Statement 2 is correct: Razzak mentioned that the Vijayanagara Empire was rich in diamonds, with mines producing high-quality stones. These diamonds were an essential source of revenue for the empire and contributed to its overall wealth.

Source: https://www.newworldencyclopedia.org/entry/Ancient_City_of_Vijayanagara

<https://openthemagazine.com/essay/the-untold-history-of-hampi/>

<https://www.jetir.org/papers/JETIR2301537.pdf>

Ancient and Medieval India by Poonam Dahiya (Chapter-11 Delhi Sultanate)

Q.34) Which of the following foreign travelers visited India during the Vijayanagara Empire?

1. Nicolo Conti
2. Abdur Razzaq
3. Domingo Paes

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Many foreign travelers visited the Vijayanagar Empire and gave a detailed account of its administration.

Option 1 is correct: The Italian traveller **Nicolo Conti visited Vijayanagara in 1420**. He gave an account of the construction and administration of the empire. He says that the Vijayanagara king is more powerful than all the other kings in India and gives the details as: ‘The circumference of the city is sixty miles, its walls carried up to the mountains, and enclose the valleys at their foot.... In this city there are estimated to be ninety thousand men fit to bear arms.’

Option 2 is correct: The Persian traveller **Abdur Razzaq visited Vijayanagara in the reign of Deva Raya II**. He gives a glowing account of the country with most part well cultivated, very fertile. The troops amount in number to eleven lakhs. He considers Vijayanagara to be one of the most splendid cities anywhere in the world which he had seen or heard of.

Option 3 is correct: Domingo Paes was a Portuguese traveller who visited the Vijayanagara Empire, located in the Deccan in southern India, around 1520.

Source: Medieval History, NCERT XI, Chapter-9, The Age of Vijayanagara and the Bahmani

<https://egyankosh.ac.in/bitstream/123456789/44425/1/Unit-20.pdf>

Q.35) With reference to National Land Monetization Corporation, Consider the following statements:

1. It will be incorporated as a 100% Government of India owned entity.
2. NLMC will undertake monetization of surplus land and building assets of Central Public Sector Enterprises and other Government agencies.
3. The Ministry of Finance will set up the company and act as its administrative ministry.

Which of the following statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Indian government has given its approval to establish the National Land Monetization Corporation (NLMC) as a fully state-owned company with an objective to monetize excess land and building assets of Central Public Sector Enterprises (CPSEs) and other government agencies, which is in line with the 2021-22 budget announcement.

Statement 1 is correct: NLMC is incorporated as a 100% Government of India owned entity, NLMC will have an initial authorized share capital of ₹5,000 crore and subscribed share capital of ₹150 crore

Statement 2 is correct: Government has set up a National Land Monetisation Corporation (NLMC) to undertake monetization of surplus land and building assets of Central Public Sector Enterprises (CPSEs) and other Government agencies.

Statement 3 is correct: Department of Public Enterprise, Ministry of Finance, will set up the company and act as its administrative ministry.

Source: <https://pib.gov.in/PressReleasePage.aspx?PID=1804287>

Q.36) Arrange the following dynasties that ruled the Vijayanagar kingdom of India in the correct chronological order starting from the earliest:

1. Aravidu Dynasty
2. Tuluva Dynasty
3. Sangama Dynasty
4. Saluva Dynasty

Select the correct answer using the correct answer:

- a) 1-2-3-4
- b) 4-2-3-1
- c) 3-2-4-1
- d) 3-4-2-1

Ans) d

Exp) Option d is the correct answer.

The Vijayanagar kingdom, a prominent South Indian empire, was founded in 1336 and lasted until 1646. It was ruled by four main dynasties in chronological order:

- 1) Sangama Dynasty (1336–1485)
- 2) Saluva Dynasty (1485–1505)
- 3) Tuluva Dynasty (1505–1570)
- 4) Aravidu Dynasty (1570–1650)

Source: Ancient and Medieval India by Poonam Dahiya (Chapter-11 Delhi Sultanate)

Q.37) With reference to the condition of women in the Vijayanagar Empire, consider the following statements:

1. The Devadasi tradition, dancing girls associated with temples, was popular in the society.
2. During this period, the woman of the royal families often participated in public functions.
3. During this period, women enjoyed the right to property and had freedom to choose their own spouse.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. The Devadasi tradition in the Vijayanagar Empire was very popular. As per the account of Domingo Paes, a Portuguese foreign traveller, the tradition of the **dancing girls attached to the temples** was very common in this empire. A Devadasi was considered a handmaiden of God who was married to the temple deity as a child and later she used to become a part of the temple establishment. These Devadasis were educated and trained in music and dance. It was interpreted by many historians from the account of Paes that these Devadasis used to hold a **very respectable place in society**. During religious rituals, the presence of these Devadasis was considered essential.

Statement 2 is correct: The woman of the palaces of the kings and the royal family often participated in public functions. The **kings and queens were experts in the fields of art, dance, music, poetry, administration, justice, mathematics** etc. Some were scholars. For example: Kampanaraya's wife Gangambike wrote 'Madhura Vijayam', Tirumalambike wrote 'Varadambika Parinaya', Ramabhandramba wrote 'Raghunathabhyudaya'. Honnamma was also a correspondent at the court of Devaraya 2, Tirumalamba Achyutaraya of Oda. Krishnadevaraya's queen Chennamba danced. **Queens were trained in dance and music, sword fighting wrestling.**

Statement 3 is incorrect: Vijayanagara society had a patriarchal family system. Thus, **there was neither the right to property nor the freedom to choose one's spouse**. Her property was the dowries received during the marriage. Only a childless widow got a share in her husband's property.

Source: <https://hospet.online/devadasi-preservers-of-art-in-vijayanagara-empire/#:~:text=Who%20is%20A%20Devadasi%3F,considered%20essential%20during%20religious%20rituals>.

Q.38) With reference to the Kalahasti Inscription, consider the following statements:

1. The Kalahasti inscription gives information about the coronation of King Achyuta Deva Rai of Tuluva Dynasty.
2. This inscription was written in Kannada language in the Devanagari script.
3. The exact date of the demise of Krishnadevaraya of Tuluva Dynasty is engraved on this inscription.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is correct answer.

Statement 1 is correct. The Kalahasti inscription was found at Sri Kalahasti Temple in the Chittor district of the Indian state of Andhra Pradesh. Kalahasti inscription has revealed that Achyuta Devaraya, who was the younger brother of Krishnadevaraya, was coronated as the fourth king of the Tuluva dynasty on 21st October 1529.

Statement 2 is correct. The Inscription which was found at the premises of Sri Kalahasti Temple in Andhra Pradesh was written in Kannada language and Devanagari script.

Statement 3 is incorrect. The exact date of death of Krishnadevaraya, the third king of the Tuluva dynasty, was engraved on the Honnenahalli inscription and not on the Kalahasti inscription.

Source: <https://telanganatoday.com/krishnadevaraya-died-on-oct-17-1529>

Q.39) Consider the following statements:

1. The Bahmani kingdom was founded by Ala-ud-din Hassan Bahman Shah.
2. Earlier the capital of the Bahamanis was Gulbarga, which was later moved to Bidar.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. Ala-ud-Din Hassan Bahman Shah, also known as Hassan Gangu, the Turkish governor, founded the Bahmani Kingdom in the year 1347. He had successfully revolted against Muhammad bin Tughlaq, the Sultan of Delhi.

Statement 2 is correct. Gulbarga served as the Bahmani Empire's capital from 1347 to 1425. In the year 1425, it was moved to Bidar.

Source: <https://www.historydiscussion.net/history-of-india/medieval-age/administration-of-india-under-the-bahmani-kingdom-indian-history/6589>

<https://www.jagranjosh.com/general-knowledge/bahmani-kingdom-13471527-ad-1411563177-1>

Q.40) Consider the following statements about Dugong, recently seen in news:

1. Recently, India's first ever dugong conservation reserve was notified in the Gulf of Mannar region.
2. Dugongs are listed as Endangered in the IUCN Red List of threatened species.
3. Dugongs can stay underwater for days, and they do not need to come to the surface for breathing.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Dugongs are marine mammals that graze on seagrass meadows in the ocean. Dugongs (*Dugong dugon*) live in small groups in shallow waters. They're called sea cows: a term that reflects the ecological role they play, being oceanic herbivores that feed on seagrass in underwater meadows. They can grow up to 3.5 meters long, and weigh around 300 kg.

Statement 1 is correct: Recently, Tamil Nadu notified India's first ever dugong conservation reserve in the Palk Bay area of the Gulf of Mannar, which lies between Sri Lanka and the southern tip of India. In an order published in the state gazette on September 21, Tamil Nadu notified the Dugong Conservation Reserve and delineated the boundaries of the area which will come up off the coastal districts of Thanjavur and Pudukottai.

Statement 2 is incorrect: The animals are distributed across many parts of the Indo-Pacific, yet they are listed as Vulnerable in the IUCN Red List of Threatened Species due to their decreasing population worldwide. The species is already extinct in China. India's dugong population too is declining: there are just around 200 dugongs left, as per recent estimates.

Statement 3 is incorrect: These mammals can stay underwater for six minutes before surfacing. They sometimes breathe by "standing" on their tail with their heads above water. Hence, they cannot stay under water for more than 6 minutes without coming to the surface for breathing.

Source: <https://thewire.in/environment/tamil-nadu-indias-first-dugong-reserve-crucial>

<https://www.nationalgeographic.com/animals/mammals/facts/dugong#:~:text=These%20mammals%20can%20stay%20underwater,with%20their%20heads%20above%20water.>

https://wii.gov.in/campa_Dugong

Q.41) Consider the following statements about ‘Tarafdars’ in Bahamani Kingdom:

1. Tarafdars in the Bahamani Kingdom were the governors of the provinces.
2. They were sometimes appointed as the Ministers of the King.
3. They were responsible for collecting revenue in their provinces.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct. During Muhammad Shah I's reign, the Bahamani kingdom was divided into four Atrafs or provinces which were Gulbarga, Daulatabad, Bidar, and Berar, each with its own governor (tarafdar).

Statement 2 is correct. Each of these provinces appointed Tarafdars, who had great administrative and military authority. Tarafdars were sometimes appointed to serve as the king's ministers as well.

Statement 3 is correct. These Tarafdars organized their own provincial armies, collected revenues from their respective provinces, and appointed all civil and military officers concerning their provinces.

Source: <https://www.historydiscussion.net/history-of-india/medieval-age/administration-of-india-under-the-bahmani-kingdom-indian-history/6589>

Q.42) With reference to the Economic condition of Vijayanagar Empire, consider the following statements:

1. The gold coins issued by the rulers of the Vijayanagar Empire were known as Varahas.
2. The coins issued by Krishnadevaraya had the Hanuman symbol engraved on them.
3. Harihara I and Bukka I had the figures of Balkrishna and Venkatesh on the coins issued by them.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. The rulers of the Vijayanagar Empire issued a large number of gold coins which were known as Pagodas or Varahas. Varaha was the most familiar symbol among the people of Vijayanagar as it is the Boar incarnation of Vishnu.

Statement 2 is incorrect. The skill of engravers was only added to coins under the Tuluva dynasty. The gold coins, pagodas and half-pagodas featuring "seated Balakrishna" were issued in different styles by Krishnadevaraya.

Statement 3 is incorrect. Bukka and Harihara-I minted gold coins from debased gold. They minted gold fanams and their fractions for medium-end transactions.

Because of the engraving style used by earlier kingdoms, including the Kadamba-Chalukyas, pagoda obverses frequently were misunderstood as depicting Hanuman. They featured a running warrior and a dagger symbol.

Source: https://www.forumancientcoins.com/india/vijayngr/vij_coinage.html

Q.43) Consider the following statements regarding Prithviraj Chauhan of Chahamana dynasty:

1. Chand Bardai and Jayanaka were the court poets during the reign of Prithviraj Chauhan.
2. Ajmer city was first established by Prithviraj Chauhan.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

The Chahamanas of Shakambhari, colloquially known as the Chauhans of Sambhar, ruled in parts of present-day Rajasthan and its neighbouring areas between 7th and 11th centuries CE. They were the most prominent ruling family of the Chahamana clan. The most famous of all Chauhans, is popularly known as Prithviraj Chauhan or Rai Pithora in the folk legends. Prithviraj Chauhan defeated Muhammad Ghori in the First Battle of Tarain in c.1191 CE. In 1192 CE.

Statement 1 is correct: Two great poems, Prithviraj Raso and Prithviraj Vijaya, were written by **court poets of Prithviraj Chauhan- Chand Bardai and Jayanaka respectively.**

Statement 2 is incorrect: Ajayaraja II (r. c. 1110–1135 CE) was an Indian king belonging to the Chahamana dynasty. He ruled the Sapadalaksha country, which included parts of present-day Rajasthan in north-western India. He defeated the Paramaras of Malwa, and also repulsed the Ghaznavid invasions after losing some part of his territory to them. **The establishment of the Ajmer city is attributed to him.**

Source: Poonam Dahiya Ancient and Medieval India

https://dbpedia.org/page/Ajayaraja_II

Q.44) Consider the following statements regarding the Delhi Sultanate:

1. Iltutmish successfully prevented the Mongol attack on India by defeating them in the Battle of Kili.
2. The Mangol threat is an important reason for the establishment of a permanent standing army by Alauddin Khalji.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The Mongol Empire launched several Mongol invasions into the Indian subcontinent from 1221 to 1327. The Mongols made Kashmir their vassal state. However, the campaigns against the Delhi Sultanate proved unsuccessful, in spite of constant Mongol incursions.

Statement 1 is incorrect: Alauddin Khalji was the sultan of Delhi during the Battle of Kili (not Iltutmish). **The Battle of Kili** was fought in 1299 between the Mongols of the Chagatai Khanate and the Delhi Sultanate. **The Mongols, led by Qutlugh Khwaja (prince of Mongols),** invaded India, intending to conquer Delhi. When they encamped at Kili near Delhi, **the Delhi Sultan Alauddin Khalji** led an army to check their advance. The Mongols withdrew after Qutlug was injured in the battle during Zafar Khan's execution.

Statement 2 is correct: Alauddin established a huge permanent standing army to satisfy his ambition of conquest and to protect the country from Mongol invasion. The northwestern frontier was fortified, and Ghazi Malik (Ghiyasuddin Tughlaq) was appointed to as the Warden of Marches to protect the frontier.

Source: Poonam Dahiya Ancient and Medieval India

<https://thewire.in/history/india-grateful-alauddin-khilji-thwarting-mongol-invasions>

https://www.hansrajcollege.ac.in/hCPanel/uploads/elearning/elearning_document/MONGOL_THREAT.pdf

Q.45) Consider the following statements about the IUCN Green list, recently seen in news.

1. The IUCN Green List is the first global standard of good practices for area-based conservation.
2. Its objective is to provide a global benchmark to assess whether protected and conserved areas are achieving successful conservation outcomes.
3. It assesses the achievement of protected areas based on 17 management criteria.
4. Recently two Indian sites have been added to the list.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 3 and 4 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

The IUCN Green List is a global campaign for successful nature conservation. At its heart is the Green List Sustainability Standard that provides a global benchmark for how to meet the environmental challenges of the 21st century.

Statement 1 is correct: Officially launched in November 2014 at the IUCN World Parks Congress in Sydney, the Green List is the first global standard of good practices for protected areas. The IUCN Green List offers locally relevant expert guidance, to help achieve fair and effective nature conservation results in the protected and conserved areas. It can help guarantee that wildlife and ecosystems can survive, thrive and bring value to communities everywhere.

Statement 2 is correct: Its objective is to provide a global benchmark to assess whether protected and conserved areas are achieving successful conservation outcomes through effective and equitable governance and management. It also aims to increase the number of natural areas delivering long-lasting conservation results for people and nature.

Statement 3 is correct: The IUCN Green List Standard is organised into four components of successful nature conservation in protected and conserved areas.

- 1) Good Governance
- 2) Sound Design and Planning
- 3) Effective Management
- 4) Successful Conservation Outcomes

There are total 17 criteria covering all the above 4 components.

Statement 4 is incorrect: Currently there are 61 Green listed sites globally. However, there are no Indian sites in this elite list. It has been observed that out of numerous protected/conserved areas that India has, only a handful of them meet the criteria for inclusion in the IUCN Green List.

Source : <https://economictimes.indiatimes.com/news/politics-and-nation/few-national-parks-sanctuaries-meet-criteria-for-iucn-green-list/articleshow/48501674.cms>

<https://www.iucn.org/resources/conservation-tool/iucn-green-list-protected-and-conserved-areas>

<https://iucngreenlist.org/standard/components-criteria/>

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Q.46) With reference to the social life in the Vijayanagara Empire, consider the following statements:

1. Sati and prostitution were considered illegal and were banned by the rulers.
2. Muslims were employed in the administration and were allowed to build mosques.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. According to Nuniz, **polygamy was common in royal families. Sati was honoured and Nuniz described it. Prostitution was also practiced in the Vijayanagar Empire.** These events denote that condition of women was not improved during Vijayanagara Empire.

Statement 2 is correct. Borbosa speaks of the **freedom of religion that everyone enjoyed. Muslims were employed by the government and were free to build mosques and worship.**

This shows they were tolerant to other religions and respected them.

Knowledge Base:

- 1) Allasani Peddanna in his **Manucharitam mentions the existence of four castes in Vijayanagar society - Brahmins, Kshatriyas, Vaisyas and Sudras.**
- 2) **Nicolo Conti mentioned slavery, Dance, music, racing, gambling and fighting are some of the games that were played and practiced.**

Source: Tamil Nadu Board Textbook, Ch-19, Pg – 213 and 214

Q.47) Consider the following pairs of land categories during Vijayanagar Kingdom and their description:

Land Category	Description
1. Amaram	Lands given to officials
2. Manya	Villages directly under the Crown
3. Bhandaravada	Tax-free villages

Which of the above given pairs is/are matched correctly?

- a) 1 only
- b) 3 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) a

Exp) Option a is the correct answer.

During the Vijayanagara kingdom, land was classified into various categories for administrative purposes, revenue collection, and to ensure proper distribution of resources.

Pair 1 is correct: Amaram (Assigned land) were such lands that were given to military personnel, officials, or courtiers as a reward for their services to the kingdom. The recipients of such lands were expected to provide military services when required.

Pair 2 is incorrect: Manya lands were granted to Brahmins by the Vijayanagara kings as a reward for their services or contributions to the kingdom. These land grants were meant to support the livelihood

of the Brahmins, who played an essential role in religious, educational, and cultural affairs. The **revenue generated from Many lands was typically exempt from taxes, and the Brahmins were allowed to use this income for their sustenance and maintenance** of religious and educational institutions.

Pair 3 is incorrect: The Bhandarvada was a village directly under crown comprising the smallest category. A part of its income was utilised to maintain the Vijayanagar forts.

Source: <https://ykcollege.ac.in/wp-content/uploads/2020/04/ADMINISTRATION-OF-VIAJANAGAR-converted.pdf>

Ancient and Medieval India by Poonam Dahiya (Chapter-11 Delhi Sultanate)

Q.48) Consider the following statements regarding the Utpala Dynasty:

1. It ruled over the area of present-day Kashmir.
2. Avanti Varman was the founder of the Utpala Dynasty.
3. Their rule was marked by the complete absence of temple construction activities in their kingdom.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Much of the history of Kashmir and North-west India is deduced from the legendary and historical chronicle Rajatarangini (which means ‘the river of kings’). It was probably written in 12th century CE in Sanskrit by a Kashmiri Brahmana called Kalhana. In early 7th century, the Karkota dynasty rulers established their rule in Kashmir. The Utpala dynasty was established by ending the rule of the Karkota dynasty in 855 CE.

Statement 1 is correct: In the 9th and 10th centuries CE, the Kashmir region was ruled over by the Hindu Utpala dynasty.

Statement 2 is correct: Avanti Varman (c. 855–883 CE) was the founder of the Utpala dynasty and was known as a great administrator. He was credited with taking major innovative works in the field of irrigation. During his reign, the cities of Avantipur and Suyapur were founded, and many Hindu temples dedicated to both Vishnu and Shiva and Buddhist monasteries were built, notable of which is the Avantiswara and Avantiswami temples.

Statement 3 is incorrect: During the reign of Utpalas, several temples were constructed. Avantivarman established various temples and cities, including Avantipura, Surapura and the Avantiswami Temple, under the direction of chief minister Suyya. Samkaravarman built the Shiva temples of Samkaragaurisa and Sugandhesa as well as Samkarapura (modern-day Pattan).

Source: Poonam Dahiya Ancient and Medieval India

<https://www.news9live.com/knowledge/utpala-dynasty-origin-architecture-and-fall-of-one-of-the-prominent-kingdoms-of-kashmir-au2114-2060297>

Q.49) With reference to the medieval Indian history, the term ‘Nanadesi’ is used to refer to:

- a) Spies appointed by the kings to keep an eye on the distractors.
- b) A privileged class of Brahmins who used to serve only the kings.
- c) Yogis approached by the people to free them from the bad spirits.
- d) Traders who formed guilds to protect their interests.

Ans) d

Exp) Option d is the correct answer.

In the context of medieval Indian history, there were many kinds of traders. These included the Banjaras. Several traders, especially horse traders, formed associations, with headmen who negotiated on their behalf with warriors who bought horses.

Since traders had to pass through many kingdoms and forests, they usually travelled in caravans and formed guilds to protect their interests. There were several such guilds in south India from the eighth century onwards – the most famous being the Manigramam and Nanadesi. These guilds traded extensively both within the peninsula and with Southeast Asia and China.

There were also communities like the Chettiers and the Marwari Oswal who went on to become the principal trading groups of the country. Gujarati traders, including the communities of Hindu Baniyas and Muslim Bohras, traded extensively with the ports of the Red Sea, Persian Gulf, East Africa, Southeast Asia and China. They sold textiles and spices in these ports and, in exchange, brought gold and ivory from Africa; and spices, tin, Chinese blue pottery and silver from Southeast Asia and China.

Source: <https://ncert.nic.in/textbook/pdf/gess106.pdf>

Q.50) What is the purpose of the Ombudsperson App launched by the Union Minister for Rural Development and Panchayati Raj?

- a) To register grievances related to Regional Rural banks.
- b) To ensure transparency in the implementation of PM Gram Sadak Yojana
- c) To monitor the progress and report any discrepancy related to Swachh Bharath Mission in Rural areas
- d) To ensure transparency and accountability in the implementation of MGNREGA

Ans) d

Exp) Option d is the correct answer.

The Ombudsperson App for Mahatma Gandhi NREGA has been launched by the Union Minister for Rural Development and Panchayati Raj to ensure transparency and accountability. The app has been developed to facilitate the reporting and categorization of grievances related to the implementation of the MGNREGA from various sources. The current process of complaint reporting, awards passing, and complaint disposal is in physical form. The app will enable easy tracking and timely passing of awards on each case, making the Ombudsperson's work hassle-free and more efficient.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1800847>

Q.1) With reference to the Maratha administration, Mamlatdar and Kamavisdar were:

- a) Representatives of Peshwa in districts
- b) Heads of small units of armed forces
- c) Ambassadors of Peshwa in foreign countries
- d) Officials in charge of coin minting press

Ans) a

Exp) Option a is the correct answer.

The Maratha administration was a three-tier system with a central government at Poona, provincial government and the district administration. The central secretariat called the Huzur Dajtar was the nerve centre of the country's administration. **Provinces under the Peshwas were of various sizes and larger ones were under provincial governors called Sarsubahdars.** The provinces were termed Subahs, Sarkars, or Prants. Next to the Sarsubahdar was the Mamlatdar whose duties were of diverse nature, namely looking after agriculture, industry, civil and criminal justice, police, local militia, revenue assessment of the districts and villages.

Option a is correct: The Mamlatdar and Kamvisdar were Peshwa's representatives in the districts. Deshmukhs and Deshpandes were district officers who were in charge of accounts and were to observe the activities of the Mamlatdars and Kamvisdars. It was a system of checks and balances.

Source: <https://www.historydiscussion.net/history-of-india/administrative-system-of-the-peshwas/5930>

Q.2) Which of the following statements indicate the significance of Babur's advent into India?

1. Introduction of gun and gunpowder in India for the first time.
2. Introduction of Char Bagh style of architecture in India.
3. Introduction of arch and dome in architecture of the subcontinent for the first time.
4. End of theocratic Rule in India by breaking the allegiance to the caliph and declaring himself "Padshah".
5. Strengthening of Trans-Asian Trade due to his control of Kabul and Kandhara.

Select the correct answer using the code given below:

- a) 1, 3, 4 and 5 only
- b) 2, 4 and 5 only
- c) 1, 2 and 5 only
- d) 1, 2, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. Babur introduced a new mode of warfare which led to the popularisation of gunpowder, cavalry, and artillery in India. Gunpowder was **used earlier too in India by the Mongols in the 13th century**, but it was popularised by Babur to be used in large scale, especially during warfare.

Statement 2 is correct. Char-Baghs and symmetrical gardens with running water and fountains as a part of Architecture style was introduced by Babur.

Statement 3 is incorrect. Arch and Dome's architecture was adopted before the advent of **Babur, by the Turks after the invasion of Mahmud Ghori.**

Statement 4 is correct. In Indian History the Delhi Sultanate Period has been called a Theocracy simply because Islam was the proclaimed religion of the state and every ruler owed his allegiance to the Caliph, The Head of the Islamic World. **All the Muslim Rulers of this period use to call themselves Sultans or the representatives of the Khalifa. Babur was the first Muslim Ruler of India to do away with this practice. It enhanced the prestige of the crown. It was Babur who declared himself to be 'Padshah'.** He thus severed

all his connections from the Khalifa and made himself independent of all theocratic influence both in principle and practice. In this way we can say that Babur was the first Muslim Ruler who thought of laying the foundations of a secular state in Medieval India.

Statement 5 is correct. Babur's control of Kabul and Kandhar strengthened India's foreign trade since these two towns were the starting points for caravans for China and the Mediterranean Sea Ports.

Source: Poonam Dalal Ch-13, Pg 654 + UPSC PYQ 2015

Q.3) Consider the following statements about the Treaty of Purandar of 1665:

1. The treaty was signed between Jai Singh I, commander of the Mughal Empire, and Shivaji.
2. According to the treaty, Shivaji had to surrender majority of his forts that were under his control to the Mughals.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

In 1664, Shivaji attacked Surat, the major Mughal port in Arabian sea and his soldiers plundered the city. In retaliation, Aurangzeb dispatched an army under the command of the Rajput general Raja Jai Singh I to defeat Shivaji and annex Bijapur.

Statement 1 is correct: The Treaty of Purandar was signed on 11 June 1665, between Jai Singh I, commander of the Mughal Empire, and Shivaji. Shivaji was forced to sign the agreement after Jai Singh besieged Purandar fort. When Shivaji realised that war with the Mughal Empire would only cause damage to his empire with possibility of his men suffering heavy losses, he chose to enter the treaty instead of leaving his men under the Mughals.

Statement 2 is correct: According to the treaty, Out of 35 forts held by Shivaji, 23 forts with surrounding territory which yielded a revenue of four lakhs of huns every year were to be surrendered to the Mughals, while the remaining 12 forts with an annual income of one lakh of huns were to be left to Shivaji 'on condition -of service and loyalty to the throne'..

Source: <https://egyankosh.ac.in/bitstream/123456789/82871/2/Theme-2.pdf>

Tamil Nadu Board, Higher secondary, History, pg. 227

Q.4) With reference to policies adopted by Akbar, consider the following statements:

1. He abolished Pilgrimage tax and Jizya tax.
2. Watan Jagirs, which were assigned to Zamindars in their homeland, were non-hereditary and transferable.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. Akbar's policy towards Rajputs was combined with broad religious tolerance. He abolished the pilgrim tax in 1563 CE and later abolished jizya in 1564 CE. He also put a prohibition on the forcible conversion of prisoners of war.

Statement 2 is incorrect. Many Rajput mansabdars were assigned their own territories as **Watan Jagir**. **Watan Jagir was hereditary and non-transferable**, and they rose to important positions in Mughal services
Source:

https://www.hansrajcollege.ac.in/hCPanel/uploads/elearning/elearning_document/AKBARS_RAJPUT_POLICY_Combined.pdf (Pg-3), Poonam Dalal Pg 667

Q.5) With reference to E-bill Processing System, consider the following statements:

1. The system was developed by the National Payment Corporation of India (NPCI).
2. The system enables users to use digital signatures for submitting their bills.
3. The system aims to eliminate physical interface between suppliers and government officials.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Union Minister for Finance & Corporate Affairs launched the **E-Bill system for Central Government Ministries on the 46th Civil Accounts Day**. E-Bill Processing System is a way of transacting the bills digitally rather than the traditional use of paper.

Statement 1 is incorrect: The e-Bill system was developed by the **Public Financial Management System (PFMS) Division** (not by the National Payment Corporation of India) in the office of the Controller General of Accounts in the Department of Expenditure, **Ministry of Finance**.

Statement 2 is correct: It is true that the **E bill Processing system enables users to use digital signature** for submitting their bills. Under this system, vendors/suppliers can upload their bills online along with supporting documents from their place at any time through digital signature. Further the system provides for the facility of **e-sign using Aadhaar** for those who do not have digital signature.

Statement 3 is correct: One of the objectives of this system is to **eliminate physical interface between suppliers and government officials**. The new system aims to make the entire process of submission and processing of bills **completely paperless and transparent**. Thus, it is considered a major step in realizing the vision of Digital India and promoting ease of doing business.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1802343>

Q.6) “He was the officer in-charge of the royal household and royal karkhanas. Only nobles who enjoyed the complete confidence of the emperor were appointed to this office. The maintenance of etiquette at the court, and the control of the royal bodyguard were also under his supervision.”

Which one of the following offices from Mughal administration is described above?

- a) Sadr-us Sudur
- b) Wazir
- c) Mir Bakshi
- d) Mir Saman

Ans) d

Exp) Option d is the correct answer.

The Mughals retained many features of the administrative system of the Sultanate and Sher Shah Suri's administration. The administration was highly centralised and the territories of the empire were divided into Jagir, Khalisa (income went directly to the royal exchequer), and Inam (lands allowed to learned and religious men). Few important positions from the Mughal central government are discussed below:

Option a is incorrect: The judicial department was headed by the chief qazi. This post was sometimes combined with that of the Sadr-us Sudur (Chief Sadar) who was the head of the ecclesiastical department. His chief duty was to protect the laws of the Shariat and he was also responsible for all charitable and religious endowments.

Option b is incorrect: The position of the wazir was revived under the Mughals under whom various heads of departments functioned. He was the principal link between the ruler and the administration.

Option c is incorrect: The head of the military administration was Mir Bakshi who was also considered as head of the nobility. Recommendations for appointment to mansabs or for promotions were made to the emperor after duly endorsed by him only. The Mir Bakshi was also the head of the intelligence and information agencies of the empire. He kept a strict watch over proper maintenance of the sanctioned size of armed contingents and war equipage by the mansabdars.

Option d is correct: **Mir Saman** was the officer in-charge of the royal household and royal karkhanas. He was responsible for all kinds of purchases, manufacturing of different articles for the use, and their storage for the royal household. Only nobles who enjoyed the complete confidence of the emperor were appointed to this office. The maintenance of etiquette at the court, the control of the royal body guard, etc., were all under his supervision.

Source: Poonal Dahiya Ancient and Medieval India.

Q.7) With reference to medieval India, arrange the following events in a chronological order:

1. Battle of Chausa
2. Battle of Chanderi
3. Battle of Haldighati
4. Battle of Dharmat

Which one of the following options given below is correct?

- a) 2-1-3-4
- b) 2-1-4-3
- c) 1-2-3-4
- d) 1-2-4-3

Ans) a

Exp) Option a is the correct answer.

- 1) Rana Sanga of Mewar enjoyed the support of a large number of Rajput chiefs such as Raja Medini Rai of Chanderi. Rana Sanga fought Babur at **Battle of Chanderi c.1528 CE** to help Medini Rai who was attacked by Babur.
- 2) In the **Battle of Chausa (near Buxar, c.1539 CE)**, Humayun was defeated, and Sher Khan adopted the title of Sher Shah. Humayun barely escaped with his life from the battlefield, swimming across the river with the help of a water carrier.
- 3) In the famous **Battle of Haldighati (c.1576 CE)**, Rana Pratap was defeated by the Mughal army led by Man Singh. The political struggle behind the battle was that by the fifteenth century, nearly all Rajput kingdoms had surrendered under the Mughal ruler, except Mewar who was unwilling to compromise on its independence.

4) Mughal Emperor Shah Jahan's sudden illness in c.1657 CE plunged the empire into a civil war (c.1657–59 CE) among his four sons. Two of his sons Aurangzeb and Murad agreed to partition the empire and both defeated Raja Jaswant Singh (ruler of Jodhpur) and Qasim Khan at **the Battle of Dharmat (in c.1658 CE)**.

So, the correct sequence of the battles is 2-1-3-4.

Source: <https://www.indiaonline.in/about/profile/history/wars/battle-of-haldighati>
Poonal Dahiya Ancient and Medieval India.

Q.8) With reference to the administration under Shivaji, consider the following statements:

1. The state provided loans to the cultivators during times of famine.
2. Chauth was the tax levied specifically on agriculture, whereas Sardeshmukhi was a tax levied on the merchants in the kingdom.
3. Mirasdars were the officers responsible for tax collection at provincial level.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) option b is the correct answer.

The revenue administration of Shivaji was humane and beneficent to the cultivators. The land was carefully surveyed and assessed. The state demand was fixed at 30% of the gross produce to be payable in cash or kind. Later, the tax was raised to 40%. The amount of money to be paid was fixed.

Statement 1 is correct: The government provided loans to the cultivators during times of famine, which they were expected to repay after the crisis was over. The purpose was to provide relief to the farmers and prevent them from falling into debt and becoming unable to pay taxes in the future.

Statement 2 is incorrect: Shivaji collected two taxes, Chauth and Sardeshmukhi, from the adjoining territories of his empire, the Mughal provinces and the territories of the Sultan of Bijapur. **Chauth was one-fourth of the revenue of the district conquered by the Marthas (not specifically on agriculture)**. Sardeshmukhi was an additional 10% of the revenue which Shivaji collected by virtue of his position as Sardeshmukh. **(Not specifically on merchants in the kingdom)**

Statement 3 is incorrect: The inhabitants in the rural areas were principally cultivators and were either Mirasdars or Upris. **“The Mirasdar belonged to the village,” held his land in heredity and could not be dispossessed of it so long as he continued to pay the rent. He could sell and transfer his fields and had the right to sit in the village council (they are not primarily involved in the tax collection at provincial level).** The Upri was an outsider, a mere tenant-at-will and cultivated the land so long as his lease continued.

Source: Tamil Nadu History Text book 11th std ch 15

https://gazetteers.maharashtra.gov.in/cultural.maharashtra.gov.in/english/gazetteer/History%20Part/History_III/chapter_9.pdf (Page 213)

Q.9) Which of the following statements is/are correct about the Third Anglo-Maratha War?

1. The Battle of Bhima Koregaon was associated with this war.
2. After this war, British abolished the Peshwai and most of the Peshwa's dominions were annexed by the British.
3. The Treaty of Salbai was signed at the end of the Third Anglo-Maratha war.

Select the correct answer from the code given below:

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Lord Hastings' imperialistic design of imposing British paramountcy led to the Third Anglo-Maratha War. The Pindaris, who were attached to Maratha armies as mercenaries, started plundering neighboring territories when they could not get regular employment. Lord Hastings took action against the Pindaris, which was seen as a transgression of the sovereignty of the Marathas, and the Maratha confederacy was once again united.

Statement 1 is correct: The Battle of Bhima Koregaon was part of the Third Anglo Maratha War. The British East India Company successfully defended and the troops of Peshwa ended up withdrawing from the battle. In contemporary caste-based society, the Mahars, who played a very important role in this battle, were considered untouchable. The Battle of Bhima Koregaon attained a legendary status among the Scheduled Castes of India. The people of Scheduled Caste saw this battle as a victory of Dalits over the oppression of the people from higher caste. In Koregaon, the British East India company installed an obelisk or Victory Pillar to commemorate those who fought for them. Dalits believed that this was a victory of the Mahar community against the caste injustices perpetrated by the Peshwas.

Statement 2 is correct: The British abolished the Peshwai (office of the Peshwa) and annexed all the Peshwa's dominions. But the jagirs of the fief holders were restored.

Statement 3 is incorrect: The Treaty of Salbai, which ended the First Anglo-Maratha War (not third Anglo-Maratha war), was signed on 17 May 1782 between the British East India Company and the Marathas.

Some important treaties that were signed during the 3rd Anglo Maratha war:

1) June 1817, Treaty of Poona, with Peshwa.

2) November 1817, Treaty of Gwalior, with Sindhia.

3) January 1818, Treaty of Mandasor, with Holkar

The Treaty of Poona was signed on 1 June 1817 between the East India Company and the Peshwa (ruler) of Pune, Baji Rao II. The treaty resulted in the British gaining control of the territory north of the Narmada River and south of the Tungabhadra River.

Source: Tamil Nadu History Text book 11th std ch 15 ; A Brief History of Modern India by Rajiv Ahir

Q.10) With reference to 'Bamiyan Buddhas' sometimes seen in news, consider the following statements:

1. These Buddha statues are located in the Swat valley of Pakistan.
2. These Buddhas were once considered the tallest standing Buddhas in the world.
3. These Buddhas belong to the Early Vedic Period, dated back to the 11th Century BCE.
4. Greek, Indian and Iranian influence were visible in these sculptures of Buddha.

Which of the statements given above are correct?

- a) 1 and 4 only
- b) 2 and 3 only
- c) 2 and 4 only
- d) 1, 2 and 4 only

Ans) c

Exp) Option c is the correct answer.

Recently the Taliban has said it would protect the ancient Buddha statues in Mes Aynak, also the site of a copper mine where the Taliban are hoping for Chinese investment. It is in sharp contrast to earlier policy of the Taliban when they destroyed centuries-old Buddha statues in Bamiyan using artillery, explosives, and rockets.



Statement 1 is incorrect: Bamiyan Buddhas is located in Bamiyan valley of Afghanistan, not Swat valley of Pakistan. The Bamiyan valley is located in the Hindu Kush mountains and along the river Bamiyan. However, the Swat valley too is a famous buddhist centre and here also Talibans targeted and destroyed Buddhist statues in large numbers in 2007.

Statement 2 is correct: It is true that Bamiyan Buddhas were **once the tallest Standing Buddha in the world**. However, it had been destroyed by the Talibans using artillery and other explosives.

Statement 3 is incorrect: Bamiyan Buddhas does **not date back to 1st Century CE, rather it dates back to 5th Century CE**. Thus, it belongs to the Gupta period.

Statement 4 is correct: It is true that Bamiyan Buddhas marked by the features of Roman draperies, were great examples of a **confluence of Gupta (India), Sassanian (An empire ruled Iran) and Hellenistic (Greek features) artistic styles**.

Source: <https://indianexpress.com/article/explained/everyday-explainers/explained-what-were-the-bamiyan-buddhas-and-why-did-the-taliban-destroy-them-7844925/>

Q.11) With reference to the history of medieval India, which of the following events occurred during the reign of Mughal emperor Jahangir?

1. Grant of permission to the East India Company for its first factory at Surat.
2. Battle of Samugarh.
3. Introduction of Pietra Durra technique in the Mughal constructions.

Select the correct answer using the codes given below:

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Jahangir/ Salim (c.1605–1627 CE) was Jodha Bai and Akbar's eldest son, was named Salim after blessings of Sheikh Salim Chisti. He revolted against Akbar in c.1599 CE. After Akbar's death, he was crowned at Agra in c.1605 CE, and assumed the title of Nur-ud-din Muhammad Jahangir. Some of the important events during his reign are as follows:

Statement 1 is correct: The English East India Company was established on 31 December 1600 as per the Royal Charter issued by the Queen of England, Elizabeth I. The Company had sent Captain Hawkins to the court of the Mughal Emperor, Jahangir in 1608 to secure permission to establish a “factory” (store house of goods) at Surat. It was turned down initially. **However, in 1613, Jahangir permitted the East India Company to establish its first factory at Surat.**

Statement 2 is incorrect: The **Battle of Samugarh** (c.1658 CE) was fought between Aurangzeb and Dara (Son of Shah Jahan) in which, due to divided counsel and underestimation of Aurangzeb by Dara, Dara Shikoh lost the battle. This practically decided the issue of succession.

Statement 3 is correct: Art and Architecture during Jahangir's reign made a significant development. **The practice of putting up buildings in marble and decorating the walls with floral designs made of semi-precious stones (known as Pietra Durra) started during his reign.**

Source: Poonam Dahiya Ancient and Medieval India

Q.12) Consider the following statements with reference to the provincial kingdom of Awadh:

1. The Provincial kingdom of Awadh was established by Saadat Khan Burhan ul Mulk.
2. In the kingdom of Awadh, Faizabad and Lucknow emerged as centres of cultural excellence.
3. Wajid Ali Shah was the last nawab of Awadh to rule before the British annexation of Awadh.

Which of the above given statements is/are correct?

- a) 2 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: The emergence of the **provincial kingdom of Awadh** was under governor **Saadat Khan Burhan ul Mulk**. Saadat Khan not only disciplined the local zamindars but also maintained a well-paid, armed and well-trained army.

Statement 2 is correct: Under the Nawabs of Awadh, **Faizabad, and then Lucknow** emerged as **centres of cultural excellence** comparable to Delhi in the spheres of arts, literature, and crafts. Regional architecture too reflected itself in the form of Imambarahs and certain other buildings. In fact, the evolution of the dance-form Kathak was the outcome of this cultural synthesis.

Statement 3 is correct: **Wajid Ali Shah (1822-1887) was the last Nawab of Awadh. He ruled from 1847 until 1856 when the British East India Company annexed the kingdom under the Doctrine of Lapse.** Governor-General Lord Dalhousie accused Wajid Ali Shah of misrule and maladministration, using these allegations as a pretext for the annexation.

Source: Ancient and Medieval India by Poonam Dahiya; Chapter-14

Q.13) Which among the following books were written by the Mughal Emperor Babur?

1. Tuzuk-i-Babri
2. Masnavi
3. Nushkha-i- Dilkhusa
4. Padshahnama

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2 and 4 only

Ans) a

Exp) Option a is the correct answer.

1st Mughal emperor of India- Babur was deeply learned in Persian and Arabic and is regarded as one of the two most famous writers of his mother tongue, Turkish.

Statement 1 is correct: Babur wrote his memoir in Turki called Tuzuk-i-Babri/Babarnama (translated into Persian by Abdur Rahim Khan-i-Khana).

Statement 2 is correct: Babur is also author of the famous text- Masnavi , a book on Muslim law rules.

Statement 3 is incorrect: Waqyat-i-Alamgiri, Khulasat- ul-Tawarikh, Muntakhah-ul-Lubab, Nushkha-i-Dilkhusa (by bhimsen Burhanpuri) etc were works that were composed during the reign of Aurangzeb.

Statement 4 is incorrect: During Shah Jahan's reign, works of history like Padshahnama (written by abdul Hamid Lahori) Turkish-i-Shahjahani and Shah Jahan Nama were composed.

Source: <https://www.yourarticlelibrary.com/essay/the-development-of-literature-during-the-mughal-period-essay/4078>

Poonam Dahiya Ancient and Medieval India

Q.14) Consider the following pairs regarding Anglo-Mysore Wars and their results:

War	Resulted in
1. First Anglo-Mysore War	Treaty of Madras
2. Second Anglo-Mysore War	Treaty of Madurai
3. Third Anglo-Mysore War	Treaty of Seringapatam
4. Fourth Anglo-Mysore War	Treaty of Mangalore

Which of the above-given pairs are matched correctly?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

The Anglo-Mysore Wars were a series of four wars fought between the British East India Company and the Kingdom of Mysore in the Indian subcontinent.

Pair 1 is correct: The First Anglo-Mysore War (1767-1769) ended in a stalemate, with both sides signing the Treaty of Madras in 1769. Mysore, under the rule of Hyder Ali, maintained its territorial integrity and gained recognition as a significant power in the region.

Pair 2 is incorrect: Second Anglo-Mysore War (1780-1784) also ended in a stalemate, with the Treaty of Mangalore being signed in 1784. While Hyder Ali passed away during the conflict, his son Tipu Sultan continued to lead Mysore and maintained its territorial integrity.

Pair 3 is correct: Third Anglo-Mysore War (1790-1792) resulted in a British victory, with the Treaty of Seringapatam signed in 1792. Mysore, under the rule of Tipu Sultan, was forced to cede large territories to the British and their allies, significantly reducing the kingdom's power and influence.

Pair 4 is incorrect: Fourth Anglo-Mysore War (1798-1799) resulted in a decisive British victory and death of Tipu Sultan. There was **no treaty after the end of the fourth Anglo-Mysore war**. Tipu Sultan was killed during the Siege of Seringapatam in 1799, and the Kingdom of Mysore was subsequently divided between the British East India Company and their allies. This marked the end of the Mysore Kingdom's resistance against British expansion in southern India.

Source: Ancient and Medieval India by Poonam Dahiya; Chapter-14

Q.15) In context of international relations, which of the following statements is/are correct regarding 'Finlandisation'?

1. It refers to USA's policy to include Finland in the North Atlantic Treaty Organization (NATO).
2. It recognises people's will to create any government that they wish.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Finlandisation refers to the **policy of strict neutrality between Moscow (USSR) and the West** that Finland followed during the decades of the **Cold War**. During Cold war, Finland did not join NATO and European military powers, and this policy enabled Finland to resist pressure from Moscow to become part of the Soviet bloc or the Warsaw Pact.

Statement 2 is correct: It is true that **Finlandisation recognises people's will to create any government that they wish**. Finland by deciding its own foreign policy of whom it should align with or not to align with formed the government that their people wish to create. For instance, Finland did not join the USA sponsored Marshall Plan and developed their country in a way they wanted.

Source: <https://indianexpress.com/article/explained/everyday-explainers/explained-ukraine-finlandisation-war-with-russia-7830261/>

Q.16) With respect to the history of medieval India, which of the following Mughal emperors was called as the 'Zinda Pir'?

- a) Akbar
- b) Shahjahan
- c) Aurangzeb
- d) Jahangir

Ans) c

Exp) Option c is the correct answer.

In his private life, Aurangzeb was industrious, disciplined, was very simple in food, dressing, and did not at all consume wine. Aurangzeb was highly devoted to his religion and conducted prayers five times a day, strictly observing the Ramzan fasting. In fact, he earned money for his personal expenses by copying the Quran and selling those copies. Due to all these qualities, he was called Darvesh/ Zinda pir (a living saint).

Source: Poonam Dahiya Ancient and Medieval India

Q.17) With regard to Military Administration of Marathas, which of the following statements are correct?

1. The cavalry was maintained both by state and nobles.
2. They recruited only Hindus to the army and not Muslims.
3. Payments of salaries to the soldiers was made in cash.
4. The Marathas did not maintain navy.

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2 and 4 only
- c) 1 and 3 only
- d) 1, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Marathas, particularly during the times of Shivaji, set up a very efficient military system of administration. They maintained a big standing army. It is said that the army of Shivaji at the time of his death consisted of one lakh infantry, 40,000 cavalry and 1,260 elephants. In addition to these, the artillery also formed a part of the army.

Statement 1 is correct: Both the infantry and the cavalry were well organised. The cavalry was divided into two classes, the Bargirs and the Shiiedars. **The Bargirs were supplied arms by the States while the Shiiedars were maintained by the nobles.**

Statement 2 is incorrect: Shivaji tried to rise above religious consideration and **recruited both Hindus and Muslims** to his army. He believed in pure merit and made no distinction between the soldiers on the basis of religion. In fact, under him there was perfect **religious toleration**.

Statement 3 is correct: For better administration, Shivaji abolished the land-grants or jagir for military officers and instituted a system of salary or cash payment for their services.

Statement 4 is incorrect: The marathas maintained a navy. Sivaji had **400 ships of different kinds** and the navy was divided into two parts. Each part was commanded by two different officers. He also organized a **merchant navy**.

Source: <https://www.historydiscussion.net/history-of-india/medieval-age/military-system-in-india-medieval-age/6199>

<https://www.historydiscussion.net/biography/sivaji-life-conquests-and-conflict-with-mughals/3064>

Q.18) Who among the following were the contemporaries of the Mughal Emperor Akbar?

1. Abul Fazl
2. Raja Todar Mal
3. Faqir Azio-Din
4. Tansen

Select the correct answer from the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Jalaluddin Akbar (1556-1605) was considered the greatest of all the Mughal emperors. He not only expanded but also consolidated his empire, making it the largest, strongest and richest kingdom of his time. He was the third emperor of the Mughal Empire, after Babur and Humayun. Akbar is also known for the extraordinary officials that were associated with his court. **Nine in numbers, they are called Akbar's Navratna.**

Option 1: Abul Fazl : Abu'l-Fazl ibn Mubarak, also known as Abul Fazl, Abu'l Fadl and Abu'l-Fadl 'Allami, was the grand vizier of the Mughal emperor Akbar, from his appointment in 1579 until his death in 1602. He was the author of the Akbarnama, the official history of Akbar's reign in three volumes, and a Persian translation of the Bible.

Option 2: Raja Todar Mal: Raja Todar Mal was the Finance Minister of the Mughal empire during Emperor Akbar's reign. He was also the Vakil-us-Sultanat and Joint Wazir. He was one of the premier nobles in the Mughal Empire and was a Mansabdar of 4000. He was one of the Navaratnas in Akbar's court.

Option 3: Faqir Azio-Din: He was a mystic, purported to be one of the legendary Navaratnas of Emperor Akbar's court. He is described as a mystic who gave religious advice to the Emperor on a wide range of topics.

Option 4: Tansen: He was a close confidant of Raja Ramchandra Singh, and they used to make music together. **Tansen's reputation brought him to the attention of the Mughal Emperor Akbar, who sent messengers to Raja Ramchandra Singh,** requesting Tansen to join the musicians at the Mughal court. Tansen initially refused to go, sought to retire instead into solitude, but Raja Ramchandra Singh, encouraged him to gain wider audience, and sent him along with gifts to Akbar.

Source: <https://gkscientist.com/social-conditions-during-mughal-period/>

Q.19) Which of the following are the objectives which mainly shaped the foreign policy of the Mughal empire?

1. To protect their empire from foreign invasions
2. To increase international trade and commerce
3. To reclaim their ancestral homeland in Central Asia.
4. To check the power of Afghan tribes living in the mountains between Punjab and Kabul.

Select the correct answer from the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

The Mughals' foreign policy was influenced by their interactions with the three great powers of the time: the Uzbek empire of Central Asia, the Safavid empire of Persia (Iran), and the Ottoman empire of Turkey.

Option 1 is correct. Safeguarding India from the invasions of foreign powers was the primary motive of the Mughal rulers. Foreign invasions weakened the strength of the Mughals and expedited their decline. More wealth had been lost as a result of the invasions of Nadir Shah and Ahmad Shah Abdali.

Option 2 is correct. One of the important objectives of the Mughals was to establish and improve trade relations with other countries. By establishing coastal ports on the Indian subcontinent in an effort to compete for trade in the Indian Ocean, the Mughal Empire began trading with countries in Europe, particularly Portugal, England, and the Netherlands. Muslim traders brought Chinese porcelain, paper, and gunpowder to Mughal India. Items of export were textiles, rice, tobacco and metals.

Option 3 is correct. One of the many objectives of the Mughals was **to reclaim the lost ancestral territory of Central Asia** as Fargana was the homeland of Babur. When he lost Fargana and Samarqand as a result of his defeat against the Uzbeks, he moved towards Kabul and annexed Kandhar and Kabul.

Option 4 is correct: Afghan tribes in the Northwest of the empire was a major threat to the Mughal empire. **To check the power of the Afghan tribes, that lived in the mountain region between Punjab and Kabul was an important objective of the Mughal foreign policy.**

Source: TN History Book

<https://www.historydiscussion.net/history-of-india/foreign-policy-of-the-mughals-and-their-relations-with-central-asia/2842>

Q.20) With reference to INS Visakhapatnam consider the following statements:

1. The ship is propelled by a Nuclear-powered engine.
2. This is India's first stealth guided missile destroyers under Project 15B.
3. The ship can effectively deal with threats above as well as below water.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Under the P-15B (Visakhapatnam Class), a total of four warships were planned (Visakhapatnam, Mormugao, Imphal, Surat) to be inducted. Recently INS Vishakaptnam was formally affiliated to the Visakhapatnam port.

Statement 1 is incorrect: The INS Visakhapatnam is propelled by diesel and gas engines, not nuclear-powered engines. The ship has four powerful Gas Turbines, in a Combined Gas and Gas (COGAG) configuration including **two gas turbines** and **two diesel engines**, capable of achieving speeds in excess of 30 knots (56 km/h).

Statement 2 is correct: INS Visakhapatnam is India's first among four stealth guided missile destroyers under Project 15B. It has 75 percent indigenous content. The ship equipment such as **Medium Range Surface to Air Missile Systems (MRSAM)**, Brahmos supersonic Surface to Surface Missiles, Torpedo Tubes and Launcher and Gun Mount were indigenously developed.

Statement 3 is correct: It is true that ships can deal with threats above as well as below water. The ship being equipped with Barak 8 long range **Surface to Air Missile** can aid in dealing threat above waters. On the other hand, weaponry such as anti-**submarine rockets**, Hull mounted Sonar Humsa NG, heavyweight **torpedo** tube launchers help in dealing with threats below water.

Source: <https://www.navyrecognition.com/index.php/naval-news/naval-news-archive/2021/november/11036-indian-navy-has-commissioned-the-ins-visakhapatnam-p15b-stealth-guided-missile-destroyer.html#:~:text=class%20of%20destroyers,-,Almost,-75%20percent%20of>
<https://www.navyrecognition.com/index.php/naval-news/naval-news-archive/2021/november/11036-indian-navy-has-commissioned-the-ins-visakhapatnam-p15b-stealth-guided-missile-destroyer.html#:~:text=The%20INS-,Visakhapatnam,-is%20propelled%20by>
<https://www.hindustantimes.com/india-news/indian-navy-to-get-first-stealth-guided-destroyer-all-about-ins-visakhapatnam-101637401943324.html>

Q.21) Which of the following statements is/are correct about Sher Shah Suri?

1. He built Sarais for the convenience of the travellers.
2. He restored the Grand Trunk Road, from the river Indus in the west to Sonargaon in Bengal.
3. Malik Muhammad Jaisi completed his work Padmavat during the reign of Sher Shah Suri.

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Sher Shah Suri was also known as Farid Khan. He was the founder of the Sur Empire in India, which had its capital in modern-day Bihar.

Statement 1 is correct. For the convenience of travellers, Sher Shah built a sarai at a distance of every two kos (about eight km) on roads. The sarai was a fortified lodging where travellers could pass the night and also keep their goods in safe custody. Separate lodgings for Hindus and Muslims were provided in these sarais. Brahmans were appointed for providing bed and food to the Hindu travellers, and grain for their horses.

Statement 2 is correct. Sher Shah paid great attention to the fostering of trade and commerce and the improvement of communications in his kingdom. **Sher Shah restored the old imperial road called the Grand Trunk Road, from the river Indus in the west to Sonargaon in Bengal.** He also built a road from Agra to Jodhpur and Chittor, evidently linking up with the road to the Gujarat seaports. He built a third road from Lahore to Multan. Multan was at that time the staging point for caravans going to West and Central Asia.

Statement 3 is correct. Sher Shah also patronized the learned men. Some of the finest works in Hindi, such as the **Padmavat of Malik Muhammad Jaisi, were completed during his reign.**

Source: <https://www.historydiscussion.net/history-of-india/achievements-of-sher-shah-during-medieval-india-2/2780>

Q.22) Consider the following statements with reference to contributions/policies of Murshid Quli Khan in Bengal:

1. He converted large part of officers' jagir lands into Khalsa land in Bengal.
2. He began to collect the land revenue through Ijaradars.
3. He permitted some landholders to confiscate the lands of others to increase the size of the landholdings.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Murshid Quli Khan became the Diwan of Bengal in 1700. He combined the office of Diwan and Nazim from 1716 till 1727 and established the rule of the Nawabs of Bengal. Murshid Quli Khan took several measures to streamline revenue administration in Bengal.

Statement 1 is correct. In 1722 he made a fresh revenue settlement that improved upon the settlements made earlier by Todar Mal and Shah Shuja. Murshid Quli Khan adopted a twofold plan for increasing the revenue, first, to turn all the **officers' jagirs in Bengal into Khalsa**, directly under the Crown collectors, and give the dispossessed officers **in exchange jagirs in the unsubdued province** of Orissa. Due to his strict policy the annual revenue collection increased. Thus, the **land assigned in jagir decreased and Khalisa land increased** thereby reducing the threat from the Imperial mansabdars whose power was crushed.

Statement 2 is correct. Secondly, he began to collect the land revenue through Ijaradars, by taking security bond from them. This was also known as **malzamini system**. The term malzamini, a derivation from the Persian mal, meaning property of any description which in the revenue practice of Bengal particularly signified rents from land, and zamin, meaning a surety or bondsman for the payment of rent or debt. Hence, he **changed Jagirdari system to the Mal Jasmani system**. In the second or third generation, those contractors came to be called zamindars and many of them were dignified with the title of Rajas and Maharajas. He thus created a new landed aristocracy in Bengal.

Statement 3 is correct. Bengal's agrarian relations were transformed due to Murshid Quli Khan's policy which **permitted some landholders to confiscate the lands of others** thereby increasing the size of the holdings. The extension of zamindaris was made possible **through military force, transfer and purchase**. All these methods were made legitimate by Murshid Quli Khan. It is clear that stress was laid on making the process of revenue collection **more organised and efficient** by introducing measurement for working out the jama and hasil. The Zamindars and ijaradars who did not delay payments and who had the support of the banking houses were given preference and were allowed to acquire large zamindaris. These measures improvised the revenue administration.

Source: <https://www.britannica.com/biography/Murshid-Quli-Khan>

https://en.banglapedia.org/index.php/Murshid_Quli_Khan

<https://egyankosh.ac.in/bitstream/123456789/22064/1/Unit-22.pdf>

Q.23) With reference to the life of Dara Shikoh, consider the following statements:

1. The book Safinat-ul-Awliya was written by him.
2. Mulla Shah Badakhshi, a sufi saint, acted as his mentor.
3. He translated Bhagavad Gita from the Sanskrit language into the Persian language.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Dara Shikoh (also spelt as Dara Shukoh) was the son of Mughal emperor Shah Jahan and brother of Mughal emperor Aurangzeb.

Statement 1 is correct. Dara wrote his first book, **Safinat-ul-Awliya, at the age of twenty-five**. It is a brief account of the lives of the Prophet and his family, the Caliphs, and saints from the five main Sufi orders that were then popular in India.

Statement 2 is correct. Mulla Shah Badakhshi (1550–1635) was a Sufi of the Qadiri order. He was the spiritual successor of the Sufi saint Mian Mir of Lahore and acted as mentor to the Mughal Prince Dara Shikoh and his sister Jahanara Begum.

Statement 3 is correct. In 1657, Dara Shikoh translated 52 Upanishads and The Bhagavad Gita from Sanskrit into Persian, which is one of his most well-known achievements. Dara respected the scholarly individuals of other religions and not only read their literature but also discussed with them as well. The "Mukalima-i-dara Shikuh wa Baba Lal" portrays a spiritual conversation between Dara Shikoh and Baba Lal, later recognized as Lal Dayal the Hindu mystic from Punjab.

Source: <https://indianculture.gov.in/stories/dara-shikoh>

[https://www.rct.uk/collection/1005038-bb/portrait-of-mulla-shah#:~:text=Mulla%20Shah%20Badakhshi%20\(1550%E2%80%931635,and%20his%20sister%20Jahanara%20Begum.](https://www.rct.uk/collection/1005038-bb/portrait-of-mulla-shah#:~:text=Mulla%20Shah%20Badakhshi%20(1550%E2%80%931635,and%20his%20sister%20Jahanara%20Begum.)

%20Begum.

Q.24) Arrange the following events in chronological order of their occurrence:

1. Nadir Shah's invasion
2. Battle of Buxar
3. Third Battle of Panipat
4. Death of Tipu Sultan

Select the correct answer using the code given below:

- a) 3-4-1-2
- b) 2-4-3-1
- c) 1-3-2-4
- d) 4-3-2-1

Ans) c

Exp) Option c is the correct answer.

- 1) **Event 1: Nadir Shah's invasion (1739):** Nadir Shah, the Persian ruler, invaded India and sacked Delhi, causing massive destruction and looting the Peacock Throne and Koh-i-Noor diamond.
- 2) **Event 3: Third Battle of Panipat (1761):** This battle was fought between the Maratha Empire and the Afghan forces led by Ahmad Shah Durrani, resulting in a decisive victory for the Afghans.
- 3) **Event 2: Battle of Buxar (1764):** This battle was fought between the British East India Company and the combined forces of the Mughal emperor, the Nawab of Bengal, and the Nawab of Awadh, leading to a significant victory for the British.
- 4) **Event 4: Death of Tipu Sultan (1799):** Tipu Sultan, the ruler of the Kingdom of Mysore, was killed during the Fourth Anglo-Mysore War when the British forces, led by Richard Wellesley, stormed his capital, Seringapatam.

Source: Ancient and Medieval India by Poonam Dahiya

Q.25) Which of the following statements best reflects the meaning of 'Principle of Reasonable Accommodation'?

- a) accommodating Socially and Educationally Backward Classes (SEBC) into judiciary gradually.
- b) limiting fundamental rights of a citizen for ensuring National security of country.
- c) positive discrimination against someone to enable them to gain equal opportunities.
- d) striking down only those provisions of law which are against the constitutional provisions.

Ans) c

Exp) Option c is the correct answer.

The Karnataka Government prohibited students from wearing head scarves inside classrooms. In this context the **Karnataka High court rejected** an argument in support of permitting Muslim girls wearing headscarves, which was based on the **principle of 'reasonable accommodation'**.

Option c is correct: The Principle of Accommodation **upholds positive discrimination** (positive action) against someone to enable them to gain equal opportunity. For example, the State providing additional support to **persons with disabilities** to facilitate their full and effective participation in society. The Principle promotes equality, enables the grant of positive rights and prevents discrimination based on disability, health condition or personal belief.

Further the **Rights of People with Disabilities Act, 2016**, defines 'reasonable accommodation' as "necessary and appropriate modification and adjustments, without imposing a disproportionate or undue burden in a particular case, to ensure to **persons with disabilities the enjoyment or exercise of rights equally with other.**

Reasonable accommodation should be provided, unless some **undue hardship** is caused by such accommodation. The petitioner in the Hijab case, argued that students(girls) should be allowed to wear head scarves as these are not causing any undue hardship to anyone. However, the Karnataka High court rejected this petition.

Source: <https://www.thehindu.com/news/national/explained-did-the-karnataka-high-courts-hijab-verdict-overlook-reasonable-accommodation/article65240144.ece>

Q.26) Surdas, a prominent Bhakti saint, was a contemporary of which of the following Mughal rulers?

- Aurangzeb
- Bahadur Shah I
- Akbar
- Shahjahan

Ans) c

Exp) Option c is the correct answer.

Surdas was contemporary of Akbar, the renowned Mughal ruler. Surdas was a blind bard, who spent most of the time in singing about Lord Krishna. He spent most of his lifetime in Agra and Mathura. He was born in 1478 and died in 1583 in Braj. [Akbar was born in 1542 and died in 1605. At the age of just 14 years (i.e., in 1556), he ascended the throne and became the emperor of the Mughal Empire.]

Surdas was a Vaishnava devotee and was also a revered poet and singer. His compositions glorified and captured his devotion towards lord Krishna. Most of his poems were written in the Braj language, while some were also written in other dialects of medieval Hindi, like Awadhi. He is famous for his works like Sur Sagar, Sur Saravali and many others works mostly written in the local languages.

Shahjahan born in 1592 and died in 1666.

Aurangzeb born in the year of 1618 and dies in 1707.

Bahadur Shah-I born in 1643 and died in 1712.

Source: Tamil Nadu Board, Higher secondary, History.

Q.27) Consider the following statements about popular women from the Mughal dynasty:

- Nur Jahan minted coins with her own name on them.
- Jahanara Begum received the title of 'Sahibat-al-Zaman' after the death of her mother.
- Mumtaz Mahal wrote the autobiography of Khwaja Muinuddin Chishti titled 'Munis al Arwah'.

Which of the statements given above are correct?

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

In the era of female suppression and patriarchal society, historical records show that Mughal kings were deeply invested in promoting female literacy, with free education and freedom of education prevalent in the land. Some women opted for religious education, while others became teachers, poets and authors to cultivate arts and culture.

Statement 1 is correct: Nur Jahan, the twentieth wife of Mughal emperor Jehangir, was a woman of remarkable strength and courage. She wielded such great power that she often presided the court alongside Jehangir and took part in matters of the state. **Nur Jahan was the Mughal empress who had coins minted with her name on them.** An ace marksman, she was also seen hunting tigers with her husband. Known for her shrewd planning and physical strength, Nur Jahan was able to rescue Jehangir from the clutches of rebel leader Mubarak Khan in 1626.

Statement 2 is correct: Jahanara Begum (1614–1681) was the eldest daughter of the Shah Jahan, the Mughal emperor of India (r. 1628–1658). Like her brother Dara Shikoh, the heir to the throne, she was profoundly spiritual, and they were initiated together into the Qadiriya order of Sufism. **Jahanara was an influential political figure, who received the title Sahibat al-Zaman ('Mistress of the Age') after her mother Mumtaz Mahal's death in 1631.** She actively participated in Sufism by extending her patronage to Sufi rituals, texts, and architecture, and encouraged women to engage in religious thought. **Jahanara authored 'Munis al arwah' (Confidant of spirits) which is the biography of Shaikh Muinuddin Chisti.**

Statement 3 is incorrect: 'Munis al arwah' was written by Jahanara and not by Mumtāz Mahal.

Arjumand Banu Begum, popularly known as Mumtāz Mahal (April, 1593 – 17 June 1631). She was married to Prince Khurram, popularly known as Shah Jahan. She regularly accompanied Shahjahan on his military and diplomatic campaigns but had never shown popular inclination towards politics. Hence, didn't play much active role in the court politics unlike, Nur Jahan.

Source:

S1: <https://theprint.in/features/nur-jahan-the-empress-who-wielded-power-in-the-mughal-court-and-hunted-tigers/164869/>

S2: <https://www.bl.uk/collection-items/princess-jahanaras-biography-of-a-sufi-saint>

S3: <https://ncert.nic.in/textbook/pdf/lehs202.pdf> (page : 157)

<https://www.tajmahal.gov.in/the-cause-of-the-taj.aspx>

<https://www.youlinmagazine.com/article/powerful-women-of-the-mughal-empire/MTY5Nw>

Q.28) With respect to the Battle of Biligram, consider the following statements:

1. The battle was fought between Humayun and Sher Khan.
2. After this Battle, Sher Khan adopted the title of 'Sher Shah'.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. The battle of Kannauj/Biligram was bitterly contested and it was **fought between Humayun and Sher Khan (Sher Shah Suri)**. Both the younger brothers of Humayun, Askari and Hindal, fought with Humayun.

Statement 2 is incorrect. In the **Battle of Chausa (1539) Sher Khan defeated Humayun and adopted the title of 'Sher Shah'**. Later in the **Battle of Kannauj after defeating again Humayun, he proclaimed himself as 'Emperor of Hindustan'**.

Source: Poonam Dalal Ch- 13 Pg. 657

Q.29) Which of the following factors contributed for the rise of the Marathas in India?

1. Rugged terrain of the region ruled by the Marathas.
2. Specialization of Maratha forces in the Guerrilla warfare.
3. Social unity created by the Bhakti movement.
4. Rise of Bijapur and Golkonda empires in the deccan.

Select the correct answer using the codes given below.

- a) 1 and 2 only
- b) 3 and 4 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

The Marathas played a major role in the decline of Mughal power. Under the dynamic leadership of Shivaji, they posed a strong challenge to Mughal power during the 1670s. There are several reasons which gave way to the rise of the Maratha empire in India.

Statement 1 is correct: The region which the Marathas ruled consisted of a narrow strip of land called Konkan. Its precipitous mountains, inaccessible valleys and impregnable hill-forts were most favourable for military defence. This rugged terrain, hence prevented easy entrance of the Mughals or enemy army into the state.

Statement 2 is correct: The Marathas claimed long tradition of military prowess and prided themselves on their loyalty, courage, discipline, cunningness, and endurance. Marathas often avoided direct battles with the Mughals, who were equipped with strong cavalry and deadly cannons. Rather, they **used Guerrilla warfare as their strength**. They possessed the ability to plan and execute the surprise lightning attacks at night.

Statement 3 is correct: The intellectual and ideological framework for their rise was provided by the bhakti movement which got "crystallised into "Maharashtra dharma". This helped in providing the Marathas a cultural identity as well. The spread of the Bhakti movement inculcated the spirit of oneness among the Marathas. Tukaram, Ramdas, and Eknath were the leading lights of the movement. The hymns of the Bhakti saints were sung in Marathi and they created a bond among people across the society. This allowed Maratha rulers to prepare a unified force against the Mughals.

Statement 4 is incorrect: It was not the rise but degeneration of Bijapur and Golkonda empire, which prompted the Marathas to unite and fight together. Taking opportunity of political void in the Deccan, Shivaji rallied the Marathas who lay scattered in many parts of the Deccan under his leadership and built a mighty kingdom, with Raigarh as capital.

Source: Tamil Nadu Board, Higher secondary, History, pg. 225-226.

Q.30) With reference to Oil bonds, consider the following statements:

1. These bonds are promissory notes issued by the Union Government to Oil Marketing Companies (OMCs).
2. The issuance price of these bonds will not be reflected in budget documents as expenditure incurred by the Government.
3. These bonds can be used by commercial banks as Statutory Liquid Ratio (SLR) holdings.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Union Finance Minister has recently said that the government cannot bring down taxes and oil prices because it has to pay for oil bonds issued by the previous Government.

Statement 1 is correct: It is true that **Oil bonds are promissory notes issued by the Government to Oil Marketing Companies** i.e by Oil bonds, the government promises OMCs a sum of money on maturity of these bonds.

A promissory note is a debt instrument that contains a **written promise by one party** (note's issuer) to pay another party (note's receiver) a definite sum of money, either on-demand or at a specified future date.

Statement 2 is correct: It is true that the issuance **price of these bonds will not be reflected in budget documents**. As the government **did not subsidise** these companies, these payouts did not show up in budget documents, until the repayment of the principal or interest components took place.

Thus, by issuing such oil bonds, the government is able to protect the consumers (from rising oil prices) without either ruining the profitability of the OMCs or running a huge budget deficit itself.

Statement 3 is incorrect: Oil bonds are considered less liquid as these bonds **cannot be qualified to be held by banks as Statutory Liquid Ratio (SLR)**. SLR is an amount that banks are required to maintain with themselves in the form of **government securities/cash/gold**.

Source: <https://indianexpress.com/article/explained/the-economics-of-oil-bonds-russia-ukraine-war-7871329/>

<https://www.business-standard.com/about/what-is-oil-bonds#:~:text=show%20up%20in-,budget,-documents%2C%20until%20the>

Q.31) Consider the following statements regarding the Mughal office of Mutasaddi:

1. Mutasaddi was directly appointed by the emperor.
2. He collected taxes on merchandise and maintained a customs house.
3. He was responsible for checking and inspecting the horses and soldiers maintained by the Mansabdars.

Which of the statements given above is/are correct?

- a) 2 and 3 only
- b) 2 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

The Mughals retained many features of the administrative system of the Sultanate and Sher Shah Suri's administration. The administration was highly centralised and the territories of the empire were divided into Jagir, Khalisa (income went directly to the royal exchequer), and Inam (lands allowed to learned and religious men).

Statement 1 is correct: The port administration was independent of the provincial authority. The governor of the port was called **Mutasaddi who was directly appointed by the emperor**.

Statement 2 is correct: The Mutasaddi collected taxes on merchandise and maintained a customs house. He also supervised the mint house at the port.

Statement 3 is incorrect: The Bakshi in the province performed the same functions as were performed by Mir Bakshi at the centre. He was appointed by the imperial court at the recommendation of Mir Bakshi. He was responsible for checking and inspecting the horses and soldiers maintained by the mansabdars in the suba.

Source: Poonam Dahiya Ancient and Medieval India.

Q.32) With reference to Maratha Confederacy, an alliance formed in the 18th century, consider the following statements:

1. Baji Rao I played an important role in organizing the Maratha Confederacy.
2. It is comprised of Bhonsle, Holkars and Scindia.
3. It was dissolved after the Third Anglo-Maratha War.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Bajirao I (1720-40), considered greatest of all the Peshwas, had started a confederacy of prominent Maratha chiefs to manage the rapidly expanding Maratha power, and to some extent appease the kshatriya section of the Marathas (Peshwas were brahmins) led by the senapati Dabodi. Under the arrangement of the Maratha confederacy, each prominent family under a chief was assigned a sphere of influence which he was supposed to conquer and rule, but in the name of the then Maratha king, Shahu.

Statement 1 is correct: Baji Rao I, who was the prime minister of the Maratha Empire under the Peshwa dynasty, played a major role in organizing the Maratha Confederacy. He forged alliances with various regional powers, including the Bhonsle, Holkars, and Scindias, to create a united front against the Mughal Empire and other rival powers.

Statement 2 is correct: The Maratha Confederacy comprised various regional powers, including the Bhonsle, Holkars, and Scindias, who came together under a loose umbrella organization. These regional powers had their own armies and territories but would cooperate with each other on matters of mutual interest and concern.

Statement 3 is correct: The Maratha Confederacy was dissolved after the Third Anglo-Maratha War.

Source: Tamil Nadu History Text book 11th std ch 15 ; A Brief History of Modern India by Rajiv Ahir

Sl: <https://egyankosh.ac.in/bitstream/123456789/20299/1/Unit-3.pdf> (Pg41)

Q.33) Consider the following statements regarding the Jagirdari system under the Mughal Empire:

1. It was a modified form of the Iqta system of the Delhi Sultanate.
2. Under this system, nobles were assigned revenue of a particular territory for their services to the state.
3. Mashrut Jagirs were given in lieu of salaries and were transferable every three to four years.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The Mughals retained many features of the administrative system of the Sultanate and Sher Shah Suri's administration. The administration was highly centralised and the territories of the empire were divided into Jagir, Khalisa (income went directly to the royal exchequer), and Inam (lands allowed to learned and religious men). Few aspects of the jagirdari system under the Mughals are discussed below:

Statement 1 is correct: Iqta of the Sultanate period in a modified form became Jagir under the Mughals. Iqtas were the lands assigned to officials instead of payment for their services.

Statement 2 is correct: The Jagirdari system is the system of assignment of revenue of a particular territory to the nobles for their services to the state and was an integral part of the Mansabdari system.

Statement 3 is incorrect: There were various types of jagirs such as-

- 1) Tankha Jagirs: Which were given in lieu of salaries and they were transferable every three to four years.
- 2) Mashrut Jagirs: These were given on certain conditions. It meant an increase of sawar rank for a temporary period. This was an emergency measure adopted in the time of crisis, that is, the permission to recruit more horsemen at the expense of the state.

Source: Poonam Dahiya Ancient and Medieval India.

Q.34) Which of the following statements is/are correct about Maratha Administration under Peshwas?

1. Kotwal was responsible for the maintenance of law and order in the urban areas.
2. Maratha military system under the Peshwas was modelled on the lines of Mughal military system.
3. The Maratha provinces were directly administered by provincial governors known as Raj Pramukhs.

Select the correct answer from the code below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) a

Exp) Option a is the correct answer.

The Peshwa was initially one of the Ashta Pradhan of Shivaji and the office was not hereditary. However, as the king's power declined, the Peshwas gained prominence. Balaji Vishwanath's leadership made the Peshwa office supreme and hereditary. They gradually took over the administration and religious leadership of the state.

Statement 1 is correct: The Kotwal was the chief officer in towns and cities during the Maratha period, responsible for maintaining law and order, regulating prices, settling civil disputes, and sending monthly accounts to the government.

Statement 2 is correct: The Maratha military system under the Peshwas was modelled on the Mughal military system. The mode of recruitment, payment of salaries, provisions for the families of the soldiers, and the importance given to the cavalry showed a strong resemblance to the Mughal military system.

Statement 3 is incorrect: During the Maratha Empire under the Peshwas, the provinces varied in size and were governed by **provincial governors known as Sarsubahdars**. The provinces were further divided into Subahs and Pranths.

Source: Tamil Nadu History Text book 11th std ch 15

Q.35) With reference to 'Parboiled rice', consider the following statements:

1. It is prepared by partially cooking the rice at the paddy stage.
2. It is possible to process all rice varieties into parboiled rice.
3. This rice will have higher resistance against fungi compared to raw rice.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Telangana Chief Minister staged a dharna demanding a **uniform paddy procurement policy**. The protest came in response to the Union government's decision to stop the purchase of excess parboiled rice. It must be noted here that Telangana is the major producer of parboiled rice.

Statement 1 is correct: Parboiled rice is cooked partially and then dehydrated and dried out for sale to consumers i.e, rice that has been **partially boiled at the paddy stage, before milling**. The Ministry of Food Affairs or Food Corporation of India (FCI) does not define what constitutes parboiled rice. On the other hand, **raw rice is produced by drying and milling paddy without steaming**.

Statement 2 is correct: It is true that **all rice varieties can be possibly processed into parboiled rice**, however ideal to process **long slender varieties** to prevent breakage during milling. Further **aromatic varieties** should not be parboiled because this process can reduce its aroma.

Statement 3 is correct: Parboiling will **increase rice's resistance against fungi** and insects; thus, it is true that **parboiled rice will have higher resistance against fungi** compared to raw rice.

Source: <https://indianexpress.com/article/explained/what-is-parboiled-rice-and-why-centre-wants-to-stop-purchasing-it-7873759/>

Q.36) Which among the following were the sources of the revenue for the Maratha administration?

- 1. Sale of forest produce
- 2. Royalty fees for minting of coins
- 3. Fines as punishment for Adultery
- 4. Tax on widow re-marriage

Select the correct answer using the code given below:

- a) 3 and 4 only
- b) 1 and 2 only
- c) 2, 3, and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Option 1 is correct: Land revenue was the main source of income. The Peshwas gave up the system of sharing the produce of the agricultural land followed under Shivaji's rule. Customs, excise duties and sale of forest produce also yielded much income.

Option 2 is correct: Goldsmiths were allowed to **mint coins on payment of royalty to the government and getting license for the purpose**.

Option 3 is correct: **Fines** were collected from persons suspected or found guilty of **adultery**.

Option 4 is correct: Further, miscellaneous **taxes** were also collected. It included

- 1) Tax on land, held by Deshmukhs and Deshpandes.
- 2) Tax on land kept for the village Mahars.
- 3) Tax on the lands irrigated by wells.
- 4) House tax from all except Brahmins and village officials.

5) Annual fee for the testing of weights and measures.

6) Tax on the re-marriage of widows.

7) Tax on sheep and buffaloes.

8) Pasture fee.

9) Tax on melon cultivation in riverbeds.

10) Succession duty.

11) Duty on the sale of horses, etc.

When the Maratha government was in financial difficulty, it levied on all land-holders

Kurja-Patti or Tasti -Patti, a tax equal to one year's income of the tax-payer.

Source: Ancient and Medieval India by Poonam Dahiya; Chapter-13

Q.37) Which among the following options can be considered as the correct reasons for Nadir Shah's invasion of India?

1. Invitation from Nizam-ul-Mulk and Saadat Khan.

2. Mughal ruler Mohammad Shah provided asylum to the Afghan rebels.

3. Mughal emperor detained the envoy of Nadir Shah.

Select the correct answer using the code given below:

a) 1 and 2 only

b) 2 and 3 only

c) 1 and 3 only

d) 1, 2 and 3

Ans) d

Exp) option d is the correct answer.

Nadir Shah was the Emperor of Iran who rose from being the son of poor shepherd to a national hero by driving the Afghans out of Iran. There were several causes for Nadir Shah's invasion of India in 1739. Some of the key factors include:

1) **Mohammad Shah Rangeela suddenly withdrew his ambassador from the Persian court** and snapped all diplomatic ties with that country after Nadir Shah came to power in c.1736 CE.

2) **Nizam-ul-Mulk and Saadat Khan sent special messages to Nadir Shah inviting him to invade India. Hence, option 1 is correct.**

3) **Also, Rangeela gave shelter to some Afghan nobles who had escaped from Nadir Shah** when he had invaded Afghanistan. **Hence, option 2 is correct.**

4) **Nadir Shah sent three envoys to the Mughal court and his third envoy was detained by Rangeela,** which probably infuriated him. **Hence, option 3 is correct.**

Source: Ancient and Medieval India by Poonam Dahiya; Chapter-13

Q.38) Consider the following statements with reference to the Mughal ruler Muhammad Shah's reign in India:

1. He was the longest-serving ruler of the Mughal dynasty.

2. The autonomous states of Deccan and Awadh emerged under his reign.

Which of the above given statements is/are correct?

a) 1 only

b) 2 only

c) Both 1 and 2

d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The longest-serving Mughal ruler was not **Mohammad Shah** as he ruled for 29 years. Instead, Emperor Akbar, who reigned from 1556 to 1605, ruled for 49 years. Similarly, Aurangzeb reign was of nearly 49 years, who ruled from 1658 to 1707. Mohammad Shah ruled from 1719 to 1748.

Statement 2 is correct: Several autonomous states emerged under **Mohammad Shah's** reign:

- 1) Nizam-ul-Mulk – Deccan
- 2) Saadat Khan – Awadh
- 3) Murshid Quli Khan – Bengal, Bihar, and Orissa

Later, the weakness of the empire was exposed when Nadir Shah not only invaded India but also imprisoned the Mughal Emperor and looted Delhi in c.1739 CE.

Source: Ancient and Medieval India by Poonam Dahiya; Chapter-13

Q.39) Consider the following statements about Malik Ambar, a popular name in the history of Medieval India:

1. He was one of the important ministers in the court of Mughal emperor Aurangzeb.
2. He developed, for the first time, a new system of land revenue called Zabti system.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Malik Ambar (1546-13 May 1626) was a Siddi military leader, who served as the Peshwa (Prime Minister) of the Ahmednagar Sultanate in the Deccan region of India. **He was born in the mid-sixteenth century at Harar in Ethiopia and was known simply as "Chapu". He was sold by his poor parents to an Arab slave merchant.**

Statement 1 is incorrect: Malik Ambar never worked at the Mughal court. Rather, he identified threat posed by the Mughals to the Deccan and he acted as a major bone of contention in Mughal dream of expanding their rule in the south. **By virtue of his hard work and sheer brilliance he rose to the rank of military commander and later became regent of the Ahmednagar dynasty.**

Statement 2 is incorrect: Malik Ambar tried to improve the administration of the Nizam Shahi state by introducing Todar Mal's system of land revenue. He abolished the old system of giving land on contract (ijara) which was ruinous for the peasants and adopted the zabti system. The **Dahsala or Zabti System** was implemented during Akbar's reign in 1580-82 to address issues that arose as a result of fixing prices each year and revenue settlement for the previous year. **This system was primarily developed by Raja Todarmal, who was the finance minister during the Mughal Empire in India at the time.**

Source: Tamil Nadu Board, Higher secondary, History, pg. 207

<https://www.tribuneindia.com/2006/20060813/spectrum/art.htm>

History of medieval India by Satish Chandra. (Pg 284)

Q.40) Which of the following statements are correct in respect of "Hattis communities" of Himachal Pradesh?

1. Hattis are one of the Particularly Vulnerable Tribal Groups (PVTGs) of India.
2. People of this community do not follow the caste system.

3. Khumbli is a traditional council administering the local affairs of Hattis communities.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Hattis community was in news on account of Himachal Pradesh Government's assurance of Centre's decision to consider its request for inclusion of the Hatti community in the list of Scheduled Tribes in the state. This announcement came just before the State was about to witness a new Assembly election.

Statement 1 is incorrect: Hattis communities do not belong to Particularly Vulnerable Tribal Groups (PVTGs) of India. At present India has 75 PVTGs spread across 18 States and UT of Andaman & Nicobar Islands. It must be noted here that **Himachal Pradesh has no PVTGs** within its territory.

Statement 2 is incorrect: Hattis communities follow a rigid caste system, the Bhat and Khash are the upper castes, while the Badhuis are below them. Inter-caste marriages have traditionally been prohibited in Hattis communities.

Statement 3 is correct: It is true that Khumbli is a traditional council governing the local affairs of Hattis communities. Khumbli, is similar to the khaps of Haryana, which decide community matters. It is unfortunate that the Khumbli's power has remained unchallenged despite the establishment of the panchayati raj system.

Knowledge Base: **Parliament** has recently passed The Constitution (Scheduled Tribes) Order (Third Amendment) Bill, 2022 **to grant ST status to Hatti community** in Himachal Pradesh.

As per the **2011 Census**, there are over 700 recognised Scheduled Tribes in India. However, states/UTs like **Punjab, Chandigarh, Haryana, NCT of Delhi, and Puducherry have no listed STs at present.**

Source: <https://indianexpress.com/article/explained/explained-hattis-himachal-pradesh-st-status-7891780/>

<https://vikaspedia.in/social-welfare/scheduled-tribes-welfare/particularly-vulnerable-tribal-groups#:~:text=Accordingly%2075-,PVTGs,-have%20been%20identified>

<https://www.tribuneindia.com/news/himachal/parliament-clears-bill-to-%C2%A0grant-scheduled-tribe-status-to-hatti-community-in-himachal-pradesh-461655>

Q.41) Consider the following statements with reference to the Third Battle of Panipat:

1. Ahmad Shah Abdali defeated the Mughals in the Third Battle of Panipat.
2. The result of battle paved the way for the rise of the British power in India.
3. Ahmad Shah Abdali was supported by Shuja-ud- Daula in this battle.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: Third Battle of Panipat fought between the **Maratha Confederacy and the Durrani Empire (under Ahmad shah Abdali)** on January 14, 1761, resulted in a catastrophic defeat for the Marathas.

Statement 2 is correct: The **third battle of Panipat, 1761** is one of the decisive battles in the history of India. The defeat in the battle dealt a severe blow to the Marathas and the Mughal Empire and thereby **paved the way for the rise of the British power in India**. Abdali returned to his capital after the war and did not stay in India. He ordered the chiefs in India, which included Robert Clive of the East India Company to recognise the Mughal Shah Alam II as the Emperor.

Statement 3 is correct: **Shuja-ud-Daula was a prominent regional ruler of Awadh and had allied with the Durrani Empire (Afghans) against the Marathas**. He provided troops, artillery, and supplies to the Durrani army in the Third Battle of Panipat.

Source: Ancient and Medieval India by Poonam Dahiya; Chapter-14

Q.42) Which among the following was the main reason behind the construction of Buland Darwaza at Fatehpur Sikri?

- To commemorate Akbar's victory of Gujarat.
- To commemorate the victory of Malik Amber against the Mughals.
- To generate employment during the famine of 1784.
- To have a grand entry point to enter in the imperial city of 'Shahjahanabad'.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: In c.1572 CE, Akbar advanced on Ahmedabad via Ajmer and defeated the Gujarat ruler Muzaffar Shah without any serious resistance. **It was in order to commemorate the victory of Gujarat that Akbar built the Buland Darwaza at Fatehpur Sikri.**

Option b is incorrect: **Bhadkal Gate** in Aurangabad, Maharashtra was constructed in 1612 by Murtaza Nizamshah's vajir Malik Ambar of Ahamadnagar. It was **built to commemorate the victory against the Mughals, so it is also famous as the 'Victory Gate'**. It is also a State Protected Monuments of Maharashtra.

Option c is incorrect: Identical in design to an ancient gate in Constantinople in Turkey, Rumi Darwaza was built in the 1780s by Nawaz Asaf-ud-Daula, an Awadhi nawab. Also referred to as Turkish Gate, the ornate structure is marked by an eight-faceted umbrella-like structure in its uppermost part. Now a symbol of Lucknow, **Rumi Darwaza** was earlier used as an entrance gate to the Old City, and soars to a height of 60 ft. **It was built to generate employment during the famine of 1784.**

Option d is incorrect: **Kashmere Gate or Kashmiri Gate is one of the many gateways constructed under the aegis of Shahjahan to enter his imperial city of 'Shahjahanabad'** -the Seventh city of Delhi. It is located towards the North of Red Fort (Lal Quila) in the locality today known as Kashmere gate after this historic gateway. It is the Northern gate to the historic walled city of Delhi. The gate is so named because it was at the start of a road that led to Kashmir.

Source: <https://timesofindia.indiatimes.com/travel/destinations/the-most-famous-historical-gateways-of-india/photostory/83995369.cms>

<https://www.incredibleindia.org/content/incredible-india-v2/en/destinations/lucknow/rumi-darwaza.html#:~:text=Also%20referred%20to%20as%20Turkish,during%20the%20famine%20of%201784>

<https://amritmahotsav.nic.in/district-repository-detail.htm?1646>

Poonam Dahiya Ancient and Medieval India

Q.43) Consider the following statements with reference to the Martanda Varma, the ruler of Travancore in 18th century:

- He supported and increased the power of the Nayar aristocracy.
- He extended trade patronage to the Syrian Christians to limit European influence.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Martanda Varma, ruled Travancore (southern Kerala state of Venad) from c.1729 to 1758 CE, initiated many measures to strengthen his authority,

Statement 1 is incorrect: Martanda Varma, who ruled Travancore from 1729 to 1758, implemented reforms to reduce the power of the Nayar aristocracy. He established a strong centralized state by consolidating his power and reorganizing the administration and military, which eventually led to a diminished influence of the Nayar nobility.

Statement 2 is correct: Martanda Varma also sought to limit European influence in the region. One of the ways he did this was by extending trade patronage to the Syrian Christians, who were well-established traders in the region. This allowed Travancore to maintain a degree of independence from European powers, particularly the Dutch and the British, who were expanding their influence in India during the 18th century.

Source: Ancient and Medieval India by Poonam Dahiya; Chapter-14

Q.44) Consider the following statements regarding important events during the reign of Mughal Emperor Shah Jahan:

1. Siege of Hooghly against Portuguese was ordered by Shah Jahan
2. He expanded the Mughal empire in the north-eastern region till modern day Assam.
3. Illustrations of Persian versions of Mahabharata and Ramayana were produced in miniature form during Shah Jahan's reign.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is the correct answer: In c.1632 CE, Shah Jahan ordered the Siege of Hooghly against Portuguese near Hooghly due to regular abuse of trading privilege by the Portuguese traders.

Statement 2 is incorrect: Aurangzeb could expand Mughal power in Assam in the north-east region. In c.1662 CE, Mir Jumla, Aurangzeb's ablest general and the governor of Bengal, led the expedition against the Ahoms.

Statement 3 is incorrect: Akbar commissioned the illustrations of several literary and religious texts. **Illustrations of Persian versions of Mahabharata and Ramayana were produced in miniature form.** Many other Indian fables became the miniature paintings in the art studio established by Akbar. Historical works such as the Akbar Nama also remained the main themes of Mughal paintings.

Source: Poonam Dahiya Ancient and Medieval India

Q.45) With reference to 'Agnipath scheme', consider the following statements:

1. The scheme is launched by the Ministry of Home Affairs.
2. The scheme applies to recruitment of both commissioned and non-commissioned posts in the Indian Army.
3. No soldiers recruited under this scheme will be eligible for benefits under the old pension scheme.

Which of the statements given above is/are **incorrect**?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The government has introduced **Agnipath scheme**, which is a short-term recruitment plan. Under the new policy, **males aged 18-21 years with 10+2 qualification**, will be enrolled on contractual basis for a period of **four years, including six months of training**.

Statement 1 is incorrect: Agnipath scheme is launched by the Ministry of Defence (not by Ministry of Home affairs). Earlier, the 'Tour of Duty' scheme (Agnipath scheme) was conceived in 2020 under the aegis of 'Department of Military Affairs' headed by then Chief of Defence Staff (CDS) **General Bipin Rawat**.

Statement 2 is incorrect: Currently, the scheme applies **only to recruitment of Non-commissioned posts in the Indian Army**. Commissioned officers are the army's highest ranked officers, and they are the group A or class-1 service officers.

Non-commissioned officers are officers working below the commissioned officers, their designation includes Sepoy, Naik, Havildar, Naib Subedar etc.

Statement 3 is incorrect: 75% of the soldiers recruited under this scheme will be released from service on completion of the four years and the **remaining (25%) will be re-enrolled for a period of 15 years** on fresh terms of service. These 25% of soldiers are **eligible for pension benefits under the old pension scheme** and other post-retirement benefits.

However, those **soldiers who were released from service upon completion of four years (called Agni Veers)** will be given a severance package called '**Seva Nidhi**', **an amount of Rs 10 lakh** – an individual contributing 30 percent of monthly emoluments and government supplementing with an equal amount. Hence it is evident these soldiers are **not eligible for pension benefits under the old pension scheme**.

Source: <https://indianexpress.com/article/cities/chandigarh/major-general-ret-d-g-g-dwivedi-tour-of-duty-dont-blunt-our-winning-edge-7969762/>

Q.46) Which among the following foreign personalities/travelers visited India during the reign of Mughal Emperor Jahangir?

1. Sir Thomas Roe
2. William Hawkins
3. Nicolo Conti
4. François Bernier

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 3 and 4 only
- c) 1, 2 and 3 only
- d) 1 and 4 only

Ans) a

Exp) Option a is the correct answer.

The Mughal Emperor **Jahangir ruled India from 1605 to 1627**. During his reign, several foreign travellers visited India.

Option 1 is correct: An English diplomat, **Sir Thomas Roe was sent as an ambassador by King James I to the court of Jahangir in 1615**. He stayed in India for three years and documented his experiences in his journals, which provide valuable insights into the Mughal court and the political climate of the time.

Option 2 is correct: Captain **William Hawkins** visited Mughal Emperor Jahangir's court in **1608 CE, to negotiate certain concessions** for the English East India Company. He succeeded in securing permission to raise a settlement at Surat.

Option 3 is incorrect: **Niccolò de' Conti was an Italian merchant and explorer who visited India in the 15th century, well before the reign of Jahangir. Conti travelled across Asia between 1419 and 1444**, visiting countries like India, Persia, and Southeast Asia. His accounts of his travels provided valuable information on the cultures, customs, and geography of the regions he visited.

Option 4 is incorrect: **Francois Bernier was a French physician and traveller. Francois Bernier arrived in India in 1658**. He worked as a physician to Mughal prince Dara Shikoh, the eldest son of the Mughal emperor Shah Jahan. After Dara Shikoh's execution, he was attached to the court of the Mughal emperor Aurangzeb.

Source: Ancient and Medieval India by Poonam Dahiya; Chapter-13

Q.47) With respect to the Battle of Khanwa, consider the following statements:

1. In this battle, Afghan chief Mahmud Lodhi helped Rana Sanga.
2. Babur declared this battle as Jihad against the Hindus.
3. The Battle lasted for more than a year until it could come to any conclusion.
4. After this Battle, Babur assumed the title of Ghazi.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2 and 4 only

Ans) d

Exp) Option d is the correct answer.

The battle of Khanwa (near Agra) was fought in 1527 between Rana Sangha of Mewar and Babur.

Statement 1 is correct. In the battle, the Rajput forces of Rana Sanga, supplemented by the contingents of Hasan Khan Mewati and the **Afghan Mahmud Lodhi and Raja Medini Rai of Alwar**, fought against Babur.

Statement 2 is correct. In this Battle, Babur **declared the struggle with Rana Sanga as a Jihad (holy war) of the Muslims against the Hindus**. His speech infused a new vigour among his soldiers, and everyone swore off the holy Quran.

Statement 3 is incorrect. The battle, which lasted for **not more than 10 hours**, was bitterly contested and became an exceedingly brutal affair and Babur won this battle.

Statement 4 is correct. After winning the Battle of Khanwa, **Babur assumed the title of 'Ghazi'**. After winning the battle of Panipat (1526), he assumed the title of 'Emperor of Hindustan'.

Source: Poonam Dalal Ch 12 & 13 Pg- 623, 653 Tamil Nadu Board Ch-20, Pg-222,

Q.48) With reference to the Deccan policy of Mughals, consider the following:

1. Babur had no planned policy towards the Deccan.
2. Akbar wanted the rulers of the Deccan states to acknowledge his suzerainty.
3. The state of Ahmednagar was completely annexed to the Mughal empire during the rule of Shah Jahan.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Mughal Deccan policy started from Akbar's period as Babur and Humayun were only concerned with the consolidation of North India which was a logical step.

Statement 1 is correct. Babur was busy consolidating the Mughal rule in north India and hence could not pay any attention towards the south (deccan).

Statement 2 is correct. Akbar was the first among the Mughal emperors who planned to conquer the Deccan after completing his conquest in the North. His primary objective in conquering the Deccan was extension of the empire. Akbar was the first Mughal ruler who wanted to extend the Mughal suzerainty over the Deccan states.

Statement 3 is correct. The state of Ahmadnagar was completely annexed to the Mughal empire under Shah Jahan and Bijapur and Golkunda were forced to accept the suzerainty of the emperor.

Source: <https://www.historydiscussion.net/history-of-india/mughal-emperors/deccan-policy-of-the-mughal-emperors-indian-history/6622#:~:text=Aurangzeb's%20policy%20towards%20the%20Deccan,the%20Marathas%20in%20the%20Deccan.>

Medieval India by Satish Chandra Ch:14 The Deccan and South India

Q.49) Which of the following statements correctly describes the concept of Zawabit?

- a) It was a land revenue system during the reign of Sher Shah Suri.
- b) It was a new custom introduced by Balban involving kissing the Sultan's feet.
- c) It was a secular decree issued by Aurangzeb to supplement the existing legal system.
- d) It was a new religious policy promulgated by Akbar to promote religious harmony.

Ans) c

Exp) Option c is the correct answer.

Option a is incorrect: The land revenue administration was very well organized and revenue officers were called Amils while Qanungo were the officials in charge of maintaining revenue records. Sher Shah for the first time introduced a schedule of crop rates. He improved land revenue system by adopting **Zabti-i-harsal (land assessment every year)** and classified all cultivable lands into three heads (good, middle, bad).

Option b is incorrect: Balban introduced rigorous court discipline and new customs such as **Sijada** (prostration) and paibos (kissing the Sultan's feet) to prove his superiority over the nobles.

Option c is correct: It is believed that Aurangzeb issued secular decrees, called **Zawabit**. Zawabit supplemented the shara (Legal system in Islam), and were often modified in view of the conditions prevalent in India.

Option d is correct: In c.1582 CE, Akbar promulgated a new religion called **Din-i-Ilahi**/Tauhindi- Ilahi (Divine Monotheism), which believes in one God and in Sul-i- Kul/peace to all. It contained the good points of all religions and the basics were rational.

Source: Poonam Dahiya Ancient and Medieval India

Q.50) With reference to 'SVANidhi se Samridhhi' program, consider the following statements:

1. The Quality Council of India (QCI) is the implementing partner of this program.
2. The program covers all the BPL (Below Poverty Line) families living in rural India.
3. The program envisages creating convergence among union ministries to enhance the welfare of targeted beneficiaries.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

The Union Ministry of Housing and Urban Affairs (MoHUA) has launched '**SVANidhi se Samridhhi**' program in **additional 126 cities** across 14 States/ UTs in Phase 2 of the program. This programme was launched as an **additional program of PMSVANidhi**, in 2021 in 125 cities in Phase 1.

Statement 1 is correct: The Union Ministry of Housing and Urban Affairs (MoHUA) has launched 'SVANidhi se Samridhhi' program and Quality Council of India (QCI) is the implementing partner of this program.

Statement 2 is incorrect: SVANidhi se Samridhhi program does not cover rural areas. It aims to cover all Urban cities. The program aims to map the socio-economic profile of the PM SVANidhi beneficiaries and their families in Urban areas. PM SVANidhi aims to benefit over **50 lakh street vendors** who have been vending in urban areas.

Statement 3 is correct: The SVANidhi se Samridhhi program has two components, first one is to create a **central database of Street vendors and their families** on various socio-economic indicators.

Second is to create an inter-ministerial **convergence platform** between various **Union Ministries** to extend the safety net of welfare schemes to street vendor households, thus promoting welfare of street vendors.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1816139>

Q.1) Consider the following statements regarding the Indo Islamic architecture in India:

1. Qutub Minar is a 14th century monument built entirely of red sandstone.
2. The Taj Mahal is a perfect symmetrical planned building entirely built using marble stone.
3. The tomb of Itimad-Ud-Daula in Agra is the first example of a tomb built on a riverbank in India.

How many statements given above are correct?

- a) Only one statement
- b) Only two statements
- c) All three statements
- d) None of the statements

Ans) a

Exp) Option a is the correct answer.

Islamic architecture is a term used for the building traditions in places in India. Though usually associated with religious buildings, Islamic architecture encompasses fortresses, palaces, tombs, public buildings such as schools, and smaller structures such as fountains, public baths, and domestic architecture. Few iconic examples of Islamic architecture are discussed below:

Statement 1 is incorrect: The Qutub Minar, built in the thirteenth century, is a 234-foot-high tapering tower divided into five storeys. The minar is a mix of polygonal and circular shapes. **It is largely built of red and buff sandstone with some use of marble in the upper storeys.** It is characterised by highly decorated balconies and bands of inscriptions intertwined with foliated designs.

Statement 2 is incorrect: The Taj Mahal is a perfect symmetrical planned building, with an emphasis of bilateral symmetry along a central axis on which the main features are placed. **The building material used is brick-in-lime mortar veneered with red sandstone and marble and inlay work of precious/semi-precious stones.** The mosque and the guest house in the Taj Mahal complex are built of red sandstone in contrast to the marble tomb in the centre. Both the buildings have a large platform over the terrace at their front. Both the mosque and the guest house are the identical structures.

Statement 3 is correct: The Tomb of Itimad-Ud-Daula was constructed by the Mughal queen Nur Jahan between 1622 and 1628 where her father Itimad Ud Daula (Mirza Ghiyas Beg) was buried. It was as a tribute to him, that Nur Jahan built the mausoleum after his death. **It is the first example of a tomb built on a riverbank in India.**

Source:

<https://whc.unesco.org/en/list/252/#:~:text=The%20building%20material%20used%20is,marble%20omb%20in%20the%20centre.>

<http://adaagra.org.in/itimaduddaulah.aspx>

Q.2) The Shore temple, which is considered to be a part of popular Sapt Pagoda of Mahabalipuram, was built during the reign of?

- a) Narsimha Varman I
- b) Mahendra Varman I
- c) Mahendra Varman II
- d) Narsimha Varman II

Ans) d

Exp) Option d is the correct answer.

According to Marco Polo's travels, there were Seven Pagodas (Sapt Pagoda) in Mamallapuram, and the Shore Temple is believed to be one of them. The temple is said to be the final one in a sequence of seven temples constructed along this coastal region. In 2004, the occurrence of the tsunami exposed an ancient

temple that had collapsed and was built with granite blocks. It is speculated that the other six temples still exist underwater.

Shore temple, which is considered to be one of the most ancient and important in South India, is believed to have been constructed during the **reign of Rajasimha/Narasimhavarman II, a former king of the Pallava dynasty.**

Source : <https://www.tamilnadutourism.tn.gov.in/destinations/mamallapuram-shore-temple>

Q.3) Consider the following statements regarding Udayagiri and Khandagiri caves of Odisha:

1. They were built during the period of Meghavahana dynasty.
2. The caves were built on the Kumari Mountain range for the Jain monks.
3. Hathigumpha cave of Udayagiri bears the inscriptions of conquests of the King Kharavela.
4. The Yaksha and Yakshini of each Jain Tirthankar are carved on the walls of Ambika Gumpha of Khandagiri caves.

Which of the statements given above are correct?

- a) 2 and 4 only
- b) 1 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Udayagiri and Khandagiri caves are ancient rock cut caves that were first discovered by a young British Officer Andrew Sterling in the 19th century AD. Some important aspects of these caves are discussed below:

Statement 1 is correct: Udayagiri and Khandagiri caves were built somewhere around the 2nd century BC by King Kharavela of the Meghavahana dynasty. He was widely regarded as the most powerful king in the annals of history of Odisha.

Statement 2 is correct: The caves were built on the Kumari mountain range for the Jain monks. Out of the one hundred and seventeen caves that were built originally only thirty-three survive till this day. Eighteen caves are located in the Udaygiri hill and fifteen in the Khandagiri hill.

Statement 3 is correct: The major caves of the Udayagiri caves are

- 1) **Hathigumpha : or the elephant cave as its known bears the inscriptions of King Kharavela. The seventeen lines mention his many conquests and his way of governance.**
- 2) The Rani Gumpha : or the Queen cave ; is a double storeyed structure with beautiful carvings. Exquisite carvings apart, the cave is known for its acoustic characteristics.
- 3) The Ganesha Gumpha : the Ganesha Cave known for its carvings of Jain teerthankar's and other sculptures. The carving of Lord Ganesha and two elephants were added much later.
- 4) The Vyaghara Gumpha : or the Tiger cave is so called because the entrance is shaped like the head of the tiger and the door shaped like a tiger's throat

Statement 4 is correct: The major caves of Khandagiri are

- 1) Barabhuji Gumpha features the twelve armed Sasana Devi's facing each other along with Tirthankar sculptures.
- 2) Trushula Gumpha - One can find the twenty-four Jain Teerthankar's carved on the walls of the cave. The sculpture of Tirthankar Rishab Dev stands out.
- 3) **Ambika Gumpha - The Yaksha and Yakshini's of each Tirthankar is carved on the walls of the cave.**

Source: <https://odishatourism.gov.in/content/tourism/en/discover/attractions/temples-monuments/udaygiri-and-amp-khandagiri-caves-temple.html>

Q.4) This pottery was wheel-made with finely levigated clay, resulting in a hard and durable product, giving it a metallic look with a mirror-like shine achieved through burnishing after firing. It was rare and highly valued, used mainly by the elite or royal class from the 6th century BC to the 2nd century AD.

Which of the following options best suits the above description?

- a) Black and red ware
- b) Painted grey ware
- c) Northern Black polished ware
- d) Red Glazed ware

Ans) c

Exp) Option c is the correct answer.

The description provided in the question refers to the Northern Black Polished Ware (NBPW), which was created using a potter's wheel and mainly produced from the 6th century BC to the 2nd century AD. The NBPW was considered a rare and luxurious pottery, which was crafted with finely navigated clay. Due to its scarcity, it was mainly used by the elite or royal class in ancient times.

Northern Black Polished Ware (NBPW) is a type of ceramic pottery that was discovered in the northern part of India. It is characterized by its black color and polished or glazed (shiny) appearance. While the finds of NBPW are not limited only to the northern part of India, it has been found in many other places throughout India. The quality of NBPW is consistent wherever it is found, irrespective of shades and color. Source: NCERT CLASS 6 - OUR PAST, PART 1 – page 86

<https://timesofindia.indiatimes.com/city/raipur/rare-northern-black-polished-ware-of-2nd-century-bc-found-in-chhattisgarh-mud-fort/articleshow/47855476.cms>

https://asc.iitgn.ac.in/assets/publications/research_papers/NBPW_encyclopaedia_2021.pdf

Q.5) Consider the following statements with reference to “Virtual Private Network”:

1. It can establish a protected network connection when using public networks.
2. Recently CERT-In asked VPN service providers to maintain data such as the purpose for which the customers used their services.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

A VPN hides your IP address by letting the network redirect it through a specially configured remote server run by a VPN host. This means that if you surf online with a VPN, the VPN server becomes the source of your data. This means your Internet Service Provider (ISP) and other third parties cannot see which websites you visit or what data you send and receive online.

Statement 1 is correct: VPN stands for "Virtual Private Network" and describes the opportunity to **establish a protected network connection when using public networks**. VPNs encrypt your internet traffic and disguise your online identity. This makes it more difficult for third parties to track your activities online and steal data. The encryption takes place in real time.

Statement 2 is correct: CERT-In has asked VPN service providers to **maintain for five years or longer details** such as the validated names of their customers, the period for which they hired the service, the IP addresses allotted to these users, the email addresses, the IP addresses and the time stamps used at the time of registration of the customers. Cert-In also wants VPN service providers to **maintain data such as**

the purpose for which the customers used their services, their validated addresses and contact numbers, and the ownership pattern of the customers.

Source: <https://www.kaspersky.com/resource-center/definitions/what-is-a-vpn>

<https://indianexpress.com/article/explained/explained-why-vpn-providers-believe-new-rules-will-undermine-users-privacy-7905586/>

<https://timesofindia.indiatimes.com/gadgets-news/explainer-new-vpn-rules-why-vpn-companies-are-upset-and-what-they-mean-for-you/articleshow/92270798.cms>

Q.6) Consider the following pairs regarding various Martial Art forms in India:

Martial Art	Description
1. Sarit Sarak	Hand to hand combat
2. Thoda	Sword and Shield fighting
3. Pari Khanda	Archery
4. Kattu Varisai	Empty hand combat

How many pairs given above are correctly matched?

- Only one pair
- Only two pairs
- Only three pairs
- All four pairs

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correctly matched: Sarit Sarak is a non-violent, **hand-to-hand combat style**. Their history may be traced back to the 17th century when the Manipuri monarchs successfully employed it to combat the British.

Pair 2 is incorrectly matched: Thoda is a martial art, sport, and cult that originated in Himachal Pradesh and is celebrated during the Baisakhi festival in April every year. The martial art primarily relies on **the skill of archery**, and it is believed to date back to the times of Mahabharata when bows and arrows were used in the epic battle in the valleys of Kullu and Manali.

Pair 3 is incorrectly matched: Pari-khanda is a martial art from Bihar that **involves sword and shield fighting**. Created by Rajputs, it is still practiced in many parts of Bihar and its techniques are also used in the Chhau dance. The name of this martial art comes from two words, Parte which means shield and Khanda which refers to sword, indicating the use of both sword and shield in this art.

Pair 4 is correctly matched: Kuttu Varisai, which means '**empty hand combat**,' was first described in Sangam literature (1st or 2nd century BC). Kuttu Varisai is mostly done in Tamil Nadu, while it is also popular in Sri Lanka's north-eastern region and Malaysia.

Source: Indian Art and Culture by Nitin Singhania

Q.7) The sculpture of Varaha or Boar avatar of Vishnu, rescuing the Goddess Earth, can be found in which of the following caves?

- Ajanta caves, Maharashtra
- Bagh caves, Madhya Pradesh
- Udayagiri caves, Madhya Pradesh
- Elephanta caves, Maharashtra

Ans) c

Exp) Option c is the correct answer.

Varaha means boar in Sanskrit and is the third incarnation of Lord Vishnu which is known for saving the earth from drowning in the cosmic waters and slaying of the demon Hiranyakashyap. There are several caves depicting this creation myth.

The sculpture is in rock-cut cave 5 at Udayagiri (Vidisha, Madhya Pradesh) which dates to the early 5th Century. This large-scale sculpture depicts the myth of Vishnu as Varaha, the Boar, rescuing the goddess Bhudevi, the earth, from the waters. At the back there are rows of figures of sages and divinities and two male musicians. On the sides of the panels there are images of the river goddesses Ganga and Yamuna with figures of attendants. Some interpretations claim that the scene represents the unification of northern India by the Guptas. **The similar sculpture can also be seen at caves at Aihole, Karnataka.**



Source:

<https://www.bl.uk/onlinegallery/onlineex/apac/photocoll/r/019pho000001003u01370000.html>

<https://www.thehindu.com/opinion/columns/where-varaha-saves-the-earth/article22645921.ece>

Themes in Indian History, Chapter 4, pg. 104

Q.8) Consider the following statements about minting of coins in Ancient India:

1. The Indo-Greek were the first rulers in India to issue coins which were attributed to the Kings.
2. Earliest gold coins in India were issued by the Indo-Greeks.
3. The Kushans issued large scale gold coins with greater purity of Gold compared to the Guptas.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The first to invade India were the Greeks, who are called the Indo-Greeks or Bactrian Greeks. In the beginning of the 2nd century BC, the Indo-Greeks occupied a large part of north-western India, much larger than that conquered by the Alexander.

Statement 1 is correct: The Indo-Bactrian rule is important in the History of India because of the large number of coins issued by the Greeks. **The Indo-Greek were the first rulers in India to issue coins which were attributed to the Kings.** This is not possible in case of the earlier punch-marked coins, which cannot be attributed to a particular dynasty certainly.

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Statement 2 is correct: Metal coins were introduced during the age of Buddha. **However, the Indo Greek rulers were the first to issue gold coins in India**, which increased in number quite considerably under the Kushans.

Statement 3 is correct: The early Kushana kings issued numerous gold coins with higher gold content than is found in the Gupta coins. Most of the Kushana coins can be found west of the Indus, however several Kushana inscriptions found in the Gangetic valley explain the expanse of their kingdom in India.

Source: R S Sharma, Ancient India, pg. 104-106

Q.9) “He was a 12th century Indian mathematician and astronomer, who wrote the first ever work with full and systematic use of the decimal number system. He was a head of an astronomical observatory at Ujjain, the leading mathematical centre of ancient India. He developed understanding of division by zero by stating the concept of infinity. He authored one of the most popular ancient Indian work, Siddhanta-shiromani.” Which of the following personalities is discussed in the above paragraph?

- a) Bhaskara II
- b) Aryabhata
- c) Brahmagupta
- d) Varahamihira

Ans) a

Exp) Option a is the correct answer.

Bhāskara II, also called Bhāskarācārya or Bhaskara the Learned, (1114-1185, Bidur), the leading mathematician of the 12th century, who wrote the first work with full and systematic use of the decimal number system.

Bhāskara II was the lineal successor of the noted Indian mathematician Brahmagupta, as **head of an astronomical observatory at Ujjain, the leading mathematical centre of ancient India.** Evidently, he was the first to gain some understanding of the meaning of division by zero, for he specifically stated that the value of $3/0$ is an infinite quantity.

Some of his notable works include Lilavati, Siddhanta-Shiromani, Bijaganita, Karanakutuhala, etc.

Option b is incorrect: Aryabhata, also called Aryabhata I, (born 476, possibly Ashmaka or Kusumapura, India) was an astronomer and the earliest Indian mathematician whose work and history are available to modern scholars. Aryabhata discovered an approximation of pi, $62832/20000 = 3.1416$. He also correctly believed that the planets and the Moon shine by reflected sunlight and that the motion of the stars is due to Earth's rotation.

Option c is incorrect: Brahmagupta (598-670) was the foremost Indian mathematician of his time. He made advances in astronomy and most importantly in number systems including algorithms for square roots and the solution of quadratic equations. He headed an astronomical observatory at Ujjain before Bhaskara II.

Option d is incorrect: Varahamihira (505-587) was an Indian astrologer whose main work was treatise on mathematical astronomy which summarised earlier astronomical treatises. He discovered a version of Pascal's triangle and worked on magic squares.

Source: <https://www.britannica.com/biography/Bhaskara-II>

<https://www.britannica.com/biography/Aryabhata-I>

<https://mathshistory.st-andrews.ac.uk/Biographies/Brahmagupta/>

<https://mathshistory.st-andrews.ac.uk/Biographies/Varahamihira/>

Q.10) Consider the following statement with reference to “Gas Based Power Plants”:

1. Recently, the Ministry of Environment has approved a gas-powered plant to be set up at Andaman and Nicobar Island.
2. There is no emission of Carbon Dioxide in these power plants.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: In 2021 National Coastal Zone Management Authority (NCZMA) recommended amending the Island Coastal Zone Regulation (ICRZ) rules to allow gas-based power plants within the Island Coastal Regulation Zone area, only in islands with geographical areas greater than 100 sq. km. **Recently, the Environment Ministry has approved an exemption to the laws governing the regulation of coastal zones and has paved the way for gas-powered plants to be set up at Andaman and Nicobar Islands.** The plant will come up in South Andaman district's Ferrargunj tehsil. It is to be developed by the National Thermal Power Corporation (NTPC).

Statement 2 is incorrect: Despite the improved air quality, natural gas plants significantly contribute to climate change. **Natural gas power plants produce considerable carbon dioxide, although less than coal plants do.**

Knowledge Base: **Natural gas power plants are cheap and quick to build. They also have very high thermodynamic efficiencies compared to other power plants.** Burning natural gas produces fewer pollutants like NO_x, SO_x and particulate matter than coal and oil. On the other hand, natural gas plants have significantly higher emissions than nuclear power plants.

Source:

https://energyeducation.ca/encyclopedia/Natural_gas_power_plant
page 64 in Epic Magazine of may

<https://timesofindia.indiatimes.com/india/gas-based-power-plants-to-be-allowed-in-coastal-regulation-zone-in-andaman-nicobar-islands/articleshow/87870352.cms>

Q.11) Consider the following statements about temple architectures in India.

1. Open ambulatory passageway along with intricate carvings on pillars, doorways and ceilings are key features of Vesara style of temple architecture.
2. Stellate plan can be seen in the Hoysala temple architecture.

Which of the statements given above is/ are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) None of the above

Ans) c

Exp) Option c is the correct answer.

Indian temples have symbolised the very ethos of life-style of people through the millennia. The panorama of Indian temple architecture may be seen across at extremely wide chronological and geographical horizon. The ancient texts on Indian temple architecture broadly classify them into three orders. The terms Nagara, Dravida and Vesara indicate a tendency to highlight typological features of temples and their geographical distribution

Statement 1 is correct: Vesara style of architecture combines both Nagara and Dravidian elements resulting in a hybridized style. It was conceptualized in the mid-seventh century A.D. by the

later Chalukya rulers. According to several historians, the Vesara style is said to have developed in today's Karnataka.

Some of its features are:

- 1) Emphasis on vimana and mandapa
- 2) **Open ambulatory passageway**
- 3) **The pillars, doorways and the ceilings were decorated with intricate carvings.**

Nagara



Dravida



Vesara



Statement 2 is correct: The Hoysaleswara temple (Lord of the Hoysalas) at Halebid in Karnataka was built in dark schist stone by the Hoysala king in 1150. **Hoysala temples are sometimes called hybrid or vesara** as their unique style seems neither completely dravida nor nagara, but somewhere in between.

Unlike the crucified ground plan of the Panchayatan style, the shrines in this temple architecture are led out in the shape of an intricately designed star, which is known as the Stellate plan.

They are easily distinguishable from other medieval temples by their highly original star-like ground-plans and a profusion of decorative carvings.

Source: NCERT, AN INTRODUCTION TO INDIAN ART, Chapter 6

<https://www.egyankosh.ac.in/bitstream/123456789/73884/1/Unit-5.pdf>

Nitin Singhania, Chapter 1, Indian Architecture.

Q.12) Consider the following statements about Shiva Nataraja sculpture found in South India:

1. The bronze representation of Shiva's Ananda Tandava first appeared in the Pallava period.
2. The bronze figurine of Shiva Nataraja performing cosmic dance signifies the cyclical creation and destruction of the universe.
3. The Siva Nataraja figurine was believed to have been developed using the lost wax technique.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Bronze sculptures and statuettes of Buddhist, Hindu and Jain icons have been discovered from many regions of India dating from the second century until the sixteenth century. Most of these were used for ritual worship and are characterised by exquisite beauty and aesthetic appeal.

Statement 1 is correct: Archeometric, iconographic and literary evidence show that the bronze representations of Shiva's Ananda tandava first appeared in the Pallava period between 7th century CE and mid-9th century CE. The later Chola craftsmen began experimenting with the greater tensile strength

of metal and thus began to produce figures that were flared and dynamic as opposed to the Pallava sculptures that were close-set and linear.

Hence, the famous Siva Nataraja figurine is attributed to the Chola dynasty.



Statement 2 is correct: The famous bronze figurine of Siva Nataraja performing cosmic dance signifies the cyclical creation and destruction of the universe. He is usually depicted with four arms carrying a Danda i.e., staff, Gaja i.e., an elephant symbol, a flame which signifies destruction and its counterpart, the Damru (drum), which signifies creation. His front right hand is in the Abhaya mudra, asking his devotees not to fear in his presence. He is shown wearing a snake ornament and dancing on Muyalaka the dwarf who signifies ignorance and evil.

Statement 3 is correct: The Chola period is well known for its metal sculpture. It is known for the high standard of aesthetic and technical skill achieved by their craftsmen during this period. **Metal sculptures both in the South and North India were made using the lost-wax process, during this period. Hence, the famous Siva Nataraja is believed to have been sculpted using lost wax process.**

Source: <https://indianculture.gov.in/artefacts-museums/siva-nataraja#:~:text=Metal%20sculptures%20both%20in%20the,North%20India%20produced%20hollow%20ones.>

Q.13) With respect to the Circus in India, which of the following statements is **not** correct?

- The first Indian circus called 'The Great Indian Circus' was set up by Vishnupant Chatre.
- Animal Welfare Board of India banned the use of elephants for circus performances in 2013.
- All wild animals are banned from being used in circus performances in India.
- India is the first country to ban the use of wild animals in Circus.

Ans) d

Exp) Option d is the correct answer.

Option a is correct : **The Great Indian Circus (1880) was created by Vishnupant Chatre from Maharashtra was the first Indian circus.** It also performed in Sri Lanka, Singapore, the Philippines, Indonesia, Japan, and China. In 1888, Keeleri Kunhikannan, a martial arts and gymnastics teacher, considered as 'The Father of The Indian Circus' opened a one-of-a-kind 'Circus Training Hall' in the Thalassery suburb of Chirakkara, Kerala.

Option b is correct. In 2013, Animal Welfare Board of India (AWBI), a statutory body under the Ministry of Environment and Forests, banned the registration of elephants for performing in circuses because of the cruelties and abuse subjected to the animals.

Option c is correct: In 1998, bears, monkeys, tigers, panthers, and tigers were banned from being forced to perform entertainment acts in India, but elephants were exempt from this law until 2013, and **after 2013 all wild animals are banned from being used in circuses.**

Option d is incorrect. Prior to **India**, several other countries including **Romania, Iran, the Netherlands, and the United Kingdom**, as well as a number of U.S. cities like Los Angeles, New York City, and Portland, Maine have already **instated similar legislation that bans the use of wild animals in circuses**, showing us that the world as a whole has been making giant strides toward a more humane future.

Source:

<https://www.thebridgechronicle.com/lifestyle/art-culture/world-circus-day-inspiring-journey-circus-india-48762>

<https://www.onegreenplanet.org/news/india-bans-wild-animals-in-circuses/>

Q.14) Hastayurveda is a treatise on elephants which considers various facts about wild and pet elephants. It was written by-

- a) Sahadeva
- b) Salihotra
- c) Palkapya
- d) Kashyapa

Ans) c

Exp) Option c is the correct answer.

Option a is incorrect. Prince Sahadeva had the responsibility of cows in the Palace of King Virata and he was the veterinarian of cows. Prince Sahadeva is regarded as the expounder of "**Gavayurveda**".

Option b is incorrect. Acharya Salihotra of the Northwestern part of India was regarded as the expounder of '**Asvayurveda**'.

Option c is correct. Hastayurveda is a Samhita written by Palkapya. It has been decided by historians that he lived during the 11th century. The present book available as a complete Samhita has been edited by Pandit Sivedutta Sarma. According to Palkapya, elephants are an important tool for the army as well as the civil work of a king. In Hastayurveda, one complete chapter has been mentioned to determine the importance of elephants, they have mentioned Vajra in war and also for different types of work. Only one Elephant can win over six thousand Horses.

Option d is incorrect. Kashyapa was a physician during the 7th century who compiled his Ayurvedic knowledge in a compendium which dealt with the diseases of women and children.

Source:

chrome- http://ccras.nic.in/sites/default/files/viewpdf/jimh/BIIHM_2006/145%20to%20158.pdf

Q.15) Which of the following statements best describes the term "Gravitational Lensing"?

- a) It is a boundary of black holes, where the velocity needed to escape exceeds the speed of light.
- b) It is a phenomenon which distorts and magnifies the light coming from objects behind a large celestial object.
- c) It is a place where matter is compressed down to an infinitely tiny point, and all conceptions of time and space completely break down.
- d) It is the process by which an object entering an extremely strong gravitational field is stretched vertically and compressed horizontally.

Ans) b

Exp) option b is the correct answer

Gravitational lensing occurs when a massive celestial body – such as a galaxy cluster – causes a sufficient curvature of spacetime for the path of light around it to be visibly bent, as if by a lens. The body causing the light to curve is accordingly called a gravitational lens.

Statement a is incorrect. A black hole’s “surface,” is called as **event horizon**. It defines the boundary where the velocity needed to escape the black hole exceeds the speed of light, which is the speed limit of the cosmos. Matter and radiation fall in, but they can’t get out.

Statement b is correct. The phenomenon of **Gravitational Lensing** occurs when a huge amount of matter, such as a massive galaxy or cluster of galaxies, creates a gravitational field that distorts and magnifies the light from objects behind it, but in the same line of sight.

Statement c is incorrect. **Singularity** is a place where matter is compressed down to an infinitely tiny point, and all conceptions of time and space completely break down

Statement d is incorrect. **Spaghettification** is the process by which an object entering an extremely strong gravitational field, such as one surrounding a black hole, is stretched vertically and compressed horizontally.

Source: https://www.nasa.gov/vision/universe/starsgalaxies/black_hole_description.html
<https://indianexpress.com/article/explained/this-word-means-gravitational-lensing-5936335/>
<https://www.phenomena.org/space/>
<https://www.space.com/what-happens-black-hole-center>

Q.16) “This embroidery is practiced by Lambani tribe. It has a combination of colorful threads, design patterns, mirror works, stitching patterns, appliqué and patch work. It is done on 13 different colors of base fabric among which dark blue or red are commonly used and it uses 14 types of stitches.”

From the above given paragraph, identify the name of embroidery.

- Himroo
- Patola
- Toda
- Banjara

Ans) d

Exp) Option d is the correct answer.

Recently in September 2022, UNESCO has released a list of 50 exclusive and iconic heritage textile crafts of India under the title “Handmade for the 21st Century: Safeguarding Traditional Indian Textile”.

Option a is incorrect. **Himroo** is a fabric made of cotton and silk which came into existence in Aurangabad during the 14th century when king Mohammad Tughlaq was ruling. At that time, Muslims don’t have a like to wear silks which leads to the evolution of **Himroo - a fabric with a cotton base and silk weaving**. The word Himroo is originated from Persian word Hum-ruh which means 'similar'. Himroo fabric is **made similar to Kum-khwab, which was woven with pure gold and silver threads**.

Option b is incorrect. Patola is a double ikat woven sari, **usually made from silk, made in Patan, Gujarat, India**. The word patola is the plural form; the singular is patolu. They are very expensive, once worn only by those belonging to royal and aristocratic families.

Option c is incorrect. The Toda Embroidery, also locally known as **“Pukhoor”**, **is an artwork among the Toda pastoral people of Nilgiris, in Tamil Nadu, made exclusively by their women**. The embroidery, which has a fine finish, appears like a woven cloth but is made with the **use of red and black threads with a white cotton cloth background**. Both sides of the embroidered fabric are usable and the Toda people are proud of its heritage. Both men and women adorn themselves with the embroidered cloaks and shawls. The embroidery is usually made **on their cloaks called “Pootkhuly” which is draped by both women and men**.

Option d is correct. Banjara embroidery has a combination of vibrant color threads that makes the design more striking. The center of the designs is **embellished with mirror works**.

There are 14 types of stitches used in Banjara embroidery. **They are Kilan, Vele, Bakhya, Maki, Suryakanti Maki, Kans, Tera Dora, Kaudi, Relo, Gadri, Bhuriya, Pote, Jollya, Nakra**.

Lambani also known as Banjara or Banjara Lambanis are a class of nomadic people who migrated from the Indian states Rajasthan and North Gujarat and spread all over India before the arrival of Mughals. They used to travel from places to place in carts with all the things they owned. They are called as Gypsies of India.

Knowledge Base: **Lambani also known as Banjara or Banjara Lambanis are a class of nomadic people who migrated from the Indian states Rajasthan and North Gujarat and spread all over India before the arrival of Mughals.**

Source: <https://medium.com/direct-create/banjara-embroidery-from-bellary-5968f36af888>
<https://blog.forumias.com/unesco-launches-list-documenting-50-iconic-indian-heritage-textiles/>

Q.17) With respect to the Mehrauli Iron Pillar, consider the following statements:

1. It is situated in the center of the courtyard of Quwwat-ul-Islam Mosque.
2. This Iron Pillar is a great example of craftsmanship of metal workers of the Gupta period.
3. It was transported to its present location by the Mughals.

How many statements given above are correct?

- a) Only one statement
- b) Only two statements
- c) All three statements
- d) None of the statements

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct. The tapering 'Mehrauli Iron Pillar' situated in the **centre of the courtyard of Quwwat-ul-Islam Mosque**. It is made up of 99% pure malleable iron. It has not deteriorated much in its more than 1600 years of existence, despite consistently remaining exposed to the weathering agents.

Statement 2 is correct. According to a 4th century CE Sanskrit inscription, this pillar was erected as a dhvaj (standard) of Vishnu on the **Vishnupada hill in memory of a mighty king named Chandra identified with Chandragupta II (375-413 CE) of the Gupta dynasty.**

Statement 3 is incorrect. It was brought to its present location by **Anangpal, the Tomar king credited with founding Delhi.**

Source:

<https://indianculture.gov.in/photo-archives/iron-pillar>

Q.18) With reference to Aryabhata, consider the following statements:

1. Aryabhata was called as Asmakiya by Bhaskara I.
2. He was first to discover that the earth rotates on its axis.
3. He was the first astronomer to give a scientific explanation of eclipses.
4. He wrote Ganitasarasangraha, which deals with various mathematical problems.

How many statements given above are correct?

- a) Only one statement
- b) Only two statements
- c) Only three statements
- d) All four statements

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. Bhaskara I, wrote a commentary on **Aryabhatiya**, called the **Aryabhatiya the Ashmaka-tantra and called Aryabhata as Ashmakiya,**

Statement 2 is correct. He was first to discover that the earth rotates on its axis and also worked out the correct equation for calculating the orbit of a planet and gave extremely accurate estimate of the length of a year to 365.2586805 days.

Statement 3 is correct. He was the first astronomer to give a scientific explanation of eclipses as he established that they are not caused by some demons but by the moon coming between the earth and the sun. He also worked out how to ascertain which part of moon would be obscured during an eclipse.

Statement 4 is incorrect. Mahavira was a famous 9th century mathematician of Karnataka who lived in the court of the Rashtrakuta king Amoghvarsha, and wrote a book called the **Ganitasarasangraha, which deals with various mathematical problems**

Knowledge Base: .

More about Aryabhata:

- 1) He was the first to invent zero and to recommend the use of the decimal system.
- 2) He described the various properties of a circle and gave a very accurate value of pi (π), correct to 4 decimal places at 3.1416.
- 3) He also perfected the methods of solving indeterminate equations in integers problems.

Source: Poonam Dalal Pg-368, 369

<https://aryabhatacollege.ac.in/about-aryabhata.aspx?id=3>

Q.19) Which of the following is **incorrect** with reference to the Gupta Architecture?

- a) Guptas patronized Buddhist cave buildings along with Hindu temples.
- b) The use of mural paintings on the walls of the caves was a major feature in the Gupta period.
- c) The inscription on pillars as a symbol to commemorate battle victories was first introduced in this period.
- d) Udayagiri Caves in Madhya Pradesh were built during the Gupta period.

Ans) c

Exp) Option c is the correct answer

The emergence of the Gupta Empire in 4th century AD is often hailed as the “**Golden Age of India**”. Temple architecture reached its climax during this period. Similarly, Buddhist and Jain art also reached its peak during the Gupta Age.

Option a is correct: **Buddhist cave buildings** continued to be built under the patronage of Guptas and Vakatakas. While the earlier Gupta rulers were Buddhists and continued the traditions of Buddhist architecture, temple architecture came to the fore front under the patronage of the Hindu rulers of the later Gupta phase. They have been found at Ajanta and Bagh, of which Ajanta caves are best preserved.

Option b is correct: **During the Gupta period;** architectural development of the caves remained constant. However, the **use of mural paintings on the walls** of the caves **became an added feature**. Some of the finest examples of mural paintings can be found in the caves of Ajanta and Ellora.

Option c is incorrect: **During the reign of Ashoka,** the inscription on pillars as a **symbol of the State or to commemorate battle victories were introduced and assumed great significance.** (And not during the Gupta period.) He also used pillars to propagate imperial sermons as well. The pillars were usually made of chunar sandstone and comprised of Shaft and Capital. On top of it lay the capital, which was either lotus shaped or bell shaped. The bell-shaped capitals were influenced by the Iranian pillars, as was the highly polished and lustrous finish of the pillars. Above it, there was a circular or rectangular base known as the abacus on which an animal figure was placed.

Option d is correct: The early Gupta style is dated from 3rd century to 5th century CE. There are both cave and free-standing temples made under this style. One such Cave complex was discovered at **Udayagiri in Madhya Pradesh.** **Udayagiri Caves** is a group of 20 Gupta-era temples and monasteries carved out of a rocky hill. One cave here is dedicated to Jainism and rest to Hinduism.

Brahmi inscriptions on the caves indicate that the site was excavated during the rule of Gupta King, Chandragupta II.

Source: Indian art and culture by nitin singhania pdf. Chapter name- Indian Architecture, Sculpture and Pottery. Page no.56 and 71 to 80.

Q.20) “Falkland Island” is often in the news for its territorial dispute. In this context, consider the following statements regarding the Island:

1. This Island is located to the west of Argentina in Pacific Ocean.
2. The islands are self-governing Overseas Territory of the United Kingdom.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The **Falkland Islands**, also called The Malvinas, are an archipelago in the **South Atlantic Ocean**, located **east of Argentina**, west of South Georgia and north of Antarctica (Elephant Island).



Statement 2 is correct: The **Falkland Islands** are a **self-governing Overseas Territory of the United Kingdom** but have been the subject of a claim to sovereignty by Argentina since the early years of Argentina's independence from Spain. In 1982 the islands were invaded by Argentina, precipitating the two-month-long undeclared Falklands War between Argentina and the United Kingdom, which resulted in the defeat and withdrawal of Argentine forces.

Source:

https://www.cs.mcgill.ca/~rwest/wikispeedia/wpcd/wp/f/Falkland_Islands.htm

<https://www.wionews.com/world/uk-insists-falkland-islands-remain-british-as-argentina-walks-away-from-pact-568213>

Q.21) With reference to the history of ancient India, consider the following statements regarding Ochre Coloured Pottery Culture:

1. It is found only in Southern India dating to the Mesolithic period.
2. It is essentially a rural culture associated with agriculture and pastoralism.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The term Ochre Coloured Pottery Culture (OCP) was coined by B.B. Lal after he excavated the site Hastinapur in the year 1951-52. Some important aspects of the ochre coloured pottery culture are discussed below:

Statement 1 is incorrect: Ochre Coloured Pottery culture is found in northern India dating to the Chalcolithic period (not Mesolithic period). The OCP pottery has red slip and appears ochre in colour (the ochre colour comes off when the pottery is touched) and hence, it is called Ochre Coloured Pottery. It has black painted designs. The OCP comes in the form of jars, storage jars, bowls, and basins.

Statement 2 is correct: The OCP culture dates to 2600- 1200 BCE and is found in the Indo- Gangetic plain and may have had some associations with early Vedic culture. **It is a rural culture and has evidence of the cultivation of rice, barley, and legumes. They also had pastoralism with evidence of cattle, sheep, goats, pigs, horses, and dogs.** The villages had wattle-and-daub houses. They used copper and terracotta ornaments. Animal figurines have also been found.

Source: Tamil Nadu Board Class 11 History textbook

https://www.lkouniv.ac.in/site/writereaddata/siteContent/202003291608408879anil_kumar_Ochre_Coloured_Pottery.pdf

Q.22) With reference to fortifications of Indus valley civilization, consider the following statements:

1. Dholavira was fortified with an imposing wall made of stone rubble set in mud mortar.
2. Sites of Kalibangan and Kot diji were surrounded by massive mud-brick fortifications.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The Indus Valley period saw the construction of elaborate fortifications using mud, baked bricks, and stones. Town planning involved dividing settlements into a citadel and lower town, with the former often surrounded by a moat.

Statement 1 is correct: Dholavira in the Rann of Kutch was fortified with an **imposing wall made of stone rubble set in mud mortar**. This massive fortification wall and the remains of stone pillars in the citadel are very distinctive and are not witnessed at any other Harappan site.

Statement 2 is correct: Kot Diji (3300 BCE) was a fortified site with a **massive wall made of limestone rubble and mudbrick**, and the settlement consisted of a citadel complex and a lower residential area and Kalibangan (2920–2550 BCE) was also surrounded **by massive mud-brick fortifications**.

Source : <https://indianculture.gov.in/node/2730054>

Q.23) Consider the following statements regarding temple architecture in India:

1. Unlike the Dravida temples, the Nagara temples are always enclosed within a compound wall.
2. The shape of the vimana in Nagara style is like a stepped pyramid unlike the curving shikhara of Dravida style.
3. In North Indian temples, images of Mithunas are found at the entrance of garbhagriha, whereas in South Indian temples, sculptures of fierce Dvarapalas guarding the temples are found.
4. The idea of multiple shikharas rising together as a cluster was popular in both Dravida and Nagara temple styles.

How many statements given above are correct?

- a) Only one statement.
- b) Only two statements.
- c) Only three statements.
- d) All four statements.

Ans) a

Exp) Option a is the correct answer.

Two broad orders of temples in the country are known– Nagara in the north and Dravida in the south. At times, the Vesar style of temples as an independent style created through the selective mixing of the Nagara and Dravida orders is mentioned by some scholars.

Statement 1 is incorrect: Unlike the nagara temple, the dravida temple is enclosed within a compound wall. The front wall has an entrance gateway in its centre, which is known as a gopuram.

Statement 2 is incorrect: The shape of the main temple tower known as vimana in Dravida Style is like a stepped pyramid that rises up geometrically rather than the curving shikhara of North India. In the South Indian temple, the word 'shikhara' is used only for the crowning element at the top of the temple which is usually shaped like a small stupika or an octagonal cupola– this is equivalent to the amlak and kalasha of North Indian temples.

Statement 3 is correct: At the entrance to the North Indian temple's garbhagriha, it would be usual to find images such as mithunas and the river goddesses, Ganga and Yamuna, whereas in the south- sculptures of fierce dvarapalas or the door-keepers guarding the temple are found.

Statement 4 is incorrect: In Dravida temple architecture, subsidiary shrines are either incorporated within the main temple tower, or located as distinct, separate small shrines beside the main temple. The North Indian idea of multiple shikharas rising together as a cluster was not popular in South India. At some of the most sacred temples in South India, the main temple in which the garbhagriha is situated has, in fact, one of the smallest towers. This is because it is usually the oldest part of the temple. With the passage of time, the population and size of the town associated with that temple would have increased, and it would have become necessary to make a new boundary wall around the temple. This would have been taller than the last one, and its gopurams would have been even loftier.

Source: An introduction to fine arts, Class 11 NCERT- chapter- 6

Q.24) This method was used for decoration. It meant the use of geometrical vegetal ornamentation. It was characterized by a continuous stem which split regularly, producing a series of counterpoised, leafy, secondary stems. The secondary stems, in turn, split again or returned to merge with the main stem creating a decorative pattern.

The above passage describes which of the following methods of Architecture?

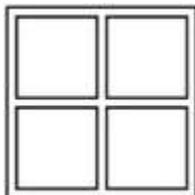
- a) Charbagh style
- b) Arabesque style
- c) Arcuate Style
- d) Trabeate Style

Ans) b

Exp) Option b is the correct answer

The Islamic rulers introduced the use of minars around the mosques and the mausoleums. Mortar was used as a cementing agent in their constructions.

Option a is incorrect: The Islamic rulers introduced the **Charbagh style of gardening**, in which a square block was divided into four adjacent identical gardens.



Charbagh Style

Option b is correct: **Arabesque method** was used for **the decoration**. Arabesque meant the use of geometrical vegetal ornamentation and was characterised by a **continuous stem** which split regularly, producing a series of counterpoised, leafy, secondary stems. **The secondary stems**, in turn, split again or returned to merge with the **main stem creating a decorative pattern**. The architecture of this period heavily used the principles of geometry from decorative pattern to imbuing a sense of symmetry.



Arabesque Design

Option c is incorrect: **Arcuate Style** was characterised by **the use of arches and domes**. The use of domes, generally hemispherical, on top of the mosques. Minars were present on the four corners of the mosques. Brick, lime plaster and mortar started to be used for constructions in this style of architecture.

Option d is incorrect: **Trabeate Style** was characterised by the **use of Lintel**. This style used shikhara on top of the temples. They were generally conical or curvilinear. Minars were absent in this method. Stone was the primary component of all constructions in trabeate style.

Source: Indian art and culture by nitin singhania pdf. Chapter name- Indian Architecture, Sculpture and Pottery. Page no.123 to 126.

Q.25) With reference to “Project 75 (India)”, consider the following statements:

1. Under the project, 6 conventional submarines will be constructed.
2. Shivalik class ship will be constructed under the project.
3. This project will help India to deter adversaries in Indo-Pacific region.

Which of the statements given above are correct?

- a) 2 and 3 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Project-75(I) envisages indigenous construction of six modern conventional submarines (including associated shore support, Engineering Support Package, training and spares package) with contemporary equipment, weapons & sensors including Fuel-Cell based AIP (Air Independent Propulsion Plant), advanced torpedoes, modern missiles and state of the art countermeasure systems. This would provide a major boost to the indigenous design and construction capability of submarines in India, in addition to bringing in the latest submarine design and technologies as part of the project.

Statement 2 is incorrect: All six submarines constructed under Project 75 I are referred to as Kalvari Class of submarines. Project 17 Stealth Frigates involves with Shivalik Class of submarines (Shivalik, Sahyadri and Satpura). The term 'class' in the Kalavari Class refers to a series of warships constructed under Project 75 I which involves - INS Kalvari, INS Khanderi, Karanj, Vela, Vagir and Vagsheer submarines.

Statement 3 is correct: This Project 75 I will help reduce current dependence on imports and gradually ensure greater self-reliance in Submarine. It will protect Indo-Pacific considering the fact that there is rapid increase of nuclear submarine arsenal by China and to **protect the Indo-Pacific from future domination by the adversary.**

Source: <https://www.financialexpress.com/defence/german-submarine-offer-for-joint-manufacturing-resurrects-project-75india/2993864/>

<https://www.financialexpress.com/business/defence-the-project-75-i-for-the-next-gen-submarine-will-be-cleared-by-next-year-a-new-plan-for-minesweepers-says-navy-chief-2900116/>

<https://idsa.in/askanexpert/project-75-the-indian-navy>

<https://timesofindia.indiatimes.com/india/explained-why-project-75-submarines-are-a-big-deal-for-indian-navy/articleshow/96385271.cms>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1737191>

Q.26) Consider the following statements regarding the 'Dancing Girl' sculpture from the Indus Valley Civilisation:

1. The Lost Wax Technique was used for making the dancing girl from bronze.
2. The girl depicted in the sculpture is wearing unstitched fabric draped around the body.
3. The Dancing girl sculpture was discovered in Harappa.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

Sculptures are relatively smaller 3-dimensional works of art. The Harappan sculptors were extremely adept at handling three dimensional volumes. The most commonly found sculptures during the Indus Valley Civilisation were seals, bronze figures and potteries. The important aspects regarding one of the most renowned sculptures called as the dancing girl are discussed below:

Statement 1 is correct: The art of bronze-casting was practised on a wide scale during Indus Valley Civilisation. Their bronze statues were made using the ‘lost wax’ technique in which the wax figures were first covered with a coating of clay and allowed to dry. Then the wax was heated and the molten wax was drained out through a tiny hole made in the clay cover. The hollow mould thus created was filled with molten metal which took the original shape of the object. Once the metal cooled, the clay cover was completely removed. In bronze human as well as animal figures are found, the best example of the former being the statue of a girl popularly titled ‘Dancing Girl’.

Statement 2 is incorrect: Dancing girl was one of two bronze artworks found at the same site, and shows a more naturalistic pose than the other more formal piece. The figure depicts a naked girl wearing only ornaments, which include bangles in the left arm, and amulet and bracelet on the right arm. The tilted head, slightly bent knees and right arm resting on her hip suggest a dancing pose, hence the name.

Statement 3 is incorrect: The sculpture of the dancing girl was discovered by British archeologist Ernest Mackay in Mohenjo-daro (not in Harappa) in 1926.

Source: <https://artsandculture.google.com/story/dancing-to-her-own-tune-discover-the-harappan-dancing-girl/AAVx4Miljw-yQg?hl=en>

Fine Arts NCERT, 11th standard

Q.27) In ancient Indian history, Faience was used to make beads, earrings, and tiny vessels. In this context which of the following options best describe the term “faience”?

- It is an alloy of copper and zinc renowned for its hardness and workability.
- It is a type of coarse iron which when fired assumes various colours depending on the base element.
- It is a type of ancient rock consisting of several minerals that have a precious bright royal blue colour.
- It is an artificially produced material from sand having shiny surface.

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: Brass is an alloy of copper and zinc. It is of historical and enduring importance because of its hardness and workability. The earliest brass, called calamine brass, dates to Neolithic times; it was probably made by reduction of mixtures of zinc ores and copper ores.

Option b is incorrect: Terra-cotta in literal terms is any kind of fired clay but, in general usage, a kind of object—e.g., vessel, figure, or structural form—**made from fairly coarse, porous clay that when fired assumes a colour ranging from dull ochre to red and usually is left unglazed.**

Option c is incorrect: Lapis lazuli is a rock, which means it’s an aggregate of several minerals. This ancient gem contains three minerals in varying amounts: lazurite, calcite, and pyrite. The rock can also contain lesser amounts of diopside, amphibole, feldspar, or mica. Lazurite is the ingredient responsible for producing the gem’s most prized color—bright royal blue.

Option d is correct: Unlike stone or shell, that are found naturally, faience is a material that is artificially produced. A gum was used to shape sand or powdered quartz into an object. The objects were then glazed, resulting in a shiny, glassy surface. The colours of the glaze were usually blue or sea green. Faience was used to make beads, bangles, earrings, and tiny vessels.

Source: <https://ncert.nic.in/textbook.php?fess1=3-10>

<https://www.gia.edu/lapis-lazuli>

<https://www.britannica.com/art/terra-cotta>

<https://www.britannica.com/technology/brass-alloy>

Q.28) “It is one of the oldest martial arts in India practiced in parts of southern India. This art form includes armed and unarmed combat and physical exercises. It is not accompanied by any drumming or song. Its most important key is footwork. Though it is considered as art of self-defense, it is very well rooted in the traditional rituals and ceremonies.”

Which one of the following martial art forms is described in the above given paragraph?

- a) Silambam
- b) Gatka
- c) Mallakhamb
- d) Kalaripayattu

Ans) d

Exp) option d is the correct answer.

Option a is incorrect: Silambam is a popular variant of martial arts which is performed with the aid of some specific weapons, primarily with bamboo sticks. It is widely performed in the regions of Tamil Nadu (India) which is also the birthplace of the game, where it emerged in around 1000 years BCE. The Tamil Sangam literature has the early records of Silambam. The word Silambam etymologically means "staff/stick from the hills". The game is usually played on an even hard surface where the players use a bamboo stick with its length equivalent to their heights. Overall, there are 16 forms of footwork present in this martial art.

Option b is incorrect: Sikh martial art ‘Gatka’, based on stick-fight, developed as self-defensive style after fourteenth century in old Punjab. It is associated with the Sikh history and an integral part of vast arena of Sikh Shastar Vidiya (skills to use weapons). The sixth Guru, Sri Guru Hargobind Ji had promoted the flamboyant techniques of Shastar Vidiya, (Sikh Martial Art), among the Sikhs who passed on these skills through generations. The tenth Guru, Sri Guru Gobind Singh Ji was known as the greatest master of weaponry of his time.

Option c is incorrect: Sometimes referred to as the mother of all ancient Indian sports, mallakhamb’s exact origins are almost impossible to trace. References of some form of mallakhamb can be found in ancient Indian epics like the Ramayana, ancient Chandraketurah pottery dating back to the second to first century BCE and also accounts of Buddhist Chinese pilgrims to India. ‘Malla’ literally means wrestling and ‘khamb’ translates to pole. Together, mallakhamb means wrestling on a pole. Wrestlers and warriors used to use the pole as a training apparatus to perfect martial arts moves which they could later use on opponents in the ring or the battlefield.

Option d is correct: Kalariipayattu or Kalayari is an Indian form of martial art that originates in modern-day Kerala and dates back to the 3rd century BCE. It is practised in the most parts of the South India. This art form includes armed and unarmed combat and physical exercises. It is not accompanied by any drumming or song and the style of fighting is its most significant aspect. Kalaripayattu is noted for its high-flying acrobatics, graceful movements and employs the deadly weapons at ease. The Movements of Kalari are based on the mannerisms and fighting techniques of animals. Though it is considered as art of self-defense, it is very well rooted in the traditional rituals and ceremonies.

Source:

<https://kalaripayattuclass.com/about-kalaripayattu/>

<https://kalaripayattuclass.com/about-kalaripayattu/>

<https://olympics.com/en/news/what-is-mallakhamb-rules-history-origin-india>

<https://sportsmatik.com/sports-corner/sports-know-how/silambam/about>

SFG 2023 | LEVEL 2 | Test #38 – Solutions | ForumIAS

Q.29) Consider the following pairs about Geographical Indication (GI) tagged artworks and the corresponding states/Union Territories:

GI tagged work of art	Origin state
1. Channapatna Toys.	Andhra Pradesh
2. Gamosa	Assam
3. Sozani Craft	Jammu and Kashmir
4. Muga Silk	West Bengal

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All the four pairs

Ans) b

Exp) Option b is the correct answer.

A GI or Geographical Indication is a name or a sign given to certain products that relate to a specific geographical location or origins like a region, town or country. Using Geographical Indications may be regarded as a certification that the particular product is produced as per traditional methods, has certain specific qualities, or has a particular reputation because of its geographical origin

Pair 1 is incorrect: Channapatna Toys are the toys made in Channapatna town of Karnataka. The ruler of Mysore, Tipu Sultan is attributed with introducing these wooden toys to the current town of Channapatna. Tipu Sultan is widely known as an admirer of art, particularly wooden artwork. He invited artists from Persia to train the local artists in the wooden toy making and then helped thrive this industry locally. It received GI tag in 2005.

Pair 2 is correct: Gamosa, a symbol of the culture and identity of Assam, has recently received the Geographical Indication (GI) tag from the central government. The handwoven rectangular fabric is made of cotton and features red borders, signifying the cultural heritage of the state. Gamosa is traditionally offered to elders and guests as a mark of respect and honour by Assamese.

Pair 3 is correct: One of the lesser known handicrafts from the valley of Kashmir is the Sozani craft, a delicate form of hand-embroidery that has been in practice for centuries. Traditionally, cotton, silk and woollen threads were used for the embroidery but now synthetic threads are also used. The threads are usually dyed in-house in various colours and then used to stitch the patterns (mostly floral and geometric) already traced on the fabric with the help of engraved wooden blocks. Sozani craft got its GI tag in 2008.

Pair 4 is incorrect: One of the best silk produced ever, the Muga of Assam, is not only unique by virtue of its golden lustre (which improves with every wash), softness and durability but also as one of the oldest weaving crafts of India. The silkworm from which the threads are drawn are found only in Assam. According to many historical accounts, the golden period of the silk was during the Ahom period when it was a thriving industry and became a part of Assamese culture. The silk is largely used to weave the state's traditional attire for women – mekhala chador. Assam's Muga Silk got its GI tag in 2007.

Source: <https://revolvingcompass.com/channapatna-toys/>

<https://arcattoscana.org/life-style/fashion/buzz/assamese-gamosa-receives-the-gi-tag/articleshow/96255325.cms>

<https://www.outlookindia.com/outlooktraveller/explore/story/70483/9-gi-tagged-indian-products-that-you-should-bring-back-from-your-next-trip>

Q.30) Consider the following statement with reference to Stockholm Conference of 1972:

1. It led to the creation of the United Nations Environment Programme (UNEP).
2. Stockholm Declaration adopted during the conference condemned apartheid and colonialism.
3. The then Indian Prime Minister Indira Gandhi had attended the conference.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: The 1972 United Nations Conference on the Human Environment in Stockholm was the first world conference to make the environment a major issue. The participants adopted a series of principles for sound management of the environment including the **Stockholm Declaration** and Action Plan for the Human Environment and several resolutions. One of the major results of the Stockholm conference was the **creation of the United Nations Environment Programme (UNEP)**.

Statement 2 is correct: The conference agreed upon a Stockholm Declaration containing 26 principles concerning the environment and development, an Action Plan with 109 recommendations, and a Resolution. **Principles of the Stockholm Declaration** included that human **rights must be asserted**, and **apartheid and colonialism should be condemned**.

Statement 3 is correct: The then Indian Prime Minister Indira Gandhi had attended the 1972 conference and called for collective action to save the environment.

Knowledge Base:

The United Nations Conference on the Human Environment in Stockholm was held in 1972.

- 1) The theme of the conference was ‘Only One Earth’.
- 2) 122 countries participated in the conference.
- 3) Its aim was to Create a common governance framework for the planetary environment and natural resources.
- 4) The Stockholm Declaration contained 26 principles that marked the beginning of a dialogue between developed and developing countries.

Source:

<https://timesofindia.indiatimes.com/india/stockholm50-summit-to-recall-indias-contribution-to-environmentalism/articleshow/91905262.cms>

<https://www.un.org/en/conferences/environment/stockholm1972>

Q.31) “He is considered as one of the famous alchemists of ancient times. As per popular belief of his times, he was blessed with the power of changing base metals into gold and extraction of “Elixir of life”. He wrote books such as Rasaratnakara and Uttarantra. Four ayurvedic treatises have also been written by him in the later years when his interest shifted in organic chemistry and medicine.”

Which of the following personalities is described in the above-mentioned paragraph?

- a) Nagarjuna
- b) Sushruta
- c) Acharya Kanada
- d) Varahmihira

Ans) a

Exp) Option a is the correct answer.

In Ancient India, an important role in the development of chemistry was made by Ayurveda which used a variety of minerals. Science and technology in ancient and medieval India covered all the major branches of human knowledge and activities. In any, early civilization, metallurgy has remained an activity central to all civilizations from the Bronze Age and the Iron Age to all other civilizations that followed.

Option a is correct: One of the famous alchemist of ancient times was **Nagarjuna**. Born in Gujarat in 931 AD, Nagarjuna was blessed with this power of changing base metals into gold and extraction of “Elixir of life” as per the beliefs of the people. He wrote a treatise Rasaratnakara which mainly deals with preparation of liquids (mainly mercury). The book also emphasised on the survey of metallurgy and alchemy. He also wrote Uttarantra which is a supplement to Sushruta Samhita and deals with preparation of medicinal drugs. Four ayurvedic treatises have also been written by him in the later years when his interest shifted in organic chemistry and medicine. The contribution of Nagarjuna in the field of chemistry had been immense as the idea of transformation of metals seems to be taken by Arabs from the Indian books.

Option b is incorrect: **Sushruta** was ancient Indian surgeon known for his pioneering operations and techniques and for his influential treatise Sushruta-samhita, the main source of knowledge about surgery in ancient India. The Sushruta-samhita also provides details on toxicology, pediatrics, pharmacology, and other branches of the traditional system of Indian medicine known as Ayurveda.

Option c is incorrect: **Acharya Kanada** is revered as the “Father of Atomic Theory”. He has rendered Kanada Sutras which is considered as one of the greatest works in the field of physics. He is not only revered in Hinduism but also in Jainism and Buddhism, where his concepts are highly praised. He described the universe with six categories, which are Dravya, which is defined as a substance. Guna, which is defined as the quality. Karman, which is defined as a motion. Samanya, which is defined as Generic Species. Visesa, which is defined as a unique Trait, and Samavaya is defined as inherence.

Option d is incorrect: **Varahamihira** was one of the renowned Indian astronomer, mathematician, and astrologer. He was honored with a special decoration and status as one of the nine gems in the court of King Vikramaditya in Avanti (Ujjain). Varahamihir’s book “panchsiddhant” holds a prominent place in the realm of astronomy. He proposed that the moon and planets are lustrous not because of their own light but due to sunlight. In the “Bruhad Samhita” and “Bruhad Jatak,” he has revealed his discoveries in the domains of geography, constellation, science, botany and animal science. In his treatise on botanical science, Varamihir presents cures for various diseases afflicting plants and trees.

Source: <https://www.astroved.com/astropedia/en/gods/maharshi-kanad>

<https://www.sanskritimagazine.com/varahamihira/>

Art and Culture by Nitin Singhania, chapter 3

<https://www.journalijdr.com/significant-contribution-chemistry-ancient-indian-science-and-technology>

Q.32) The sculpture of the Descent of the Ganges, a giant open-air rock relief carved on two monolithic rock boulders, is found at which of the following sites?

- Mahabalipuram
- Badami caves
- Kanheri caves
- Bagh caves

Ans) a

Exp) Option a is the correct answer.

The **Descent of the Ganges**, known also known as **Arjuna's Penance** is a monument at **Mahabalipuram, on the Coromandel Coast of the Bay of Bengal**, in the Chengalpattu district of the state of Tamil Nadu. Measuring 96 by 43 feet (29 m × 13 m), the Descent of the Ganges is a giant open-air rock relief carved on two monolithic rock boulders. The legend depicted in the relief is the story of the descent of the sacred

river Ganges to earth from the heavens led by Bhagiratha. The waters of the Ganges are believed to possess supernatural powers.

Source : <https://whc.unesco.org/en/list/249/>

<https://www.theheritagelab.in/mahabalipuram-arjunas-penance-descent-of-ganga/>

<https://ccrtindia.gov.in/medieval-school-of-sculpture/>

Q.33) Consider the following description:

“This structure is located in Delhi. It was constructed in the early 12th century and is one of the earliest examples of Islamic architecture in India. Its construction was begun by Qutub-ud-din Aibak. It is notable for its striking blend of Islamic and Hindu architectural styles, as well as for its intricately carved pillars and arches. Its vast courtyard is surrounded by a cloister.”

Which among the following have been described above?

- Jamali-Kamali Mosque
- Jama Masjid
- Khirki Masjid
- Quwwat-ul-Islam Mosque

Ans) d

Exp) Option d is the correct answer.

Quwwat-ul-Islam Mosque is in Delhi, India. **It was constructed in the early 12th century** and is one of the earliest examples of Islamic architecture in India. The mosque was built by the Islamic conqueror Qutub-ud-din Aibak. The mosque's name, Quwwat-ul-Islam, means "Might of Islam" in Arabic. The mosque is notable for its striking blend of Islamic and Hindu architectural styles, as well as for its intricately carved pillars and arches. The mosque's vast courtyard is surrounded by a cloister. The Quwwat-ul-Islam Mosque is an important historical and cultural landmark in India, and it attracts many visitors each year. The Iron Pillar of 23ft height, situated in the courtyard of the Quwwat-ul-Islam (Might of Islam) Mosque is dated to the Gupta period with Sanskrit inscriptions from the 4th or 5th century. This pillar was taken from a Vishnu temple and placed at this site before the construction of the complex.

Option a is incorrect: Jamali-Kamali Mosque was built between 1528 and 1536 by Shaikh Fazl al-Allah, also known as Jalal Khan Jalali or Jamali. It is located in the Archaeological Village complex in Mehrauli, Delhi.

Option b is incorrect: Jama Masjid was built by the Mughal emperor Shah Jahan between 1650 and 1656. It is located in Old Delhi.

Option c is incorrect: **Khirki Masjid** was built between 1351-54 by Khan-i-Jahan Junan Shah, the prime minister of Feroz Shah Tughlaq. It is also located in Delhi.

Source: <https://ncert.nic.in/ncerts/l/gess103.pdf>

<https://www.bl.uk/onlinegallery/onlineex/apac/photocoll/g/019pho00000027u00104000.html#:~:t ext=The%20Iron%20Pillar%2023ft%20high,the%20construction%20of%20the%20complex.>

Q.34) In the context of cultural history of India, which of the following best describes the term “Yavanika”?

- Bronze sculptures developed by the early cholas.
- A type of curtain used in the Indian theatres.
- Coins specially minted for religious affairs and donations.
- A type of pottery used to strain liquor.

Ans) b

Exp) Option b is the correct answer.

The Indo-Greeks contributed significantly to the development of Indian theatre. They introduced the use of the curtain during stage theatricals. **They introduced the concept of the Yavanika, which was a curtain that separated the stage from the audience and was used to signal the start and end of a performance.**

Source: NCERT, R S Sharma, pg. 111

Q.35) The term “Twin deficit Problem” is often seen in the news. In this context, which of the following statements best describes the term?

- it is a problem when there is a simultaneous rise in both fiscal and current account deficits.
- It is the difference between revenue deficit and grants for creation of capital assets.
- It is the borrowing requirements of the government, excluding interest payments.
- It is a problem when there is an increase in Revenue deficit and Capital account deficit.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: Twin deficit refers to the situation when an economy suffers from both the fiscal deficit and the Current Account Deficit. Where the Fiscal deficit refers to a condition where a governments' expenditure exceeds the revenue it is getting. Such gaps between the expenditure and revenue are compensated by the market through loans, etc.

Further, Current account deficit (CAD) is when the value of a country's imports of goods and services is greater than its exports.

Option b is incorrect: Effective Revenue Deficit is the difference between revenue deficit and grants for creation of capital assets. The concept of effective revenue deficit has been suggested by the Rengarajan Committee on Public Expenditure. It is aimed to deduct the money used out of borrowing to finance capital expenditure.

Option c is incorrect: Primary Deficit indicates the borrowing requirements of the government, excluding interest payments. It is the amount by which the total expenditure of a government exceeds the total income. Note that the primary deficit does not include the interest payments made. Also, primary deficit shows the borrowing requirements needed for meeting the expenditure of the government.

Option d is incorrect: Twin deficit problem is not associated with rise in Capital account deficit and revenue deficit. A capital account deficit shows that more money is flowing out of the economy along with increase in its ownership of foreign assets and vice-versa in case of a surplus. Revenue Deficit is the excess of its total revenue expenditure to its total revenue receipts. Revenue Deficit is only related to revenue expenditure and revenue receipts of the government.

Source: <https://www.indiatimes.com/explainers/news/explained-what-is-twin-deficit-how-is-it-affecting-the-indian-economy-573371.html>

<https://lms.indianeconomy.net/glossary/effective-revenue-deficit/#:-:text=Effective%20Revenue%20Deficit%20is%20the,borrowing%20to%20finance%20capital%20expenditure.>

<https://economictimes.indiatimes.com/definition/capital-account>

<https://www.financialexpress.com/what-is/primary-deficit-meaning/1623441/>

Q.36) Consider the following statements about the contributions of Brahmagupta to the field of science in Ancient India:

- In his work Brahmasphutasiddhanta, he gave the formula for calculating area of a cyclic quadrilateral.
- He identified that the Earth has the nature of attracting objects towards it.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Brahmagupta (598-670) was the foremost Indian mathematician of his time. He made advances in astronomy and most importantly in number systems including algorithms for square roots and the solution of quadratic equations.

Statement 1 is correct: In the Brahmasphutasiddhanta, Brahmagupta gave a remarkable formula for the area of a cyclic quadrilateral (a four-sided polygon whose vertices all reside on same circle) and for the lengths of the diagonals in terms of the sides.

Statement 2 is correct: Brahmagupta in AD 628, wrote that "bodies fall towards the earth as it is in the nature of the earth to attract bodies, just as it is in the nature of water to flow". Along with giving the concept of gravity he calculated the diameter of the Earth to be 7905 miles, thus forestalling modern scientists like Newton and Kepler by several centuries.

Source: <https://mathshistory.st-andrews.ac.uk/Biographies/Brahmagupta/>

<https://www.britannica.com/biography/Brahmagupta>

<https://www.cs.mcgill.ca/~rwest/wikispeedia/wpcd/wp/g/Gravitation.htm>

Q.37) “These group of caves were originally a Buddhist site which later dominated by the Shaivite faith. The sculptures in these caves are known for their remarkable qualities of surface smoothness, elongation and rhythmic movements. Some of the pristine sculptures in these caves are Maheshmurti and Ardhanarishwara.”

Which of the following caves is being discussed in the above paragraph?

- Ajanta caves
- Ellora caves
- Elephanta caves
- Udaigiri caves.

Ans) c

Exp) Option c is the correct answer.

The Elephanta Caves located near Mumbai, were originally a Buddhist site which was later dominated by the Shaivite faith. It is contemporary with Ellora, and its sculptures show slenderness in the body, with stark light and dark effects. **Elephanta sculptures are known for their remarkable qualities of surface smoothness, elongation and rhythmic movement.** Their composition is very complex.

The image of Maheshmurti at Elephanta dates back to the early sixth century CE. It is located in the main cave shrine. In the tradition of western Deccan sculpting, it is one of the best examples of qualitative achievement in sculpting images in rock cut caves. It is also known as Trimurthy.

Ardhanarishvara, literally translates into the half female god (Siva). For its artistic excellence, this image is arguably the second-best image, after the three headed Mahesh Murthy at Elephanta.

Source: <https://elephanta.co.in/ardhanarishvara-at-elephanta>

Class 11 NCERT, An Introduction to Indian art, Chapter 4.

Q.38) Arrange the following monuments in chronological order according to the year in which their construction was completed.

- Qutb Minar
- Alai Darwaza
- Ibadat khana at Fatehpur Sikri
- Bibi-Ka-Maqbara

Select the correct answer from the code given below:

- 1-2-3-4
- 2-1-3-4
- 1-2-4-3
- 2-1-4-3

Ans) a

Exp) Option a is the correct answer.

The correct chronological order will be 1-2-3-4

Option 1: Qutbu'd-Din Aibak laid the foundation of Minar in AD 1199 for the use of the mu'azzin (crier) to give calls for prayer and raised the first storey, to which were added **three more storeys by his successor and son-in-law, Shamsu'd-Din Iltutmish (AD 1211-36). In 1230, Iltutmish completed the construction of the Qutab Minar.**

Option 2: Alai Darwaza was built by Alauddin Khilji around 1311 as an entrance door to the Qutub Minar and Quwwat-ul-Islam Mosque. This door was over 14 meters tall and had arches of very pleasing proportions that were very accurate. It is also the entrance to Quwwat-ul-Islam Mosque from the Southern side. The door also contains a magnificent dome built on correct scientific lines.

Option 3: The Ibādat Khāna (House of Worship) was a meeting house built in 1575 CE by the Mughal Emperor Akbar (r. 1556–1605) at Fatehpur Sikri to gather spiritual leaders of different religious grounds so as to conduct a discussion on the teachings of the respective religious leaders.

Option 4: The Bibi-Ka-Maqbara is a beautiful mausoleum of Rabia-ul-Daurani alias Dilras Banu Begum, the wife of the Mughal Emperor Aurangzeb (1658-1707 A.D.). This mausoleum is believed to be constructed by **Prince Azam Shah in memory of his mother during 1651 to 1661 A.D**

Source: Art and Culture by Nitin Singhania.

Q.39) Consider the following statements about the Ellora Caves:

1. The famous sculpture depicting Ravana shaking the Kailasa Mountain is located in the Ellora caves.
2. Ellora caves are located in the gorge of the Waghora river.
3. More than half of the caves at Ellora belong to the Jain religion.

Which of the above given statements are **incorrect**?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Ajanta and Ellora are two monumental rock-cut cave complexes located in the Aurangabad district of Maharashtra. While separated by a distance of approximately 100 km, they are often mentioned together due to their similar aesthetic and cultural significance.

Statement 1 is correct: Some of the marvelous sculptures within the temple are that of dancing Nataraja; Shiva Parvati's wedding and **Ravana attempting to lift Mount Kailasa, the abode of Lord Shiva**, with his full might.

Statement 2 is incorrect: Ajanta Caves (Not Ellora) lie in the gorge of Waghora river.

Statement 3 is incorrect: The Ellora Caves are a complex of 34 caves. Out of these 34, 17 are Hindu caves (caves 13, 29, 14, and 15 are famous and are known as Ravan Ki Khai and Dashavatar caves, respectively), 12 are Buddhist caves (caves 1-12), and **5 are Jain caves (not more than half)**(caves 30-34, Jaina caves include Indra Sabha and Jagannath Sabha).

Source: Indian Art and Culture by Nitin Singhania

Q.40) The West Seti Hydro project, which India recently have decided to develop, is located in which Country?

- a) Nepal
- b) Bhutan

- c) Myanmar
d) Bangladesh

Ans) a

Exp) Option a is the correct answer.

India will be taking over an ambitious hydropower project in Nepal known as West Seti Dam Project nearly four years after China withdrew from it, ending a six-year engagement between 2012 and 2018.

Option a is correct: The Investment Board Nepal and India's state-owned NHPC Limited has sign a memorandum of understanding (MoU) to **develop the West Seti and Seti River-2 hydroelectric projects in western Nepal**. The estimated cost of the project, according to the Investment Board, is \$2.4 billion. The West Seti project, on the West Seti River in Nepal's northwestern Doti District, has been planned for or under development since 1994. These storage type projects on the Seti river are located in four districts of Bajhang, Doti, Dadeldhura and Achham.



Source:

<https://indianexpress.com/article/explained/what-west-seti-power-project-can-mean-for-india-nepal-ties-7979073/>

<https://kathmandupost.com/national/2022/08/15/investment-board-india-s-nhpc-limited-to-ink-mou-on-west-seti-projects-thursday>

Q.41) With reference to the Ashokan pillar at Sarnath (pillar with Lion Capital), consider the following statements:

1. Animals depicted on the abacus of the Sarnath pillar include a Tiger, a horse, a bull and an elephant.
2. The phrase 'Satyamev Jayate' was originally inscribed on the abacus of this pillar.

Which of the above given statements is/are **incorrect**?

- a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The Sarnath Pillar is a column of polished sandstone located in Sarnath, near Varanasi in the state of Uttar Pradesh. It was erected by Emperor Ashoka in the 3rd century BCE, as a part of his efforts to spread Buddhism across his empire. The pillar is known for its beautiful carvings and inscriptions, which provide important historical and cultural insights into the Mauryan period.

Statement 1 is incorrect: In the abacus of the Sarnath pillar, four animals are shown representing four directions – a galloping horse (west), a bull (east), an elephant (south) and a lion (north). The animals seem to follow each other turning the wheel of existence till eternity. **There is no Tiger on the abacus.**

Statement 2 is incorrect: The Mundaka Upanishad is an ancient Sanskrit Vedic text, embedded inside Atharva Veda. **The Mundaka Upanishad is the source of the phrase Satyameva Jayate, which is the national motto of India.** The phrase was not originally inscribed as a part of the Sarnath lion capital.



Source: Indian Art and Culture by Nitin Singhania

Q.42) With reference to schools of sculpture developed in Ancient India, consider the following statements:

1. While Mathura school is indigenously developed, Gandhara School had Greek influence.
2. While Mathura school mostly used white marble, Gandhara school used red sandstone.
3. While Gandhara school mainly had Buddhist influence, Mathura school had influence of Hinduism, Jainism and Buddhism.
4. While Gandhara school was patronized by Pala rulers, Mathura school was patronized by Satavahana rulers.

How many of the above given statements are correct?

- a) Only one statement
- b) Only two statements
- c) Only three statements
- d) All the four statements

Ans) b

Exp) Option b is the correct answer.

Three prominent schools of sculpture developed in this period at three different regions of India – centred at Gandhara, Mathura and Amaravati.

Statement 1 is correct: Gandhara School had heavy influence of Greek or Hellenistic sculpture, so it is also known as IndoGreek art. **Mathura School** and Amaravati School were developed indigenously and not influenced by external cultures.

Statement 2 is incorrect: Early Gandhara School used **bluish-grey sandstone** while the later period saw the use of mud and stucco. The sculptures of Mathura School were made using **spotted red sandstone**, but the sculptures of Amaravati School were made using **white marbles**.

Statement 3 is correct: Gandhara and Amaravati are mainly Buddhist imagery whereas Mathura school had influence of all three major religions of the time, i.e., Hinduism, Jainism and Buddhism.

Statement 4 is incorrect: Gandhara and Mathura were patronized by Kushana rulers whereas Amravati was patronized by Satavahana rulers.

Source: Indian Art and Culture by Nitin Singhania

Q.43) With reference to the seals found during Indus Valley Civilization (IVC), consider the following statements:

1. Animal and human figures were found on the seals.
2. These seals were used for commercial purposes.
3. Mathematical images have also been found on some seals.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The art of making glazed or unglazed porous earthenware, figures, and other decorative items from clay that has been dried and fired at temperatures of about 1000°C is known as terracotta, which is derived from the Latin terra cotta, or baked earth.

Statement 1 is correct. Terracotta seals from the sites of Indus Valley Civilisation (IVC) were found to bear on them the representation of an animal or human figure. There was a seal found in Mohenjodaro named the **Pashupati seal**. This seal looks like a human figure seated with its legs crossed. On the right side of the figure, an **elephant and a tiger** could be seen, and on the left a **rhinoceros** and a **buffalo**.

Statement 2 is correct. Seals were primarily used for **commercial purposes** and helped in communication. Discovery of various seals in **Mesopotamia** and various sites such as Lothal indicate that seals were extensively **used for trade**.

Statement 3 is correct. **Mathematical images** have also been found on some seals, which might have been used for **educational purposes** as well. Seals with symbol similar to 'Swastika' design have also been found.

Source: <https://www.dollsofindia.com/library/terracotta-art/>
Nitin singhaniya

Q.44) With reference to Ibadat Khana, consider the following statements:

1. The Ibadat Khana was built by the Mughal Emperor Humayun.
2. It was built for conducting religious discussions with theologians of different religions.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. The Mughal Emperor **Akbar (1542–1605 CE)** **built** the House of Worship, also known as the **Ibadat Khana**. It aims to conduct a discussion on the teachings of the different religious leaders.

Statement 2 is correct. Ibadat Khana was an assembly of **spiritual leaders (theologians) of different religions at one place to discuss** the teachings of their **respective religions**. Most of these religious discussions were held in the evenings on Thursdays.

Source : https://www.worldhistory.org/Ibadat_Khana/

Q.45) Recently, the term ‘over the ground worker’ was in the news. In this context, consider the following statements:

1. He/she is a terrorist or other criminal who acts alone rather than as part of a larger organization.
2. He/she can be detained under the provisions of the Public Safety Act.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The term over-ground workers (OGWs) is used by the police and security forces for those who are reportedly sympathetic to militants and provide them logistical support in terms of food, shelter, money, and other logistical infrastructure.

Instead, **lone wolf** is a terrorist or other criminal who acts alone rather than as part of a larger organization.

Statement 2 is correct: Recently, the Jammu and Kashmir Police detained five over-ground workers (OGWs) of militants in the Ramban district under the provisions of the Public Safety Act. The Jammu & Kashmir Public Safety Act (PSA), 1978 is a preventive detention law, under which a person is taken into custody to prevent him or her from acting in any manner that is prejudicial to “the security of the state or the maintenance of the public order”. It is very similar to the National Security Act that is used by other state governments for preventive detention.

Source: <https://indianexpress.com/article/cities/jammu/jammu-kashmir-police-detain-militants-ramban-8220610/>

<https://jkhome.nic.in/pdf/PSA0001.pdf>

Q.46) With reference to Buddhist architecture, consider the following statements:

1. Chaitya is usually a prayer hall with a stupa placed at the centre of the hall.
2. Viharas are a place of residence for monks.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. In Buddhism, Chaityas refers to a prayer hall with a stupa in the centre. Chaityas are narrow and have high ceilings, unlike Viharas. Examples of common chaityas that have survived are rooted in Indian rock-cut architecture, such as the Bhaja Caves and the great Karla Caves.

Statement 2 is correct. Buddhists Viharas meant as a place of residence for monks and also a place for religious work and Buddhist learning. Viharas are small, centred halls that are occasionally joined by beds carved from stone.

Source: <https://www.india-a2z.com/buddhist-architecture-in-india.html>

Q.47) With reference to Sun Temples of India, consider the following pairs:

Sun Temple	State/UT
1. Konark	Odisha
2. Modhera	Chhattisgarh
3. Martand	Uttarakhand
4. Unnao Balaji	Madhya Pradesh
5. Surya Pahar	Assam

Which of the pairs given above are correctly matched?

- 1, 2 and 3 only
- 1, 3 and 5 only
- 1, 4 and 5 only
- 1, 2, 4 and 5 only

Ans) c

Exp) Option c is the correct answer.

Sun Temple	State/UT
1. Konark	Odisha
2. Modhera	Gujarat
3. Martand	Jammu & Kashmir
4. Unnao Balaji	Madhya Pradesh
5. Surya Pahar	Assam

- Sun Temple Konark:** It is a World Heritage Site located in the Indian state of Odisha. It is also considered as one of the Seven Wonders of India.
- Sun Temple Modhera:** In the Mehsana district of Gujarat, it is situated on the banks of the Pushpavati River.
- Sun Temple Martand:** It is situated in the Indian Union Territory of Jammu & Kashmir. Martand Sun Temple is listed as the site of national importance in the region.
- Unnao Balaji Sun Temple:** It is situated in the Datia district of the state of Madhya Pradesh. It is famous for its unique design and architecture.
- Surya Pahar Assam:** It is located in the Goalpara town of Assam and is considered as one of the least known archaeological site in the state.

Source:

<https://timesofindia.indiatimes.com/web-stories/religion/12-most-famous-sun-temples-in-india/photostory/81103884.cms>

Q.48) Which of the following statements is/are correct regarding the Didarganj Yakshi, also known as the Chauri-Bearer (flywhisk-bearer) statue?

- It is made of polished chunar sandstone.
- It was found on the banks of River Yamuna in Uttar Pradesh.
- It is believed that the sculpture belongs to the third century CE.

Select the correct answer using the code given below:

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

Didarganj Yakshi sculpture has garnered and attracted interest from various spheres because it is a stunning combination of **Buddhist elements of art** with supposed Mauryan standards of beauty.

Option 1 is correct: Didarganj Yakshi stone sculpture, is 5'2" tall. It is supported by a pedestal and is made of **polished chunar sandstone**. It strikes the viewer as having superb craftsmanship and attention to detail.

Option 2 is incorrect: Didarganj Yakshi **sculptor was found in 1917 on the muddy banks of the river Ganga (and not river Yamuna) in Didarganj city of Bihar.**

Option 3 is incorrect: There are multiple views regarding the Chauri-bearer statue's dating and style. According to scholars, the sculpture dates to the **third century BCE** (not third century CE) and is frequently found in pieces of art from the Mauryan era. However, some scholars date it to a later period of the Kushanas and compare it to Mathura Yakshis from the second century CE.

Source: <https://indianculture.gov.in/snippets/didarganj-yakshi>

Q.49) Consider the following statements with reference to the Khajuraho temple complex:

1. The temples of Khajuraho were built by the Chandela Kings in the tenth century.
2. Khajuraho's temples are also known for their extensive erotic sculptures.
3. Temples at Khajuraho are devoted to both Hindu and Jain gods.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer

Khajuraho are a group of temples dating back to the period 950 A.D.-1050 A.D. The Temples of Khajuraho are a magnificent example of the Nagara style of temples as the temples.

Statement 1 is correct: The **temples of Khajuraho made by the Chandela Kings in the tenth century. The Lakshmana temple of Khajuraho**, dedicated to Vishnu, was built in **954** by the **Chandela king, Dhanga**. Khajuraho temples consists of a sanctum, a narrow ante-chamber (antarala), a transept (mahamandapa), additional halls (ardha mandapa), a mandapa or nave and an ambulatory passage (Pradakshina-path) which is lighted by large windows.

Statement 2 is correct: **Khajuraho's temples are also known for their extensive erotic sculptures.** The erotic expression is given equal importance in human experience as spiritual pursuit, and it is seen as part of a larger cosmic whole. Many Hindu temples therefore feature **mithun (embracing couple) sculptures** and it is considered auspicious. Usually, they are placed at the entrance of the temple or on an exterior wall or they may also be placed on the walls between the mandapa and the main shrine.

Statement 3 is correct: There are **many temples at Khajuraho**, most of them **devoted to Hindu gods**. There are **some Jain temples as well** as a **Chausanth Yogini temple**, which is of interest. The main Jain temples includes the Parshvanath Temple around 954 AD, the Ghantai Temple around 960 AD, and the Adinath Temple around 1027 AD. Kandariya Mahadeva is a Hindu temple which is the largest and tallest of the surviving temples at the temple site of Khajuraho.

Source: <https://ncert.nic.in/ncerts/l/kefal06.pdf>

Q.50) Consider the following statements with reference to Chief of Defence staff (CDS):

1. The serving Lieutenant General can be appointed as CDS.
2. He acts as the military advisor to the Prime Minister on key defence issues.
3. The Department of Defense is headed by the CDS.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 2 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

The Chief of Defence Staff (CDS) will be first among equals among service chiefs. However, in the list of protocol, the CDS will be higher than the service chiefs. The main task of the CDS will be to ensure 'jointmanship' among the three services. This will include powers to work on setting up few theatre commands as well as allocating military assets among the services to synergise their operations, they said.

Statement 1 is correct: The Ministry of Defence has issued a notification amending the rules of defence forces for the appointment of next Chief of Defence Staff (CDS). The amendment to the service rules of the Army, Navy and Air Force will make serving three-star officers and retired three- and four-star officers eligible for appointment as the next CDS. **As per the notification, the government may consider officers who are serving as Lieutenant General equivalent, General equivalent or officers who have retired in the rank of Lt Gen or Gen but have not attained the age of 62 years, for the post of CDS.**

Statement 2 is correct: The Cabinet Committee on Security (CCS) approved the creation of the chief of defence staff (CDS) who will be the single-point military adviser to the government as suggested by the Kargil Review Committee in 1999, **The CDS will also act as a single-point military adviser to the prime minister and defence minister on key defence and strategic issues.**

Statement 3 is incorrect: The Department of Military Affairs which will be created under the defense ministry will be headed by the CDS. He will function as the secretary of the department. **The Department of Defense is headed by the Defense secretary.**

Source:

https://www.business-standard.com/article/pti-stories/cabinet-committee-on-security-approves-creation-of-chief-of-defence-staff-119122400586_1.html

<https://www.indiatoday.in/india/story/centre-amends-rules-chief-of-defence-staff-appointment-1959484-2022-06-07>

<http://mod.gov.in/dod/about-department-defence-0>

<https://static.pib.gov.in/WriteReadData/specificdocs/documents/2021/oct/doc202110501.pdf>

Direction for the following five (5) items:

Read the following **four passages** and answer the items that follow the passages. Your answers to these items should be based on the passages only:

Passage 1

The labyrinthine nature of healthcare systems, as explored by a plethora of erudite scholars, demands a critical examination of the intricate interconnections between biomedical advancements, public health policy, and the ethical considerations that undergird healthcare delivery. At the heart of this convoluted nexus lies the persistent struggle to balance the imperatives of health equity with the exigencies of economic and technological progress. For instance, the rapid advancements in the field of personalized medicine, fueled by the ongoing genomics revolution, have engendered a paradigm shift in our understanding of diseases. While these innovations hold immense promise for the optimization of therapeutic interventions and the reduction of adverse drug reactions, they also raise crucial questions about the equitable distribution of cutting-edge healthcare technologies, as well as the potential exacerbation of existing health disparities. Simultaneously, the global proliferation of non-communicable diseases (NCDs), such as cardiovascular disease and diabetes, necessitates a reevaluation of the traditional models of healthcare delivery. The primacy of preventive care and the emphasis on health promotion strategies must be reconciled with the mounting pressures on healthcare systems to provide comprehensive, cost-effective care in the face of escalating healthcare expenditures and an aging population.

Q.1) On the basis of the passage given above, the following assumptions have been made:

1. Personalized medicine is transforming disease understanding and treatment.
2. Equitable distribution of advanced healthcare technologies is not possible.

Which of the above assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The passage states that personalized medicine, driven by the genomics revolution, is causing a paradigm shift in our understanding of diseases. This validates the given assumption.

Statement 2 is incorrect: The passage mentions that equitable distribution of advanced healthcare technologies raises "crucial questions," but it does not claim that it is not possible.

Q.2) What is the most logical and essential message of the above-given passage?

- a) Biomedical advancements are sufficient to address global health challenges.
- b) Non-communicable diseases can be effectively managed using existing healthcare models.
- c) The ethical considerations in healthcare delivery have little impact on policy decisions.
- d) Healthcare systems must navigate intricate interconnections and adapt to emerging trends.

Ans) d

Exp) Option d is the correct answer.

The passage emphasizes the complexity of healthcare systems and the need to critically examine the connections between biomedical advancements, public health policy, and ethical considerations. It also discusses the challenges of emerging trends, such as personalized medicine and the rise of non-communicable diseases, suggesting that healthcare systems must adapt to these trends.

Passage 2

Dowry deaths remain a persistent challenge in India despite efforts to prevent them. One of the major challenges is changing cultural attitudes towards dowry. The practice of dowry is deeply ingrained in Indian society and many families believe it is necessary for a successful marriage. Additionally, there is often a lack of support for women who are victims of dowry violence. Many women face stigma and shame if they report abuse or leave their husbands. Furthermore, dowry deaths are often covered up by families and authorities, making it difficult to prosecute those responsible. Another challenge is the ineffective implementation of laws and policies aimed at preventing dowry deaths. Police and judicial officials may be biased against women or may lack the zeal to investigate and prosecute cases.

Q.3) Which of the following statements best reflects the corollary to the passage given above?

- Community based education programs can eliminate dowry deaths.
- One stop centers should be made functional throughout India,
- Stringent laws should be enacted to punish those responsible for dowry deaths.
- Modernisation of the police force can reduce dowry related crimes.

Ans) b

Exp) Option b is the correct answer.

Option a will definitely help in **reducing** incidences of dowry deaths. But this can't eliminate it, as this alone is not the only reason, there are other reasons too. So option a is incorrect.

The passage states that 'Additionally, there is often a lack of support for women who are victims of dowry violence. Many women face stigma and shame if they report abuse or leave their husband'

So definitely One stop centers throughout India will help victims of dowry violence. Hence option b is correct.

In the passage it's stated that 'Another challenge is the ineffective **implementation** of laws and policies aimed at preventing dowry deaths', so implementation is the problem. So enacting new stringent laws is not the next step to prevent dowry deaths. Hence option c is incorrect.

The passage mentions that 'Police and judicial officials may be biased against women or may lack the zeal to investigate and prosecute cases', this implies that the next step should be **sensitisation** of police force, not the modernisation. Hence option d is incorrect.

Passage 3

Cow vigilantism, the act of individuals taking the law into their own hands to punish those who they believe have harmed cows, has become a controversial issue in India in recent years. While cow protection has long been an important aspect of Hindu culture, the rise of vigilantism has led to violent clashes between different religious groups and raised concerns about the rule of law and the safety of minority communities. In many cases, those accused of cow-related crimes are subjected to vigilante justice before being given a fair trial, leading to a breakdown in the criminal justice system. The issue has also become politicized, with some political parties and leaders using cow protection as a means of gaining support from certain communities.

Q.4) Which of the following statements best reflect the rational, plausible and practical implications that can be derived from the passage given above ?

- Vigilantism is defeating the criminal justice system in India.
- All the political parties utilize religion to fulfill their own political goals.
- Minorities in India are vulnerable to religious clashes.
- Cow protection is sacrosanct to Hindu religion.

Select the correct answer using the code given below:

- a) 2 and 4 only
- b) 1 and 3 only
- c) 1 and 2 and 3 only
- d) 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

The passage states that ‘In many cases, those accused of cow-related crimes are subjected to vigilante justice before being given a fair trial, leading to a breakdown in the criminal justice system’ so this implies that Vigilantism is defeating the criminal justice system in India. Hence statement 1 is correct.

In the passage it’s mentioned that “some” political parties and leaders are using cow protection as a means of gaining support from certain communities. But from this we can’t imply that “all” political parties utilize religion to fulfill their goals Hence statement 2 is incorrect.

The passage states that ‘the rise of vigilantism has led to violent clashes between different religious groups and raised concerns about the rule of law and the safety of minority communities’. It implies that ‘Minorities in India are vulnerable to religious clashes’. Hence statement 3 is correct.

In the passage it’s mentioned that ‘cow protection has long been an important aspect of Hindu culture,’ but from this we can’t imply that it is sacrosanct. Hence statement 4 is incorrect.

Passage 4

Judicial activism refers to the practice of judges using their power to interpret the law in ways that promote social justice and protect individual rights. In India, judicial activism has been a significant force in promoting progressive social change and holding the government accountable for its actions. Some examples of judicial activism in India include the Supreme Court’s decisions to recognize the right to privacy as a fundamental right, strike down discriminatory laws, and order investigations into cases of corruption and human rights abuses. However, critics argue that judicial activism can undermine the separation of powers between the judiciary and the executive, as well as lead to an overly politicized judiciary. Despite these criticisms, judicial activism remains an important tool for promoting justice and ensuring accountability in India.

Q.5) Based on the passage above following assumptions have been made:

1. Judiciary is the one holding the government accountable.
2. India is not immune to human rights violations.
3. Separation of power between judiciary and executive is quite important.
4. Politicization of the judiciary is not good.

Which of the above is/are valid assumptions?

- a) 2 only
- b) 1, 3 and 4 only
- c) 3 and 4 only
- d) 1, 2, 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

The passage states that ‘judicial activism has been a significant force in promoting progressive social change and holding the government accountable for its actions’, so definitely through judicial activism the government is being held accountable but it is “not the only one” holding the government

accountable. Statement 1 assumes that “judiciary is the one”, which is incorrect. Hence statement 1 is invalid assumption.

The passage mentions that through judicial activism, the judiciary has ordered investigations into human rights abuses. So it assumes that there are human rights violations in India. Hence statement 2 is a valid assumption.

The passage states that ‘critics argue that judicial activism can undermine the separation of powers between the judiciary and the executive, as well as lead to an overly politicized judiciary’, this is argument of certain people, this is not a stated fact or an assumption in any manner, hence statement 3 and 4 are invalid assumptions.

Q.6) In the Lok Sabha elections, there are only two candidates, X and Y, contesting from the Central Delhi seat. $\frac{3}{5}$ of the people promised to vote for X, and the rest promised to vote for Y. 15% of the people, who promised to vote for X, and 20% of the people, who promised to vote for Y, did not vote at all. If Y got 4800 votes, how much was the margin of victory for X?

- a) 4200
- b) 3000
- c) 2850
- d) 3800

Ans) c

Exp) Option c is the correct answer.

Let the total votes = v

People who promised to vote for X = $\frac{3}{5}$ of v

People who actually voted for X = $\frac{3}{5}$ of v – 15% of $(\frac{3}{5}$ of v) = $(\frac{51v}{100})$

People who promised to vote for Y = $\frac{2}{5}$ of v

People who actually voted for Y = $\frac{2}{5}$ of v – 20% of $(\frac{2}{5}$ of v) = $(\frac{32v}{100})$

Now according to the question, $(\frac{32v}{100}) = 4800$

Solving we get v = 15000

Margin of victory = $(\frac{51v}{100}) - (\frac{32v}{100}) = (\frac{19v}{100})$

Putting v = 15000, we get: Margin of victory = $(\frac{19v}{100}) = (\frac{19 \times 15000}{100}) = 2850$ votes

Q.7) A recipe requires 227 grams of ghee and 397 grams of flour. While making the recipe 227 grams of ghee is added, now if the chef accidentally pours in 595 grams of flour, how many more grams of ghee should be added?

- a) 340 gm
- b) 113 gm
- c) 104 gm
- d) 240 gm

Ans) b

Exp) Option b is the correct answer.

The ratio of ghee to flour in the original recipe is 227:397.

If the chef accidentally pours in 595 grams of flour,

we can use the ratio to find out how many grams of ghee should be added.

Since the ratio of ghee to flour is 227:397, for every 397 grams of flour, there should be 227 grams of ghee.

So for 595 grams of flour, there should be $(\frac{227}{397}) \times 595 = 340$ grams of ghee.

Since the chef has already added 227 grams of ghee,

they should add an additional $340 - 227 = 113$ grams of ghee to maintain the ratio in the recipe.

Q.8) What is the largest integer n such that 2^n is a factor of 20^8 ?

- a) 2
- b) 4
- c) 8
- d) 16

Ans) d

Exp) Option d is the correct answer.

To find the largest integer n such that 2^n is a factor of 20^8 , we need to first find the prime factorization of 20^8 :

$$20 = 2^2 * 5^1$$

Thus,

$$\Rightarrow 20^8 = (2^2 * 5^1)^8$$

$$\Rightarrow 20^8 = (2^{16} * 5^8)$$

Now, since we are looking for the largest integer n such that 2^n is a factor of 20^8 .

Since the maximum power of 2 in the prime factorization of 20^8 is 2^{16} , the largest value of n is 16.

Thus, the largest integer n would be 16 where 2^n is a factor of 20^8

Q.9) In a Printing competition three teams take part to print maximum numbers of pages. Consider the two statement and a question:

Statement-1: The first team and the third team print twice as much as the second team prints.

Statement-2: The second team and third team print three times as much as the first team prints.

Question: Which team wins the competition?

Which one of the following is correct in respect of the Statement and the Question?

- a) Statement-1 alone is sufficient to answer the Question.
- b) Statement-2 alone is sufficient to answer the Question.
- c) Both Statement-1 and Statement-2 are required to answer the Question.
- d) Neither Statement -1 alone nor Statement-2 alone is sufficient to answer the Question.

Ans) c

Exp) Option c is the correct answer.

Output of 1st team be A

Output of second team be B

Output of third team be C

Statement-1: The first team and the third team print twice as much as the second team prints.

$$A+C = 2B$$

This does not give us which team printed maximum.

So, Statement-1 alone is not sufficient to answer the Question.

Using Statement-2: The second team and third team print three times as much as the first team prints.

$$B + C = 3A$$

This does not give us which team printed maximum.

So, Statement-2 alone is not sufficient to answer the Question.

Using both Statements:

$$A+ C = 2B \text{ ---(1) and } B+C = 3A \text{---(2)}$$

$$C = 2B- A \text{ put this in equation (2)}$$

$$B+ 2B -A = 3 A \Rightarrow 3B = 4A \Rightarrow B = 4A/3 \text{---(3)}$$

Put this in equation (2)

$$C = 2(4A/3) -A = 8A/3 - A \Rightarrow C = 5A/3 \text{----(4)}$$

Now, $B = 4A/3$

$C = 5A/3$

So, the value of C is the highest. Hence C printed the maximum number of pages and won the competition.

Both Statement-1 and Statement-2 are required to answer the Question.

Q.10) N is a natural number. Consider the two Statements and a Question:

Statement-1: When N is divided by 100, the remainder obtained is 2.

Statement-2: Total number of factors of number N is odd.

Question: Is N a perfect square ?

Which one of the following is correct in respect of the Statement and the Question?

- a) Statement-1 alone is sufficient to answer the question
- b) Statement -2 alone is sufficient to answer the question
- c) Either Statement-1 alone or Statement -2 alone is sufficient to answer the question
- d) Neither Statement-1 alone nor Statement -2 alone is sufficient to answer the question

Ans) c

Exp) Option c is the correct answer.

Statement-1: When N is divided by 100, the remainder obtained is 2.

Implies the unit digit of the number is 2. So, in this condition N is not a square, because for no perfect square, the unit digit is 2.

Hence Statement-1 alone is sufficient to answer the question.

Statement-2: Total number of factors of number N is odd.

This is a rule in mathematics, that the number of factors of a perfect square is always odd and vice versa. Hence Statement -2 alone is sufficient to answer the question.

Conclusion: Either Statement-1 alone or Statement -2 alone is sufficient to answer the question.

Q.11) Seven friends, A, B, C, D, E, F, and G go to a cinema hall to watch a movie, all these friends sit in the first, second and third row in a certain manner:

At least two friends sit in each row.

There is at least one female in each row.

C a female doesn't sit with A, E and D.

F sits with only his best friend B.

A sits with his best friend in the first row.

G sits in the third row. And E is the brother of C.

How many females are there in the group?

- a) 3
- b) 4
- c) 5
- d) Can't be determined

Ans) d

Exp) Option d is the correct answer.

Step 1: A sits with his best friend in the first row and G sits in the third row.

Step 2: given F sits with only his best friend B. Implies the row in which F sits, no one else sits other than B. So, it has only two people on that row. Such a row left is 2nd.

Step 3: C a female doesn't sit with A, E and D. So, C can't sit in 1st row and given in row 2nd only two people sit, G can't sit in 2nd row too. So, she has to sit in 3rd row.

Hence E and D will be seated in 1st row.

Given, A sits with 'his' best friend, so A is a male.

F sits with 'his' best friend, so F again is a male.

Given, in each row a female sits so, B has to be a female ---(1)

Given, E is the brother of C, so in 1st row both A and E are male, so D has to be female.--(2)

Given C is a female --(3)

So now we know that for sure, C, and D are female. But we don't know about G. She can be a male or female. Hence number of female can't be determined.

Row	Person
1st	A, E, D
2nd	F, B
3rd	G, C

Q.12) In an apartment there are eleven floors plus the ground floor. 8 people get into the lift of the building on the ground floor. The lift doesn't stop on the first floor. The number of people who get down on the three floors are 1, 3 and 4 (not in the same order). These sets of 1, 3 and 4 people get down on different floors. Find the number of ways in which they can do so ?

- a) 62040
- b) 64000
- c) 50400
- d) 201600

Ans) d

Exp) Option d is the correct answer.

Total floors =11

Since they don't get down on 1st floor, so the total number of floors on which they can get down is 10.

We have to select three floors on which this set of people will get down: this can be done in $C(10,3)$ ways and these floors can be shuffled among themselves in $3!$ Ways. ---(1)

Total number of people =8

Choosing set of 4 people who will be getting down on one floor = $C(8,4)$ ---(2)

Remaining people = 4

Choosing set of 3 people who will be getting down on another floor = $C(4,3)$ ---(3)

Remaining people = 1

Choosing set of 1 people who will be getting down on another floor= $C(1,1)$ ---(4)

Now the number of ways in these set of people can get down on different floors=

product of (1), (2), (3), (4) = $C(10,3) \times 3! \times C(8,4) \times C(4,3) \times C(1,1) = 2,01,600$

Q.13) Following is a matrix of certain entries. The entries follow a certain trend row-wise. Choose the missing entry (?) accordingly.

17A	19C	16F
240K	240R	240C
7P	?	4D

- a) 16 F
- b) 11G

- c) 10 S
d) 48 E

Ans) b

Exp) Option b is the correct answer.

The second row digit is $(1st\ row)^2 - (3rd\ row)^2$

That is $(17)^2 - 7^2 = 240$

$(16)^2 - 4^2 = 240$

So, $(19)^2 - x^2 = 240$

$x = 11$

The difference between the two alphabets is consecutive prime numbers.

$A+2 = C, C+3 = F, F+5=K, K+7=R, R+11=C, C+13=P, P+17=G, G+23=D$

Q.14) For the given expression $(83)^{261}$, what will be the remainder when it will be divided by 17?

- a) 15
b) 9
c) 8
d) 2

Ans) d

Exp) Option d is the correct answer.

Expression : $\{(83)^{261}\}/17$

Step 1: Find the remainder for $83/17$. It's 15.

Step 2: $\{(15)^{261}\}/17 = \{(-2)^{261}\}/17$ (Since $15/17$ gives remainder -2)

Now break the power of 2: $\{(-2)^4\}^{65}/17 \times (-2)/17 \Rightarrow$ since $(-2)^4 = 16$,

So $\{(16)^{65}\}/17 \times (-2)/17 = (-1) \times (-2) = 2$. (Since $16/17$ will give remainder -1)

Note: for such types of questions the aim should be to break the expression in such a way that we get a convenient remainder of -1, -2 or -3.

Q.15) In the Blue Diamond motel, 42 friends were staying for a vacation. Few days later 13 more friends joined in. Due to the entry of 13 new friends, the expenses of the motel went up by Rs31 per day while the average expenditure per head diminished by Rs3. What was the original expenditure of the motel ?

- a) 583
b) 623
c) 633
d) 563

Ans) c

Exp) Option c is the correct answer.

Let the expenditure be Rs x per head, of the motel when 42 friends were staying.

Total expenditure = Rs $42x$ ---- (1)

When 13 new friends joined in,

(a) Total expenditure went up by Rs 31 per day, so new total expenditure = Rs $(42x + 31)$ ---- (2)

(b) Average expenditure diminished by Rs 3 per head., so new average expenditure = $(x-3)$

(c) New total expenditure = $(42+13)(x-3) = 55(x-3)$ ---- (3)

Equating (2) and (3)

$42x + 31 = 55(x-3)$

$X = 15.07$

Original expenditure of motel = $15.07 \times 42 = 633.23$

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Q.16) A company sells two types of products, A and B. In a week, they sold 60 units of product A at ₹80 each and 40 units of product B at ₹120 each. The following week, they sold 50% more units of product A and 25% fewer units of product B. What is the average cost of the products sold over the two weeks?

- a) ₹92.73
- b) ₹96.25
- c) ₹97.50
- d) ₹98.33

Ans) a

Exp) Option a is the correct answer.

Total revenue and units sold in the first week:

Product A: 60 units * ₹80 = ₹4800

Product B: 40 units * ₹120 = ₹4800

Total revenue: ₹4800 + ₹4800 = ₹9600

Total units sold: 60 + 40 = 100

Total revenue and units sold in the second week: (50% more of Product A and 25% less of Product B)

Product A: 60 units * 1.5 = 90 units; 90 units * ₹80 = ₹7200

Product B: 40 units * 0.75 = 30 units; 30 units * ₹120 = ₹3600

Total revenue: ₹7200 + ₹3600 = ₹10800

Total units sold: 90 + 30 = 120

Total revenue and units sold over the two weeks:

Total revenue: ₹9600 (week 1) + ₹10800 (week 2) = ₹20400

Total units sold: 100 (week 1) + 120 (week 2) = 220

The average cost of the products sold over the two weeks:

Average cost = Total revenue : Total units = ₹20400 : 220 = ₹92.73

Q.17) Three employees, Alok, Bhavesh, and Chetan started a project together with an effort of 10%, 30%, and 60% respectively. Chetan is the project lead and gets a 15% bonus from the project earnings. The remaining profit is shared among the three employees in the ratio of their efforts put into the project. If the total profit earned is Rs. 1,00,000, find out the difference between the total amount received by Bhavesh and Chetan.

- a) Rs. 40,500
- b) Rs. 64,000
- c) Rs. 74,000
- d) Rs. 90,000

Ans) a

Exp) Option a is the correct answer.

The total effort put in by all three employees is 10%+30%+60% = 100%

Chetan gets a 15% bonus from the project earnings, so the bonus amount received by Chetan = 15% × 1,00,000 = Rs. 15,000

The remaining profit is Rs. 1,00,000 - Rs. 15,000 = Rs. 85,000

The profit of Rs. 85,000 is shared among the three employees in the ratio of their efforts put in the project.

Ratio of their efforts put in the project = 10% : 30% : 60% = 1:3:6.

Amount received by Alok = (1/10) × 85,000 = Rs. 8,500

Amount received by Bhavesh = (3/10) × 85,000 = Rs. 25,500

Amount received by Chetan = (6/10) × 85,000 = Rs. 51,000

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The total amount received by Chetan is the sum of his bonus and his share of profit, which is Rs. 15,000 + Rs. 51,000 = Rs. 66,000

The difference between the amount received by Bhavesh and Chetan is Rs. 25,500 - Rs. 66,000 = Rs. -40,500

Therefore, Chetan received Rs. 40,500 more than Bhavesh.

Q.18) Reema decided to have a race on her bicycle. Reema rides at a constant speed of 10 km/h. She starts their race from point A, and the target is to reach point B, which is 60 km away. However, 30 minutes into the race, Reema realizes she left her water bottle at point A and decides to go back to get it. After retrieving the water bottle, she immediately resumes the race towards point B. How much time will it take for Reema to reach point B?

- a) 7.5 hours
- b) 6 hours
- c) 7 hours
- d) 6.5 hours

Ans) c

Exp) Option c is the correct answer.

- ⇒ Reema rides at a constant speed of 10 km/h.
- ⇒ In the first 30 minutes (or 0.5 hours) of the race, she covers a distance of $10 \text{ km/h} \times 0.5 \text{ h} = 5 \text{ km}$.
- ⇒ After going back to point A to retrieve her water bottle, she has to cover the initial 5 km again plus the remaining 60 km to reach point B. So in total, she has to cover a distance of $5 \text{ km} + 55 \text{ km} = 65 \text{ km}$.
- ⇒ At a constant speed of 10 km/h, it will take her $65 \text{ km} / (10 \text{ km/h}) = 6.5 \text{ hours}$ to reach point B from the moment she realizes she left the water bottle.
- ⇒ Adding the initial 30 minutes (or 0.5 hours) to this time, it will take Reema a total of $6.5 \text{ h} + 0.5 \text{ h} = 7 \text{ hours}$ to reach point B from the start of the race.

Q.19) What number should replace the question mark?

1, 2, 5, 10, 13, ?, 29

- a) 21
- b) 23
- c) 25
- d) 26

Ans) d

Exp) Option d is the correct answer.

The series is following the pattern of the digit multiplied by 2 and the next digit with addition of 3 consecutively to get the next numbers in the series. We can see it as follows:

- ⇒ $1 \times 2 = 2$
- ⇒ $2 + 3 = 5$
- ⇒ $5 \times 2 = 10$
- ⇒ $10 + 3 = 13$

Hence

- ⇒ $13 \times 2 = 26$
- ⇒ $26 + 3 = 29$

Passage 2

The vast, mysterious realm of the ocean harbors an astonishing variety of creatures, many of which exhibit unique characteristics that enable them to thrive in their underwater habitats. From the tiniest plankton to the largest whales, each species has adapted to its ecological niche, performing a role in the intricate web of marine life. In the depths, where sunlight barely penetrates, bioluminescent organisms create their own light, illuminating their surroundings and attracting prey. Others possess specialized sensory organs, detecting subtle changes in their environment to locate food or avoid predators. Coral reefs, often referred to as the rainforests of the sea, serve as vibrant hubs of biodiversity. A kaleidoscope of fish, invertebrates, and other marine species coexist in these fragile ecosystems, relying on one another for sustenance and protection. Symbiotic relationships, such as those between clownfish and sea anemones, exemplify the delicate balance and interdependence that exist in these underwater communities. As the tides ebb and flow, the ceaseless rhythms of the ocean shape and sustain the lives of its inhabitants, providing a complex tapestry of interconnected relationships in this fascinating underwater world.

Q.22) On the basis of the passage given above, the following assumptions have been made:

1. Adaptations in marine organisms are crucial for their survival.
2. The marine life is immune to environmental changes.

Which of the above assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: This assumption is valid because the passage extensively discusses the variety and complexity of marine life. It mentions the different sizes and roles of marine species, from plankton to whales, and their adaptations to their ecological niches. Furthermore, the passage highlights the intricate web of marine life, the existence of coral reefs as vibrant hubs of biodiversity, and the delicate balance and interdependence of underwater communities. All of these points support the assumption that the ocean environment is diverse and complex.

Statement 2 is incorrect: This assumption is invalid because the passage does not address the topic of environmental changes or external threats, such as climate change or pollution. It focuses on describing the diversity, adaptations, and relationships within marine ecosystems. By not mentioning how marine life might be affected by external factors, it leaves room for the possibility that these organisms could be vulnerable to environmental changes or threats. The passage does not claim or imply that marine life is immune to such challenges.

Q.23) Which is the most logical corollary that can be drawn from the above passage?

- a) The various inhabitants of marine ecosystems thrive independently.
- b) The resiliency of marine ecosystems is solely dependent on the geographical location and depth of the habitat.
- c) There is limited variation in species and ecological relationships of marine organisms.
- d) The symbiotic interactions of marine species facilitate the flourishing of intricate underwater communities.

Ans) d

Exp) Option d is the correct answer.

The passage discusses the unique characteristics and adaptations of various marine species that enable them to survive in their underwater habitats. It also highlights the importance of symbiotic relationships, such as those between clownfish and sea anemones, which demonstrate the delicate balance and interdependence within underwater communities. These points together suggest that the adaptability and interdependence of marine life contribute to the rich and complex nature of ocean ecosystems.

Passage 3

In the crucible of rural India, a mélange of intricate social, economic, and political forces converge, forging an entwined tapestry of adversity and potential. The agrarian fulcrum upon which the nation's fortunes precariously hinge has been beleaguered by myriad challenges, including the burgeoning specter of climate change, the vicissitudes of market forces, and the pervasive dearth of technological innovation. These forces conspire to perpetuate a cycle of deprivation, with smallholder farmers ensnared in the quagmire of indebtedness and subsistence. To extricate the rural populace from this conundrum, it is incumbent upon policymakers to cultivate a paradigm shift, wherein the agricultural sector is reimagined as a dynamic engine of growth rather than a vestige of stagnation. This transformative vision necessitates the integration of modern agronomic practices, the establishment of robust value chains, and the revitalization of rural institutions that serve as custodians of social capital. Furthermore, the empowerment of rural women as agents of change, the promotion of sustainable resource management, and the prioritization of skill development are pivotal to fostering a more equitable and prosperous rural landscape. As the tectonic plates of India's socio-economic landscape undergo a seismic shift, it is imperative that the nation's rural underpinnings are fortified, lest the edifice of progress crumble under the weight of unfulfilled potential.

Q.24) What is the most logical and rational inference of the above passage?

- Rural India's prosperity is entirely dependent on the success of the agricultural sector.
- Policymakers must take transformative actions to unlock the potential of rural India.
- The agricultural sector should rely on traditional practices and institutions for sustainable production.
- Extending interest-free credit to women and farmers would aid in rural development.

Ans) b

Exp) Option b is the correct answer.

The passage discusses the various challenges faced by the rural agricultural sector in India and emphasizes the need for a paradigm shift in the way the agricultural sector is viewed. It suggests that policymakers should take transformative actions, such as modern agronomic practices, robust value chains, and revitalization of rural institutions, to unlock the potential of rural India.

Q.25) Which of the following measures are emphasized in the passage as essential for fostering a more equitable and prosperous rural landscape?

- Improvement in infrastructure
- Participative decision-making
- Credit-extension to Small enterprises

Select the correct answer using the code given below:

- 2 only
- 3 only
- 1 and 2 only
- 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The passage does mention the need for a transformative vision that includes the integration of modern agronomic practices, establishment of robust value chains, and revitalization of rural institutions. These elements can be linked to the "improvement in infrastructure", as they would require advancements in infrastructure to support such changes. Additionally, the passage emphasizes the empowerment of rural women and the revitalization of rural institutions, which can be associated with "participative decision-making". However, the passage does not explicitly mention credit-extension to small enterprises.

Passage 4

As a society, we tend to prioritize productivity above all else. The relentless pursuit of efficiency has become a badge of honor, a measure of our worth as individuals. We wake up early, work long hours, and sacrifice our personal lives in the name of progress. But at what cost? Are we really happier and healthier for it? The truth is that our obsession with productivity is not only misguided, but it's also unendurable. We cannot continue to push ourselves to the brink of exhaustion without paying a heavy price. We need to recognize that productivity is not the end goal, but rather a means to an end. It's a tool we use to achieve our goals, but it shouldn't come at the expense of our well-being. We need to shift our focus from doing more to doing better, from quantity to quality, from output to outcome. Only then can we truly thrive as individuals and as a society.

Q.26) Based on the passage following assumptions have been made:

1. Society values productivity more than personal well-being.
2. Doing better is more important than doing more.
3. Pursuing productivity is unsustainable.
4. The pursuit of productivity leads to exhaustion.

Which of the above assumptions is/are valid?

- a) 1, 2 and 3 only
- b) 2 and 4 only
- c) 1 and 3 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

The passage argues that society tends to prioritize productivity above all else, which implies that productivity is valued more highly than personal well-being. Hence Statement 1 is a valid assumption. Statement 2 is a suggestion as it's stated that 'We need to shift our focus from doing more to doing better'. Hence statement 2 is not a valid assumption.

In the passage it's stated that 'The truth is that our obsession with productivity is not only misguided, but it's also unendurable', hence it assumes that 'Pursuing productivity is unsustainable'. So statement 3 is a valid assumption.

The passage states that 'We cannot continue to push ourselves to the brink of exhaustion without paying a heavy price', it nowhere assumes that pursuit of productivity leads to exhaustion. Hence statement 4 is not a valid assumption.

Passage 5

Brexit, the UK's withdrawal from the European Union (EU), remains a contentious issue. One of the key issues at stake is the future of trade between the UK and the EU. The UK's decision to leave the EU has already had a significant impact on trade. The negotiations have been complex with disagreements over

issues such as the Irish border and access to the EU single market. UK had decided to leave the EU as the UK's contribution to the EU's budget was not proportionate to the benefits it got. The social welfare expenditure on the Britons was declining and the immigration from the EU had contributed to loss of jobs among Britons. As Brexit unfolds, the UK faces significant challenges in terms of economic growth and trade. The country's ability to negotiate favorable trade deals with other nations outside of the EU will be critical to its future success.

Q.27) Which one of the following is the most logical and rational inference that can be made from the above passage?

- a) The continuity of trade of UK with EU's single market is vital for UK's economy
- b) UK should finalize trade deals with nations outside EU for its economic revival.
- c) Stopping immigration from the EU will create more jobs for Britons.
- d) Greater proportion of the budget can be utilized for the social welfare of Britons.

Ans) a

Exp) Option a is the correct answer.

The passage emphasizes that 'One of the key issues at stake is the future of trade between the UK and the EU. The UK's decision to leave the EU has already had a significant impact on trade'. It implies that continuity of trade with the EU single market is vital for the UK's economy. So, this is the most logical and rational inference that can be made from the above passage. Hence option a is correct.

The passage mentions that 'The country's ability to negotiate favorable trade deals with other nations outside of the EU will be critical to its future success'. It nowhere indicates economic revival, hence option b is incorrect.

The passage states that the UK decided to leave the EU as immigration from the EU had contributed to loss of jobs for Britons, but it can't be inferred that 'Stopping immigration from the EU will create more jobs for Britons.' As creation of jobs depends on several other factors, hence option c is incorrect.

The passage mentions that 'the social welfare expenditure on Britons was declining' but it can't be inferred that 'Greater proportion of the budget can be utilized for the social welfare of Britons'. Hence option d is incorrect.

Passage 6

The high levels of non-performing assets (NPAs) in the Indian banking sector can be attributed to several factors. One significant reason is weak corporate governance, which has led to a lack of accountability and transparency in the management of companies. In addition, the economic slowdown has contributed to the problem, as many companies have been unable to repay their loans due to declining revenues. The lack of infrastructure and regulatory challenges have also played a role, as businesses have struggled to access capital and finance their operations. Another factor is the prevalence of fraud and corruption, which has led to loans being granted to unscrupulous borrowers who have no intention of repaying them. The consequences of this problem are significant, with banks struggling to lend and the economy suffering as a result. To address this issue, stricter regulations and better corporate governance practices are needed, along with greater transparency and accountability in the management of companies.

Q.28) Which one of the following statements best reflects the most logical, rational and practical suggestion implied by the passage given above?

- a) The Indian government should provide loans to companies to help them repay their existing debt.
- b) Regulatory agencies should be instituted for better monitoring of the banking sector.
- c) Adopting a zero tolerance policy against corruption will prevent loan frauds.
- d) Good corporate governance practices should be made mandatory for the banking sector.

Ans) d

Exp) Option d is the correct answer.

The passage mentions that ‘many companies have been unable to repay their loans due to declining revenues’, but providing them more loans can never be a viable solution to NPA. Hence option a is incorrect.

The passage stated that the lack of infrastructure and regulatory challenges have also played a role, but it does not mean that new regulatory agencies have to be instituted. It can also mean that existing regulatory institutions have failed to regulate the banking sector, so instituting regulatory agencies is not the most logical, rational and practical suggestion. Hence, option b is incorrect.

The passage mentions that ‘Another factor is the prevalence of fraud and corruption, which has led to loans being granted to unscrupulous borrowers who have no intention of repaying them’, it implies that corruption has led to wilful defaulters. So adopting a zero tolerance policy against corruption will prevent loan frauds, so this is a suggestion but not the most logical, rational and practical suggestion implied by the passage. Hence option c is incorrect.

The passage states that ‘One significant reason is weak corporate governance, which has led to a lack of accountability and transparency in the management of companies’, hence making good corporate governance practices mandatory will help in resolving many issues as it will prevent corruption too. So, this is the most logical, rational and practical suggestion implied by the passage. Hence option d is correct.

Passage 7

In the vast and unpredictable universe, there exists an intricate balance of forces that govern the motion of celestial bodies. From the smallest particles to the largest galaxies, everything is in constant motion, affected by gravity, electromagnetism, and other fundamental forces. Scientists have spent decades trying to understand these forces and their interplay, but the deeper they delve, the more complex the picture becomes. The universe is not a simple machine that can be understood with a few equations; rather, it is a living, breathing organism that defies easy explanation. Yet, in this chaos, there is also beauty. The swirling colors of a nebula, the graceful dance of a binary star system, and the mysterious dark matter that holds everything together - these are just a few of the wonders that await those who dare to explore the universe.

Q.29) Which of the following statements best reflects the crux of the passage given above?

- a) The universe is a complex gizmo that can be appreciated with intertwined explanations.
- b) The universe is a contrast of complex forces and alluring wonders.
- c) Decades of studies have not helped considerably to decode fundamental forces.
- d) Exploring the universe will expose you to magnificent mysteries.

Ans) b

Exp) Option b is the correct answer.

The passage states that ‘The universe is not a simple machine that can be understood with a few equations; rather, it is a living, breathing organism that defies easy explanation’, so option a is an aspect of the universe which is being discussed in the passage, but this is not the crux of the passage. Hence option a is incorrect.

The first half of the passage discusses the vastness and complexity of the universe, and the second half of the passage discusses the hidden beauties. So, option b rightly reflects the crux of the passage. Hence option b is correct.

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In the passage it's mentioned that the deeper the scientist delves to understand the forces the more complex it becomes, but from this we can't conclude that studies have not helped to decode the fundamental forces. Hence option c is incorrect.

The last part of the passage mentions about the beauties hidden in the universe, so this is just one aspect being discussed, this is not the crux. Hence option d is incorrect.

Q.30) In a certain code language, if "ELEPHANT" is written as " GJGNJYPR", "COMPUTER" is written as "EMONWRGP", then in the same code language, "KNOWLEDGE" will be written as:

- MLQUNCFEG
- MJUQNGBIL
- NKUONGAIL
- MJUQNGAIL

Ans) a

Exp) Option a is the correct answer.

Alphabets and their positions

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

ELEPHANT -> GJGNJYPR

COMPUTER -> EMONWRGP

It appears that a pattern is used where each letter in the given word is replaced by another letter in the alphabet based on its position (odd or even).

⇒ For odd-positioned letters, the replacement letter is two positions ahead of the alphabet.

⇒ And for even-positioned letters, the replacement letter is two positions behind the alphabet

- E(5) -> G(7)
- L(12) -> J(10)
- E(5) -> G(7)
- P(16) -> N(14)
- H(8) -> J(10)
- A(1) -> Y(25)
- N(14) -> P(16)
- T(20) -> R(18)

And

- C(3) -> E(5)
- O(15) -> M(13)
- M(13) -> O(15)
- P(16) -> N(14)
- U(21) -> W(23)
- T(20) -> R(18)
- E(5) -> G(7)
- R(18) -> P(16)

Now, if we apply the same pattern to the word "KNOWLEDGE":

- K(11) -> M(13)
- N(14) -> L(12)
- O(15) -> Q(17)
- W(23) -> U(21)
- L(12) -> N(14)

- 6) E(5) -> C(3)
 7) D(4) -> F(6)
 8) G(7) -> E(5)
 9) E(5) -> G(7)

So, in the same code language, "KNOWLEDGE" will be written as "MLQUNCFEG".

Q.31) Priya is Arjun's cousin. Shweta is sister-in-law of Akash who is not married. Anjali is the mother of Veer. Rohit is the brother of Akash. Rohit is Priya's uncle. Anjali is the grandmother of Arjun who is the son of Rohit. Shweta is the wife of Veer. How is Anjali related to Shweta?

- a) Aunt
 b) Sister
 c) Mother-in-law
 d) Mother

Ans) c

Exp) Option c is the correct answer.

Vertical lines denotes a generation change

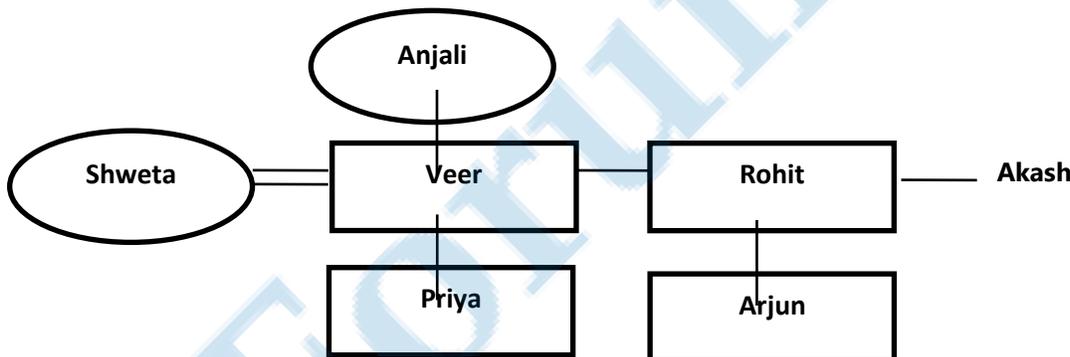
Horizontal lines denotes siblings

Oval represents female

rectangles represents male

and two horizontal line represent married couple

We can draw the following diagram from the given info:



This clearly shows Anjali is Mother-in-law of Shweta.

Q.32) The clock at Tower Chowk Bhopal is set right at 12 noon on Monday. It loses $\frac{1}{2}\%$ on the correct time in the first week but gains $\frac{1}{4}\%$ on the true time during the second week. What will be the time shown on Monday after two weeks ?

- a) 12:25:12
 b) 11:34:48
 c) 12:50:24
 d) 12:24:16

Ans) b

Exp) Option b is the correct answer.

In one week there are $24 \times 7 = 168$ hours.

So, the clock loses $\frac{1}{2}\%$ (0.5%) in the first 168 hours.

It gains $\frac{1}{4}\%$ (0.25%) in the next 168 hours.

So it loses $(0.50 - 0.25 = 0.25\%)$

So total time lost is 0.25% of $168 = 21/50$ hours = $(21/50) \times 60$ minutes = $25 + (1/5) = 25$ minutes 12 seconds.

The time shown on Monday after two weeks will be 25 minutes 12 seconds less than 12.

That is 11:34:48

Q.33) There are four inlets to Bhakra Nangal Dam. When the first three inlets are opened, the dam can be filled in 12 minutes. When the second, third and fourth inlets open it can be filled in 15 minutes. And when the first and fourth inlets are opened, the dam can be filled in 20 minutes. How much time will it take to fill up the dam when all the four inlets are opened?

- a) 10 minutes
- b) 12 minutes
- c) 8 minutes
- d) 30 minutes

Ans) a

Exp) Option a is the correct answer.

let the first inlet fills up the dam in A minutes. In 1 minute it fills $1/A$

Second inlet fills up in B minutes, In 1 minute it fills $1/B$

Third inlet in C minutes. In 1 minute it fills $1/C$

And fourth inlet in D minutes. In 1 minute it fills $1/D$

In 12 minutes the first three inlets fill the tank : so the capacity of tank filled in 1 minute = $1/12$

$$\Rightarrow (1/A) + (1/B) + (1/C) = 1/12 \text{ ----(1)}$$

In 15 minutes the second, third and fourth inlets fill the tank : so the capacity of tank filled in 1 minute = $1/15$

$$\Rightarrow (1/B) + (1/C) + (1/D) = 1/15 \text{ ----(2)}$$

In 20 minutes the first and fourth inlet fill the tank : so the capacity of tank filled in 1 minute = $1/20$

$$\Rightarrow (1/A) + (1/D) = 1/20 \text{ ----(3)}$$

Subtracting (1) and (2),

$$(1/A) - (1/D) = (1/12) - (1/15) = 1/60 \text{ ----(4)}$$

Solving (3) and (4),

We get $A = 30$ minutes, $D = 60$ minutes

Put the value of A in equation (1):

$$(1/30) + (1/B) + (1/C) = 1/12$$

$$(1/B) + (1/C) = (1/20) \text{ -----(5)}$$

Now using equation (3) and (4):

$$(1/A) + (1/B) + (1/C) + (1/D) = (1/20) + (1/20) = 1/10$$

Implies all of the four inlets opened together, in one minute fill $1/10$ of the tank.

So, all the four inlets opened together will fill the tank in 10 minutes.

Q.34) A solid metal sphere is melted and the smaller spheres of equal radii are formed. 10% of the volume of the sphere is lost in the process. The smaller spheres have a radius that is one by ninth the larger sphere. If 10 L of paint were needed to paint the larger sphere, how many liters are needed to paint all the smaller spheres ?

- a) 900
- b) 90
- c) 810
- d) 81

Ans) d

Exp) Option d is the correct answer.

Let radius of the larger sphere be R and that of smaller ones are r. Given, $r = R/9$ --- (1)

Volume of larger sphere = $(4/3) \pi(R^3)$ --- (2)

Volume of one smaller sphere = $(4/3) \pi(r^3) = (4/3) \pi (R/9)^3$ --- using equation (1)

Since 10% of volume is lost during melting:

Volume left = 90% of the larger sphere volume = $0.9[(4/3) \pi(R^3)]$

Number of smaller spheres possible = Volume left / volume of smaller sphere =

$\{0.9[(4/3) \pi(R^3)]\} / \{(4/3) \pi (R/9)^3\} = (9^3) \times 0.9$

Surface area of larger sphere = $4\pi(R^2)$

Surface area of one smaller sphere = $4\pi(R/9)^2 = \{4\pi(R^2)\}/81$

Surface area of all smaller spheres = Number of small spheres x Surface area of one smaller sphere

$(9^3) \times 0.9 \times \{4\pi(R^2)\}/81 = 8.1 \times (4\pi R^2)$

Ratio of surface area of smaller sphere and larger sphere = $\{8.1 \times (4\pi R^2)\}/4\pi(R^2) = 8.1$

Since 10 liters of paint were needed for larger sphere,

So 10×8.1 liters = 81 liter will be needed for smaller spheres.

Direction for the following six (6) items:

Read the following **four passages** and answer the items that follow the passages. Your answers to these items should be based on the passages only:

Passage 1

The study of ethics has been a fundamental aspect of philosophy for thousands of years, with various schools of thought offering different perspectives on how to determine right from wrong. However, despite the extensive intellectual history of ethics, it remains a deeply subjective and often divisive field. Different cultures and societies have their own ethical systems, and even within a single society, individuals may hold vastly different moral beliefs. In the modern world, this subjectivity has become more pronounced, with advances in technology and globalization making it increasingly difficult to reconcile different ethical frameworks. For instance, the rise of artificial intelligence has raised complex ethical questions, such as whether a machine can be held morally responsible for its actions. Similarly, the proliferation of social media and online platforms has given rise to new ethical dilemmas, such as how to balance freedom of speech with the need to prevent hate speech and misinformation.

Q.35) Which of the following statements best reflects the critical message conveyed by the passage?

- There can never be a single, objective standard of ethics that applies to all cultures and individuals.
- We continually grapple with new ethical dilemmas that arise as a result of technological and societal change.
- The subjective nature of ethics will create more divisions in society due to the simultaneous presence of different moral beliefs.
- The rise of technology and globalization has made ethical questions more complex and difficult to answer.

Ans) b

Exp) Option b is the correct answer.

The passage states that “Different cultures and societies have their own ethical systems, and even within a single society, individuals may hold vastly different moral beliefs.” So, this refers to the fact that there can’t be a single, objective standard of ethics that applies to all cultures and individuals. So, this is one

aspect of ethics which is being discussed in the passage. Thus, is not the critical message being conveyed. Hence option a is incorrect.

The passage discusses the subjectivity of ethics and how it has become more pronounced in the modern world due to technological and societal changes. The critical message being conveyed is that we must continually grapple with new ethical dilemmas that arise as a result of these changes, as stated in option b. This is because as technology and society evolve, new ethical questions will inevitably arise, and we must be prepared to address them in a thoughtful and nuanced way. Hence option b is correct.

In the passage it's mentioned that in the modern world subjectivity will become more pronounced. It does not mean that it will create more divisions in the society. Hence Option c is incorrect.

The passage states that 'In the modern world, this subjectivity has become more pronounced, with advances in technology and globalization making it increasingly difficult to reconcile different ethical frameworks', so this is one aspect of challenges being discussed, but this is not the critical message being conveyed. Hence option d is incorrect.

Passage 2

Despite its widespread acceptance around the world democracy is not without its issues. The primary challenge is the issue of political polarization. In many countries, political ideologies have become increasingly divided, with little room for compromise or dialogue. This has led to gridlock in government and a breakdown of trust between citizens and their representatives. Another issue is the problem of voter participation. While the right to vote is a fundamental aspect of democratic societies, many citizens choose not to participate in elections or are unable to do so due to logistical or legal barriers. This has led to concerns about the representativeness and legitimacy of democratic governments. Another challenge is to ensure that all voices are heard. This is particularly challenging in societies that are diverse in terms of race, ethnicity, religion, and socio-economic status. Despite these challenges democracy is the best form of government.

Q.36) Which of the following statements best sums up the passage ?

- a) Challenges to democracy do not threaten its survival.
- b) Lack of representativeness delegitimizes democracy.
- c) Dialogue and compromise are essential for democratic governance.
- d) Protecting ethno religious and socio-cultural diversities strengthens democracy.

Ans) c

Exp) Option c is the correct answer.

Though the passage mentions that Despite these challenges democracy is the best form of government. But this does not imply that challenges do not threaten its survival. Because the first line itself says that 'Despite its widespread acceptance around the world democracy is not without its issues'. Hence option a is incorrect.

In the passage it's mentioned that citizens not participating in vote has led to concerns about the representativeness and legitimacy of democratic governments', so this is one of the challenges being discussed, but this doesn't sum up the passage. Hence option b is incorrect.

The passage mentions as the primary challenge 'political ideologies have become increasingly divided, with little room for compromise or dialogue. This has led to gridlock in government and a breakdown of trust between citizens and their representatives', so it means that Dialogue and compromise are essential for democratic governance, as the adverse consequences are very broad, as gridlock implies the government becoming almost non functional and breakdown of trust means government becoming non representative of the people, which is at the core of democracy. Hence option c best sums up the passage. Hence option c is correct.

Option d is again the solution to one of the challenges being discussed, hence this again doesn't sum up the passage. Hence option d is incorrect.

Passage 3

The multifaceted nature of art movements, as recognized by numerous experts, demonstrates a complex interaction between aesthetic values and sociopolitical contexts. As each movement emerges, it often develops as a response to or a rejection of its predecessor. Consequently, these artistic revolutions mirror the evolution of societal values and the shifting cultural landscapes of their respective eras. Cubism, for example, emerged in the early 20th century as a groundbreaking departure from the traditional modes of artistic representation. By fragmenting and reassembling objects into abstract forms, artists such as Pablo Picasso and Georges Braque sought to challenge the conventional notions of perspective and three-dimensionality.

This radical shift in artistic expression can be seen as a reflection of societal upheavals and the rapid pace of modernization during this period. Similarly, the Dada movement, born amidst the chaos of World War I, rejected traditional artistic and cultural values, embracing irrationality, spontaneity, and anti-establishment sentiment. Dada artists like Marcel Duchamp and Max Ernst utilized unconventional materials and techniques to create provocative works that defied established norms and questioned the very nature of art itself. The study of art movements reveals not only the development of aesthetic principles but also the intricate relationship between art and the sociopolitical context in which it is created. By examining these movements, we gain a deeper understanding of the role that art plays in shaping and reflecting the cultural identity of a given time and place.

Q.37) What does the emergence of art movements primarily indicate, according to the passage?

- The personal preferences of individual artists
- The influence of aesthetic values and sociopolitical contexts
- The inherent unpredictability of artistic trends
- The role of economic factors in shaping artistic expression

Ans) b

Exp) Option b is the correct answer.

The passage states that the multifaceted nature of art movements demonstrates a complex interaction between aesthetic values and sociopolitical contexts. This implies that the emergence of art movements primarily indicates the influence of these factors.

Q.38) Consider the following assumptions:

- The artists involved in art movements are always aware of the sociopolitical context of their times.
- Artistic revolutions reflect the evolution of societal values and cultural landscapes.

Which of the above given assumptions is/are valid as per the passage?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The passage does not make this assumptions, and there is no evidence in the passage to support them. While some artists may be aware of the socio-political context, others may not be, and their work may be more focused on artistic expression than social commentary. There is universal statement that all artists are aware of the socio-political context.

Statement 2 is correct: The passage discusses how art movements, such as Cubism and Dadaism, emerged as responses or rejections to the artistic traditions and societal changes of their times. It also highlights how these movements reflect the cultural and social changes of their respective eras.

Q.39) What is the key idea that has been conveyed in the above given passage?

- The hierarchy of the art movements that have evolved over time
- The financial success of prominent artists
- The role of art in constructing the cultural identity
- The process of selecting appropriate materials and techniques for artistic expression

Ans) c

Exp) Option c is the correct answer.

The passage concludes that the study of art movements reveals not only the development of aesthetic principles but also the intricate relationship between art and the sociopolitical context in which it is created. By examining these movements, we gain a deeper understanding of the role that art plays in constructing and reflecting the cultural identity of a given time and place.

Passage 4

Socialization is the process by which human infants begin to acquire the skills necessary to perform as members of their society, and is thus the means by which social order is perpetuated. The institutionalization of social structures and norms creates a taken-for-granted world that is experienced as objective reality, despite its purely subjective origins. The cognitive and normative structures that make up this world are embedded in everyday experience and become naturalized through routine interactions and practices. However, this process of objectification is not complete or permanent, as the social world is subject to continual negotiation and interpretation. Through the ongoing production and reproduction of social reality, individuals and groups can exercise agency and shape the social structures and processes that govern their lives.

Q.40) Which one of the following statements best reflects the crux of the passage given above?

- Individuals' experiences and their perception of reality are shaped through socialization, which helps to maintain social order.
- Objective reality is important in any functioning society.
- The process of objectification of reality of the social world is permanent.
- Individuals and groups do not have agency in the ongoing reproduction of social reality.

Ans) a

Exp) Option a is the correct answer.

The passage argues that socialization is a crucial process by which human infants acquire the skills necessary to function as members of their society, and this process is necessary to perpetuate social order. The institutionalization of social structures and norms creates a world that is perceived as objective reality, despite its purely subjective origins. However, the process of objectification is not complete or permanent, and the social world is subject to negotiation and interpretation. Through the ongoing production and reproduction of social reality, individuals and groups can shape the social structures and processes that govern their lives. Therefore, the best summary of the passage is that socialization perpetuates social order by shaping individual experiences and understandings of reality.

SFG 2023 | LEVEL 2 | Test #40 – Solutions | ForumIAS

Q.1) With reference to the ‘Geographical Indication’ Tag (GI Tag) given to some crops in India, consider the following pairs:

Crops	States
1. Tandur Red gram	Telangana
2. Aattukombu Avara	Tamil Nadu
3. Raktsey Karpo Apricot	Ladakh
4. Kalanamak Rice	Uttar Pradesh

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs.

Ans) c

Exp) Option c is the correct answer.

Geographic Indication (GI) tags are facilitated by the **Geographical Indications of Goods (Registration and Protection) Act, 1999**. GI tags are issued under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry. GI Tag is an acknowledgment of intellectual property and the first GI Tag in India was bestowed upon West Bengal’s Darjeeling Tea in 2003.

Pair 1 is correct: Tandur red gram is a local variety of pigeon pea which is mainly grown in **Tandur town and the nearby region of Telangana**. The fertile deep black soil and huge limestone deposits can be attributed to the specific quality traits of Tandur red gram. It contains about **22-24% protein**, which is almost **three times that of the protein content in cereals**. It was given GI tag in **December 2022**.

Pair 2 is incorrect: Geographic Indication tag for crop **Aattukombu Avara was given to Kerala (not Tamil Nadu)**. Besides Aattukombu Avara - Attappady Thuvara (red gram), Onattukara Ellu (sesame), Kanthaloor Vattavada Veluthuli (garlic), and Kodungallur Pottuvellari (snap melon) were other crops of Kerala which were given GI tag in FY 2023. With 6 products, Kerala Topped the list of states in the country with most GI tags in Financial Year 2023.

Pair 3 is correct: Ladakh got its first ever Geographical Indication (GI) Tag to its Raktsey Karpo Apricot. Apricot is the major fruit of Ladakh with large-scale cultivation in both Leh and Kargil Districts. Although Ladakh grows more than thirty types of Apricots, the **Raktsey Karpo variety is unique to the region**.

Pair 4 is correct: It is true that the **GI tag for Kalanamak rice was given to Uttar Pradesh in 2013** (Grown in 11 districts of the Terai region of northeastern Uttar Pradesh and in Nepal). Kalanamak is a traditional variety of paddy with a black husk and a strong fragrance, which is considered a gift from Lord Buddha to the people of the Sravasti when he visited this region after his enlightenment.

Recently the Indian Agriculture Research Institute (IARI) **has successfully developed two dwarf varieties of Kalanamak rice** and they were named Pusa Narendra Kalanamak 1638 and Pusa Narendra Kalanamak 1652.

Source: [https://www.thehindubusinessline.com/economy/agri-business/kerala-tops-gi-tag-list-in-fy-2022-23/article66702026.ece#:~:text=Attappady,-Aattukombu,-Avara%20\(bears\)%2C%20Attappady](https://www.thehindubusinessline.com/economy/agri-business/kerala-tops-gi-tag-list-in-fy-2022-23/article66702026.ece#:~:text=Attappady,-Aattukombu,-Avara%20(bears)%2C%20Attappady)

<https://www.thehindu.com/sci-tech/agriculture/fragrant-and-nutritious-kalanamak-rice-buddhas-gift-to-people-gets-new-powers-and-name/article66069818.ece>

<https://newsonair.gov.in/News?title=Ladakh-gets-its-first-ever-GI-Tag-to-its-Raktsey-Karpo-Apricot&id=452476>

<https://www.thehindu.com/news/national/telangana/telanganas-tandur-red-gram-gets-gi-tag/article66264136.ece>

Q.2) Which of the following works were written by Mahakavi Kalidasa?

1. Abhigyanashakuntalam
2. Vikramorvasiyam
3. Kumarasambhavam
4. Ritusamhara

Select the correct answer from the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Kālidāsa, who believed to be lived during 4th–5th century CE, was a Classical Sanskrit author who is often considered ancient India's greatest poet and playwright.

Options 1 and 2 are correct: Malavikagnimitra, Abhigyanashakuntalam, and Vikramorvasiyam were the three plays he had written. These three plays rose to such popularity that Kalidasa was recognised as one of the greatest poets.

Option 3 is correct: Raghuvamsa and Kumarasambhava are two of the epic poems written by Kalidasa.

Option 4 is correct: Ritusamhara and Meghaduta are two of Kalidasa's minor poems. In his representation of the eternal conflict between desire and duty, Kalidasa established a new benchmark.

Source: Indian Art & Culture by Nitin Singhanian

Q.3) With reference to 'Kutiyattam', consider the following statements:

1. The performance involves both male as well as female members.
2. A large copper drum called Mizhavu is the only musical instrument used in the performance.
3. The performance narrates the story of Hindu epic Ramayanam.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Kutiyattam is being practised in the province of Kerala and is one of India's oldest living theatrical traditions. Originating more than 2,000 years ago, Kutiyattam represents a **synthesis of Sanskrit classicism and reflects the local traditions of Kerala**.

Statement 1 is correct: It is true that both **male as well as female members are involved in Kutiyattam dance**. While the **dance** can only be presented by the men of Chakiar caste, the **music** is played by men belonging to the Nambiar caste. The **female roles of the drama are enacted by the female members of the Nambiar caste**, however the **female members of the Chakiar caste are not allowed** to take part in this performance.

Statement 2 is incorrect: While a large copper drum called Mizhavu is the predominant musical instrument used in Kutiyattam, it is not the only music instrument. Other musical instruments used in this play are a **conch shell and a small drum played with a stick called cymbals**.

Statement 3 is correct: Kutiyattam is a sacred, spiritual dance form and has powerful bonds with the idea of sacrifice and religion. The performance displays a myriad of **emotions and expressions** that help to **re-live several scenes from well-known epics such as Ramayanam and Mahabharatam**. Neta abhinaya (eye expression) and hasta abhinaya (the language of gestures) are prominent features of this performance. Source: <https://www.esamskriti.com/e/Culture/Indian-Culture/Kutiyattam-is-India-colon-s-oldest-living-theatrical-art-form-1.aspx>

Q.4) Consider the following statements about Mohiniattam:

1. Traditionally, it is performed as a classical solo dance in Kerala.
2. The Tandava aspect is dominant in this dance form.
3. The footwork is characterized by intricate and thumping movements.

Which of the above given statements is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Mohiniattam or the Dance of an Enchantress ('Mohini' meaning beautiful woman and 'attam' means dance), is essentially a solo dance performance by women that was further developed by Vadivelu in 19th century and gained prominence under the rulers of Travancore in the present state of Kerala.

Statement 1 is correct: Traditionally, Mohiniattam is a **solo dance performance by women** which was developed by Vadivelu in the 19th century and gained prominence under the rulers of Travancore in **Kerala**.

Statement 2 is incorrect: The **Lasya aspect (beauty, grace) of dance is dominant** in a Mohiniattam recital. Hence, it is mainly performed by female dancers. Whereas Tandava is the divine dance performed by Lord Shiva. It is considered to be the source of the cosmic cycle of creation, preservation and dissolution.

Statement 3 is incorrect: There is a marked **absence of intricate and thumping footwork**, and the footwork is gentle.

Source: Indian Art and Culture by Nitin Singhania

Q.5) Consider the following statements with reference to "Dalai Lama":

1. Each Dalai Lama is believed as reincarnation of Maitreya by Tibetan Buddhists.
2. The Dalai Lama belongs to Gelug tradition of Tibetan Buddhism.
3. The 14th Dalai Lama was bestowed with Nobel Peace Prize in 1989.
4. Traditionally, Dalai Lama was responsible for governing Tibet.

Which of the statements given above are correct?

- a) 1, 2, 3, and 4
- b) 1, 3, and 4 only
- c) 1 and 2 only
- d) 2, 3, and 4 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: The **Dalai Lamas are believed by Tibetan Buddhists to be reincarnation of Avalokiteshvara or Chenrezig, the Bodhisattva of Compassion** and the patron saint of Tibet. Bodhisattvas are realized beings, inspired by the wish to attain complete enlightenment, who have vowed to be reborn

in the world to help all living beings. **Maitreya is the Buddha of the future, who will be born to teach enlightenment in the next age.**

Statement 2 is correct: Tibetan Buddhism has four major schools: Nyingma (8th century), Kagyu (11th century), Sakya (1073), and Gelug (1409). **The Dalai Lama belongs to the Gelug tradition of Tibetan Buddhism, which is the largest and most influential tradition in Tibet.**

Statement 3 is correct: **Tenzin Gyatso is the fourteenth Dalai Lama of Tibetan Buddhism.** He was born in 1935 and recognised as the reincarnation of Thubten Gyatso at a young age. **In 1989 he received the Nobel Peace Prize for maintaining a policy of non violence with the Chinese government.**

Statement 4 is correct: **The Dalai Lama is the head monk of Tibetan Buddhism and traditionally has been responsible for the governing of Tibet,** until the Chinese government took control in 1959. Before 1959, his official residence was Potala Palace in Lhasa, the capital of Tibet.

Source: <https://www.dalailama.com/the-dalai-lama>

<https://dharma.net.org/coursesM/31/bodhisattva5i.htm>

<https://indianexpress.com/article/explained/dalai-lama-reincarnation-succession-china-8525467/>

https://www.bbc.co.uk/religion/religions/buddhism/people/dalailama_1.shtml#:~:text=The%20Dalai%20Lama%20is%20the,government%20took%20control%20in%201959.

Q.6) With reference to Ankiya Nat, consider the following statements:

1. Khol is the only musical instrument used in it.
2. It was started by Saint Chaitanya Mahaprabhu in the Assam region.
3. The use of a language called 'Brajavali' is one of the features of this performance.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

During the period of Bhakti movement, folk theatre became a popular means for communicating faith to God, both for the performers as well as the audience. Ankiya Nat is one of such popular developed means to connect people with Lord Krishna.

Statement 1 is incorrect: The musical instruments used in it are the drum (khol) and, most importantly, the little cymbals (manjeera). There is also the mridanga (drum) made up of clay. Other percussion instruments are the dundubhi, bheri, gomukha, pataaha etc. There is also the use of stringed instruments like a simplified veena which resembles ektara.

Statement 2 is incorrect: Ankiya Nat was started by Saint **Shankardev (1449-1568) (not Chaitanya Prabhu) and his disciple Mahadeva in the 16th century A.D,** in the region of Assam.

Statement 3 is correct: Ankiya Nat was originally written in an Assamese-Maithili **mix language called Brajavali.** Unlike Sanskrit, Brajavali is the common language of people inhabited in the eastern parts of India. Thus, it is true that the **use of common language is one of the unique features of Ankiya Nat.**

Source: Nitin Singhania - Chapter 7 Folk Theatres

<http://asomsatramahasabha.org/articles/ANKIYA%20NAT.pdf>

Q.7) With reference to the Haveli sangeet, consider the following statements:

1. It was associated with the Bhakti movement.
2. It is mainly practiced by followers of the Kabirpanthis.
3. Pandit Jasraj is associated with this form of music.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Haveli Sangeet genre of music developed mostly in Rajasthan and Gujarat but now is seen in many parts of the country.

Statement 1 is correct: Haveli Sangeet is associated with the **Bhakti movement**. It was originally meant to be **sung in the temple premises** but now are performed outside of the temple.

Statement 2 is incorrect: Haveli Sangeet is currently practiced by a community known as the **Pushtimarg Sampradaya** or the community that believes in Pushtimarg as the way to salvation.

Statement 3 is correct: Though Pandit Jasraj is an eminent classical vocalist of the Mewati gharana, **he has sung many songs belonging to Haveli Sangeet genre**. Jasraj's vocal range extends to three-and-a-half octaves and uses precise diction, a trademark of the Mewati gharana's style of khayal.

Knowledge Base: Pushtimarg also known as Vallabha sampradaya is a subtradition Vaishnavism. It was founded in the early 16th century by Vallabhacharya. It is focused on Krishna.

Source: Indian Art and Culture by Nitin Singhania 2nd Edition – Chapter 5 - Indian Music.

Q.8) With reference to cultural history of India, which of the following classical dance forms was traditionally performed in open air theatres?

- a) Kathakali
- b) Kuchipudi
- c) Bharatnatyam
- d) Mohiniyattam

Ans) a

Exp) Option a is the correct answer.

Kerala is the home of several traditional dance and drama forms, the most notable being Kathakali.

A Kathakali performance is traditionally held in open air on a stage covered with coarse mats, which is lit by a brass lamp. This makeshift open-air theater is provided by a temple courtyard or a family mansion. A pair of attendants holds up a patchwork quilt, which functions as a curtain. **The most important accessory to the performance is a brass oil lamp**, as its quivering wick greatly accentuates the various shades of expression on the painted faces of the actors.

Source: <https://scholarblogs.emory.edu/postcolonialstudies/2014/06/21/kathakali/>

<https://www.culturopedia.com/kathakali/>

Nitin Singhania + Chapter 7: INDIAN DANCE FORMS

Q.9) References to puppetry are found in which of the following literary sources?

1. Silappadikaram
2. Natyashastra
3. Arthashastra
4. Mahabharata

Select the correct answer using the code given below.

- a) 1, 3 and 4 only
- b) 2 and 3 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

Puppetry is one of the ancient forms of entertainment. This form of entertainment gives unrestricted freedom to the artist in design, colour and movement making it one of the most ingenious inventions of mankind.

Option 1 and 4 are correct: Puppetry has long been of interest in India, both for entertainment and educational purposes. **The excavation sites at Harappa and Mohenjo-daro have yielded puppets with sockets attached to them**, which suggest the presence of puppetry as an art form even during those days. The written reference to puppetry is found in the Tamil classic **Silappadikaram**, written around 1st and 2nd century BC and also in **Mahabharata**. Srimad Bhagavata (part of the epic Mahabharata) say that with three strings-Satta, Raja and Tama, the God manipulates each object in the universe as a **marionette** (a small figure of a person operated from above with strings by a puppeteer).

Option 2 is incorrect: Natyashastra, the masterly treatise on dramaturgy written sometime during 2nd century BC to 2nd century AD., **does not refer to the art of puppetry.**

Option 3 is correct: One of the earliest references to puppetry in India can be found in the Rig Veda, and then in Kautilya's **Arthashastra**, where performers from the Plabak and Kuhak tribes are described as professional puppeteers.

Source: <https://certindia.gov.in/puppet-forms/>

Nitin Singhania + Chapter 8: INDIAN PUPPETRY

Q.10) With reference to Indian Knowledge Systems initiative, consider the following statements:

1. It is an innovative cell under the Ministry of Ayush.
2. It will engage in spreading the rich heritage of our country.
3. It aims to create database of individuals and organizations who have contributed to Indian traditions.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2, and 3

Ans) c

Exp) Option c is the correct answer.

Indian Knowledge System grew over the ages with the contributions of teachers who helped students to evolve through inculcating human values, knowledge, and skills, he added.

Statement 1 is incorrect: The Indian Knowledge System (IKS) is a division and an innovative cell under Ministry of Education (MoE) at All India Council for Technical Education (AICTE), New Delhi. It was established in 2020.

Statements 2 and 3 are correct: Indian Knowledge System (IKS) seeks to promote interdisciplinary research on all aspects of IKS, preserve and disseminate IKS for further research and societal applications, actively engage for spreading the rich heritage of our country and traditional knowledge in the field of Arts and literature, Agriculture, Basic Sciences, Engineering & Technology, Architecture, Management, Economics, etc. **It will create database of individuals and organizations who have contributed to Indian traditions.** It will create portal for archival and dissemination of this rich knowledge and also create an open portal and keep it dynamic and live like wiki, in a PPP mode.

Source: <https://iksindia.org/mission.php>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1846801>

Q.11) In the context of Sri Guru Granth Sahib, which of the following terms best describes the term “Sikh Bhagats”?

- Original writings of baba Guru Nanak.
- Saints/poets of various sects whose teachings are included in the Guru Granth Sahib.
- Important disciples of the Sikh gurus.
- Poems that deal with universal peace and harmony.

Ans) b

Exp) Option b is the correct answer.

Sikh Bhagats were holy men of various sects whose teachings are included in the Sri Guru Granth Sahib.

Sri Guru Granth Sahib contains the teachings of thirteen Bhakti saints, called ‘Bhagats’, like Ramananda, Namadev, Ravidas, Parmanand, Sain, Surdas etc and two Muslim Bhagats–Kabir and Baba Farid. The word “Bhagat” means devotee, and comes from the Sanskrit word Bhakti, which means devotion and love.

Source: Indian Art and Culture by Nitin Singhania 2nd Edition, Chapter-11

<https://www.searchgurbani.com/bhagats#:~:text=Sikh%20Bhagats%20were,and%20Sufi%20saints.>

Q.12) Which of the following statements is/are correct about Chhau dance?

- It is a traditional tribal dance form performed in some eastern states of India.
- The dance form is known for its colorful masks, and vibrant costumes.
- It is believed to have originated as a form of temple worship.

Select the correct code from given below:

- 1 only
- 1 and 2 only
- 2 and 3 only
- 1, 2, and 3

Ans) b

Exp) Option b is the correct answer.

The word Chhau originates from ‘Chhaya’ meaning shadow. There are three main styles of Chhau dance – Saraikella Chhau in Jharkhand, Mayurbhanj Chhau in Odisha and Purulia Chhau in West Bengal. Of these, Mayurbhanj Chhau artists don’t wear masks. In 2010, UNESCO inscribed Chhau in the Representative List of Intangible Cultural Heritage of Humanity.

Statement 1 is correct: Chhau dance is a traditional tribal dance form that is primarily performed in the eastern states of India, such as Jharkhand, Odisha, and West Bengal.

Statement 2 is correct: Chhau dance is known for its acrobatic movements, **colorful masks, and vibrant costumes**. The dancers wear elaborate costumes and masks that represent various characters from Hindu mythology.

Statement 3 is incorrect: While Chhau dance is often performed during religious festivals, it is not believed to have originated as a form of worship. Instead, it is thought to have **originated as a martial art** that was later adapted into a dance form.

Source: Indian Art and Culture by Nitin Singhania

Q.13) Which among the following is/are the examples of shadow puppetry of India?

1. Kundhei
2. Tholu Bommalata
3. Pavakoothu

Select the correct answer using the codes given below:

- a) 2 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect: The string puppets of Odisha are known as **Kundhei**. Made of light wood, the Odisha puppets have no legs but wear long flowing skirts. They have more joints and are, therefore, more versatile, articulate and easy to manipulate. The puppeteers often hold a wooden prop, triangular in shape, to which strings are attached for manipulation. The costumes of Kundhei resemble those worn by actors of the Jatra traditional theater. The music is drawn from the popular tunes of the region and is sometimes influenced by the music of Odissi dance.

Statement 2 is correct: **Tholu Bommalata, Andhra Pradesh's shadow puppets has the richest and strongest tradition**. The puppets are large in size and have jointed waist, shoulders, elbows and knees. They are coloured on both sides. Hence, these puppets throw coloured shadows on the screen. The music is dominantly influenced by the classical music of the region and the theme of the puppet plays are drawn from the Ramayana, Mahabharata and Puranas.

Statement 3 is incorrect: **Pavakoothu** is a traditional string Puppetry, came into existence during the 18th century due to the influence of Kathakali, the famous classical dance-drama of Kerala, on puppet performances. In Pavakoothu, the height of a puppet varies from one foot to two feet. The head and the arms are carved of wood and joined together with thick cloth, cut and stitched into a small bag. The manipulator puts his hand into the bag and moves the hands and head of the puppet.

Source: <https://cctindia.gov.in/puppet-forms/>

Q.14) With reference to Indian music, which among the following options correctly describe the term “Jatigan”?

- a) It is a form of Carnatic Music composed by combining the features of all ragas.
- b) It refers to scholarly compositions in Telegu and Tamil with a slow-moving music.
- c) It is mainly a dance form performed on brisk and attractive music.
- d) It is a type of music evolved to narrate the epics.

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: The Varnam is a musical form in Carnatic Music. Whereas musical forms like the Kirtana, Kriti, Javali, Tillana, etc. have their similar counterparts in Hindustani Music, the Varnam does not find a counterpart. The Varnam is a beautiful creation of musical craftsmanship of a high order, **combining in itself all the characteristic features of the raga in which it is composed.** This form is aptly called a Varnam, since many of the svara group patterns called ‘Varnas’ in ancient music, are dexterously interwoven in its texture.

Option b is incorrect: Padas are scholarly compositions in Telegu and Tamil. Though they are composed mainly as dance forms, they are also sung in concerts, on account of their musical excellence and aesthetic appeal. A padam also has the sections, pallavi, anupallavi and charana. **The music is slow-moving and dignified.** There is a natural flow of music and, sustained balance between the words and the music is maintained throughout. The theme is madhura bhakti, portrayed as bahir sringara and antar bhakti.

Option c is incorrect: The Tillana, corresponding to the Tarana of Hindustani music, is a short and crisp form. **It is mainly a dance form, but on account of its brisk and attractive music,** it sometimes finds a place in music concerts as a conclusion piece. It usually begins with jatis.

Option d is correct: During the late Vedic period 3000-1200 BC, a form of music called Samgana was prevalent which involved chanting of the verses set to musical patterns. **Various forms of music like Jatigan were evolved to narrate the epics.** Between 2nd to 7th AD a form of music called Prabandh Sangeet, which was written in Sanskrit, became very popular. This form gave way to a simpler form called Dhruvapad, which used Hindi as the medium.

Source: <https://nadsadhna.com/indian-music/>
<https://ccrtindia.gov.in/carnatic-classical-music/>

Q.15) In the context of Indian history, consider the following statements regarding “Mangarh Massacre”:

1. The massacre is mainly related to the Bhil Tribe.
2. Govind Guru was associated with this event.
3. The event is also known as the Adivasi Jallianwala.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 2 only
- c) 1, 2, and 3
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

As a tribute to tribal freedom fighters who lost their lives, the government is exploring the possibility of declaring Mangarh Hillock, in Banswara District (Rajasthan), a monument of national importance. Mangarh is situated at Gujarat-Rajasthan border.

Statement 1 is correct: Mangarh Massacre refers to the killing of more than 1,500 Bhil tribals on 17th November 1913.

Statement 2 is correct: In 1903, Govind Guru set up his main dhuni on Mangarh Hill, situated in the middle of dense forests on the border of Banswara and Santrampur. Mobilised and trained by him, the Bhils placed a charter of 33 demands before the British by 1910 primarily relating to forced labour, high tax imposed on Bhils and harassment of the guru’s followers by the British and rulers of princely states.

The Bhils rejected the British’s attempt to placate them and refused to leave Mangarh Hill, vowing to declare freedom from British rule. Later, On 17 November 1913, the British Indian Army fired indiscriminately on Bhil protesters, and it is said that over 1,500 people, including women and children died in the tragedy.

Statement 3 is correct: Mangarh Massacre event is also known as the Adivasi Jallianwala.

Source: <https://www.firstpost.com/explainers/ativasi-jallianwala-bagh-the-mangarh-massacre-of-1913-that-pm-modi-spoke-of-in-rajasthan-11554721.html>

Q.16) With reference to tappa music, consider the following statements:

1. It is believed to be originated from the court of Lucknow's ruler Wajid Ali Shah.
2. Love story and a sense of loss are its central themes
3. It consists of the song uttered in fast note patterns.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Tappa is a form of Indian semi-classical vocal music. Its specialty is a rolling pace based on fast, subtle and knotty construction. Its tunes are melodious and sweet, and depict the emotional outbursts of a lover.

Statement 1 is incorrect: Tappa is a form of semi classical vocal music **believed to be originated from the folk songs of camel riders in the Punjab area.** Tappa, in Punjabi and Pashto language, is set in ragas generally used for the semi classical forms. It is characterized by jumpy and flashy tonal movements with rhythmic and rapid notes. While **Thumari** is believed to be developed during the 19th century at the **court of Lucknow's ruler Wajid Ali Shah.**

Statement 2 is correct: Tappa literally means 'jump' in Persian. They are essentially folklore of love and passion and are written in Punjabi. Love story and a sense of loss are central themes. Its beauty lies in the quick and intricate display of various permutations and combinations of notes.

Statement 3 is correct: The Tappa consists of the song uttered in fast note patterns. It is a difficult composition and needs much practice. Both the Thumri and Tappa require special training as do the Dhrupad and Khyal forms of singing.

Source: <https://ccrtindia.gov.in/hindustani-classical-music/>

<https://ccrtindia.gov.in/regional-music/>

<https://www.swarganga.org/articles/details.php?id=2>

<https://www.darbar.org/article/an-introduction-to-light-classical-thumri-dadra-and-other-styles#:~:text=Thumri%20is%20North%20India's%20most,was%20also%20a%20leading%20exponent.>

<https://en.banglapedia.org/index.php/Tappa>

<https://nadsadhna.com/indian-music/vocal-forms/tappa/>

<https://nadsadhna.com/indian-music/vocal-forms/tappa/>

Q.17) Consider the following pairs regarding folk music in India

Folk Music	State
1. Pankhida	Chhattisgarh
2. Mando	Rajasthan
3. Burrakatha	Bihar
4. Sana Lamok	Manipur

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

Ans) a

Exp) Option a is the correct answer.

Pair 1 is incorrect: Pankhida is a folk music of Rajasthan. Sung by the peasants of Rajasthan while doing work in the fields, the peasants sing and speak while playing algoza and manjira. The literal meaning of the word 'Pankhida' is lover.

Pair 2 is incorrect: Goan regional music is a treasury of the traditional music of the Indian subcontinent. **Mando, the finest creation of Goan song** is a slow verse and refrain composition dealing with love, tragedy and both social injustice and political resistance during Portuguese presence in Goa.

Pair 3 is incorrect: Burrakatha is a highly dramatic form of ballad from Andhra Pradesh. A bottle shaped drum (tambura) is played by the main performer while reciting a story. The ballad singers, like stage actor, wear make up and a highly stylised costume.

Pair 4 is correct: Sana Lamok is a folk music of Manipur. Manipur's hills and valley—both are fond of music and dance. Sana Lamok is sung at the time of coronation ceremony by the Maaiba (priest). It may also be sung to welcome the king. It is sung to evoke the spirit of Pakhangba, the presiding deity. There is a belief that this song is potent with magical powers.

Source: <https://ccrtindia.gov.in/regional-music/>

Q.18) With reference to the elements of Kathak, consider the following statements:

1. Ananda is the introductory item performed by dancer.
2. Thaata comprises of soft and varied movements of dancer.
3. Jugalbandi is a competitive play between the dancer and a tabla player.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Kathak is a traditional dance form of Uttar Pradesh that traces its origins from the Ras Leela of Brajbhoomi. The dance form is characterized by storytelling through gestures and music, as derived from the "Kathikas". During the Mughal era, it degenerated into a lascivious style and was influenced by Persian costumes and styles of dancing. However, in the 20th century, Lady Leela Sokhey revived the classical style of Kathak. An important feature of Kathak is the development of different gharanas as it is based on Hindustani style of music.

Statement 1 is correct: In a Kathak recital, **Ananda is the opening piece** that sets the stage for the rest of the performance. It is a **solo dance piece that serves as an introduction** to the dancer's skill, style, and interpretation of the music.

Statement 2 is correct: Thaata is an essential component of Kathak dance that showcases the dancer's grace, fluidity, and control. **It is a series of soft, varied movements** that emphasize the dancer's footwork and body posture.

Statement 3 is correct: Jugalbandi is an exciting element of Kathak dance that involves a playful and competitive exchange between the dancer and a tabla player. It is a form of musical dialogue in which the two artists try to outdo each other with their skills and creativity.

Source: Indian Art and Culture by Nitin Singhania

Q.19) With respect to the architecture of Qutb Shahi dynasty, consider the following statements:

1. The 'Charminar' was built by Quli Qutub Shah of Qutb Shahi dynasty.
2. Recently, the step wells at the Golconda fort got UNESCO's Asia-Pacific award.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. Charminar was built by Sultan Mohammed Quli Qutb Shah, of Qutb Shahi dynasty, in 1591. It is said that this square shaped structure with four pillars and intricate carvings was built in honour of his wife, Bhagmati. **Quli Qutub Shah also founded the city of Hyderabad.**

Statement 2 is correct. Recently, the step wells at the Qutb Shahi tombs of the **Golconda Fort were awarded UNESCO's Asia-Pacific award (2022) for cultural heritage conservation.** Step wells of Golconda Fort, Telangana is a **16th-century well.** This structure is made in the **Persian style.**

The award is categorized into 6 types of recognition: Award of Excellence, Award of Distinction, Award of Merit, Award for New Design in Heritage Contexts, and Special Recognition for Sustainable Development. The monument has bagged the Award of Distinction.

Source: Poonam Dalal Ch- 12 Pg 607 + <https://whc.unesco.org/en/tentativelists/5573/>

Q.20) Recently, the State Ranking Index for National Food Security Act was released. In this context, consider the following statements:

1. It was compiled and released by the Ministry of Agriculture.
2. It does not reflect the level of hunger or malnutrition in a particular state or union territory.
3. In the 1st edition of the index, Odisha secured the first rank among the General Category States.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 2 only

Ans) c

Exp) Option c is the correct answer.

The State Ranking Index for National Food Security Act (NFSA) is built on three key pillars, which cover end-to-end implementation of NFSA through TPDS. These pillars are- i) NFSA- coverage, targeting and provisions of the Act, ii) delivery platforms, and iii) nutrition initiatives.

Statement 1 is incorrect: The Ministry of Consumer Affairs, Food & Public Distribution released the first edition of the 'State Ranking Index for National Food Security Act (NFSA).

Statement 2 is correct: The State Ranking Index for National Food Security Act (NFSA) denotes only the efficiency of TPDS operations, **it does not reflect the level of hunger, if any or malnutrition, or both, in a particular state or union territory.** The current version of the Index measures the effectiveness of NFSA implementation majorly through operations and initiatives under TPDS. It does not cover programs and schemes implemented by other Ministries and Departments under NFSA.

Statement 3 is correct: Odisha has been adjudged the top ranked State followed by Uttar Pradesh at the 2nd spot and Andhra Pradesh at third amongst the General Category States in 'State Ranking Index for NFSA'. Among the Special Category states/UTs, Tripura stood first followed by Himachal Pradesh and Sikkim respectively. Further, among the 3 UTs where Direct Benefit Transfer (DBT)- Cash is operational, Dadra and Nagar Haveli & Daman and Diu is the top ranked UT.

IMPLEMENTING FOOD SECURITY		
How the 20 'general category' states ranked in terms of NFSA implementation		
TOP THREE		
Rank	State	Index score
1	Odisha	0.836
2	Uttar Pradesh	0.797
3	Andhra Pradesh	0.794
BOTTOM THREE		
18	Delhi	0.658
19	Chhattisgarh	0.654
20	Goa	0.631

Source: https://dfpd.gov.in/1sGbO2W68mUlunCgKmpnLF5WHm/NFSA_2022.pdf
<https://pib.gov.in/PressReleasePage.aspx?PRID=1839388>

Q.21) Consider the following statements about Natyashastra, an ancient Indian epic:

1. It is in the form of an informal discourse between the author and several other Munis (disciples) on questions related to Natya-Veda.
2. It is the first book on dramaturgy in India which prescribes rules of acting and theatre art.
3. It was composed by Sarangadeva.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

The Natyashastra combines the terms Natya, which alludes to techniques of dancer/actor, with “sastra,” that refers to science, resulting in a codified framework that is surprisingly secular in its setting. The work offers detailed descriptions of acting techniques, costumes, music, musical instruments, and so on.

Statement 1 is correct: Natyashastra takes form of an informal discourse between Bharata Muni and a number of other Munis who approached him with Natya Veda-related questions. In this book, Bharata explains topics like dramatic composition, play structure and stage construction, acting genres, body motions, make-up and costumes, the function and aims of an art director, musical scales, musical instruments, etc. Through several chapters and numerous poems.

Statement 2 is correct: Natyashastra is the first book on dramaturgy (the theory and practice of dramatic composition) in India. It contains the rules and prescriptions regarding performance, the theatre hall, acting, gestures, Rasa, stage direction, etc.

Statement 3 is incorrect: Natyashastra was written and compiled by Bharata Muni between 200 BC and 200 AD. It is believed to be the first work that clarified and elaborated on the subject of musicology. However, Sarangadeva was a 13th century musicologist who wrote the classic text on music, the Sangeet Ratnakara.

Source: Nitin Singhania, Chapter 5, Indian Music

<https://www.caleidoscope.in/art-culture/bharat-muni-natyashastra>

<https://ccrtindia.gov.in/resources/literary-arts/>

Q.22) Consider the following statements about Kathakali, an Indian Classical dance form:

1. Traditionally, Kathakali is performed by male dancers.
2. There is an elaborate use of facial makeup in this dance form.
3. The language used for Kathakali songs is Manipravalam, which is a mixture of Malayalam and Sanskrit.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

In the temples of Kerala, two forms of dance-drama, Ramanattam and Krishnattam, evolved under the patronage of feudal lords, narrating episodes from Ramayana and Mahabharata. These folk drama traditions latter became the source of Kathakali, which derived its name from the words ‘Katha’ meaning story and ‘Kali’ meaning drama.

Statement 1 is correct: Kathakali is traditionally an all-male troupe performance. Traditionally, kathakali is performed exclusively by men and young boys who play the parts of both males and females. It originated at a time when women were confined within the walls of a household.

Kathakali originated as part of the bhakti movement and is believed to have been performed by soldiers of the kingdom, as the plays were written by a prince himself. Since they were well-trained in the martial art of kalari, troupes that followed in their footsteps also implemented rigorous exercises as part of the training process. And thence started the practice of body massages using the feet (chavitty uzichil). This practice is believed to be one major reason why women were not welcome in exploring the art. However, there have been several female dancers who went on to break the glass ceilings and took the dance form to its new glory.

Statement 2 is correct: There is minimal use of props in the Kathakali recital. However, very elaborate facial make-up along with a head gear is used for different characters.

Statement 3 is correct: The language used for Kathakali songs is Manipravalam, i.e., a mixture of Malayalam and Sanskrit. Music is important to rightfully convey the entire drama to the viewers. Different compositions of music are used during performance to give depth to the drama.

Source: Source: Nitin Singhania, Chapter 6, Indian Dance

<https://www.thehindu.com/entertainment/theatre/on-women-artistes-in-kathakali/article19313819.ece>

<https://www.britannica.com/art/kathakali#:~:text=Traditionally%2C%20kathakali%20is%20performed%20exclusively,its%20practice%20throughout%20their%20lives.>

<https://www.hindustantimes.com/art-and-culture/i-wanted-my-dance-to-show-women-in-their-true-light-dancer-kanak-rele/story-mvHuHu7yI7RJsamDzmkSDK.html>

Q.23) Consider the following statements about Sattriya dance, a classical dance form in India:

1. It was first introduced by Shankaracharya in the 5th century CE.
2. The dance is generally performed by bhokots, a group of male monks.
3. Musical instruments like Khol, Cymbals and Flutes are used during the performance of Sattriya dance.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Sattriya art form derives its name from the Vaishnava monasteries known as ‘Satras’, where it was primarily practised. It is inspired from Bhakti Movement.

Statement 1 is incorrect: Sattriya dance in modern form was introduced by the Vaishnava saint Shankaradeva (and not Shankaracharya) in the 15th century CE in Assam. The dance form was an amalgamation of various dance forms prevalent in Assam, mainly Ojapali and Devdasi.

Statement 2 is correct: The dance is generally performed in group by male monks known as ‘Bhokots’ as part of their daily rituals or even on festivals.

Statement 3 is correct: Khol (drum), Cymbals (Manjira) and flute form the major accompanying instruments of this dance form. It is based on a great coordination between rhythmic syllables, music and dance postures.

Source: Nitin Singhania, Chapter 6, Indian Dance

Q.24) With reference to Gombeyatta puppetry art in India, consider the following statements:

1. The string puppets of Karnataka are known as Gombeyatta.
2. These puppets are carved from a single piece of wood and look like large dolls that are colourfully dressed.
3. Episodes enacted in Gombeyatta are usually based on Prasangas of the Yakshagana plays.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) option b is the correct answer.

A puppet is one of the most remarkable and ingenious inventions of the man. Almost all types of puppets are found in India. Puppetry throughout the ages has held an important place in traditional entertainment. Like traditional theater, themes for puppet theater are mostly based on epics and legends. Puppets from different parts of the country have their own identity. Regional styles of painting and sculpture are reflected in them.

Statement 1 is correct: The string puppets of Karnataka are called Gombeyatta. They are styled and designed like the characters of Yakshagana, the traditional theater form of the region.

Statement 2 is incorrect: The Gombeyatta puppet figures are highly stylized and have joints at the legs, shoulders, elbows, hips and knees. These puppets are manipulated by five to seven strings tied to a prop. Some of the more complicated movements of the puppet are manipulated by two to three puppeteers at a time.

Whereas, **Kathputli puppets from Rajasthan are carved from a single piece of wood. These puppets are like large dolls that are colourfully dressed.** Their costumes and headgears are designed in the medieval Rajasthani style of dress, which is prevalent even today.

Statement 3 is correct: Episodes enacted in Gombeyatta are usually based on Prasangas of the Yakshagana plays. The music that accompanies is dramatic and beautifully blends folk and classical elements.

Source: <https://ccrtindia.gov.in/puppet-forms/>

Q.25) Recently, the term “POP-FAME” was in the news. In this context, which of the following statements best describes this term?

- It is a type of fuel developed from the Bacteria.
- It is scheme of Indian Government to facilitate penetration of E-vehicles.
- It is a term used for the artist, who in a short span of time garner huge popularity.
- It is a new type of organic fertilizer developed by Government under Brand name Pop-Fame.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: US Scientists have developed a fuel named POP-FAME from bacteria. POP-FAME (Polycyclopropanated fatty acid methyl ester) is a new fuel molecule made up of seven sets of cyclopropane rings. **Cyclopropane is naturally produced by bacteria in a family called Streptomyces.** It has a three-carbon ring with each carbon atom combining with two other elements, mostly Hydrogen. **POP-FAME is found to have energy density over 50 megajoules (MJ), as compared to 32 MJ for petrol and 35 MJ for RP-1 (a kerosene-based rocket fuel); making it an ideal rocket fuel.**

Source: <https://www.space.com/bioengineered-bacteria-efficient-rocket-fuel>

<https://www.thehindubusinessline.com/business-tech/rocket-fuel-bacteria-that-pack-a-punch/article65621242.ece>

Q.26) Which of the following statements are correct about the features of Bharatnatyam?

- In this dance form, equal emphasis is given on both the Tandava and Lasya aspects
- Dancers often perform with bent knees in this dance.
- Tharangam is the concluding stage of Bharatanatyam.

Select the correct answer using the code given below:

- 1 and 2 only
- 1 and 3 only
- 2 and 3 only
- 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Bharatnatyam is the oldest among all classical dance forms, and its name is derived from Bharata Muni and 'natyam', meaning dance in Tamil. The origins of Bharatnatyam can be traced back to the temple dancers or devadasis of Tamil Nadu, where it was known as 'Sadir' or 'Dashiattam'. Bharatnatyam was traditionally performed by solo female dancers but has become popular among male and group artists too. Rukmini Devi Arundale is known for giving global recognition to Bharatnatyam.

Statement 1 is correct: In this dance form, equal emphasis is given on **both the Tandava and Lasya** aspects of dance, with major emphasis on 'mudras'.

Statement 2 is correct: One of the striking features of Bharatanatyam is that performers mostly dance with their knees bent. This stance is called "Ardhamandala," which helps the performer maintain balance and execute intricate footwork.

Statement 3 is incorrect: Tharangam is not a concluding stage of Bharatanatyam. It is a solo element in Kuchipudi where the dancer balances a pot of water on their head while performing with their feet on the edges of a brass plate. **Thillana** is the concluding stage of the Bharatanatyam performance.

Source: Indian Art and Culture by Nitin Singhania

Q.27) Consider the following statements about Borgeets, a popular folk music in India:

1. Borgeets were written and composed by Shankardeva in Brajaboli.
2. They are secular songs, mostly portraying themes of struggle of people belonging to lower castes/varna.
3. They are often practiced in Sattras, the monasteries of Ekasarna Dharma.

Which of the statements given above is/are **incorrect**?

- a) 1 only
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

A Borgeet is a vaishnava devotional song, popular in Assam. In literal sense it means great song.

Statement 1 is correct: Borgeets were composed by Shankardev and Sri Madhavdev (Shankardeva's disciple) in 15th to 16th century. They were written in Brajaboli language.

Statement 2 is incorrect: Borgeets are Vaishnavite songs and are not secular songs. They express the religious sentiments of the poets reacting to different situations. They are lyrical songs with specific raga.

Statement 3 is correct: Borgeets are practiced in Sattras, the monasteries of Ekasarana Dharma. These are Vaishnavite monasteries in Assam. Sattriya dance is performed on these Borgeets composed by Shankardeva.

Source: Nitin Singhania, Chapter 6, Indian Dance.

<https://www.assams.info/answers/what-is-a-borgeet>

Q.28) Consider the following pairs:

Folk Dance Forms States

- | | |
|---------------|-------------|
| 1. Bihu | Assam |
| 2. Burrakatha | West Bengal |
| 3. Bhangra | Gujarat |
| 4. Ghoomar | Rajasthan |

How many of the above pairs are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correctly matched: Bihu is a popular folk dance of Assam that is performed by both men and women in colorful traditional dresses. The dance is performed in groups and includes group formations, rapid hand movements, and brisk footwork. The dance is a celebration of joy and happiness.

Pair 2 is incorrectly matched: Burrakatha or Jangam Katha, is a form of dance narration from Andhra Pradesh, in which a single performer narrates stories from the puranas.

Pair 3 is incorrectly matched: Bhangra is the highly energetic folk dance of Punjab. Accompanied with infectious and catchy drumbeats, it is a popular form of celebration during festivities. Giddha is the female counterpart of the male Bhangra.

Pair 4 is correctly matched: Ghoomar is a traditional folk dance performed by the women of the Bhil tribe in Rajasthan. The dance is characterized by pirouetting movements that bring the flowing vibrancy of the multi-colored Ghaghra into prominence.

Source: Indian Art and Culture by Nitin Singhania

Q.29) Which of the following statements is correct about the community of people called 'Bauls', which is well known for its culture and traditions?

- Muslim folk musicians belonging to Western Rajasthan
- A tribal community of Odisha associated with Saura Paintings
- A community from Manipur associated with Thang-ta.
- A group of mystic musicians from Bengal region.

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect. The **Manganiyars** are professional **Muslim folk musicians** belonging to Jaisalmer, Barmer, parts of Jalore, Bikaner and Jodhpur districts in **Western Rajasthan**. Belonging to the Muslim faith, but supported by the Patrons (Rajput's, members of a Hindu military caste claiming Kshatriya descent), the Manganiyars sing the praises both of the great **Sufi saints and of the God Krishna**.

Option b is incorrect. 'Bauls' are **not the tribal community of Odisha** associated with Saura Paintings. Saura paintings made by Saura tribe of Odisha and are similar to Warli paintings. It is essentially a wall mural painting and is ritualistic.

Option c is incorrect. Thang-ta is created by the **Meitei people of Manipur**, Thang-ta is an armed martial art that finds its mention in the most lethal combat forms. Sarit Sarak, on the other hand, is an unarmed art form that uses hand-to-hand combat.

Option d is correct. The Bauls are **mystic minstrels/ musician living** in rural **West Bengal**. Bauls belong to an **unorthodox devotional tradition, influenced by Hinduism, Buddhism, Bengali, Vaishnavism and Sufi Islam**, yet distinctly different from them. Bauls neither identify with any organized religion nor with the caste system, special deities, temples or sacred places. Their emphasis lies on the importance of a person's physical body as the place where God resides.

Source: <https://ich.unesco.org/en/RL/baul-songs-00107>

<https://www.mamekhan.com/manganiyar-musicians.html> + Nitin Singhania (Paintings + Matrial Art)

Q.30) In the context of Indian History, consider the following statement regarding "Pandurang Khankhoje":

- He was one of the founding members of the Ghadar Party in 1914.
- He had met Vladimir Lenin in Russia to seek support for the India's freedom cause.
- He was appointed as professor at the National School of Agriculture in Chapingo, near Mexico City.

Which of the statements given above are correct?

- 1 and 2 only
- 1 and 3 only
- 2 and 3 only
- 1, 2, and 3

Ans) d

Exp) Option d is the correct answer.

Pandurang Khankhoje was born in Wardha, Maharashtra, in the late 19th century, Pandurang Khankhoje came in contact with other revolutionaries early on. As a student, he was an ardent admirer of the French Revolution and of the American War of Independence. Closer to home, the Hindu reformer Swami

Dayanand and his Arya Samaj movement, which called for a spirit of reform and social change, became the hero to a young student group led by Khankhoje.

Statement 1 is correct: Pandurang Khankhoje was one of the founding members of the Ghadar Party, established by Indians living abroad in 1914, mostly belonging to Punjab. Its aim was to lead a revolutionary fight against the British in India.

Statement 2 is correct: Along with the Indian workers, militant action was planned by Pandurang Khankhoje in India, but the outbreak of the First World War halted these plans. **He then reached out to Bhikaji Cama in Paris, and met with Vladimir Lenin in Russia among other leaders, seeking support for the Indian cause.** However, as he was facing possible deportation from Europe and could not go to India, he sought shelter in Mexico.

Statement 3 is correct: Due to his prior friendship with Mexican revolutionaries, **he was appointed a professor at the National School of Agriculture in Chapingo, near Mexico City.** He researched corn, wheat, pulses and rubber, developing frost and drought-resistant varieties, and was part of efforts to bring in the Green Revolution in Mexico.

Source: <https://indianexpress.com/article/explained/explained-who-was-pandurang-khankhoje-ghadarite-revolutionary-and-a-hero-of-mexico-8105384/>

https://www.documenta14.de/en/south/903_revolutionary_work_pandurang_khankhoje_and_tina_modotti

Q.31) Consider the following statements with reference to Sangam literature:

1. Akam and Puram were among the important themes of Sangam literature.
2. Tirukkural, a great work of Sangam literature, was written by Ilango Adigal.
3. Poets of the Sangam literature included both male and female.

Which of the above-given statements is/are **incorrect**?

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Sangam literature is the main source of the history of ancient South India, and it was compiled from the 3rd century BC to the 3rd century CE.

Statement 1 is correct: The poems belonging to the Sangam Literature are generally based on two main themes – Akam concerned with emotions and sentiments in the context of romantic love, sexual connection, and sensuality and Puram concerned with exploits and heroic achievements in the setting of battle and public life.

Statement 2 is incorrect: Thiruvalluvar, commonly known as Valluvar, was a celebrated Tamil poet and philosopher. He is best known as the author of the Tirukkural, a collection of couplets on ethics, political and economical matters, and love. Silappadikaram (story of an anklet) was written by Ilango-Adigal.

Statement 3 is correct: Poets of the Sangam literature include both male and female. Women poets like Avvaiyar, Nachchellaiyar, and Kakkaiyapadiyar flourished in this period and contribute to Tamil literature. For example, Abidhana Chintamani states that the first Avvaiyar lived during the Sangam period (c. 3rd century BCE) and is said to have had cordial relations with the Tamil chieftains Vēl Pāri and Athiyamān. She wrote 59 poems in the Purānāṅṁūru.

Source: Indian Art and Culture by Nitin Singhania 2nd Edition, Chapter-11

<https://egyankosh.ac.in/bitstream/123456789/64663/1/Unit1.pdf>

Q.32) With reference to the cultural history of India, consider the following statements about the plays in 'Classical Sanskrit Theatre':

1. One of the major characteristics of classical Sanskrit theatre is the usual absence of tragic ending.
2. The protagonist used to be a male who would generally win at the end of the play.
3. Masks were heavily used by the performers.
4. Vidusaka used to play the comic character.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Sariputrprakarana by Ashvaghosha, an eminent philosopher, is considered the first example of classical Sanskrit drama. It was a nine act play. **Sudraka** was the first to introduce the essence of conflict in his play **Mricchakatika**. Apart from a hero and a heroine, this play features an antagonist for the first time. **Kalidasa** is perhaps the most popular among the Sanskrit playwrights. His three works **Malavikagnimitram**, **Vikramorvasi** and **Shakuntalam** - are some of the finest examples of classical Sanskrit drama.

Statement 1 and 2 are correct: Classical Sanskrit play was bound by some rigid conventions: They were generally four to seven-act plays. One of the major characteristics of Classical Sanskrit theatre is absence of tragedy, they never have a sad ending. It is a mixed composition, in which joy is mingled with sorrow. Love is the main theme of most of the dramas and vidushak is the constant companion of the hero in his love affairs. **The protagonist was male who would always achieve the object of his desire at the end.** The plays had well defined opening, progression, development, pause and conclusion in which the Hero does not die and wins in the end.

Statement 3 is incorrect: Sanskrit plays followed an almost ritualistic progression. **The play started with several pre-play rituals, also known as purva-raga**, most of which were performed behind the curtain. Following this, the **Sutradhar, who was the stage manager and director**, entered the stage with his assistants. Dressed in white, he would offer worship to the deity and seek his blessings. The **stages were two-storeyed**. While the upper floor was used for representing celestial sphere, the lower one represented the terrestrial sphere. Curtains were used to intensify the impact of play. **However, masks were not used.**

Statement 4 is correct: Vidusaka (Clown) who used to play the comic role was vital for vividness of dramatic performances. He is the noble and good-hearted, often a friend of hero. He questions the prevailing social norms through satire. The vidushaka is the privileged character **who has the license to mock the king, to ridicule those around him** and at the same time present wisdom and absolute truths without fear. **Traditionally, he spoke in Prakrit while others in Sanskrit.**

Source: Nitin Singhania + Chapter 7: INDIAN THEATRE

<https://www.culturopedia.com/sanskrit-or-classical-theatre/>

Q.33) Consider the following statements with reference to Allasani Peddana:

1. He is also known as Andhra kavita pitamaha.
2. He was one among the Ashtadiggajas (group of eight poets) in the court of Krishnadevaraya of Vijayanagara.
3. The famous text Manucharitra was written by Allasani Peddana.

Which of the above-given statements is/are correct?

- a) 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Allasani Peddana's works are known for their intricate language and complex themes.

Statement 1 is correct: Allasani Peddana (15th -16th centuries CE) was one of the earliest Telegu poets. He is known as **Andhra kavita pitamaha meaning father of poetry in Andhra.**

Statement 2 is correct: There were eight great poets in the court of Krishnadevaraya of Vijayanagara (1509-1530 AD). They were called Ashtadiggajas. Allsani Peddana was one among them. He has been given the title Sarvatomukhandhra Kavitaipitamaha.

Statement 3 is correct: Manucharitra written by Allasani Peddana is about the birth of Svarochisha Manu, the founder of mankind in the Svarochisha Manvantara. It is adapted from the Markandeya Purana. In this book, Peddana compares the birth of the son of Krishnadevaraya to the birth of Svarochisha Manu. Manucharitra's original title is Svarochishamanu Sambhavamu.

Source: Indian Art and Culture by Nitin Singhania 2nd Edition, Chapter-11

Q.34) With reference to the cultural history of India, consider the following statements about the Bommalattam puppetry:

1. This puppetry is famous in the state of Tamil Nādu.
2. It combines the techniques of both rod and string puppets.
3. Bommalattam puppets are largest and heaviest of all traditional Indian Puppets.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Puppetry in India can be broadly classified into four categories – **String Puppet, Shadow Puppet, Glove Puppet, and Rod Puppet.**

Statement 1 and 2 are correct: The stringed puppets of Tamil Nadu are known as Bommalattam. They combine the techniques of both rod and string puppets. A few puppets have jointed arms and hands, which are manipulated by rods. They are made of wood and the strings for manipulation are tied to an iron ring which the puppeteer wears like a crown on his head.

Statement 3 is correct: The Bommalattam puppets are the largest, heaviest and the most articulate of all traditional Indian marionettes. A puppet may be as big as 4.5 feet in height weighing about ten kilograms.

Source: <https://cctindia.gov.in/puppet-forms/>
Nitin Singhania + Chapter 8: INDIAN PUPPETRY

Q.35) Consider the following statements with reference to the “Anang Tal Lake”:

1. Recently, it was declared as the Ramsar Wetland of International Importance.
2. It is situated near Leh in the Union Territory of Ladakh
3. The lake is considered to be built by the rulers of the Tomar Dynasty.

Which of the statements given above is/are correct?

- a) 1, 2 and 3
- b) 1 and 3 only
- c) 2 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

Statements 1 and 2 are incorrect: The Ministry of Culture has declared **Anang Tal Lake as a monument of national importance** under Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958. Anang Tal Lake, dated back to 1060AD, **is situated to north of Jog Maya temple and northwest of Qutub Complex in South Delhi.**

Statement 3 is correct: Anang Tal Lake is ascribed to Anangpal II of Tomar Dynasty that ruled parts of present-day Haryana and Delhi between 8th and 12th century. Anangpal II was instrumental in populating Indraprastha and made Dhillikapuri (Delhi) as the capital of Tomar Dynasty. He built Lal Kot (later merged into Qila Rai Pithora by Prithviraj Chauhan) and also believed to bring Iron Pillar of Mehrauli from Udayagiri in Central India. He was succeeded by his grandson Prithviraj Chauhan, who was defeated by Ghurid forces in Battle of Tarain.

Source: <https://indianexpress.com/article/cities/delhi/anang-tal-lake-declared-monument-of-national-importance-8110070/>

<https://indianexpress.com/article/explained/tomar-king-anangpal-ii-legacy-delhi-7237182/>

Q.36) Consider the following statements with reference to the Paisachi language in India:

1. It shares some linguistic similarities with the Prakrit language.
2. Brihatkatha of Gunadhya is written in the Paisachi language.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Paisachi is an extinct language that was spoken in ancient India. Paishachi or Paisaci is a largely unattested literary language of the middle kingdoms of India mentioned in Prakrit and Sanskrit grammars of antiquity. **It is generally grouped with the Prakrit, with which it shares some linguistic similarities**, but is still not considered a spoken Prakrit by the grammarians because it was purely a literary language.

Statement 2 is correct: Brihatkatha of Gunadhya is written in the Paisachi language. Brihatkatha is an ancient Indian epic reported to have been authored by Guhya in the poorly understood Paisachi language. The Brihatkatha existed in the sixth century CE, according to subsequent Sanskrit poets such as Dain, Subandhu.

Source: <https://www.jstor.org/stable/41688434>

Q.37) The usage of Grantha Script is primarily associated with which of the following present-day states?

- Rajasthan
- Tamil Nadu
- Assam
- West Bengal

Ans) b

Exp) Option b is the correct answer.

Grantha is the name applied to the script used in Tamil Nadu for writing the Sanskrit language.

Both Grantha and Tamil scripts appear alike in modern forms. The evolution of both scripts from Brahmi was also more or less similar. The development of Grantha script in Tamil Nadu may be divided into four periods. The archaic and ornamental, the transitional, the medieval and the modern. Archaic and ornamental variety is commonly known as Pallava Grantha. Mahendravarman's Tiruchirappalli rock cut cave and other cave temple inscriptions, Narasimhan's Mamallapuram, Kanchi Kailasanatha and Saluvankuppam temple inscriptions, Mutharaiyar's Senthalai inscriptions are examples of this variety.

Source: <https://www.tnarch.gov.in/epigraphy/inscriptions-grantha-script>

Q.38) Which of the following statements is/are correct regarding the crop “Mithila Makhana”?

- This crop was recently included under the Minimum Support Price (MSP) regime.
- This crop is a rich source of micronutrients such as Zinc and Iron.
- This crop is cultivated largely in dry lands.

Select the correct answer using the code given below:

- 1 only
- 1 and 3 only
- 2 only
- 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Mithila Makhana is also simply known as ‘makhn’. Its botanical name is ‘Euryale Ferox Salisb’ and it is a special variety of **aquatic fox nut**. It is believed that the food is famously consumed during **Kojagara Puja** by Maithil Brahmins, who celebrate it for newly-married couples.

Statement 1 is incorrect: Recently the **Government awarded Geographic Indication (GI) tag to Mithila Makhana** grown in Mithila region of Bihar.

Minimum Support Price (MSP) is a form of market intervention by the Government of India to insure agricultural producers against any sharp fall in farm prices. At present 22 crops and fair and remunerative price (FRP) for sugarcane are covered under MSP regime and **Mithila Makhana is not covered under MSP policy regime.**

Statement 2 is correct: It is true that Mithila Makhana is a rich source of micronutrients such as Zinc and Iron. Also, this crop is low in cholesterol, fat and sodium, and has low calorific value.

Statement 3 is incorrect: Mithila Makhana is an aquatic crop, and it cannot be cultivated in dry lands.

Mithila Makhana is a special variety of fox nut **grown in ponds on a leaf**. It is collected, washed and sun-dried for hours and then roasted in a pan at a high flame. In this process their outer shells are broken, and the white puff comes out.

Source: <https://indianexpress.com/article/lifestyle/food-wine/bihar-mithila-makhana-gi-tag-healthy-ingredient-snack-8105437/>

[https://vikaspedia.in/agriculture/market-information/minimum-support-price#:~:text=prices%20\(MSPs\)%20for,-22,-mandated%20crops%20and](https://vikaspedia.in/agriculture/market-information/minimum-support-price#:~:text=prices%20(MSPs)%20for,-22,-mandated%20crops%20and)

Q.39) Consider the following statements about the literature related to the Buddhism:

1. Anguttara Nikaya is a part of the Sutta Pitaka.
2. Buddhacharita was written by Ashvaghosha.
3. Dhammapada was written by king Harshavardhana.

Which of the statements given above is/are correct?

- a) 1, 2 and 3
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

The Buddha's teachings were delivered orally. He taught for 45 years, tailoring his lessons to the needs of the students. The teachings were learned by the Sangha, and group recitations were held at festivals and special occasions. In 483 BC, the teachings were rehearsed and validated in the First Council, after which they were separated into Three Pitakas.

Three Pitakas include Vinaya Pitaka, Sutta Pitaka and Abhidhamma Pitaka

The main teaching or Dhamma of Buddha is contained in the Sutta Pitaka. It is divided into five collections or Nikayas.

- 1) Digha Nikaya
- 2) Majjhima Nikaya
- 3) Samyutta Nikaya

4) Anguttara Nikaya (Hence, statement 1 is correct)

- 5) Khuddaka Nikaya

Statement 2 is correct: Buddhacharita: it is an epic poem composed in Sanskrit by Ashvaghosha in the early 2nd century AD. It is about the life of the Buddha.

Statement 3 is incorrect: Dhammapada is a part of the Khuddaka Nikaya of the Sutta Pitaka (not written by Harshavardhana). It contains a collection of the sayings of the Buddha in verse form.

Source: Indian Art & Culture by Nitin Singhania

Q.40) Recently, many cattle across India were killed due to Lumpy Skin Disease (LSD). Regarding this disease, consider the following statements:

1. It is caused by the Capripoxvirus.
2. This disease may cause a decrease in weight and milk yield in cattle.
3. It is a Zoonotic disease, which can easily spread from animals to humans.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2, and 3

Ans) a

Exp) Option a is the correct answer.

This is not the first time LSD has been detected in India. The disease has been endemic in most African countries, and since 2012 it has spread rapidly through the Middle East, Southeast Europe and West and Central Asia. Since 2019, several outbreaks of LSD have been reported in Asia.

Statement 1 is correct: According to a report by GAVI, the Global Alliance for Vaccines and Immunization, the **Lumpy Skin Disease (LSD) disease is caused by a virus called the Capripoxvirus** and is “an emerging threat to livestock worldwide”. It is genetically related to the goat pox and sheep pox virus family.

Statement 2 is correct: LSD infects cattle and water buffalo mainly through vectors such as blood-feeding insects. Signs of infection include the appearance of circular, firm nodes on the animal’s hide or skin that look similar to lumps. **Infected animals immediately start losing weight and may have fever and lesions in the mouth, along with a reduced milk yield.** Other symptoms include excessive nasal and salivary secretion. Pregnant cows and buffaloes often suffer miscarriage and in some cases, diseased animals can die due to it as well.

Statement 3 is incorrect: According to the World Organization for Animal Health (WOAH), of which India is a member, mortality rates of 1 to 5 per cent are considered usual. **The disease is not zoonotic, meaning it does not spread from animals to humans, and humans cannot get infected with it.** While the virus does not spread to humans, “milk produced by an infected animal will be fit for human consumption after boiling or pasteurization as these processes will kill the viruses, if any, in the milk”,

Source: <https://indianexpress.com/article/explained/explained-health/explained-what-is-lumpy-skin-disease-cattle-8070602/>

Q.41) “It was one of the earliest epic poems in Tamil, written in the 5th–6th century AD. It tells the story of young merchant Kovalan, his marriage to the virtuous Kannagi and his love for the courtesan Matavi.” Which of the following texts has been described in the above passage?

- Silappathikaram
- Amuktamalyada
- Ratnavali
- Kundalakesi

Ans) a

Exp) Option a is the correct answer.

Silappathikaram, also spelled Silappatikaram, the earliest epic poem in Tamil, written in the 5th–6th century AD by Ilango Adigal.

The Silappathikaram tells the story of the young merchant Kovalan and his wife Kannagi. It tells about Kovalan’s love for the courtesan Matavi, and his consequent ruin and exile in Mathurai. In Mathurai he is unjustly executed after trying to sell his wife’s anklet to a wicked goldsmith who had stolen the queen’s anklet and charged Kovalan with theft. Kannagi comes to Maturai, proves Kovalan’s innocence, then tears off one breast and throws it at the kingdom of Maturai, which goes up in flames. Such is the power of a faithful wife.

Option b is incorrect: Amuktamalyada is an epic poem in Telugu composed by Krishnadevaraya of the Vijayanagar Dynasty

Option c is incorrect: Harsha wrote three Sanskrit plays- Nagananda, Ratnavali, and Priyadarshika.

Option d is incorrect: Kundalakesi, also known as Kuntalakeciviruttam, is a Tamil epic authored by Nathakuthanaar about the 10th century.

Source: <https://www.britannica.com/topic/Silappathikaram>

Q.42) With respect to Khayal Music, consider the following statements:

- The origin of Khayal music is attributed to Amir Khusrau.
- Alap is given much more importance in Khyal music as compared to Dhrupad.
- The sultans of Jaunpur were patrons of the Khayal music.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. The word 'Khyal' is derived from Persian and means "idea or imagination". The origin of this style was **attributed to Amir Khusrau**. Generally, a Khyal composition is also referred to as a '**Bandish**'.

Statement 2 is incorrect. **Alap** is given **much less room in the Khyal** music as compared to Dhrupad. This is because there is more use of taan in the composition of Khyal music.

Statement 3 is correct. The **sultans of Jaunpur**—notably Mohammad Sharqi (1401–1440) and Hussain Sarqi (r. 1458–1499), who were contemporaries of the Mughal emperor Babur—were **patrons of musicians who developed khayal**.

Khayal grew in importance in seventeenth-century Jaipur and found a prolific champion in Sadarang (Niyamat Khan), a musician in the court of Muhammad Shah (r. 1719–1748) and a descendant of Tansen.

Source: <https://www.encyclopedia.com/international/encyclopedias-almanacs-transcripts-and-maps/khayal>

Q.43) With reference to various folk theatre traditions of India, consider the following pairs:

Folk theatres Features

- | | |
|--------------|--|
| 1. Bayalata | Marked by the complete absence of any religious themes. |
| 2. Jatra | Spreads the message of teachings of Lord Krishna |
| 3. Powada | Depicts the valour story of Maratha emperor Shivaji. |
| 4. Kuruvanji | A secular romantic play, which depicts the fate of a love-stuck heroine. |

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

Ans) c

Exp) Option c is the correct answer.

Pair 1 is incorrect: Bayalata is an open-air theatre tradition of Karnataka that is performed during the worship of the local deity. **Bayalata narrates the love tale of Radha-Krishna**, thus the statement, marked by the **complete absence of religious themes, is not correct.**

There are generally five types of Bayalatas – Dasarata, Sannata, Doddata, Parijata and Yakshagana.. **Parijata and Yakshagana are narrated by a single Sutradhar** while the other three forms are performed in a chorus of three-four, aided by a Vidushaka (clown).

Pair 2 is correct: Jatra is a popular folk theatre of Eastern India. It is generally an open-air performance that was **initiated by Vaishnava saint Sri Chaitanya** to propagate the **teachings of Krishna**. Later, variants such as Rama Jatra, Shiv Jatra and Chandi Jatra also came into existence that narrated stories of Puranic legends. In the modern times, Jatra was used to narrate stories of secular, historical and even patriotic themes.

Pair 3 is correct: When **Shivaji killed his adversary Afzal Khan**, a play was written lauding the heroic deeds of Shivaji, which later came to be known as **Powada**. They are **operatic ballads depicting stories of valour and sung by the folk musicians** known as Gondhalis and Shahirs.

Powadas were also written to raise awareness on social issues such as female foeticide, dowry and corruption.

Pair 4 is correct: **Kuruvanji is a theatre tradition of Tamil Nadu** and it is characterised by classical Tamil poetry and songs. The first Kuruvanji was composed by Thirukutarajappa Kaviyar. **The basic theme revolves around the fate of a love-struck heroine**, and it is performed in a dance ballet form.

Thirukutrala Kuravanji is about a girl named Vasanthavalli who starts dreaming about Kutralanathar as her lover as her friends start talking to her about the glory of Kutralanathar. Vasanthavalli seeks advice from Kurathi, the fortune teller, who predicts her union with Kutralanathar.

Source: Nitin Singhania – Chapter 7 Folk Theatres

Q.44) In the context of cultural traditions of India, ‘Tumbi, Chikara and Onavillu’ are best related to which of the following?

- Handicrafts made using bamboo
- Folk musical instruments
- Bronze sculptures popular during the Chola period
- GI tagged toy traditions in India

Ans) b

Exp) Option b is the correct answer.

Tumbi, Chikara and Onavillu are folk musical instruments. Basically, they are Tata Vadya, i.e., Chordophones or the string instruments that function best when their sound is modified by hand.

Tumbi: The tumbi is a small, lightweight folk instrument with just one string from the northwestern Indian state of Punjab. It is used to play simple tunes with characteristic timbre.

Chikara: Chikara is a stringed instrument made of parchment, wood and steel. It is a local instrument found in Madhya Pradesh and Rajasthan. It is majorly used by the ‘Pradhan’ community for vocal accompaniment to songs and dance sequences in Madhya Pradesh. Moreover, it is used by the ‘Meo’ community of Alwar district of Rajasthan for vocal accompaniment.

Onavillu: An onavillu is a simple, short, bow-shaped musical instrument. Its name may come from Onam, a festival in Kerala where the instrument is used in dances, and villu, which means 'bow' in Malayalam. Although still regularly used in rural art forms, use of the onavillu is on the decline.

Knowledge Base:

Other types of folk chordophones are:

Ektara or Tun Tuna: It is a one-stringed instrument played by wandering monks.

Dotara: two-stringed instrument used by Bauls

Dilruba or Esraj: accompanying instrument used in Punjab and during Rabindra sangeet in eastern India.

Sarinda: Important tribal instrument and is used by Santhals in Eastern India and also used in Rajasthan and Assam. It is like Sarangi.

Source: Nitin Singhania, Chapter 5, Indian Music

<https://www.india-instruments.com/various-string-instrument-details/tumbi.html>

<https://indianculture.gov.in/musical-instruments/tat-vadya/chikara>

Q.45) Consider the following statements with reference to Small Modular Reactor:

1. These are coal based thermal plants which will be used for power production at Industrial level.
2. These reactors have less fuel requirement as compared to conventional reactors.
3. These reactors may produce radioactive waste.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Given their smaller footprint, Small modular reactors (SMRs) can be sited on locations not suitable for larger nuclear power plants. Prefabricated units of SMRs can be manufactured and then shipped and installed on site, making them more affordable to build than large power reactors. SMRs offer savings in cost and construction time, and they can be deployed incrementally to match increasing energy demand.

Statement 1 is incorrect: Small modular reactors (SMRs) are advanced nuclear reactors that have a power capacity of up to 300 MW(e) per unit, which is about one-third of the generating capacity of traditional nuclear power reactors.

Statement 2 is correct: Small modular reactors (SMRs) have reduced fuel requirements. Power plants based on SMRs may require less frequent refuelling, every 3 to 7 years, in comparison to between 1 and 2 years for conventional plants. Some SMRs are designed to operate for up to 30 years without refuelling.

Statement 3 is correct: Small modular reactors, long touted as the future of nuclear energy, actually generate more radioactive waste than conventional nuclear power plants, according to research from Stanford and the University of British Columbia

Knowledge Base:

Recently, the International Atomic Energy Agency (IAEA) has established the Platform on SMRs and their Applications,

- 1) **It is a onestop shop** for countries to coordinate support related to all aspects of SMR development.
- 2) The IAEA is the world's centre for cooperation in the nuclear field. It was set up as the world's "Atoms for Peace" organization in 1957 within the United Nations family.

Source: [https://www.iaea.org/newscenter/news/what-are-small-modular-reactors-smrs#:~:text=Small%20modular%20reactors%20\(SMRs\)%20are,of%20traditional%20nuclear%20power%20reactors.](https://www.iaea.org/newscenter/news/what-are-small-modular-reactors-smrs#:~:text=Small%20modular%20reactors%20(SMRs)%20are,of%20traditional%20nuclear%20power%20reactors.)

<https://news.stanford.edu/2022/05/30/small-modular-reactors-produce-high-levels-nuclear-waste/>

Q.46) With respect to the Thomas Cup, consider the following statements:

1. It is an international tennis competition.
2. Recently, India bagged its first-ever Thomas Cup victory.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The Thomas Cup competition was the idea of Sir George Alan Thomas, a highly successful English badminton player of the early 1900s.

Statement 1 is incorrect. Thomas Cup is an International Badminton Championship. The first tournament was planned in 1941-42 but delayed due to World War II and then it was **played in 1948-49**. Its final match was played at the Queen's Hall, Preston, England on 25th and 26th Feb 1949. **Malaya became the first Thomas Cup Champion.**

Statement 2 is correct. In May 2022, the Indian men's badminton team created history by clinching the Thomas Cup. India registered a 3-0 victory over 14-time champions Indonesia. The final match of the **Thomas Cup was held in Bangkok, Thailand. This is India's first-ever Thomas Cup victory in 73 years.** The men's badminton team was rewarded Rs 1 crore by India's Sports Ministry for their extraordinary performance.

Source: <https://www.nationalbadmintonmuseum.com/the-first-thomas-cup-final/>

<https://economictimes.indiatimes.com/magazines/panache/india-wins-thomas-cup-2022-pm-modi-anand-mahindra-call-it-historic-netizens-heap-praises-on-badminton-team/articleshow/91586418.cms?from=mdr>

Q.47) With reference to the Sangeet Natak Akademi, consider the following statements:

1. Sangeet Natak Akademi is an apex body in the field of performing arts.
2. P.V. Rajmanner was the first chairman of Sangeet Natak Academy.
3. The Akademi's fellowship (Akademi Ratna) does not carry any monetary rewards.
4. National School of Drama (NSD) was set up by Sangeet Natak Akademi.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2, 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Sangeet Natak Akademi is India's national academy of music, dance and drama – is the first national academy of the arts set up by the Republic of India. It was created by a resolution of the (then) Ministry of Education, **Government of India, dated 31 May 1952, which was notified in the Gazette of India of June 1952.**

Statement 1 is correct. The Sangeet Natak Akademi is the apex body in the field of performing arts in the country, preserving and promoting the vast intangible heritage of India's diverse culture expressed in forms of music, dance and drama.

Statement 2 is correct. The Akademi became functional with the appointment of **its first Chairman, Dr P.V. Rajamannar**, and the formation of its all-India council of representatives, the General Council. The first President of India, Dr Rajendra Prasad, **inaugurated it on 28 January 1953 at a special function held in the Parliament House.**

Statement 3 is incorrect. The Akademi's fellowship (Akademi Ratna) carries a purse money of 3 Lakh Rupees and Akademi Awards (Akademi Puraskar) carry a purse money of 1 lakh Rupees. The award also carries a Tamrapatra and Angavastram.

Statement 4 is correct. National School of Drama (NSD) was set up in 1959 by Sangeet Natak Akademi for focused work on dramatics in India. In 1975, NSD became an independent entity under Ministry of Culture

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1901819>

<https://indianculture.gov.in/MoCorganization/sangeet-natak-akademi>

Q.48) With reference to the differences and similarities between Hindustani and Carnatic music, consider the following statements:

1. Hindustani music has more Ragas than Carnatic music.
2. Unlike Carnatic music, time of performance plays an important role in Hindustani music.
3. Hindustani music has greater scope for improvisations than Carnatic music.
4. Hindustani music is vocal-centric, while both vocals and instruments are important in Carnatic music.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

Indian classical music is classified into two broad divisions - Hindustani music and Carnatic music. While Hindustani music was practised in North India and is an indigenous form of music with Persian-Arabic influences, Carnatic music is indigenous to South India and remained free of any outside influence.

Statement 1 is incorrect: This statement is **incorrect** as Carnatic music has a **far greater variety and range of Ragas (around 72)** than the Ragas of Hindustani music (around 6 major ones).

Statement 2 is correct: Time has a very **important role** to play in the rendition of Hindustani music. The **rules** of Hindustani music **mandate** that **particular Ragas** are to be used at **particular times** of the **day** and in particular **seasons** of the year only. There are **no such rules** related to timing of performance in Carnatic music.

Statement 3 is correct: The **rules** of Hindustani music are **not rigid** and the **duration** of the **Ragas** are **short** as well, so there is **ample scope of improvisation** in Hindustani music and is **generally preferred** as well. On the other hand, the **rules of Carnatic** music are quite **rigid** and the **compositions**, called **Kriti**, have very **complex rules** and **long durations** with almost **no scope for improvisations**.

Statement 4 is correct: While **vocals** and **instruments** are used in **combination** in **both Hindustani** and **Carnatic** music, **vocals** are given **more importance** in **Hindustani** music, where vocals are at the **centre** of the **performance** and the **instruments** only provide **accompaniment and support**. In **Carnatic** music, both vocals and instruments are given **equal importance**.

Source: [https://www.thehindu.com/entertainment/music/the-charm-lies-in-the-difference-between-hindustani-and-](https://www.thehindu.com/entertainment/music/the-charm-lies-in-the-difference-between-hindustani-and-carnatic/article34841775.ece#:~:text=greater%20variety%20of%20composition%20in%20Carnatic%20music%3A)

[carnatic/article34841775.ece#:~:text=greater%20variety%20of%20composition%20in%20Carnatic%20music%3A](https://www.thehindu.com/entertainment/music/the-charm-lies-in-the-difference-between-hindustani-and-carnatic/article34841775.ece#:~:text=greater%20variety%20of%20composition%20in%20Carnatic%20music%3A)

Art & Culture by Nitin Singhania, 5th edition, Ch-5, Pg 5.18

Q.49) “It is a folk dance performed by the women in Rajasthan. The snake is the inspiration for the costumes and dance movements. A wind instrument ‘Been’ is associated with this dance form. It has been inscribed in the UNESCO List of the Intangible Cultural Heritage of Humanity.”

Which of the following dance forms is described in the above paragraph?

- Saraikella Chhau
- Charba
- Ghoomar
- Kalbelia

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: Saraikella Chhau in Jharkhand is a form of Chhau. It is a form of mask dance that uses vigorous martial movements to narrate mythological stories. In 2010, UNESCO inscribed Chhau in the Representative List of Intangible Cultural Heritage of Humanity.

Option b is incorrect: Charba is the popular folk dance of Himachal Pradesh. It is performed during the Dussehra festivities.

Option c is incorrect: Ghoomar or Gangore is a traditional folk dance performed by the women of the Bhil tribe in Rajasthan. It is characterised by the pirouetting movements of the women, which brings into prominence the multi-coloured vibrancies of the flowing Ghaghra.

Option d is correct: Kalbelia is a sensuous **folk dance** performed by the women of the **Kalbelia community of Rajasthan**. The **costumes and dance movement** are similar to that of the serpents. The most popular musical instrument of this dance form is ‘**Been**’ (**wind instrument** played by snake charmers). The UNESCO has **inscribed** Kalbelia folk songs and dances in the Representative **List of the Intangible Cultural Heritage of Humanity in 2010**.

Source: Indian Art and Culture by Nitin Singhania 2nd Edition – Chapter 6 – India Dance Forms.

Q.50) Recently, the Government of India launched “Paalan 1000 campaign”. In this context, which of the following statements best describes this campaign?

- It is an initiative to showcase the heritage of India to the world.
- It is an initiative of the Ministry of Agriculture to promote 1000 Farmer Producer Organizations in rural areas.
- It focuses on the cognitive development of children in the first 2 years of their life.
- It will focus on preserving 1000 monuments which are currently not protected under any scheme.

Ans) c

Exp) Option c is the correct answer.

Option c is correct: ‘Paalan 1000 - Journey of the First 1000 Days’, focuses on the cognitive developments of children in the first 2 years of its life. Paalan 1000 combines early years coaching for parents, families and other caregivers with services designed to meet families’ basic needs. Infants and toddlers are shaped by their experiences – and those experiences are shaped by their caregivers. Caregivers are crucial for a strong start in the first years of life. The programme is aligned to the mission of the Rashtriya Bal Swasthya Karyakram (RBSK), emphasizing responsive care and focusing interventions on the first 1000 days.

Source: <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1852261>

<https://timesofindia.indiatimes.com/gadgets-news/centre-launches-paalan-1000-national-campaign-parenting-app-all-details/articleshow/93607390.cms>

Q.1) Consider the following statements with respect to the paintings during Chalcolithic period:

1. Battle scenes and complex geometrical shapes are depicted in Chalcolithic paintings.
2. Paintings in Jogimara caves in Ramgarh hills belong to this period.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The pre-historic paintings were generally executed on rocks and these rock engravings were called Petroglyphs. The first set of pre-historic paintings were discovered in Bhimbetka caves in Madhya Pradesh.

Statement 1 is correct. Most of the paintings concentrate on depicting battle scenes. There are many paintings of men riding horses and elephants. Other paintings from this period also have depictions of musical instruments like the harp. Some of the paintings have complex geometrical shapes like spirals, rhomboids and circles.

Statement 2 is correct. Some of the paintings from the later Chalcolithic period can be seen in the Jogimara caves in the Ramgarh hills in the Surguja district of Chhattisgarh. These are dated to be painted around 1000 BCE. Chhattisgarh is also home to a variety of caves in the district of Kanker like the shelter of Udkuda, Garagodi, Khairkheda, Gotitola, Kulgaon, etc.

Source: NCERT –An Introduction to Indian Art (Class 11) Ch-1 Pg-5, Nitin Singhania

Q.2) With reference to Navayana Buddhism, consider the following statements:

1. It prohibited the so-called shudras to become its members.
2. It rejected the teachings of Theravada, Mahayana and Vajrayana School of Buddhism.
3. It held that women were incapable of attaining salvation as they cannot lead ascetic life.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 2 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

In 1935, Dr Ambedkar announced his decision to renounce Hinduism and Ambedkar along with more than five lakh followers **embraced Buddhism in Nagpur's Deekshabhoomi in 1956**. Dr. Ambedkar called his version of Buddhism as **Navayana Buddhism**, and its followers are called neo-Buddhists.

Statement 1 is incorrect: Navayana Buddhism is considered one of the important Dalit movements of India in post-Independence India. **People belonging to Scheduled Castes and so-called shudras also referred to as Untouchables are predominant members** of Navayana Buddhism. Therefore, Navayana Buddhism **prohibited the so-called untouchables to become its members is not correct.**

Statement 2 is correct: It is true that Navayana Buddhism **rejected the teaching of traditional schools of Buddhism such as Hinayana, Mahayana and Vajrayana** buddhism. **Navayana means new wheel** and it **rejected** traditional Buddhist practices such as institution of monk after **renunciation**, ideas such as karma, rebirth in afterlife, samsara, meditation, nirvana and Four Noble Truths.

Statement 3 is incorrect: Navayana Buddhism **did not believe in after life and Nirvana (salvation)** and hence **women's capacity to attain salvation is not relevant** in Navayana Buddhism. Further Navayana Buddhism is open to both male and female members.

Source: Nitin Singhania - Religion in India (Buddhism)

Q.3) Ajivika sect is considered as an important school of Shramana tradition. With respect to this sect, consider the following statements:

1. It was founded by Makkhali Gosala.
2. It believed in the doctrine of Niyati.
3. The authority of Vedas was rejected by Ajivikas.
4. It denied the existence of the soul.
5. Bindusara was one of the followers of Ajivika sect.

Which of the statements given above are correct?

- a) 1, 2, 3 and 4 only
- b) 2, 3, 4 and 5 only
- c) 1, 2, 3 and 5 only
- d) 1, 2 and 5 only

Ans) c

Exp) Option c is the correct answer.

Ajivika sect is from Shramana school tradition of school and belong to Nastika or Heterodox school of philosophy.

Statement 1 is correct. The Ajivika Sect was founded by Makkhali Gosala in 5th century BC. He was a contemporary of Siddhartha Gautama, the founder of Buddhism, and of Mahavira, the last and 24th Tirthankara of Jainism. Gosala is believed to have been an acquaintance of Mahavira.

Statement 2 is correct. The sect revolves around the Niyati (Fate) I.e. doctrine of absolute determinism. Ajivikas believe that what will happen is entirely pre-ordained or pre-decided and is based on cosmic principles. Hence there was no use of Karma.

Statement 3 is correct. Ajivikas rejected the authority of Vedas like Buddhism and Jainism.

Statement 4 is incorrect. Ajivikas believed in the existence of soul (atman) in every living being like Jainism. But they believed existence of soul in material form whereas Jainism propounds formless soul.

Statement 5 is correct. Ajivika sect reached its peak during the Mauryan period. The Mauryan king Bindusara (4th Century BC) was one of the followers of Ajivika sect.

Source: Nitin Singhania Pg. 12.6

Q.4) From the given passage identify the cave painting:

This cave painting belongs to a famous Jaina cave temple located in Tamil Nadu. The ceiling of the sanctum and ardha-mandapam of this cave temple contain beautiful paintings. The most important mural is the exquisite composition, Samava-saran, a lotus tank with a disciple collecting flowers and animals and fish frolicking.

Select the correct answer using the code given below:

- a) Armamalai cave Paintings
- b) Sittanavasal cave Paintings
- c) Badami cave Paintings
- d) Leepakshi Paintings

Ans) b

Exp) Option b is the correct answer.

Option a is incorrect. Armamalai Cave Paintings are situated in Vellore district of Tamil Nadu, these natural caves were converted into Jain temple in 8th century. The beautiful colourful paintings on the walls and roof depict the tales of Astathik Palakas (deities protecting eight corners) and Jainism.

Option b is correct. The Sittanavasal Caves or Arivar-koil, a Jaina cave temple. It is located in northwest of Pudukkottai town in Tamil Nadu. This Jaina cave temple is world famous primarily for its mural paintings. The ceiling of the sanctum and ardha-mandapam of this cave temple contain beautiful paintings. The most important mural is the exquisite composition, Samava-saran, a lotus tank with a disciple collecting flowers and animals and fish frolicking.

Option c is incorrect. Badami caves are located in Karnataka, they are one of the earliest surviving Hindu paintings. The murals belonging to 6-7th century AD are of different subjects and resemble the tradition of Ajanta and Bagh. The human subjects have a graceful and compassionate look in them and have big, half-closed eyes with protruding lips

Option d is incorrect. Leepakshi Paintings are located in Andhra Pradesh, these mural paintings were executed on Veerabhadra temple walls at Lepakshi in 16th Century. Made during the Vijaynagara period, they follow a religious theme, based on Ramayana, Mahabharata and incarnations of Vishnu. The paintings show a complete absence of primary colours, especially blue.

Source: Nitin Singhania Pg 2.9+

<https://www.indian-heritage.org/swaminathan/sittannavasal/Sittannavasal%20%20a%20booklet.pdf>

Q.5) In the context of astronomy, which of the following statements is correct about the Large Magellanic Cloud?

- a) It refers to a contracting mass of gas which represents an early stage in the formation of a star.
- b) It is a flat ring of icy small bodies that revolve around the Sun beyond the orbit of the planet Neptune
- c) It is an irregular galaxy that orbits around the Milky Way galaxy.
- d) It is a region around the sun over which the effect of the solar wind extends.

Ans) c

Exp) Option c is the correct answer.

Optio c is the correct: Magellanic Clouds are irregular galaxies. They are comprised of two irregular galaxies, the **Large Magellanic Cloud (LMC)** and the Small Magellanic Cloud (SMC), **which orbit the Milky Way once every 1,500 million years and each other once every 900 million years.** Scientists estimate the Small Magellanic Cloud contains around 3 billion stars, while the Large Magellanic Cloud houses some 30 billion stars. These companion galaxies were named for the Portuguese navigator Ferdinand Magellan, whose crew discovered them during the first voyage around the world (1519–22).



Option a is incorrect: Protostar is a contracting mass of gas which represents an early stage in the formation of a star, before nucleosynthesis has begun.

Option b is incorrect: Kuiper belt is a flat ring of icy small bodies that revolve around the Sun beyond the orbit of the planet Neptune. It was named for the Dutch American astronomer Gerard P. Kuiper and comprises hundreds of millions of objects—presumed to be leftovers from the formation of the outer planets—whose orbits lie close to the plane of the solar system.

Option d is incorrect: Heliosphere is the region around the sun over which the effect of the solar wind extends.

Source: <https://www.britannica.com/topic/Magellanic-Cloud>

<https://www.thehindu.com/sci-tech/science/webb-peers-into-the-depths-of-tarantula-nebula/article65870531.ece>

Q.6) With reference to the Vaisheshika School of Philosophy, consider the following statements:

1. Kannad Kashyap is considered as the founder of this school of philosophy.
2. The school believes that the law of karma is the guiding principle of the universe.
3. It considers that logical thinking and real knowledge are techniques to achieve salvation.
4. It classifies all objects of experience into seven padārtha or categories.

Which of the statements given above are correct?

- a) 1, 2 and 4 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

Orthodox school has six sub-schools of philosophy that were called the Shada Darshana. They are Vaishesika, Nyaya, Samkhya, Yoga, Purva Mimansa and Vedanta or Uttara Mimansa.

Statement 1 is correct. Maharshi Kanada Kashyap who also wrote the basic text governing the Vaisheshika school of philosophy is often considered the founder of this school.

Statement 2 is correct. Vaisheshika school believes that the laws of karma guide this universe, i.e. everything is based on the actions of human beings. It believes that we are rewarded or punished according to our actions.

Statement 3 is incorrect. Nyaya's philosophy is constantly stressed that real knowledge and systematic reasoning and thinking is the guiding principle to achieve salvation.

Vaisheshika school believed in salvation, but it was parallel to the creation and destruction of the universe, which was a cyclic process and was decided by the wishes of God. According to Vaisheshika darshana, **Guna-nasha forever is moksha.**

Statement 4 is correct. Vaisheshika school is a system of pluralistic realism, which emphasizes that reality consists in differences. It classifies all objects of experience into **seven padārtha or categories**. The seven categories are substance (dravya); quality (guna); action (karma); generality (sāmānya); particularity (vishesa); inherence (samavāya); and non-being (abhāvā).

Source: Nitin Singhanian + <https://www.newworldencyclopedia.org/entry/Vaisheshika>

<https://www.hindupedia.com/en/Darshana>

Q.7) With reference to the Mughal paintings, consider the following statements:

1. A formal artistic studio called Tasvir Khana was established by Akbar.
2. Daswant, Basawan and Kesu were famous painters in Shah Jahan's court.

3. Representation of flora and fauna as well as decorated margins are characteristics of Jahangir's paintings.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 3 only

Ans) c

Exp) Option c is the correct answer.

The paintings made in the Mughal period had a distinctive style as they were drawn from Persian antecedents. They **focused on hunting scenes, historical events and other court-related paintings**. Even though they made only miniature paintings, the illustrations in paintings are considered amongst the most unique paintings in the world.

Statement 1 is correct. An entire department devoted to the paintings and scribing of his documents was established by Akbar. He established a **formal artistic studio called Tasvir Khana** where the artists were hired on salary, and they developed their own styles.

Statement 2 is incorrect. Famous painters of Akbar's period include **Daswant, Basawan and Kesu**. Prominently illustrated manuscripts during Akbar's reign are **Tutinama, Hamzanama, Anvar-i-Suhaili and Gulistan of Sadi**.

Statement 3 is correct. The Mughal paintings **reached its zenith in the period of Jahangir**. He was a naturalist by nature and preferred **the paintings of flora and fauna, i.e. birds, animals, trees and flowers**. One of the unique trends that developed in this period was of decorated margins around the paintings.

Source: Nitin Singhania Pg 2.15+ <https://www.culturalindia.net/indian-art/paintings/mughal.html>

Q.8) In the context of Mahayana Buddhism, which of the following best describes about 'Samyaksambuddha'?

- a) A Bodhisattva who is yet to be born.
- b) A Buddha who achieved enlightenment through Sravakayana.
- c) Someone who has attained enlightenment and has chosen to teach others how to reach this state.
- d) Enlightened Buddha who achieves nirvana without a teacher and chooses not to teach.

Ans) c

Exp) Option c is the correct answer.

Option a is incorrect. Maitreya is a future Buddha who will appear on Earth in the future, achieve complete enlightenment, and teach the pure dharma. He holds his raised hand in the gesture of exposition (vitarka mudra) and in his lowered hand displays a flask (kamandalu).

Option b is incorrect. A Buddha who achieved enlightenment through Śrāvakayāna is called a Śrāvakabuddha. Śrāvakayāna refers to the “vehicle of the sravakas” or “vehicle of the hearers”.

Option c is correct. In Buddhism, a **Samyaksambuddha is someone who has attained enlightenment (or a state of being fully awakened) and has chosen to teach others how to reach this state**. It is also known in Buddhism as nirvana – on his own without the assistance of a teacher. Siddhartha Gautama, better known simply as the Buddha, was considered a samyaksambuddha.

Option d is incorrect. Another type of enlightened buddha is the **pratyekabuddha, who also achieves nirvana without a teacher, but chooses not to teach**.

Source: NCERT Class 11 + <https://www.yogapedia.com/definition/11047/samyaksambuddha>

<https://www.exoticindiaart.com/blog/types-of-buddha-statues-their-meaning-and-importance/>

Q.9) Consider the following statements with respect to the Mysore School of Painting.

1. Under the rule of Raja Krishna Raja Wodeyar, the popularity of the Mysore School of Painting reached its zenith.
2. The use of gesso paste is an important feature of Mysore Painting.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Mysore paintings were patronised by the rulers of the Mysore province and continued in the British period too. The major theme of the Mysore paintings is the depiction of Hindu gods and goddesses.

Statement 1 is correct. Under the rule of **Raja Krishna Raja Wodeyar, the popularity of the Mysore School of Painting reached its highest point.** However, after the Raja expired in 1868, the artists started scattering and the school reached the point of total extinction. **Quite similar to the Tanjore Paintings, Mysore Paintings of India make use of thinner gold leaves** and require much more hard work. The most popular themes of these paintings include Hindu Gods and Goddesses and scenes from Hindu mythology.

Statement 2 is correct. A number of steps are involved in the process of producing a Mysore painting. They use the **'gesso paste', which is a mixture of zinc oxide and Arabic gum.** This gives a particular base to the painting that develops a sheen in the background.

Source: Nitin Singhania Pg 2.23 + <https://www.culturalindia.net/indian-art/paintings/mysore.html>

Q.10) Consider the following statements regarding Oncolytic Virotherapy, recently seen in news:

1. It helps in killing cancer cells while leaving nearby healthy cells and tissues intact.
2. Sometimes, the Natural Killer (NK) cells in the human body may limit the effectiveness of this therapy.

Which of the statements given above is/are correct?

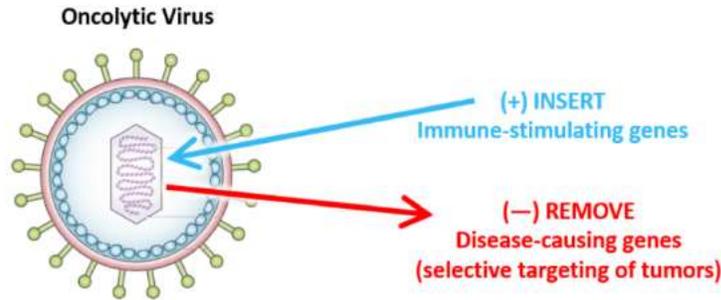
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Researchers in the US have developed a novel strategy in Oncolytic Virotherapy (OV) to improve a cancer therapy that can kill tumour cells while leaving nearby healthy tissues intact.

Statement 1 is correct: Oncolytic viruses can kill cancer cells while leaving nearby healthy cells and tissues intact. The oncolytic virus kills tumor cells and causes the release of danger signals, which help to generate an immune response.



Source: Cancerresearch

Statement 2 is correct: In oncolytic virotherapy, the treatment exerts its influence by activating an antitumor immune response made of immune cells such as Natural Killer (NK) cells. **However, sometimes those natural killers limit the oncolytic viruses** and so despite the exciting development in the OV field in recent years, there is room for improvement to tackle some limitations, including the relatively weak therapeutic activity and lack of means for effective systemic delivery.

Source: <https://blog.forumias.com/oncolytic-virotherapyov-next-gen-cancer-therapy-can-kill-tumours-without-harming-healthy-cells/>

SI:

[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3516024/#:~:text=An%20oncolytic%20virus%20\(OV\)%20is%20a%20virus%20having%20the%20ability%20to%20specifically%20infect%20and%20lyse%20cancer%20cells%2C%20while%20leaving%20normal%20cells%20unharmmed.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3516024/#:~:text=An%20oncolytic%20virus%20(OV)%20is%20a%20virus%20having%20the%20ability%20to%20specifically%20infect%20and%20lyse%20cancer%20cells%2C%20while%20leaving%20normal%20cells%20unharmmed.)

Q.11) Consider the following pairs

School of Philosophy	Path of Salvation
1. Sankhya School	By performing rituals only
2. Yoga School	By meditation and physical application of yogic techniques
3. Nyaya School	By acquiring real knowledge

How many pairs given above are correctly matched?

- Only one pair
- Only two pairs
- All three pairs
- None of the pair

Ans) b

Exp) Option b is the correct answer.

Orthodox school has six sub-schools of philosophy that were called the Shada Darshana. They are Vaishesika, Nyaya, Samkhya, Yoga, Purva Mimansa and Vedanta or Uttara Mimansa.

Pair 1 is incorrect. Sankhya Philosophy is the oldest school of philosophy and was founded by Kapil Muni who is supposed to have written the Samkhya Sutra. It argued that salvation could be attained through the acquisition of knowledge.

The Mimamsa school argues that salvation is possible through performing rituals, but it is also necessary to understand the justification and reasoning behind Vedic rituals.

Pair 2 is correct. The Yoga school literally means the union of two major entities. They argue that human being can achieve salvation by combining meditation and physical application of yogic techniques. The origin of Yoga and the school have been expounded in the Yogasutra of Patanjali that is attributed tentatively to the 2nd century BCE.

Pair 3 is correct. Nyaya school of thought was supposed to be founded by Gautama who is also identified as the author of the Nyaya Sutra. It believe in the technique of logical thinking to achieve salvation. They argue that acquiring 'real knowledge' can only accrue salvation.

Source: Nitin Singhania Ch- 14

Q.12) With reference to ancient history of India, which of the following statements is/are correct in respect of Indo-Greek coins?

1. They had images of kings on one side and Indian/Greek deities on the other.
2. They were marked by the complete absence of Copper metals.
3. They had inscriptions in both Greek as well as Prakrit language.

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 3 only

Ans) c

Exp) Option c is the correct answer.

Following the decline of the Mauryan empire, several kingdoms came into existence in Northern India and the Indo Greek was one of those important kingdoms. The Indo-Greek or the Graeco-Indian Kingdom was **founded by Demetrius I, when he invaded India in 180BC. Menander I (reign 165 BC – 145 BC)** is one of the famous kings of Graeco- Indian kingdom.

Statement 1 is correct: The front of the **Indo Greek coins carried the image of the issuing monarch, and the back usually carried the figure of a deity** – Greek deities such as Zeus, Apollo, Poseidon and Indian deities. The Indo Greek kings such as **Pantaleon and Agathocles included Indian deities**, variously interpreted as Hindu deities or the Buddha into their coins.

Statement 2 is incorrect: Various metals such as **Copper, Gold, Silver and Nickel were used in Indo Greek coins**. Therefore, it is not true that Indo Greek coins were marked by the complete absence of copper metals.

Statement 3 is correct: It is true that Indo Greek coins had inscriptions in both **Greek and Prakrit language**, so these coins were bilingual. Further these coins had bilingual inscriptions- **Greek and kharosthi scripts**.

Source: <https://egyankosh.ac.in/bitstream/123456789/20153/1/Unit-23.pdf> (pg no 7)

http://www.columbia.edu/itc/mealac/pritchett/00routesdata/bce_199_100/indogreekcoins/indogreekcoins.html

<https://sarmaya.in/objects/numismatics/appolodotus-ii-indo-greek-silver-drachm-2/#:-:text=coins%20with%20bi%2D-,lingual,-and%20bi%2Dscriptual>

[https://sarmaya.in/objects/numismatics/appolodotus-ii-indo-greek-silver-drachm-2/#:-:text=drachm%20\(silver\)%20and-,copper,-\(chalcon\).%20The%20front](https://sarmaya.in/objects/numismatics/appolodotus-ii-indo-greek-silver-drachm-2/#:-:text=drachm%20(silver)%20and-,copper,-(chalcon).%20The%20front)

Q.13) Which of the following statements about the Sthanakavasi sect of Jainism are correct?

1. Ascetics of Sthanakavasi cover their mouths with strips of cloth.
2. The Sthanakavasi do not believe in idol-worship.
3. The Sthanakavasi sect emerged from the Lonka sect of Jainism.

Select the correct answer from the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Sthanakavasi sect is associated with the religion of Jainism. Jainism has two significant historical sub-traditions, namely the Digambaras and the Svetambaras. The Digambaras have various sub-sects, including Mula Sangh, Terapanthi, Taranpathi, and Bispanthi, while the Svetambaras have sub-sects such as the Sthanakavasi and Murtipujaka.

Statement 1 is correct: The ascetics of Sthanakvasi cover their mouths with strips of cloth and they do not use the cloth of yellow or any other color except white.

Statement 2 is correct: The Sthanakavasi do not believe in idol-worship at all. As such, they do not have temples but only sthanakas, that is, prayer halls, where they carry on their religious fasts, festivals, practices, prayers, discourses, etc.

Statement 3 is correct: The Sthanakavasi arose not directly from the Shwetambaras but as reformers of an older reforming sect, viz., the Lonka sect of Jainism. This Lonka sect was founded in about 1474 A.D. by Lonkashah, a rich and well-read merchant of Ahmedabad. The main principle of this sect was not to practice idol-worship. A Lonka sect layman, Viraji of Surat, received initiation as a Yati, i.e., an ascetic, and won great admiration on account of the strictness of his life. Many people of the Lonka sect joined this reformer and they took the name of Sthanakavasi, thereby intending to strictly follow on the principles of Lord Mahavir. Source: Indian Art and Culture by Nitin Singhania ch 12 <https://jainworld.com/societies-sanghs/jain-sects/>

Q.14) Which of the following cultural practices in India have been included under UNESCO's list of intangible cultural heritage?

1. Patola Silk Textile
2. Mudi yettu
3. Dashavatar
4. Yoga
5. Tolu Bommalatta
6. Durga Puja

Select the correct answer from the code given below:

- a) 1, 2 and 3 only
- b) 2, 4 and 6 only
- c) 1, 4 and 5 only
- d) 2, 5 and 6 only

Ans) b

Exp) Option b is the correct answer.

Intangible cultural heritage refers to the practices, expressions, knowledge, skills, and traditions that communities, groups, and individuals recognize as part of their cultural heritage. These can include oral

traditions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature, and traditional craftsmanship. UNESCO maintains a list of intangible cultural heritage elements that have been recognized for their cultural significance and are actively promoted for safeguarding and preservation.

Statement 1 is incorrect: Not included in the Intangible cultural heritage list. Patola silk textiles are unique to the Patan region of Gujarat and are produced using a complex process known as double ikat.

Statement 2 is correct: Mudiyettu, included in 2010: A traditional ritual theatre, Mudiyettu, is a folk dance and drama performed in the State of Kerala. It depicts the mythological tale of a battle between the Goddess Kali and the demon Darika

Statement 3 is incorrect: Not included in the Intangible cultural heritage list. Dashavatar is a traditional theatre form performed during the annual festival of the village deity in the temple premises. It has a history of eight hundred years and depicts the ten incarnations of Lord Vishnu

Statement 4 is correct: Yoga, included in 2016. It consists of a series of poses, meditation, controlled breathing, word chanting and other techniques to help a person build self-realisation.

Statement 5 is incorrect: Not included in the Intangible cultural heritage list. The Tolu Bommalatta is a form of shadow puppet theatre tradition in India, which is predominantly practiced by the Killekyata/Are Kapu community in the state of Andhra Pradesh.

Statement 6 is correct: Durga Puja, included in 2021 is a ten-day festival celebrated in autumn to honour the Goddess Durga and her victory over the demon Mahishasur. The festival starts with Mahalaya, and the main festivities begin on Shashti, Shaptami, Ashtami, and Nabami.

Knowledge Base: List of Intangible Cultural Heritage in India

- 1) Buddhist Chanting
- 2) Kalbelia
- 3) Chhau Dance
- 4) Koodiyattam
- 5) Kumbh Mela
- 6) Mudiyettu
- 7) Nawruz
- 8) Ramlila
- 9) Sankirtana
- 10) Ramman
- 11) Traditional Brass and Copper Craft of Utensil making
- 12) Vedic Chanting
- 13) Yoga
- 14) Durga Puja

Source: <https://ich.unesco.org/en/state/india-IN?info=elements-on-the-lists>

<https://www.indiaculture.nic.in/national-list-intangible-cultural-heritage-ich>

Q.15) Recently, Kurki system of Punjab was seen in the news. With reference to the Kurki system, consider the following statements:

1. It means attachment of a farmer's land, pledged to a money lending entity, in case of loan default.
2. Kurki orders are executed under Section 60 of Civil Procedure Code, 1908.
3. Recently, the supreme court ordered a complete ban on the Kurki system due to its exploitative nature.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: Kurki means attachment of a farmer's land, already pledged to the money lending institution or individual, in case of a loan default. Apart from banks, private moneylenders, commission agents also get these decrees against farmers from time to time.

Statement 2 is correct: Kurki orders are executed under Section 60 of Civil Procedure Code, 1908. **The land which is pledged by the farmer to the bank or money lender gets registered in their name.** In some cases, the land is auctioned as well. The process begins after the money lender moves court to get kurki orders in case the farmer is unable to pay back his loan. In kurki, attachment of farmer's land as well as his tractor can be done as per the Section 60.

Statement 3 is incorrect: As of now, Supreme Court has not put ban on the Kurki system. However, a plea filed in the Punjab and Haryana High Court in 2018 sought complete ban on kurki.

But, Punjab government in its affidavit stated that there was no need to ban kurki as relief was being given to farmers in terms of loan waiver, compensation etc. The court stated that Section 60 of Civil Procedure Code, 1908 – under which kurki takes place – was over 110 years old and needed complete revision.

Source: <https://indianexpress.com/article/explained/what-is-kurki-and-why-is-it-a-big-issue-in-punjab-8129733/>

Q.16) Which of the following statements are correct about the Varkari Sect?

1. The followers of the Varkari sect are devotees of Lord Vishnu in his manifestation as Vithoba.
2. The Varkari sect avoids the use of alcohol and tobacco.
3. Tukaram was associated with this sect.
4. An annual pilgrimage known as Vari is made to Pandharpur by Varkaris.

Select the correct answer from the code given below:

- a) 2 and 4 only
- b) 1 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

The word "Varkari" is derived from "vari" meaning occurrence or periodic schedule and "kari" meaning doer, signifying someone who regularly makes the pilgrimage to Pandharpur. The pilgrimage route follows the path of important poet saints of the bhakti movement in Maharashtra, who emphasized social equality, immediate experience of divinity, and religious poetry in vernacular languages accessible to non-elite communities.

Statement 1 is correct: The Varkari sect is a devotional movement in Maharashtra, India that is centered on the worship of Lord Vishnu in his manifestation as Vithoba.

Statement 2 is correct: The Varkari sect follows a strict moral code that includes the avoidance of alcohol and tobacco, among other things.

Statement 3 is correct: Prominent figures under this sect include Jnaneshvar (1275–1296), Namdev (1270–1350), Eknath (1533–1599), and **Tukaram (1598– 1650).**

Statement 4 is correct: The main center of worship for the Varkaris is the Vithoba temple in Pandharpur, Maharashtra, where they make an **annual pilgrimage known as the Vari.**

Source: Indian art and culture by Nitin Singhania ch 12

<https://www.oxfordbibliographies.com/display/document/obo-9780195399318/obo-9780195399318-0182.xml>

Q.17) Which of the following statements are correct about the Mimamsa school of philosophy?

1. Mimamsa focuses on the analysis of texts from Vedic Samhita and Brahmanas.
2. This School believed that reason and rationality should be applied to all aspects of life and there is no such thing as eternal truth.
3. According to this philosophy, salvation can be achieved by performing rituals.

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2, and 3

Ans) a

Exp) Option a is the correct answer.

The word 'Mimamsa' literally means the art of reasoning, interpretation and application. The texts that describe the Mimamsa philosophy in detail, are the Sutras of Jaimini, which were supposedly composed in the 3rd century BCE. Further inroads into the philosophy were made by two of their greatest proponents: Sabar Swami and Kumarila Bhatta.

Statement 1 is correct: Mimamsa school of philosophy is focused on the analysis of texts from **Samhita and Brahmana**, which are considered the most important Vedic texts.

Statement 2 is incorrect: Mimamsa school of philosophy believed in the existence of eternal truths, they argue that the **Vedas contain the eternal truth** and they are the repositories of all knowledge. If one has to attain religious merit, acquire heaven and salvation, they would have to fulfill all the duties which are prescribed by the Vedas.

Statement 3 is correct: Mimamsa school of philosophy focused on the performance of Vedic rituals as a means of attaining worldly prosperity and liberation from the cycle of birth and death. They argue that salvation is possible through performing rituals but it is also necessary to understand the justification and reasoning behind vedic rituals. It was necessary to understand this reasoning if one wanted to perform the rituals perfectly, which will allow them to attain salvation.

Source: Indian art and culture by Nitin Singhania ch 14

Q.18) With reference to Hinayana Buddhism, consider the following statements:

1. Hinayana Buddhism believes in individual salvation through the path of self-discipline and meditation.
2. One of the sub-sects of Hinayana is Sthaviravada or Theravada.
3. Being an old school, the Scholars of Hinayana predominantly used Sanskrit as a language to communicate.
4. Emperor Ashoka patronised Hinayana sect.

Which of the above given statements are correct?

- a) 3 and 4 only
- b) 1, 2, and 3 only
- c) 1, 2 and 4 only
- d) 1 and 4 only

Ans) c

Exp) Option c is the correct answer.

The Hinayana school is also known as the lesser vehicle, which is the school of the followers of the original preaching of the Buddha. This school is more orthodox and does not believe in idol or image worship of Buddha.

Statement 1 is correct: They believe in individual salvation and try to attain individual salvation through self-discipline and meditation. Ultimate aim of Hinayana is nirvana.

Statement 2 is correct: One of the sub-sects of Hinayana is Theravada, also known as Sthaviravada. The name Theravada means "the teaching of the elders" or "the way of the elders. The goal of Theravada Buddhism is individual liberation from suffering, and the ideal practitioner is the arhat. The monastic tradition is also a central aspect of Theravada Buddhism.

Statement 3 is incorrect: Hinayana Buddhism is an old school that predominantly used Pali language, not Sanskrit to interact with masses.

Statement 4 is correct: Emperor Ashoka patronized the Hinayana sect as the Mahayana school came into being much later. However, the Hinayana school in its original form is almost non-existent in the present age.

Source: Indian art and culture by Nitin Singhania ch 12

https://www.bbc.co.uk/religion/religions/buddhism/subdivisions/theravada_1.shtml#:~:text=up%20to%20us-,Theravada%20life,to%20full%2Dtime%20monastic%20life.

Q.19) Consider the following statements about Dashanam Sanyasis, one of the prominent sects under Hinduism:

1. They are associated with Advaita philosophy.
2. Disciples of Shankaracharya were the followers of this sect.
3. Aranya, Bharati and Giri are some of the sub-orders under Dashanam Sanyasis.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Sanyasi means one who abandons the desires of the world and the body. Dashnami sanyasis are Hindu Shaivite ascetic who belongs to one of the 10 orders (dashnami, "ten names"). They are also called "Dash Nam Sanyasi" as they are further divided into ten groups.

Statement 1 is correct: They are associated with Advaita Vedanta philosophy. Advaita Vedanta says that fundamental nature of reality is nothing but unlimited conscious existence. Whereas Vishishta Advaita says along with fundamental reality there is existence of Maya.

Statement 2 is correct: This sect was established by Adi Shankaracharya in 8th century CE. The disciples of Adi Shankaracharya were the followers of this sect.

Statement 3 is correct: The ten groups under Dashanam Sanyasi sect are Aranya, Ashrama, Bharati, Giri, Parvata, Puri, Sarasvati, Sagara, Tirtha, and Vana. Each of these orders is attached to one of four monasteries (mathas), established by Adi Shankaracharya, in the north, south, east, and west parts of India.

Source: Nitin Singhania, Chapter 12, Religions in India

Q.20) Consider the following statements regarding the National Single Window System (NSWS):

1. It is a one-stop digital platform that allows investors to apply for various approvals required for commencing a business in the country.
2. It was launched by the Ministry of Environment, Forest and Climate Change
3. Jammu & Kashmir is the first Union Territory to get integrated with the NSWS.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: National Single Window System (NCWS) is a one-stop digital platform that aims at allowing investors to apply for various pre-operations approvals required for commencing a business in the country. The system aims to make the business registration process easier, allowing the beneficiary to get significant approvals online, without having to run to the government offices for approvals and can avail themselves of services with just a click.

Statement 2 is incorrect: The Union Ministry of Commerce and Industry (and not the Ministry of Environment, Forest and Climate Change) has launched the National Single Window System (NSWS) for investors and businesses.

Statement 3 is correct: Jammu & Kashmir is the first Union Territory to be onboarded the National Single Window System (NSWS). This marks a major leap in Ease of Doing Business (EoDB) in the Union Territory.

Source: <https://blog.forumias.com/national-single-window-system-for-investors-and-businesses-launched/>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1796506>

Q.21) Consider the following statements about Charvaka school of philosophy in India.

1. Charvaka school was founded by Jaimini.
2. They argued against the need to achieve salvation.
3. They did not consider ether as one of the five essential elements of universe.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Charvaka was a philosophical system of thought that emerged in India around 600 BCE and emphasised materialism to understand and live in the world. It was supposed to be one of the earliest schools that developed a philosophical theory. The philosophy is old enough to find mention in the Vedas and Brihadarankya Upanishad.

Statement 1 is incorrect: Charvaka school of philosophy was propounded by Brihaspati and not Jaimini. This school argues that there is no other world after this one, hence death is the end of a human being and pleasure should be the ultimate objective of life. This theory focuses to 'eat, drink and make merry'.

Statement 2 is correct: The Charvaka School was the main proponent of the materialistic view. They argued against the need to achieve salvation and denied the existence of brahma and God. They believed only in things that could be touched and be experienced by the human senses.

Statement 3 is correct: The Charvakas do not consider ‘ether’ as one of the five essential elements as it cannot be experienced through the perception. Hence, they say the universe consists of only four elements: fire, earth, water and air.

Source: Nitin Singhania, Chapter 14.

Q.22) With reference to the Vijayanagar Empire in India, what did the terms ‘Barkur gadyanas’ and ‘Bhatkal gadyanas’ refer to?

- Arms factories
- Places where coins are minted
- Small units of royal spies
- Naval units of the empire

Ans) b

Exp) Option b is the correct answer.

The Vijayanagara Empire (14th–17th century) issued large quantities of gold coins and other metals used in their coinage were pure silver and copper. The **earlier Vijayanagara coinage was produced in different mints and was called by different names such as Barkur gadyanas, Bhatkal gadyanas, etc.** The inscriptions on the coins were in Kannada or Sanskrit.

Source: Indian Art and Culture by Nitin Singhania Chapter-22

Q.23) Consider the following pairs of Indian festivals and states in which they are predominantly celebrated:

Festivals	:	State
1. Saga Dawa	:	Kerala
2. Losoong	:	Sikkim
3. Hornbill	:	Nagaland
4. Kang Chingba:		Manipur

Which of the pairs given above is/are correctly matched?

- 1 and 2 only
- 3 only
- 2, 3 and 4 only
- 1, 3 and 4 only

Ans) c

Exp) Option c is the correct answer.

Festivals and fairs form an intrinsic part of Indian culture being an outpouring medium of our beliefs and emotions. Each community has their own festivals and holy days.

Pair 1 is incorrect: Saga Dawa is also known as Buddha Purnima or Buddha Jayanti which is celebrated as the birth anniversary of Lord Buddha. In Sikkim, Buddha Purnima is known and celebrated as Saga Dawa (and not in Kerala). It falls in the month of April/ May every year.

Pair 2 is correct: Losoong festival is celebrated in honour of the Sikkimese New year. It is celebrated across the State of Sikkim during the month of December every year. It is the celebration of the harvest season by the farmers and other occupational communities. Traditionally, it is the festival of the Bhutia tribe but now-a-days even the Lepchas celebrate it with equal vigour and joy.

Pair 3 is correct: Hornbill festival is one of the major agricultural festivals celebrated in the State of Nagaland. It's a week-long festival that begins on 1st December every year. All the major Naga tribes attend this festival and congregate at the Kisama Heritage village.

Pair 4 is correct: The festival of Kang Chingba is one of the biggest Hindu festivals celebrated in the State of Manipur. It is mainly celebrated by Meitei community who follow Vaishnavism. It is like the 'Jagannath Puri Rath Yatra' and draws many antecedents from the same. The festival of Rath-Yatra/ Kang is celebrated with gaiety on the second day of the fourth lunar month of the Manipuri calendar Engen which falls in late June or early July and lasts for 10 days till Purna-Yatra/ Kanglen.. The festival includes a Rath Yatra, which re-enacts the journey of Lord Jagannath along with his brother Balabhadra and his sister Subhadra. However, due to cultural evolution in the region, there is a slight difference in the way how the festival is celebrated in Manipur from that in Odisha.

Source: Nitin Singhania, Chapter 18.

Q.24) Consider the following statements about the Lingayat Sect popular in India:

1. It is a religious tradition founded by Basaveshwara, popularly known as Basavanna.
2. This tradition believes in monotheism.
3. It promoted caste system to maintain the social order.
4. It rejected the authority of the Vedas.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

The Lingayats/ Virshaivas are a Shaivite sect in Hinduism that emerged in the 12th Century AD in Karnataka during the reign of Kalachuri dynasty.

Statement 1 is correct: Lingayatism was founded by Basaveshwara, popularly known as Basavanna in the 12th century AD in Karnataka.

Statement 2 is correct: Lingayatism is a distinct Shaivite tradition which believes in monotheism through worship centered on Lord Shiva in the form of linga. The followers are called Virshaiva (heroes of Shiva) or the Lingayats (wearers of Shivalinga).

Statement 3 is incorrect: Lingayats opposed the caste system and other Hindu rituals. As they advocated a society where all people were considered equal, all skills and professions were similarly valued, and sincerity was enough to gain the love of God.

Statement 4 is correct: Lingayats reject the authority of vedas and all the elaborate Hindu rituals prescribed by the Hindu priests. They wanted a more egalitarian society and greater individual freedom.

Source: Nitin Singhania, appendix 2, Bhakti and Sufi movements.

Q.25) Which among the following statements best describes the term “smurfing”, often mentioned in the media?

- a) It is a money-laundering technique involving the structuring of large amounts of cash into multiple small transactions.
- b) It is a type of malware that downloads onto a computer disguised as a legitimate program.
- c) It is a gene editing technology which involves introduction of genes from foreign species.
- d) It is an unethical practice where an investor sells shares that he does not own at the time of a trade.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: Smurfing is a money-laundering technique involving the structuring of large amounts of cash into multiple small transactions. Smurfs often spread these small transactions over many different accounts, to keep them under regulatory reporting limits and avoid detection. Smurfing is a form of structuring, in which criminals use small, cumulative transactions to remain below financial reporting requirements.

Option b is incorrect: A Trojan Horse Virus is a type of malware that downloads onto a computer disguised as a legitimate program.

Option d is incorrect: Short selling happens when an investor sells shares that he does not own at the time of a trade. In a short sale, a trader borrows shares from the owner with the help of a brokerage and sells it at market price with the hope that prices will fall. When prices drop, the short seller buys the shares and books a profit.

Source: <https://www.investopedia.com/terms/s/smurf.asp>

Q.26) “It is one of the biggest congregations in North East India as it has been dubbed as the ‘Mahakumbh of the East’. The festival falls in the month of June. During the festival, various agricultural work like digging, ploughing, sowing, and transplanting of crops are forbidden for some days. Widows, Brahmacharis and Brahmins avoid cooked food during these days.”

- a) Ambubachi Mela
- b) Losar Festival
- c) Hornbill Festival
- d) Bihu Festival

Ans) a

Exp) Option a is the correct answer.

Festivals and fairs forms an intrinsic part of Indian culture being an outpouring medium of our beliefs and emotions. Each community has their own festivals and holy days but that does not stop other religious groups from enjoying these festive days. India is a secular country and holidays are declared for a number of festivals belonging to different faiths and communities.

Option a is correct: Ambubachi Mela is held at Kamakhya temple of Guwahati in the State of Assam. Ambubachi Mela is one of the biggest congregations of eastern India. It is the most important festival of the Kamakhya temple and is celebrated in the month of June every year. It has been dubbed as the ‘Mahakumbh of the East’. The festival has been associated with fertility rituals and many devotees come to seek the blessing of a child from the Goddess. During the festival, the patron Goddess Kamakhya is said to be undergoing her annual menstrual cycle. Hence, the temple remains closed for three days. **“Ambubachi” means spoken with water and it also implies that the rains expected during this month make the earth fertile and ready for procreation. For some days, all agricultural work like digging, ploughing, sowing, and transplanting of crops are forbidden. Widows, Brahmacharis and Brahmins avoid cooked food during these days.**

Option b is incorrect: Losar Festival falls on the first day of the lunar calendar and is **quite popular in Arunachal Pradesh** (being mainly celebrated by **Monpa tribe** who practice agriculture and animal husbandry and follow Buddhism). Losar is a three day festival and is celebrated with a great pomp and show at Tawang.

Option c is incorrect: Hornbill Festival is one of the major festival celebrated in **Nagaland**. It is a **10 day festival** that begins on 1st December every year. All the major Naga tribes attend this festival and congregate at the Kisama Heritage Village. All the tribes showcase their talent and cultural vividness through costumes, weapons, bows and arrows and headgears of the clans. This is also a good opportunity to bring all the tribes together and for the younger generation.

Option d is incorrect: Bihu Festival is a set of three important **non-religious festivals of Assam** - Rongali or Bohag Bihu observed in April, Kongali or Kati Bihu observed in October, and Bhogali Bihu observed in January. **Rongali Bihu is the most important among the three and it coincides with Assamese New Year.** Songs and dances are the main attractions during Bihu. **Bohag Bihu** is one of the most popular festivals of Assam. The festival of Bihu is traditionally tied to the changing seasons and harvests. The celebrations range from one week to almost a month depending on the communities and tribes' decision.

Source: Indian Art and culture by Nitin Singhania + Chapter 20: FAIRS AND FESTIVALS OF INDIA
<https://directortourism.assam.gov.in/frontimpotentdata/ambubachi-festival>

Q.27) Which of the following statements is/are correct with reference to the Paitkar painting?

1. This form of painting has a cultural association with Ma Mansa.
2. A theme of Paitkar paintings is 'What happens to human life post death'.
3. Recently it has been given Geographical Indication (GI) Tag.

Select the correct answer using the code given below:

- a) 2 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Paitkar painting is a folk painting found in East India in the form of scrolls. The Paitkar Painting occurs in the bordering areas of Jharkhand, West Bengal and Orissa and considered as the old age tribal painting of India.

Statement 1 is correct: This form of painting has cultural association with Ma Mansa (Hindu Goddess of Snakes), one of the most popular goddesses in tribal household. These paintings are linked to the social and religious customs including giving alms and holding yajnas.

Statement 2 is correct: Common theme of Paitkar paintings is 'What happens to human life post death'. Although an ancient art, it is on the verge of extinction given the rate of its decline. Having a common subject of what happens to life after death. These paintings have been long used in for storytelling and in socio-religious customs.

Statement 3 is incorrect: The Paitkar painting has not been given GI tag yet.

Source: [https://cctindia.gov.in/wp-content/fellowship_research_project/PaitkarPaintingAVisualNarrativeTraditionofJharkhand\(high\).pdf](https://cctindia.gov.in/wp-content/fellowship_research_project/PaitkarPaintingAVisualNarrativeTraditionofJharkhand(high).pdf)
<https://cultureandheritage.org/2022/06/paitkar-tribal-folk-paintings-of-jharkhand.html>

Q.28) With reference to the Ancient Monuments and Archaeological Sites and Remains Act (or AMASR Act) of 1958, consider the following statements:

1. The AMASR Act only provides for denotification of a monument if it ceases to be of national importance.
2. The AMASR Act created a "prohibited area" 100 metres around every national monument where no construction is permitted.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The Ancient Monuments and Archaeological Sites and Remains Act (or AMASR Act), 1958 is an act of the government of India that provides for the preservation of ancient and historical monuments. **It was passed in 1958. The Archaeological Survey of India functions under the provisions of this act.**

Statement 1 is correct: The AMASR Act only provides for denotification of a monument if it ceases to be of national importance. Recently, the ASI had admitted to a Parliamentary Committee about 24 missing monuments, and loss of another 26 to factors like urbanisation and submerging in dams.

Statement 2 is correct: The AMASR Act was substantially amended in 2010 to strengthen several of its provisions. The main features of the amendments were the creation of a “prohibited area” 100 metres around every national monument where no construction, public or private is permitted, “regulated area” 200 metres beyond the prohibited area, where any construction requires permission of a newly constituted National Monuments Authority. Given the unique nature of each monument, the Act also proposed heritage bye-laws for each monument to be prepared by an expert body.

Source: <https://indianexpress.com/article/opinion/columns/hurting-heritage-amendments-to-the-monuments-act-threaten-historical-structures-ancient-monuments-and-archaeological-sites-and-remains-amasr-act-4751098/>

<https://indianexpress.com/article/explained/explained-culture/asi-protected-monuments-untraceable-missing-8359347/>

Q.29) With reference to the paintings of India, consider the following statements about the “Apabhramsa School of Art”:

1. The themes of these paintings are mostly related to Jainism.
2. There is predominance of single figures in the paintings.
3. Human figures depicted in the paintings usually have fish-shaped bulging eyes and double chin.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Apabhramsa School of Art or Jain School of Art or simply known as Western Indian School of Art was a predominant school of art in western India during 11th to 15th century. It grew as a reaction to the great mural paintings of Ajanta along with **Pala school of art**. The main difference between Apabhramsa and Pala school of art was the difference of their patrons’ faith. The Apabhramsa school was patronized by Jain Solanki rulers of Gujarat and Rajasthan, so these paintings were dominated by Jain iconography, whereas Pala school was patronized by Buddhist rulers, so their paintings were dominated by Buddhist imagery.

Statement 1 is correct: The Apabhramsa School of Art traces its origin to Gujarat and Mewar region in Rajasthan. **The most common themes of these paintings were Jain** and in the later period the Vaishnava School appropriated them too. They brought in the concept of Gita Govinda and secular love into these paintings that were otherwise **dominated by the Jain iconography**. In the early Jain phase, the paintings were made on Palm leaf but in the later period they were made on paper. The colours used in the paintings had symbolic meaning and they usually used red, yellow and ochre. **In the later phase, they used bright and gold colours.**

Statement 2 is correct: The Apabhramsa school of paintings is characterized by **lonely single figures in the paintings, and one rarely finds group paintings.**

Statement 3 is correct: The features of **the Apabhramsa School of Art** is **fish-shaped bulging eyes, a pointed nose and a double chin.** They tried to begin the trend to make angular faces. The figures are usually stiff and even the ornamentation is carefully done. The female figurines have enlarged hips and breasts. The animal and bird figurines in the paintings are represented as toys. **The Kalpasutra and Kalakacharya-Katha are two heavily illustrated Jain text by Apabhramsa artist.** The Kalpasutra contains the biographies of the Jain Tirthankaras, notably Parshvanatha and Mahavira.

Source: Indian Art and culture by Nitin Singhania + Chapter 2 - INDIAN PAINTINGS

<https://www.lifestalker.com/2017/10/apabhramsa-school-of-art.html>

Q.30) Consider the following statements regarding E-Baal Nidan Portal:

1. It is established by the National Commission for Protection of Child Rights in 2015.
2. It is an online portal wherein any person can register a complaint reporting any violation committed against a child.
3. The progress of redressal of the complaint can be tracked by the complainant.

Which of the statements given above is/are correct?

- a) 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: E-Baal Nidan Portal is launched by National Commission for Protection of Child Rights- NCPCR in 2015.

Statements 2 and 3 are correct: It is an online portal with the Web Address, wherein any person can register a complaint reporting about any violation committed against a child and after such registration, the complainant will get a complaint registration number. Through this number, the progress of redressal of the complaint in the Commission can be tracked by the complainant. The registration form is prepared in such a way that all the aspects of a complaint can be enumerated and details can be provided by the complainant. The details that are included in the form are the date of incidence, place of incidence, information about the victim, the authority, the nature and category of complaint, what action was initiated, etc.

Source:

<https://blog.forumias.com/online-portal-e-baal-nidan-for-redressal-of-grievances-against-violation-of-child-rights-revamped/>

<https://pib.gov.in/Pressreleaseshare.aspx?PRID=1859646#:~:text=wherein%20any%20person%20can%20register%20a%20complaint%20reporting%20about%20any%20violation%20committed%20against%20a%20child%20and%20after%20such%20registration%20>

Q.31) With reference to the Antiquities and Art Treasures Act of 1972, consider the following statements:

1. No private person is allowed under the act to export even registered antiquities.
2. All articles, manuscripts, etc. inherited by a person, falling within the definition of the term 'antiquity', are required to be registered under the Act.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Antiquities and Art Treasures Act, 1972 was enacted for the effective control over the movable cultural property consisting of any type of art objects and antiquities. The Act is one step forward in controlling the export trade in Indian antiquities and preventing any smuggling and fraudulent dealings.

Statement 1 is correct: It is pertinent to note that **no private person is allowed under the Act to export antiquities**. It is **only lawful for the Central Government or any authority or agency authorized by the Central Government in this behalf**, to export antiquities. If any person exports or attempts to export any antiquity in contravention of the aforesaid provision of the Act, he shall be punishable with imprisonment for a term.

Statement 2 is incorrect: **Not all articles, manuscripts, records, sculptures, coins** etc. possessed/collected/ inherited by you which fall within the definition of the term 'antiquity', are **required to be registered under the Act**. The Central Government, from time to time, in its notification in the Official Gazette specifies those antiquities which are mandatorily required to be registered under the Act.

Source:

Indian Art and culture by Nitin Singhania+ Chapter: 22 -LAW AND CULTURE

<https://www.mondaq.com/india/music-and-the-arts/407126/law-relating-to-antiquities-in-india--be-aware-of-your-obligations>

Q.32) Among the following, the beauty and exquisiteness of Mural Paintings can be seen in-

- 1. Bagh caves
- 2. Jogimara caves
- 3. Ellora caves

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Mural paintings are **painted on the walls or a solid structure**. These have existed in India since ancient times and can be dated between 10th century BC and 10th century AD.

The beauty and the exquisiteness of mural paintings can be seen in places like **Ajanta, Armamalai Cave, Ravan Chhaya Rock shelter, Bagh caves, Sittanavasal caves and Kailasanatha temple in Ellora**.

Option 1 is correct. **Bagh caves in Madhya Pradesh** with their exquisite work rank quite close to the actual Ajanta caves in terms of their design, execution and decoration. Cave no. 4, known as Rang Mahal, has beautiful **murals** on the walls depicting Buddhist and Jataka tales.

Option 2 is correct. **Jogimara** is an artificially carved-out cave located in the Surguja district of Chattisgarh. It has the Mural paintings of dancing couples and animals like elephants and fish. The paintings have a distinct red outline. Other colours like white, yellow and black are also used.

Option 3 is correct. The mural paintings in **the Ellora caves** are found in five caves, mostly limited to the Kailasa temple. Some prominent Ellora cave paintings are: Images of Goddess Lakshmi and Lord Vishnu, Lord Shiva with his followers, and Beautiful and gracious Apsaras.

Source: Nitin Singhania Ch-2

Q.33) With reference to Ajanta Paintings, consider the following statements:

1. Some of these paintings date back to the first century CE.
2. The mural painting of Bodhisattva Padmapani can be found only in Ajanta caves.
3. Chinese traveller Hiuen Tsang mentioned the marvel of Ajanta Paintings in his account.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

Ajanta rock-cut caves carved out of granite cliffs are located in the gorge of **Waghora river near Ajanta village in the Aurangabad district of Maharashtra**. Ajanta caves houses one of the world-famous ancient paintings called Ajanta paintings.

Statement 1 is correct: The **Ajanta paintings belong to the period of first century CE to seventh century CE** and paintings reached their **zenith** during the **Gupta** period. Most of the paintings depict Buddhist subject. Ajanta paintings were accidentally discovered by a British hunting party headed by **Captain John Smith in 1819**.

Statement 2 is incorrect: Besides Ajanta caves the **mural paintings of Bodhisattva Padmapani are also found in Bagh caves**. Cave 4 or Rang Mahal (Palace of Colours) of Bagh caves houses a painting of the bodhisattva Padmapani which resembles Ajanta paintings.

Statement 3 is correct: **Hiuen Tsang, the Chinese traveller** mentioned the marvels of Ajanta paintings in his account of India around the **7th century**. However, he may have **never really visited the caves himself** and his writing is based on accounts heard from fellow travellers.

Source: https://govtgirlsekalpur.com/Study_Materials/History/AJANTA_CAVE_PAINTINGS.pdf
<https://www.outlookindia.com/traveller/mp/inspire-me/heritage/bagh-caves-palace-colours/#:~:text=painting%20of%20the-,bodhisattva,-Padmapani%20is%20believed>

Q.34) With reference to the cultural history of Ancient India, which of the following statements is correct in respect of Ajnana sect?

- a) Salvation can be achieved by practising strict discipline.
- b) Salvation cannot be achieved by attaining knowledge about nature.
- c) Humans can achieve salvation faster by practising rituals.
- d) Surrendering oneself to God is the best means to achieve salvation.

Ans) b

Exp) Option b is the correct answer.

Shramana means one who performs acts of austerity and asceticism. It refers to several Indian religious movements parallel to Vedic religion. The various **Shramana schools include Jainism Buddhism, Ajivikas and Ajnanas and Charvakas**.

Option b is correct: Ajnana sect believed that it is impossible to attain knowledge about nature. Even if it is possible, it is useless for attaining salvation. Therefore, this sect believed that salvation cannot be achieved by **attaining knowledge about nature**.

The Ajnana sect was part of the **Sramana movement** and a **major rival of early Buddhism, Jainism and the Ajivika school**. Buddhist and Jain texts mentioned about the Ajnana sect and **Sanjaya Belatthiputta** was one of the major proponents of this school of thought.

Option a, c and d are incorrect: Ajnana sect does not believe in practising strict discipline nor surrendering oneself to god or practising rituals as a means for achieving salvation. In fact Ajanan sect did not propose any doctrine of their own, rather they were **specialised in refutation ie, they proved other religious doctrine as false** and Buddhism, Jainism and Ajivika school were their major rivalries.

Source: Nitin Singhania - Religions in India

Q.35) The term Kappaphycus alvarezii was recently seen in the news. Which among the following options best conveys its meaning?

- Newly discovered honeybee species endemic to the Western Ghats.
- An invasive species of seaweed native to IndoPacific region.
- A newly discovered species of jumping spider of the Tanzania genus in Asia
- A lethal fungus that poses extreme threat to the survival of some amphibian species.

Ans) b

Exp) Option b is the correct answer.

Option a is incorrect: A new species of endemic honeybee has been recently discovered in the Western Ghats. The new species has been named Apis karinjodian and given the common name Indian black honeybee.

Option b is correct: Kappaphycus alvarezii is seaweed (alga) which is native to the Indo-Pacific region. The International Union for Conservation of Nature lists it as one of the world's 100 most invasive species. It is one of the prime threats that killed the corals near Kurusadai which was deliberately introduced in Ramanathapuram for commercial cultivation some two decades ago.

Option c is incorrect: A spider researcher from Ahmedabad recently discovered a new species of jumping spider of the Tanzania genus on the outskirts of Rajkot. The new species, which the researchers have named after Indian biochemist Yellapragada Subbarao, is the first species of the Tanzania genus to be recorded anywhere in Asia.

Option d is incorrect: Batrachochytrium dendrobatidis (Bd) is a lethal fungus that causes chytridiomycosis – a deadly disease that is wiping out hundreds of amphibian species. The pathogen affects the keratin in the skin of amphibians and is spreading across Africa, killing out or driving to the verge of extinction hundreds of amphibian species.

Source: <https://www.downtoearth.org.in/news/environment/coral-breach-a-silent-catastrophic-invasion-has-happened-in-the-gulf-of-mannar-here-is-how-87837>

Q.36) Consider the following pairs

Paintings	States
1. Pattachitra	Andhra Pradesh
2. Patua	West Bengal
3. Kalighat	Punjab
4. Kalamkari	Maharashtra

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

Ans) a

Exp) Option a is the correct answer.

Folk painting is assuredly the oldest traditional art still being created in India. It may include handmade elements, may be decorative or utilitarian, learned formally or informally, it may also be self-taught.

Pair 1 is incorrect. The name **Pattachitra** comes from a Sanskrit word patta, which means canvas/cloth and chitra means picture is a traditional painting of **Odisha**. The themes of these paintings are inspired from Jagannath and Vaishnava cult, sometimes from Shakti and Shaiva cults. Pattachitra on palm leaf is known as talapattachitra.

Pair 2 is correct. **Patua is an art of Bengal which dates back around a thousand years.** It started out as a village tradition by painters telling Mangal Kavyas. These were painted on cloth and told religious stories; today they are painted with poster paints on sheets of paper sown together, usually used to comment on political and social issues.

Pair 3 is incorrect. **Kalighat is a painting of West Bengal (and not Punjab).** **Watercolors** were used on mill paper using brushes made of calf and squirrel hair. Originally, the paintings depicted religious note, especially Hindu Gods and Goddesses. Over time, these paintings were used to express social sentiments.

Pair 4 is incorrect. The main centers for **Kalamkari art are Srikalahasti and Machilipatnam in the state of Andhra Pradesh.** The pen used is made of sharp pointed bamboo, used to regulate the flow of colours. The base is cotton fabric while the colours used are vegetable dyes.

Source: Nitin Singhania Ch-2

Q.37) With reference to art and archaeological history of India, Tamasha paintings belong to which of the following schools of painting?

- a) Mewar school of painting
- b) Marwar school of painting
- c) Bundi school of painting
- d) Kishangarh school of painting

Ans) a

Exp) Option a is the correct answer.

Although in mediaeval India the Mughal paintings dominated the scene, many regional paintings emerged in Northern parts of India. These paintings are deeply rooted in the Indian traditions, taking inspiration from Indian epics, religious texts like the Puranas, love poems in Sanskrit and other Indian languages.

Option a is correct: Tamasha paintings is a school of Mewar paintings which show court ceremonial and city views in unprecedented details. Initially Mewari painting focuses on Sahibdin (one of the famous painters of Mewar paintings) depiction of **literary texts** – the Rasikapriya, the Ramayana and the Bhagavata Purana. After Sahibdin's death, the style of Mewari paintings changed to depict life at court in Mewar.

Option b is incorrect: Marwar School of Painting was practised in the Jodhpur and Bikaner region of Rajasthan. In this painting men and women wore colourful clothes. **Raja Man Singh (1803-1843)** patronised a series of paintings including the **Shiva Purana, Natacharitra, Durgacharitra, Panchtantra, etc.**

Option c is incorrect: Kishangarh style of painting was practised in Ajmer district of Rajasthan and it is considered a synthesis of Mughal and local style. The theme of this painting is a **love tale between Krishna and Radha**. The famous **Bani Thani painting belongs to the Kishangarh school of painting**.

Option d is incorrect: Bundi school of painting is dated back to 1625 AD and practised majorly in Bundi district of Rajasthan. **Life of Krishna forms a major theme in this school of painting**. Human faces were round with pointed noses in the paintings. Colour of the sky is painted in different colours and mostly a red ribbon is visible in the sky. A painting showing Bhairavi Ragini, in the Allahabad Museum is one of the earliest examples of Bundi painting.

Source: Nitin Singhania - Indian Paintings

Q.38) Consider the following statements with reference to Jainism:

1. Earliest record of Digambara beliefs is contained in the Suttapahuda of Kundakunda.
2. Digambara Jains believe that women cannot be tirthankaras.
3. Digambaras do not follow all the five constraints as espoused in Jainism.

Which of the above-given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The Jainism branched into several sects such as Digambara and Svetambara and various subsects.

Statements 1 is correct: The earliest record of Digambara beliefs is contained in the Prakrit Suttapahuda of Kundakunda. The Digambara School has two major sub-sects which is Mula Sangh known as the original community. The other one is Bispanthi, Terapanthi, and Taranpanthi known as the modern community.

Statements 2 is correct: Digambara Jains believe that women can not be tirthankaras and that Malli was a man. Whereas Svetambaras believe tirthankaras can be men or women, and say that Malli began her life as a princess.

Statement 3 is incorrect: Digambaras follow all the five constraints as espoused in Jainism, which are Ahimsa (non-violence), Satya (truthfulness), Asteya (non-stealing), Brahmacharya (celibacy) and Aparigraha (non-attachment to material possessions). These five principles are collectively known as the five vows or Mahavratas, which are observed by all Jains, including Digambaras.

Source: Indian Art and Culture by Nitin Singhania Chapter-12

Q.39) Consider the following pairs of UNESCO's intangible cultural heritages and the states to which they belong:

UNESCO intangible cultural heritage	States
1. Kutiyattam	Telangana
2. Ramlila	Uttar Pradesh
3. Kalbelia	Rajasthan

How many pairs given above are **incorrectly** matched?

- a) Only one pair
- b) Only two pairs
- c) All three pairs
- d) None of the pairs

Ans) a

Exp) Option a is the correct answer.

UNESCO established its lists of Intangible Cultural Heritage with the aim of ensuring the better protection of important intangible cultural heritages worldwide and to create awareness of their significance. India has 14 intangible cultural heritage elements on this prestigious list.

Pair 1 is incorrect: Kutiyattam is traditionally performed in Kerala and not Telangana. It is a combined dance drama conducted by the Chakyars (a subcaste among Hindus) who play the male roles whereas, the women of the Nambiar caste play the female roles. The performance lasts from 6 to 20 days. They are mainly enacted inside the temples based on themes of Hindu mythology.

Pair 2 is correct: Ramlila is a popular folk theatre in the region of Uttar Pradesh. It is an enactment of Ramayana using songs, dances and dialogues, mainly during the period before Dussehra. It is generally performed by male actors, who do the role of Sita as well. The play is staged annually over ten or more successive nights, during the auspicious period of "Sharad Navaratri".

Pair 3 is correct: Kalbelia dance is performed by the members of Kalbelia tribe in the State of Rajasthan. Kalbelia dance movements resembles that of a serpent. Traditionally, Kalbelia tribe was known for its frequent movement from one place to another and the occupation of catching snakes and trading snake venom. The songs are based on mythology and it involves composing lyrics spontaneously and improvising songs during performance.

Source: Nitin Singhania, Chapter 10, UNESCO'S List of Intangible Cultural Heritage

Q.40) Consider the following statements regarding Rubber Board:

1. It is a statutory body constituted by the Government of India for the overall development of the rubber industry in the country.
2. It comes under the administrative control of the Ministry of Agriculture and Farmers' Welfare.
3. Chairman of the board is appointed by the central government.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: The Rubber Board is a statutory organization constituted under Section (4) of the Rubber Act, 1947.

Statement 2 is incorrect: The Rubber Board functions under the Ministry of Commerce & Industry of the Government of India (and not the Ministry of Agriculture and farmers' Welfare).

Statement 3 is correct: The Board has a chairman appointed by the Central Government. Chairman is the principal executive officer responsible for the proper functioning of the Board and implementation of its decisions and discharge of its duties under the Rubber Act.

Source:

<http://rubberboard.org.in/rbfilereader?fileid=235#:~:text=The%20Chairman%20who%20is%20the,Excise%20duty%20and%20Market%20Promotion.>

<https://commerce.gov.in/about-us/autonomous-bodies/commodity-boards/rubber-board/>

Q.41) Consider the following statements with reference to the Madhubani paintings of India:

1. Traditionally, they were painted on walls having the base of cow dung and mud.
2. The paintings depict auspicious occasions like birth, marriage and festivals.
3. It is a three-dimensional painting with excellent use of shades.

Which of the above-given statements is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Madhubani paintings are a traditional folk-art form that originated in the Mithila region of Bihar, India.

Statement 1 is correct: Madhubani paintings have a common theme and are usually drawn from religious motifs of the Hindus, including Krishna, Rama, Durga, Lakshmi and Shiva. **Traditionally, these were painted on walls using rice paste and vegetable colours on a base of cow dung and mud. With time, the base changed to handmade paper, clothes and canvas, still natural colours were used.**

Statement 2 is correct: The paintings have a common theme and are usually drawn from religious motifs of the Hindus, including Krishna, Rama, Durga, Lakshmi and Shiva. The figures in the painting are symbolic, for example, fish depicts good luck and fertility.

The paintings are also **made depicting auspicious occasions like birth, marriage and festivals.** Flowers, trees, animals, etc. are used to fill any gaps in the painting.

Statement 3 is incorrect: Since there was **no shading, the paintings are two-dimensional.** Some of the common features of these paintings include double line border, bold use of colours, ornate floral patterns and exaggerated facial features.

Source: Indian Art and Culture by Nitin Singhania Chapter-2

Q.42) Consider the following statements with reference to the Wangala festival of Northeast India:

1. It is primarily celebrated by the Mishmi tribe of Arunachal Pradesh.
2. It is also known as the '100 Drum festival'.
3. Feathered head-gear is worn while celebrating the festival.

Which of the above-given statements is/are correct?

- a) 2 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Wangala festival is held in the Asanang near Tura in the Garo Hills.

Statement 1 is incorrect: The dominant Garo Tribe primarily celebrates the Wangala festival in Meghalaya. The festival indicates the beginning of winter and is celebrated as a nod to the post-harvest season. The festival is celebrated in honour of 'Misi Saljong', a local deity who is considered to be generous.

Statement 2 is correct: Drums, flutes and other orchestra instruments are played to create a festive ambiance for the Wangala festival. **It is also known as the '100 Drum festival' as loud drum noises herald the beginning of the festival.**

Statement 3 is correct: Wangala Festival day is also set apart by the wonderful costumes worn by the participants. **An extraordinary feature is the feathered head-gear that is worn by everyone celebrating the festival and also reflects their clan colors.**

Source: Indian Art and Culture by Nitin Singhania Chapter-18

Q.43) Consider the following statements with reference to the coins in medieval period:

1. Mohammad bin Tughlaq introduced the Rupee, a form of bronze currency.
2. Mughal emperor Akbar issued both round and square coins.
3. Jahangir issued coins with Zodiac signs.

Which of the above given statements are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

India has a very rich history of numismatics since the Vedic period.

Statement 1 is incorrect: **Sher Shah Suri**, a 16th century ruler of Afghan lineage introduced the **Rupee**. It was a **silver currency**. At that moment one rupee was equal to four coins made of copper. The Indian currency is still called Rupee. **Rupya** was made of silver which weighed almost **11.34 grams** during that period.

Statement 2 is correct: **Akbar issued both round and square coins. In 1579, he issued gold coins called Ilahi coins to propagate his new religious creed 'Din-e-illahi'.** On this coin, it was written 'God is great, may his glory be glorified'. The value of an ilahi coin was equal to 10 rupees. Sahansah was the largest gold coin.

Statement 3 is correct. Jahangir showed the legend in a couplet in the coins. In some of his coins, he added the name of his beloved wife Noorjahan. **The most famous of his coins had images of Zodiac signs.**

Source: Indian Art and Culture by Nitin Singhania Chapter-23

Q.44) Consider the following pairs of Vaishnav Sects and their founders:

Sect	founder
1. Ramanandi Sampradaya	Dnyaneshwar
2. Brahma Sampradaya	Madhvacharya
3. Pushti Marg Sampradaya	Vallabhacharya

Which of the above given pairs is/are matched correctly?

- a) 2 only
- b) 3 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

There are various sects that Vaisnavism branched into as it evolved and spread to other reign.

Pair 1 is incorrect: **Sant Dnyaneshwar was a 13th-century Indian Marathi saint, poet, philosopher and yogi of the Nath Shaiva and Varkari tradition. Ramanandi Sampradaya is associated with the teachings**

of the Advaita scholar Ramananda. This is the largest monastic group within Hinduism in Asia, and these Vaishnava monks are known as Ramanandis, Vairagis or Bairagis.

Pair 2 is correct: Brahma Sampradaya is associated with Lord Vishnu, the Para- Brahma or Universal Creator (not to be confused with the Brahma deity). The founder was Madhvacharya. Gaudiya Vaishnavism promoted by Chaitanya Mahaprabhu is associated with Brahma Sampradaya. The ISKCON belongs to this sampradaya.

Pair 3 is correct: Pushti marg Sampradaya is a Vaishnav sect founded by Vallabhacharya around 1500 AD. Their philosophy is that the ultimate truth is one & only one Brahm. The devotion is based on pure love for Lord Krishna. All followers are expected to do Seva to their personal icon of Krishna.

Source: Indian Art and Culture by Nitin Singhania Chapter-12

Q.45) Which of the following options best describes the meaning of “I-familia”, a term recently seen in news?

- A global database for identifying missing persons based on international DNA kinship matching.
- An online movement against the discrimination being faced by women in different fields.
- A group of animals that can emit electricity from their bodies in specific situations.
- A web portal launched by the government to receive complaints against the sexual harassment at workplace

Ans) a

Exp) Option a is the correct answer.

Option a is correct: The first of its kind, **I-Familia is a global database for identifying missing persons based on international DNA kinship matching.**

The result of cutting-edge scientific research, the database seeks to identify missing persons or unidentified human remains when direct comparison is not possible, by using DNA samples from family members instead.

Agencies such as INTERPOL can play a unique role through its global network when it comes to implementation. I-Familia helps to reunite loved ones or to bring closure to cases and allow families to rebuild their lives.

Source: <https://www.interpol.int/en/How-we-work/Forensics/I-Familia>

<https://www.clinicalprograms.com/blogs/what-is-a-family-medicine-residency>

Q.46) Consider the following statements with reference to the Warli paintings of India:

- These paintings have a close resemblance to the mural paintings of Bhimbetka.
- Only white pigment is used over the base of red-ochre color in these paintings.
- Intricate human and animal drawings are made with life-like details in these paintings.

Which of the above given statements are correct?

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The name of the Warli painting comes from the people who have been carrying the painting tradition that goes back to 2500-3000 BC. They are called the **Warlis, indigenous people that occupy mainly the Gujarat-Maharashtra border.**

Statement 1 is correct: Warli paintings have close resemblance to the mural paintings of Bhimbetka in Madhya Pradesh. These **ritualistic paintings** have a central motif of a chaukat or chauk, which is surrounded by scenes portraying fishing, hunting, farming, dances, animals, trees and festivals.

Statement 2 is correct: In Warli paintings, **the base is made of a mixture of mud, branches and cow dung that gives it a red ochre colour. For painting only white pigment is used, which is made of a mixture of gum and rice powder.** The wall paintings are usually done for auspicious occasions.

Statement 3 is incorrect: Traditionally, the paintings are done on the walls using very basic graphic vocabulary, including a triangle, a circle and a square. These shapes are inspired from nature, i.e. circle from sun or moon, triangle from conical shaped trees or mountains and square from sacred enclosure or piece of land. To represent a human or animal, two triangles are joined at the tip, with circles acting like their head.

Source: Indian Art and Culture by Nitin Singhania Chapter-2

Q.47) Consider the following statements with reference to Vajrayana Buddhism:

1. Vajrayana Buddhism was developed as a result of royal courts sponsoring both Buddhism and Shaivism.
2. The female deity Tara is the main deity of Vajrayana.
3. Followers of Vajrayana Buddhism strongly opposed Brahmanical rituals.

Which of the above-given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statements 1 and 2 are correct: Scholars have said that **Vajrayana school developed as a result of royal courts sponsoring both Buddhism and Shaivism**, i.e., they say, it was influenced by Hinduism. The main deity is lady called Tara.

Statement 3 is incorrect: Vajrayana Buddhism involved combining Brahmanical (Veda based) rituals with Buddhist philosophies. Vajrayana is based on Mahayana Buddhist philosophy. This school believes in Tantra's, Mantras and Yantras superiority due to being a faster vehicle to liberation containing many skillful methods of tantric ritual.

Source: Indian Art and Culture by Nitin Singhania Chapter-12

Q.48) Consider the following statements with reference to spread of Buddhism abroad from India:

1. Acharya Ateesha of the Vikramashila University helped in the spread of Buddhism to Tibet.
2. King Ashoka sent his daughter Sanghamitra to Sri Lanka to propogate Buddhism.
3. The presence of ancient silk route aided the spread of Buddhism abroad.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) option d is the correct answer.

Statement 1 is correct: The head of the Vikramashila University was Acharya Ateesha, also known as Dipankara Shreejnana. He went to Tibet in the 11th century and gave a strong foundation to Buddhism in Tibet.

Statement 2 is correct: King Ashoka made great efforts to propagate Buddhism outside India. He sent his son Mahendra and daughter Sanghamitra to Sri Lanka to spread the message of the Buddha. The teachings of the Buddha were transmitted orally by the Srilankan people who had gone from India.

Statement 3 is correct: Many Chinese and Indian scholars travelled through ancient Silk routes to propagate the philosophy of Buddhism. People from all over the world came to visit the land of the Buddha. They stayed in India and collected Buddhist relics and manuscripts related to Buddhism and learnt about its sayings at the various educational centres.

Source: Indian Art and Culture by Nitin Singhanian Chapter-12

Q.49) Consider the following statements with reference to the Manjusha paintings of India:

1. This art form belongs to Kandhamal region of Odisha.
2. It is also known as Angika art.
3. Snake motifs are always present in these paintings.

Which of the above given statements is/are correct?

- a) 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Manjusha art is folk art from Bhagalpur, Bihar, and dates back to the 7th century. It is also called scroll painting. The name Manjusha is also associated with an **elaborate story, a goddess and a festival celebrated in Bhagalpur.**

Statements 2 and 3 are correct: Manjusha paintings is also known as Angika art, where ‘ang’ refers to one of the Mahajanpada. Since snake motifs are always present, it is also called snake painting. These paintings are executed on boxes of jute and paper.

Source: Indian Art and Culture by Nitin Singhanian Chapter-2

Q.50) Consider the following statements regarding Disposable Email Addresses:

1. Disposable Email Addresses pose a severe threat to the privacy and data security of email users.
2. All personal details of the user and IP address are dissolved after the period of mailbox use is over.
3. These emails may not require sign-ups or verification to ensure that the person using the email address is real.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

A disposable email address (DEA) is a temporary email address that expires after a set period of time, or one which you can delete whenever you like. Like any regular email service, a disposable email address

allows you to click a link sent for email verification to check the legitimacy of the email address. That means you can use a disposable email address to comment or access premium content of any website that requires you to sign up. And your primary email address will still be clean, organized, and free from spam!

Statement 1 is incorrect: DEAs were developed to protect email users from spam, advertising mailings and malware as it's anonymous and free. Mostly we don't read the privacy policies of all the sites we sign up for. Many websites rent or sell their email lists to other businesses. So, we don't have any idea of where your personal address will end up in the future after you share it on websites you register with. Using a disposable or a temp mail address to register on websites, blogs, and forums keeps your real one hidden from hackers' eyes, **thereby improving email security.**

Statement 2 is correct: All personal details of the user, address, IP address are dissolved after the period of mailbox use is over. Temporary emails are being used to create profiles on social media networks, download files, and use it each time the users want to conceal their identity.

Statement 3 is correct: In case of DEAs, it's possible to get a new email address and receive email within seconds, with no sign-ups, no contact details required and certainly no verification that the person using the email address is "real." They are being increasingly used for illegitimate purposes.

Source: <https://www.newindianexpress.com/nation/2022/oct/28/disposable-emails-emerge-as-new-terror-tool-intel-agencies-on-alert-2512436.html>

Q.1) With reference to Pasteurisation, consider the following statements:

1. This process can only be used for non-packaged food items.
2. It can eliminate microorganisms present in the food to a certain extent.
3. It drastically alters the nutrition content of the food.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 2 only

Ans) b

Exp) Option b is the correct answer.

Pasteurization is a process, named after scientist Louis Pasteur, that applies heat to destroy pathogens in foods. The process was widely used in the dairy industry, in most milk processing plants, the milk is heated up to 161 degree Fahrenheit and rapidly cooled back to a 39 degree celsius.

Statement 1 is incorrect: Pasteurization is a process of food preservation in which **packaged and non-packaged foods** such as milk, fruit juices are treated with mild heat, usually to less than 100 °C (212 °F), to eliminate pathogens and extend shelf life.

Statement 2 is correct: Pasteurization kills pathogenic microorganisms and also a wide range of spoilage organisms are destroyed.

While sterilization destroys all the microorganisms and spores present in the food, in Pasteurization **the resistant microorganisms, a part of enzymes and bacteria spores survive**. This is the reason why Sterilized foods are perfectly preserved at room temperature but Pasteurized foods require refrigeration (3°C and 6°C), to delay the proliferation of microorganisms and spores present in the food.

Statement 3 is incorrect: Unlike Sterilisation, Pasteurization does not affect the nutrient content of food in significant ways, thus it drastically alters the nutrient content of food is not true. For instance the U.S. Food and Drug Administration states that there are **no significant differences in nutritional value between pasteurized and unpasteurized milk**.

With the exception of **decreasing riboflavin (vitamin B2)**, pasteurization does not significantly decrease the nutritional value of milk. It must be noted here that Pasteurized milk remains an excellent source of riboflavin (vitamin B2).

Source: <https://www.thehindubusinessline.com/portfolio/commodity-analysis/what-is-pasteurised-milk/article9973160.ece>

<https://www.terrafoodtech.com/en/sterilization-vs-pasteurization/>

Q.2) With reference to astronomical phenomena, how is Dark matter different from Dark energy?

1. The share of Dark energy in the total universe is greater than that of Dark matter.
2. While dark matter slows down the expansion of the universe, dark energy speeds it up.
3. While dark matter interacts with light, dark energy does not interact with light.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Recently, a highly sensitive experiment named LUX-ZEPLIN (LZ) has been used to detect dark matter in the universe in the USA.

Statement 1 is correct: Only 5% of the entire universe is observable/visible and the rest of 95% consists of dark matter and dark energy. **Dark energy** accounts for around **68%** of the total universe, while **dark matter accounts for 27%** of the total universe by volume. Thus, it is true that the **share of dark energy in the total universe is greater than that of dark matters.**

Statement 2 is correct: It is true that dark matter slows down the expansion of the universe, while dark energy speeds it up. Dark matter works like an **attractive force** – a kind of cosmic **cement that holds our universe together**. In contrast **dark energy is a repulsive force** – a sort of anti-gravity – that drives the universe's ever-accelerating expansion.

Statement 3 is incorrect: Both **dark matter and dark energy does not interact with the electromagnetic force**, which means that it does **not absorb, reflect or emit light**, making it extremely hard to detect.

Source: <https://www.thehindu.com/sci-tech/technology/the-search-for-dark-matter/article65628063.ece>

<https://www.discovermagazine.com/the-sciences/whats-the-difference-between-dark-matter-and-dark-energy#:~:text=slows%20down%20the-,expansion,-of%20the%20universe>

<https://home.cern/science/physics/dark-matter#:~:text=normal%20matter%2C%20dark-,matter,-does%20not%20interact>

Q.3) Which of the following statements are correct in respect of 'Dry Ice'?

1. It can be used to preserve the food without altering its taste.
2. Dry ice pellets can be used to extinguish fires.
3. It is free of any ice burns as its temperature is lower compared to normal ice.
4. It is one of the common chemicals used for cloud seeding.

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2 and 4 only
- c) 1, 2 and 4 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Dry ice is a solid form of carbon dioxide. It is commonly used for temporary refrigeration as CO₂ does not have a liquid state at normal atmospheric pressure and sublimates directly from the solid state to the gas state. It is colourless, odourless, non-flammable, and slightly acidic in nature.

Statement 1 is correct: It is true that dry ice can be used to **preserve the food quality without altering its taste/quality of foods**. Dry ice can be used to inhibit the growth of fungi and **bacteria** (thus preserving the quality of food) in food products by **displacing the oxygen** without altering the taste or quality of foods.

Statement 2 is correct: Tiny dry ice pellets can be used to fight fire by **both cooling fuel** and suffocating the fire by **excluding oxygen**. Without oxygen combustion won't take place and dry ice, by cutting off oxygen supply from fire, can act as an effective fire extinguisher.

Statement 3 is incorrect: Compared to normal ice (temperature of 0 degree celsius), the **temperature of dry ice is -78 degree celsius and it is extremely cold**. Therefore, **dry ice is more likely to result in ice burns** if not handled properly, thus dry ice is free of any ice burns is not true.

Statement 4 is correct: The most **common chemicals used for cloud seeding includes dry ice**, silver iodide, potassium iodide. Cloud seeding is the process of spreading either dry ice or more commonly, silver iodide aerosols, into the upper part of clouds to try to stimulate the precipitation process and form rain.

Source: <https://www.health.ny.gov/publications/7081/>

<https://agris.fao.org/agris-search/search.do?recordID=LV2005000502#:~:text=Conference-,Application,-of%20dry%20ice>

Q.4) Which of the following is a reason why aluminium is used for wrapping food items?

- Aluminium usually does not react with acid particles contained in the food.
- Poor heat conductivity of aluminium keeps the food inside aluminium wrap warm.
- Aluminium is incapable to react with water content of the food inside the wrap.
- It is possible to make a thin sheet out of aluminium metal owing to its malleable property.

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: Non metals generally do not react with acids but metals (including Aluminium) react with acids and produce hydrogen gas. Thus, Aluminum does not react with acid content of the food is not true.

Option b is incorrect: Aluminium is the good conductor of heat, thus aluminium is being used as food wraps owing to its poor thermal conductivity is not correct. The more **common metals, copper and aluminium have the highest thermal conductivity** while steel and bronze have the lowest.

Option c is incorrect: Aluminium will react readily with water or air to produce aluminium oxide, thus aluminium's inability to react with water content in food is not correct. But the produced **Aluminium Oxide is not reactive** which makes it best property for using aluminium as food wrapping material. The layer of aluminium oxide protects the rest of the aluminium in the wrap from oxidising and reacting with food.

Option d is correct: The property of metals by which they can be beaten into thin sheets is called malleability. While **metals** such as Iron, Silver and Aluminium show this property **non-metals** such as coal and pencil lead do not show this property. This property is one of the major reasons why Aluminium is used to wrap the food items.

Source: Science NCERT Class 8 - Chapter 4

Q.5) With reference to the voting rights in India, consider the following statements:

- As per the Representation of the People Act (RPA) of 1951, an individual in the lawful custody of the police cannot vote.
 - An individual under preventive custody can cast his/her vote by post.
- Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

If an individual is confined during a prison, whether under a sentence of imprisonment or transportation, then he is not eligible for voting.

Statement 1 is correct. Section 62 (5) of Representation of the People Act (RPA), 1951 deprives prisoners of their right to vote. An individual in the lawful custody of the police and those serving a sentence of imprisonment after conviction cannot vote. Undertrial prisoners are also excluded from participating in elections.

Statement 2 is correct. In the case of preventive custody, an individual can vote. In 2014, the ECI had said that the person under preventive custody had the proper to vote, but not under-trials and convicts. As per the provisions of sub-Section (5) of Section 62 of the Representation of the People Act, 1951 confers voting rights on the electors subjected to preventive detention. As per Rule 18 of the Conduct of Elections Rules, 1961, the electors under preventive detention are entitled to cast their votes by post.

Source: <https://www.legalserviceindia.com/legal/article-7582-all-about-vote-and-voting-rights-in-india.html>

<https://eci.gov.in/files/file/9411-protection-of-voting-rights-of-electors-subjected-to-preventive-detention-regarding/>

Q.6) Gypsum can be used in which of the following area(s)?

1. To treat Aluminium toxicity in the soil.
2. For setting fractured bones of humans
3. To extract petroleum from underground

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 only
- d) 1, 2 and 3

Ans) d

Exp) Option a is the correct answer.

Gypsum is a soft sulphate mineral composed of calcium sulphate dihydrate, with the chemical formula $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$. **Gypsum is widely mined and is used as a fertiliser** and as the main constituent in many forms of plaster, blackboard or sidewalk chalk, and drywall.

Statement 1 is correct: One of the important applications of Gypsum lies in the field of Agriculture and **it is true that gypsum helps in treating aluminium toxicity**. Gypsum gives nutrients to plants by providing sulphur and calcium, calcium helps in the absorption of nutrients in the roots, and sulphur improves crop yield.

Gypsum has the ability to reduce pH level of the soil which means **adding gypsum will improve the acidic content of the soil**.

Statement 2 is correct: On heating gypsum at 373 K, it loses water molecules and becomes calcium sulphate hemihydrate ($\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$) and this is called **Plaster of Paris**. Doctors use this as a plaster for **supporting fractured bones in the right position**.

Statement 3 is correct: In Hydraulic fracturing, a fluid is pumped down a well at pressure to **create small fractures (cracks) in gas-bearing rock formations to release trapped petroleum**. Gypsum is one of the chemicals used for this purpose, thus it is true that **Gypsum is used to extract petroleum from underground**.

Source: <https://ncert.nic.in/ncerts/l/jesc102.pdf> (pg no 32)

<https://www.dmp.wa.gov.au/Petroleum/Chemicals-used-in-hydraulic-25615.aspx#:~:text=During-,hydraulic,-fracturing%2C%20fluid%20is>

Q.7) With reference to 'Fullerene', consider the following statements:

1. They are a class of molecules composed entirely of carbon.
2. They possess high tensile strength and high electrical conductivity.
3. They can be instrumental in fighting the menace of Antibacterial resistance.

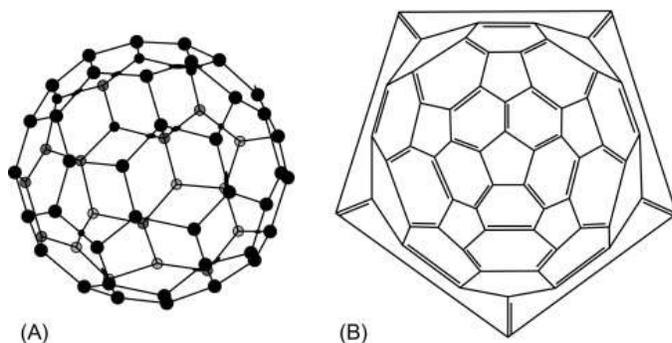
Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

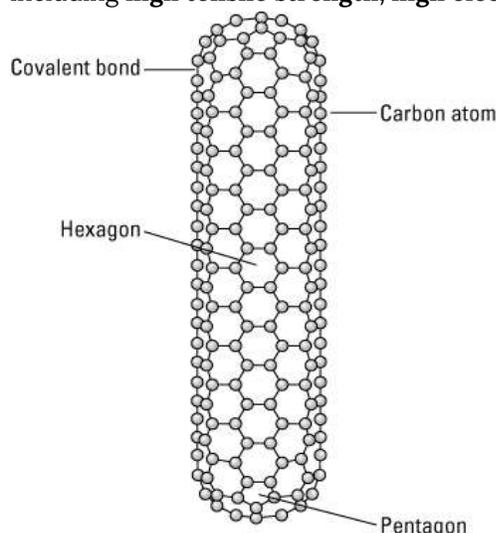
Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Fullerene molecules are made of carbon atoms, and their shapes are as hollow sphere, ellipsoid, or tube. Spherical fullerenes are also referred to as buckyballs.

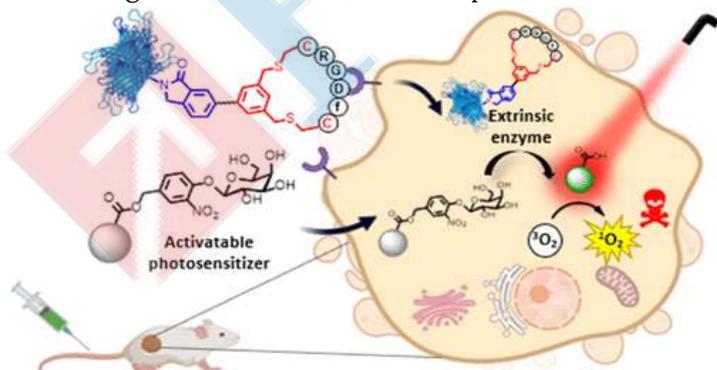


Statement 2 is correct: Their unique molecular structure results in extraordinary macroscopic properties, including **high tensile strength, high electrical conductivity, high ductility, and high heat conductivity.**



Statement 3 is correct: **Antimicrobial photodynamic inactivation (aPDI)** is a newly emerged treatment approach that can effectively **address** the issue of **multidrug resistance resulting from the overuse of antibiotics.** Fullerenes can be used as promising photosensitizers (PSs) for aPDI due to the advantages, good photostability and wide antibacterial spectrum.

PSs can be directly injected or coated to the infected site, aPDI will not cause damage to the entire body like antibiotics do and thus can be repetitively applied to achieve higher bactericidal efficiency while minimising the side effects inflicted on patients.



Source:

<https://www.sciencedirect.com/topics/engineering/fullerene#:~:text=of%20molecules%20composed-entirely,-of%20carbon.%20The>

<https://www.frontiersin.org/articles/10.3389/fmicb.2022.957698/full>

Q.8) With reference to Trans fats, consider the following statements:

1. Other than those made by humans, trans fats do not exist in nature.
2. Trans fats in oils can extend the shelf life of oil.
3. Trans fats increase the overall cholesterol level of humans while reducing the good cholesterols.
4. At present, India has no regulation that regulates the level of trans fats in any food products.

Which of the statements given above are correct?

- a) 1 and 4 only
- b) 2 and 3 only
- c) 2 and 4 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

As per the World Health Organisation (WHO), approximately 5.4 lakh deaths take place each year globally because of intake of industrially produced trans fatty acids. Trans fats are the most harmful type of fats which can have much more adverse effects on a human body than any other dietary constituent.

Statement 1 is incorrect: Trans fats occur in nature too, although large amounts of Trans fats are produced artificially. Artificial TFAs are formed when hydrogen is made to react with the oil to produce fats resembling pure ghee/butter. The **natural sources of Trans fats are meats and dairy products.**

Statement 2 is correct: It is true that **Trans Fats containing oils can be preserved longer** which means they have longer shelf life. Also, trans fats give the food the **desired shape and texture** and can easily substitute pure ghee. Further trans fats are comparatively cheaper and thus add to profits of companies.

Statement 3 is correct: It is true that **Trans fats not only raise total cholesterol levels but also reduce the good cholesterol (HDL) levels.** This makes humans who consume trans fats more prone to cardiovascular diseases as good cholesterol helps in protecting humans from heart disease.

Statement 4 is incorrect: The Food Safety and Standards Authority of India (FSSAI) **has capped the amount of trans fatty acids (TFA) in oils and fats to 3% for 2021 and 2% by 2022**, thus India has no regulation regarding level of trans fats in any food products is not correct. In **2011, India first passed** a regulation that set a TFA limit of 10% in oils and fats, which was further reduced to 5% in 2015.

Source: [https://www.thehindu.com/sci-tech/health/fssai-slashes-limit-for-trans-fat-levels-in-foods/article61751294.ece#:~:text=The%20Food%20Safety%20and%20Standards,and%20Restriction%20on%20Sales\)%20Regulations.](https://www.thehindu.com/sci-tech/health/fssai-slashes-limit-for-trans-fat-levels-in-foods/article61751294.ece#:~:text=The%20Food%20Safety%20and%20Standards,and%20Restriction%20on%20Sales)%20Regulations.)

<https://indianexpress.com/article/health-wellness/how-do-trans-fats-damage-your-heart-vessels-why-is-who-worried-about-5-billion-people-exposed-to-them-8401204/#:~:text=in%20milk%20and-,meat,-sourced%20from%20them>

Q.9) With reference to Food irradiation, consider the following statements:

1. It is the process of ionising food using rays emanating from radioactive material.
2. Irradiated foods can be stored for years without refrigeration.
3. Early ripening of fruits is one of the applications of food irradiation.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 3 only

Ans) a

Exp) Option a is the correct answer.

Food irradiation is the application of ionising radiation to food to improve the safety and extend the shelf life of foods by reducing or eliminating microorganisms and insects. **Irradiation does not make foods radioactive, compromise nutritional quality, or noticeably change the taste, texture, or appearance of food.**

Statement 1 is correct: It is true that **food irradiation is the process of ionising foods with either Gamma rays or X rays.** Gamma rays are emitted from **radioactive forms of the element cobalt (Cobalt 60)** and hence it is true that it uses radioactive rays to ionise food.

Also irradiation technique uses X rays and **electron beams** (similar to X-rays) to ionise food. Electron beam is a stream of high-energy electrons propelled from an electron accelerator into food.

Statement 2 is correct: Irradiation can be used to sterilise foods, which can then be **stored for years without refrigeration.** Sterilised foods are useful in hospitals for patients with severely impaired immune systems, such as patients with AIDS or undergoing chemotherapy.

Statement 3 is incorrect: Irradiation actually **delays ripening of** fruits. Thus, irradiation is used to delay ripening of fruit to increase longevity, not to fasten the process of ripening. Other applications of food irradiation are as follows;

- 1) **Prevention of Foodborne Illness** by effectively eliminating organisms that cause foodborne illness, such as Salmonella and Escherichia coli (E. coli).
- 2) **Preservation of foods** by destroying or inactivating organisms that cause spoilage and decomposition and extend the shelf life of foods. Irradiation also decreases the need for other pest-control practices that may harm the fruit.

Source: <https://www.fda.gov/food/buy-store-serve-safe-food/food-irradiation-what-you-need-know>

Q.10) What is the correct sequence of occurrence of the following cities in South-East Asia as one proceeds from East to West direction?

1. Hanoi
2. Naypyidaw
3. Manila
4. Kuala Lumpur

Select the correct answer using the code given below:

- a) 3-2-1-4
- b) 3-1-4-2
- c) 1-3-4-2
- d) 1-4-3-2

Ans) b

Exp) Option b is the correct answer.

Correct arrangement of South East Asian countries from East to West is-

Manila (120.9842° E)- **Bandar Seri Begawan**(114°56'32"E)- **Jakarta** (106.8456° E) **Hanoi** (105.8342° E)- **Phnom Penh**(104.9282° E)- **Singapore**(103.8198° E)- **Vientiane**(102.6331° E)- **Kuala Lumpur**(101.6841° E)- **Bangkok**(100.5018° E)- **Naypyidaw**(96° 6' 0" E).



Source: <https://asean.org/about-asean/>

Q.11) With reference to the application of noble gases, consider the following pairs:

Noble gases	Applications
1. Helium	Radiation therapy
2. Neon	Cryogenic refrigeration
3. Argon	To improve fuel efficiency of cars.
4. Radon	Breathing mixture for sea divers

How many pairs given above are correctly matched?

- only one pair
- only two pairs
- only three pairs
- all four pairs

Ans) c

Exp) Option c is the correct answer.

The noble gases also called as inert gases are a class of chemical elements with similar properties. Under standard conditions, they all are **odourless, colourless, monatomic gases with very low chemical**

reactivity. The six naturally occurring noble gases are helium (He), neon (Ne), argon (Ar), krypton (Kr), xenon (Xe), and the radioactive radon (Rn).

Pair 1 is correct: Radiation therapy (also called radiotherapy) is a cancer treatment that uses high doses of radiation to kill cancer cells and shrink tumours. Due to the favourable physical and biological properties of helium, **helium ion beams are increasingly considered a promising alternative to proton beams for radiation therapy.**

Pair 2 is correct: Neon in its liquid form is used as a cryogenic refrigerant, meaning that it is a fluid that is used in the process of cooling objects below 150 K. Neon's cooling capacity is very high and it has 40 times the cooling capacity (per volume) of liquid helium and over 3 times that of liquid hydrogen. It is the second-lightest noble gas, with helium being the first.

Pair 3 is correct: Argon is known as a powerful insulator and is often used in luxury car tires which means it can help keep the air in the tire cooler. An overall lower tire temperature results in improved fuel economy because there is less energy wasted as heat.

Pair 4 is incorrect: Radon is a naturally occurring radioactive gas (thus cannot be used as a breathing mixture) which may be found in high concentrations in indoor environments, such as homes and workplaces. Helium is used in the production of breathing mixtures for professional divers.

Source: <https://ro-journal.biomedcentral.com/articles/10.1186/s13014-017-0944-3#:~:text=Due%20to%20their%20favorable%20physical,proton%20beams%20for%20radiation%20therapy.>

<https://chemistrytalk.org/neon-element/#:~:text=Neon%E2%80%99s%20Cooling-,Capacity,-In%20its%20liquid>

<https://www.who.int/news-room/fact-sheets/detail/radon-and-health#:~:text=a%20naturally%20occurring-,radioactive,-gas%20which%20may>

Q.12) With reference to various food preservation methods, consider the following statements:

1. Canning is a method of food preservation which involves using the sugar in crystallised form to preserve foods.
2. Drying may include preserving food by keeping it in a place where there is no sunlight.
3. Vacuum packing removes air from the package to eliminate bacteria inside the package.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Food Preservation involves preventing the growth of bacteria, fungi and other microorganisms as well as retarding oxidation of fats to reduce rancidity. Food Preservation ensures that the quality, edibility and the nutritive value of the food remains intact.

Statement 1 is incorrect: Canning and bottling means sealing cooked food in sterile bottles and cans. The container is boiled and this kills or weakens bacteria. Foods are cooked for various lengths or time. Once the can or bottle is opened the food is again at risk of spoilage. Canning is different from preserving food using sugars. Sugar is used in syrup form to preserve fruits or in crystallised form if the material to be preserved is cooked in the sugar till crystallisation takes place like candied peel and ginger.

Statement 2 is correct: Drying is the oldest method of food preservation. This method reduces water activity which prevents bacterial growth. Sun and wind are both used for drying. Also, **Shade drying (drying**

under shaded area) is used for **foods which lose their colour when exposed to direct sunlight for drying**. Generally, herbs, green and red chillies, okra and beans etc. are dried under shaded area

Statement 3 is correct: Vacuum packing creates a vacuum by making **bags and bottles airtight**. Since there is **no oxygen in the created vacuum, bacteria die**. Usually, this method is used to preserve dry fruits.

Source: <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=111462#:~:text=Use%20of%20Heat-,Canning,-Canning%20is%20the>

<http://ecoursesonline.iasri.res.in/mod/page/view.php?id=111449#:~:text=Shade-,drying,-%3A%0AThis%20kind>

<https://www.provac.com/blogs/news/food-preservation-with-vacuum-how-it-works#:~:text=technique%20that%20involves-,removing,-air%20from%20the>

Q.13) Which of the following statements can be an application of evaporative cooling?

1. Sweating of Body.
2. Water in Earthen Pot.
3. Formation of dew.
4. Air cooler used in home.

Choose the correct option using the codes given below:

- a) 1, 2, and 3 only
- b) 1 and 4 only
- c) 1, 2 and 4 only
- d) 2, 3, and 4 only

Ans) c

Exp) Option c is the correct answer.

The phenomenon of **change of liquid into vapours** at any temperature below its boiling point is called evaporation. In an open vessel, the liquid keeps on evaporating. The particles of liquid absorb energy from the surrounding to regain the energy lost during evaporation. This absorption of energy from the surroundings make the surroundings cold.

Option 1 is correct: Sweating or Perspiration is the natural way of cooling our body and maintaining the core temperature. Perspiration is essentially evaporation. Our sweat glands produce sweat. This sweat then takes up the heat from our skin to reduce our body temperature.

Option 2 is correct: Earthen pots are capable of cooling water lower than room temperature. The prime reason behind such a cooling effect is that the **earthen pots have minute pores** from where water seeps out. **This seeping water absorbs the heat from the water inside the pot and evaporates.** Thus, it reduces the temperature of the water inside the pot making it cooler and more soothing to drink during the summer season.

Option 3 is incorrect: Dew is the moisture that forms as a result of condensation. Condensation is the process a material undergoes as it changes from a gas to a liquid. **Dew is the result of water changing from a vapor to a liquid.** Dew forms as temperatures drop and objects cool down.

Option 4 is correct: Air cooler is more effective on dry days. The principle behind working of air cooler is evaporative cooling. By passing outdoor air over water-saturated pads, the water in the pads evaporate, reducing the air temperature by 15°- to 40°F-before it is directed into the home.

Source: Page 10,chapter 1 - MATTER IN OUR SURROUNDINGS of 9th ncert

<https://www.evapoler.com/why-evaporative-air-cooler-cooling-system/>

<https://hal.science/hal-02408692/document>

<https://education.nationalgeographic.org/resource/dew/>

Q.14) Consider the following statement with reference to Hardness of Water:

1. The hardness of water is due to the presence of calcium and magnesium salts.
2. A common indicator of hard water is a lack of lather when water is used with soap.
3. The resin beads with salt ions are used to remove the hardness of water.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2, and 3

Ans) d

Exp) Option d is the correct answer.

Statements 1 and 2 are correct: Hard water contains a high rate of mineral content, which is formed when water penetrates through deposits of limestone and chalk. **Hard water contains a large percentage of calcium and magnesium carbonates** and this is what makes the water hard. **One of the most common indicators of hard water is a lack of lather when water is used with soap.**

Statement 3 is correct: **Water hardness is a big concern and an effective solution is using a water softener, which helps remove calcium from the water.** There are different water softeners available in the market and they are regarded as ion exchange systems. In such systems, **hardness ions are exchanged for salt (sodium or potassium) ions.** The exchange is done within the resin tank of the water softener. **Small resin beads are covered with salt ions. In the water softening process, the water flows through the resin beads, and the hard water reacts with salt ions, which consist mainly of sodium ions. This results in removal of hardness in water.**

Source: Page 76, chapter 4- Carbon and its Compounds of 10th NCERT

<https://www.kent.co.in/blog/remove-calcium-and-magnesium-in-hard-water-with-water-softener/>

<https://www.freshwatersystems.com/blogs/blog/what-is-a-water-softener-and-how-does-it-work>

<https://www.springwellwater.com/remove-hardness-in-your-home-water-with-water-softener/>

Q.15) Consider the following statements with respect to the China-Indian Ocean Region Forum:

1. It was organised by Indian Ocean Rim Association.
2. The forum was attended by representatives from 19 countries including India.
3. At the forum it was proposed to establish a marine disaster prevention and mitigation cooperation mechanism.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 3 only

Ans) d

Exp) Option d is the correct answer.

Recently in December 2022, China has convened the first “China-Indian Ocean Region Forum” in the southwestern Chinese city of Kunming.

Statement 1 is incorrect. It was organised by China International Development Cooperation Agency (CIDCA)

Statement 2 is incorrect. “China-Indian Ocean Region Forum” was not attended by India. The forum was attended by “high-level representatives” and “senior officials” from 19 countries: Indonesia, Pakistan,

Myanmar, Sri Lanka, Bangladesh, Maldives, Nepal, Afghanistan, Iran, Oman, South Africa, Kenya, Mozambique, Tanzania, Seychelles, Madagascar, Mauritius, Djibouti, and Australia.

Statement 3 is correct. Outcome of the forum was that the forum issued a “Joint Press Statement” that noted China’s proposal to establish a marine disaster prevention and mitigation cooperation mechanism between China and countries in the Indian Ocean region.

Source: <https://blog.forumias.com/china-indian-ocean-region-forum-explained-chinas-moves-in-the-indian-ocean/>

Q.16) Consider the following statements:

1. Carbon-14 isotopes are used as the standard reference for measuring atomic masses.
2. The positively charged ions are called anions.
3. The molecular mass of a substance is the sum of the atomic masses of all atoms in a molecule.

Which of the statements given above is/are correct?

- a) 2 and 3 only
- b) 1 and 3 only
- c) 3 only
- d) None of the above

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect: The atomic mass of an element is the average mass of the atoms of an element measured in atomic mass unit (amu, also known as daltons, D). The atomic mass is a weighted average of all of the isotopes of that element, in which the mass of each isotope is multiplied by the abundance of that particular isotope. In 1961 for a universally accepted atomic mass unit, **carbon-12 isotope was chosen as the standard reference for measuring atomic masses.** One atomic mass unit is a mass unit equal to exactly one-twelfth (1/12th) the mass of one atom of carbon-12. The relative atomic masses of all elements have been found with respect to an atom of carbon-12.

Statement 2 is incorrect: The charged particle in a compound is known as ions. Ions may consist of a single charged atom or a group of atoms that have a net charge on them. An ion can be negatively or positively charged. **A negatively charged ion is called an ‘anion’ and the positively charged ion, a ‘cation’.**

Statement 3 is correct: The molecular mass of a substance is the sum of the atomic masses of all atoms in a molecule. It is therefore the relative mass of a molecule expressed in atomic mass units (u).

Source: Page 30, 31, 34 of chapter 3 ATOMS AND MOLECULES 9t NCERT

https://www.angelo.edu/faculty/kboudrea/periodic/structure_mass.htm#:~:text=The%20atomic%20mass%20of%20an,abundance%20of%20that%20particular%20isotope.

<https://www.cancer.gov/publications/dictionaries/cancer-terms/def/molecular-mass>

Q.17) With reference to various types of reactions, consider the following statements:

1. Burning of coal is an example of Combination reaction.
2. In displacement reaction, one reactant is displaced by another reactant.
3. In decomposition reaction, two reactants react to form a single product.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 only
- d) 1, 2, and 3

Ans) a

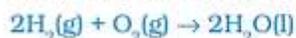
Exp) Option a is the correct answer.

Statement 1 is correct: A reaction in which a single product is formed from two or more reactants is known as a combination reaction. The examples of combination reactions are:

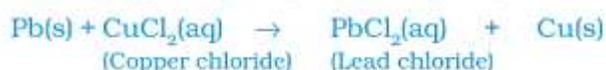
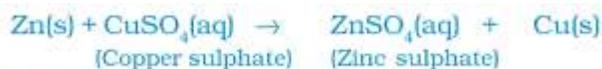
(i) Burning of coal



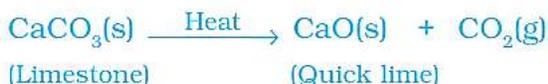
(ii) Formation of water from $\text{H}_2\text{(g)}$ and $\text{O}_2\text{(g)}$



Statement 2 is correct: When one reactant is displaced by another reactant it is called as displacement reaction. Zinc and lead are more reactive elements than copper. They displace copper from its compounds.



Statement 3 is incorrect: In decomposition reaction, a single reactant breaks down to give simpler products. Decomposition of calcium carbonate to calcium oxide and carbon dioxide on heating is an important decomposition reaction used in various industries. Calcium oxide is called lime or quick lime. It has many uses – one is in the manufacture of cement. When a decomposition reaction is carried out by heating, it is called thermal decomposition.



Source: Page 6, chapter 1- Chemical Reactions and Equations of 10th NCERT.

Q.18) Consider the following statements with reference to Redox reaction:

1. It is a type of chemical reaction that involves a transfer of electrons between two species.
2. In redox reaction, if a substance gains hydrogen during a reaction it is said to be oxidized.
3. The reaction of copper oxide with hydrogen gas is an example of Redox reaction.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2, and 3

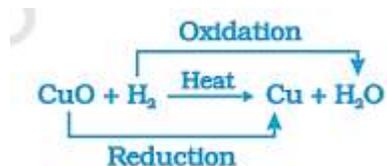
Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: An oxidation–reduction (redox) reaction is a type of chemical reaction that involves a transfer of electrons between two species. An oxidation–reduction reaction is any chemical reaction in which the oxidation number of a molecule, atom, or ion changes by gaining or losing an electron. Redox reactions are common and vital to some of the basic functions of life, including photosynthesis, respiration, combustion, and corrosion or rusting.

Statement 2 is incorrect: If a substance gains oxygen or loses hydrogen during a reaction, it is oxidised. If a substance loses oxygen or gains hydrogen during a reaction, it is reduced.

Statement 3 is correct: The reaction of Copper oxide with Hydrogen gas is an example of Redox reaction.



Some other examples of redox reactions are:



Source: Page 12, chapter 1- Chemical Reactions and Equations of 10th NCERT.

[https://chem.libretexts.org/Bookshelves/Analytical_Chemistry/Supplemental_Modules_\(Analytical_Chemistry\)/Electrochemistry/Redox_Chemistry/Oxidation-Reduction_Reactions](https://chem.libretexts.org/Bookshelves/Analytical_Chemistry/Supplemental_Modules_(Analytical_Chemistry)/Electrochemistry/Redox_Chemistry/Oxidation-Reduction_Reactions)

Q.19) The term ‘Rancidity’ is often heard in day-to-day life. In this context, which of the following statements best describes the term ‘Rancidity’?

- It is a condition of Hyper-acidity in the stomach of human body.
- It is a condition where environmental factors like moisture attack and destroy the metals.
- It is a condition formed when electricity is passed through an aqueous solution of brine.
- It is a condition that is produced by the oxidation of fat and oils present in foods.

Ans) d

Exp) Option d is the correct answer.

Rancidity, condition produced by aerial oxidation of unsaturated fat present in foods and other products, marked by unpleasant odour or flavour. When a fatty substance is exposed to air, its unsaturated components are converted into hydroperoxides, which break down into volatile aldehydes, esters, alcohols, ketones, and hydrocarbons, some of which have disagreeable odours.

Option a is incorrect: When there is an excessive amount of hydrochloric acid in the stomach, the condition is known as Hyperacidity.

Option b is incorrect: When a metal is attacked by substances around it such as moisture, acids, etc., it is said to corrode and this process is called corrosion. The black coating on silver and the green coating on copper are other examples of corrosion.

Option c is incorrect: When electricity is passed through an aqueous solution of sodium chloride (called brine), it decomposes to form sodium hydroxide.

Option d is correct: When fats and oils in food are oxidised, they become rancid and their smell and taste change. Thus, it is a condition that is produced by the oxidation of fat and oils present in foods. Usually substances which prevent oxidation (antioxidants) are added to foods containing fats and oil. Keeping food in air tight containers helps to slow down oxidation.

Source: Page 13, chapter 1- Chemical Reactions and Equations of 10th NCERT.

Q.20) With reference to the International Counter Ransomware Initiative (CRI), consider the following statements:

- It is a recent initiative of the Financial Action Task Force (FATF).
- India is not a member of CRI.
- It seeks to enhance international cooperation to combat the growth of ransomware

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Recently, the members of the International Counter Ransomware Initiative (CRI) met in Washington, DC.

Statement 1 is incorrect. International Counter Ransomware Initiative (CRI) is an international counter-ransomware virtual event with over 30 countries and the European Union, with the goal of accelerating cooperation to counter ransomware. It has nothing to do with Financial Action Task Force.

Statement 2 is incorrect. India is member of International Counter Ransomware Initiative (CRI). The other members of the International Counter Ransomware Initiative (CRI)– Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Croatia, Czech Republic, Dominican Republic, Estonia, France, Germany, Ireland, Israel, Italy, Japan, Kenya, Lithuania, Mexico, the Netherlands, New Zealand, Nigeria, Norway, Poland, Republic of Korea, Romania, Singapore, South Africa, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, United States, and Ukraine, and the European Union.

Statement 3 is correct. The Counter Ransomware Initiative seeks to enhance international cooperation to combat the growth of ransomware. It also aims to:

- 1) build cross-border resilience
- 2) collectively disrupt and defend against malicious cyber actors.

Source: <https://www.whitehouse.gov/briefing-room/statements-releases/2022/11/01/international-counter-ransomware-initiative-2022-joint-statement/>

Q.21) Consider the following statements with reference to the reaction of acid with metals:

- 1. When acid reacts with Metals, it generally produces salt and release hydrogen gas.
- 2. Different metals have different reactivities with water and dilute acids.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Acids take part in reactions in which salts are produced. In these reactions, the hydrogen ions in the acids are replaced by metal ions or ammonium ions.

Statement 1 is correct: When acid reacts with Metals, it produces salt and release hydrogen gas. It is a displacement reaction in which an element displaces another element in a compound. The hydrogen in acids is displaced by the metals to produce hydrogen gas.

Acid + Metal → Salt + Hydrogen gas

Statement 2 is correct: Different metals have different reactivities with water and dilute acids. A list of common metals arranged in order of their decreasing reactivity is known as an activity series. Metals above hydrogen in the Activity series can displace hydrogen from dilute acids.

Metals	Reactivity
Potassium	Reacts with water
Sodium	
Lithium	
Barium	
Strontium	
Calcium	Reacts with Acids
Magnesium	
Aluminium	
Zinc	
Manganese	
Chromium	
Iron	
Cadmium	
Cobalt	
Nickel	
Tin	Included for Comparison
Lead	
Hydrogen	
Antimony	
Bismuth	
Copper	
Mercury	
Silver	
Gold	
Platinum	

Source: Page 19, chapter 2 - Acids, Bases and Salts of 10th NCERT.

https://chem.libretexts.org/Bookshelves/Introductory_Chemistry/Introductory_Chemistry/14%3A_Acids_and_Bases/14.05%3A_Reactions_of_Acids_and_Bases

Q.22) With reference to Tooth Decay, consider the following statement:

1. It is the decay of tooth enamel, which is the hardest part in Human body.
2. The tooth decay starts only when the mouth is having Ph value of above 7.
3. It occurs when acid is produced in the mouth by the bacteria.
4. To avoid tooth decay, one could use toothpaste which is generally basic in nature.

Which of the statements given above are correct?

- a) 1 and 4 only
- b) 1, 3, and 4 only
- c) 1, 2, 3, and 4
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Tooth decay is damage to a tooth's surface, or enamel. It happens when bacteria in your mouth make acids that attack the enamel. Tooth decay can lead to cavities (dental caries), which are holes in your teeth. If tooth decay is not treated, it can cause pain, infection, and even tooth loss.

Statement 1 is correct and 2 is incorrect: Tooth decay starts when the pH of the mouth is lower than 5.5.

Tooth enamel, made up of calcium hydroxyapatite (a crystalline form of calcium phosphate) **is the hardest**

substance in the body. It does not dissolve in water, but is corroded when the pH in the mouth is below 5.5.

Statement 3 is correct: Bacteria present in the mouth produce acids by degradation of sugar and food particles remaining in the mouth after eating.

Statement 4 is correct: The best way to prevent tooth decay is to clean the mouth after eating food. **Using toothpastes, which are generally basic, for cleaning the teeth can neutralise the excess acid and prevent tooth decay.**

Source: page 27, chapter 2- Acids, Bases and Salts of 10th NCERT.

Q.23) Bleaching powder is a solid combination of chlorine and slaked lime. In this context, what are the applications of the Bleaching powder?

1. It can be used to kill the germs in water.
2. It can be used as an oxidising agent in chemical industries.
3. It can be used to whiten Wood Pulp in the paper industry.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2, and 3

Ans) d

Exp) Option d is the correct answer.

Chlorine gas is used for the manufacture of bleaching powder. Bleaching powder is produced by the action of chlorine on dry slaked lime $[Ca(OH)_2]$. Bleaching powder is represented as $CaOCl_2$, though the actual composition is quite complex.

Formula - $Ca(OH)_2 + Cl_2 \rightarrow CaOCl_2 + H_2O$

Statement 1 is correct: Bleaching powder is **used to kill the germs in water.**

Statement 2 is correct: Bleaching powder is **used as an oxidising agent in many chemical industries.**

Statement 3 is correct: Bleaching powder is used for bleaching cotton and linen in the textile industry, **for bleaching or whiten wood pulp in paper factories and** for bleaching washed clothes in laundry.

Source: Page 30, chapter 2- Acids, Bases and Salts of 10th NCERT.

Q.24) Consider the following statements with reference to the properties of Ionic compounds:

1. They are generally brittle in nature.
2. These compounds have low melting and boiling points.
3. These compounds usually do not conduct electricity in solid state but conduct electricity in the molten state.
4. Ionic compounds are generally soluble in water.

Which of the statements given above are correct?

- a) 1, 2, and 4 only
- b) 1 and 4 only
- c) 1, 3, and 4 only
- d) 2, and 3 only

Ans) c

Exp) Option c is the correct answer.

Ionic compounds usually form when a metal reacts with a nonmetal, where the metallic atoms lose an electron or electrons, becoming cations (positively charged ions), and the nonmetallic atoms gain an electron or electrons, becoming anions (negatively charged ions). Once the ions form, if they are in close proximity, their opposite charges attract, forming an ionic compound. The properties of ionic compounds are as follows:

Statement 1 is correct: Ionic compounds are solids and are somewhat hard because of the strong force of attraction between the positive and negative ions. **These compounds are generally brittle and break into pieces when pressure is applied.**

Statement 2 is incorrect: Melting and Boiling points: Ionic compounds have high melting and boiling points. This is because a considerable amount of energy is required to break the strong inter-ionic attraction.

Statement 3 is correct: The conduction of electricity through a solution involves the movement of charged particles. A solution of an ionic compound in water contains ions, which move to the opposite electrodes when electricity is passed through the solution. **Ionic compounds in the solid state do not conduct electricity because movement of ions in the solid is not possible due to their rigid structure. But ionic compounds conduct electricity in the molten state.** This is possible in the molten state since the electrostatic forces of attraction between the oppositely charged ions are overcome due to the heat. Thus, the ions move freely and conduct electricity.

Statement 4 is correct: Ionic compounds are generally soluble in water and insoluble in solvents such as kerosene, petrol, etc.

Source: Page 49, chapter 3- Metals and Non-metals of 10th NCERT.

<https://www.britannica.com/science/ionic-compound>

Q.25) Which of the following statements with reference to 'Maarg Portal' is correct?

It is a-

- platform to monitor details about every plant under all plantation project of National Highway Authority of India.
- portal to address Indian requirements of map based contents like satellite Images and theme-oriented services.
- one-stop platform to facilitate mentorship for startups
- platform to provide education through online mode.

Ans) c

Exp) Option c is the correct answer.

Option a is incorrect. The National Highways Authority of India (NHAI), a public sector undertaking under the Ministry of Road Transport and Highways, has developed a mobile App called 'Harit Path' to monitor location, growth, species details, maintenance activities, targets and achievements of each of its field units for each and every plant under all plantation projects.

Option b is incorrect. Bhuvan is designed, developed, deployed and managed by a small team of scientists within ISRO. It is being widely, used by the Government, public, NGOs and Academia. Bhuvan is developed with a clear focus of addressing Indian requirements of map based contents like satellite Images and theme-oriented services to enable planning, monitoring and evaluation of stakeholder's activities in governance and development.

Option c is correct. The MAARG Portal by Startup India is a one stop mentorship platform to facilitate mentorship for startups across diverse sectors, functions, stages, geographies, and backgrounds. Startups can connect with academicians, industry experts, successful founders, seasoned investors, and other experts to get personalized advice on growth strategy, seek clarity, and get practical advice.

Option d is incorrect. DIKSHA is the platform for providing quality e-content for school education in States/UTs and QR coded Energized Textbooks for all grades (one nation, one digital platform). DIKSHA complies with World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG) 2.0 level AA.

Source: <https://maarg.startupindia.gov.in/about-us>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1647625>

<https://pib.gov.in/newsite/PrintRelease.aspx?relid=137293>

Q.26) Which of the following statements regarding RADAR and its application is/are correct?

1. The RADAR system operates by transmitting electromagnetic waves and detecting the reflected signal.
2. RADAR cannot be used to measure Speed of a Vehicle
3. RADAR is also used to detect buried artifacts.

Select the correct answer using the code below:

- a) 1 and 3 only
- b) 1, 2 and 3
- c) 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

RADAR stands for Radio Detection and Ranging and is used for sensing, detecting and locating objects in the environment. RADAR has a wide range of applications such as aircraft anti-collision systems, air and terrestrial traffic control, surveillance systems, air-defence systems, meteorological monitoring, antimissile systems, RADAR astronomy, marine RADARs for ships, guided missile target locating system, remote sensing, geological observations, and measurement of height and depths

Statement 1 is correct: RADAR (Radio Detection and Ranging) works by transmitting radio waves and then detecting the reflected signals to determine the location, speed, and other characteristics of objects in its vicinity.

Statement 2 is incorrect: RADAR is commonly used by law enforcement agencies to measure the speed of vehicles for traffic enforcement purposes. Hence statement 2 is wrong.

Statement 3 is correct: Archaeologists use ground penetrating RADARs for detecting buried artifacts. Geologist also use it for studying the position of the earth for earthquake detection.

Modern RADAR systems are equipped with advanced signal processing techniques that allow them to extract a **vast amount of information from the reflected signal, beyond just range detection**. For instance, Doppler RADARs can detect the velocity of moving objects, while Synthetic Aperture RADAR (SAR) can create high-resolution images of the terrain even in adverse weather conditions etc.

Source:

https://www.researchgate.net/publication/316696944_RADAR_and_its_applications/link/5e6328324585153fb3c836ac/download

Q.27) Which of the following statements best defines the 'Escape Velocity'?

- a) The minimum velocity required for a planet to enter the orbit of Sun
- b) The minimum velocity required for an object to leave the gravitational influence of a planet
- c) The maximum velocity required for an object to escape the Planet magnetic field
- d) The maximum velocity required for a satellite to enter the orbit of the Planet.

Ans) b

Exp) Option b is the correct answer.

Escape velocity is the minimum speed required for an object to escape the gravitational pull of a planet or other celestial body and enter into space. At this speed, the object will continue to move away from the planet indefinitely, assuming there is no other force acting on it. It is important in space exploration and satellite launches.

A spacecraft leaving the surface of Earth, for example, needs to be going about 11 kilometers (7 miles) per second, or over 40,000 kilometers per hour (Approx 25,000 miles per hour), to enter orbit.

Knowledge Base:

The escape velocity of a planet or other celestial body depends on its mass and radius. It is given by the formula:

$$v = \sqrt{2GM/r}$$

where v is the escape velocity, G is the gravitational constant, M is the mass of the planet, and r is the distance from the centre of the planet to the object.

Source: https://www.nasa.gov/audience/foreducators/k-4/features/F_Escape_Velocity.html

Q.28) Which of the following statements best defines the term "reverberation"?

- The persistence of sound in a closed space after the original sound has ceased.
- Repetition of a sound received at the source caused by reflection of sound.
- The bending of sound waves around an obstacle
- The decrease in sound intensity as it travels through a medium.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: Reverberation is the persistence of sound waves in an enclosed space after the original sound source has stopped. When sound waves hit a surface, they can be reflected back and forth between surfaces, causing them to linger in the space for a longer period of time. This creates a prolonged sound that gradually fades away.

Option b is incorrect: The repetition of a sound wave received at the source caused by reflection is known as an **echo**. The reflected sound creates a delay between the original sound and the echoed sound, which is more noticeable when the distance between the source and the reflective surface is greater.

Option c is incorrect: The bending of sound waves around an obstacle is known as **diffraction**. When sound waves encounter an obstacle, such as a doorway or a corner, they can bend and spread out, allowing the sound to "diffuse" or spread around the obstacle.

Option d is incorrect: The decrease in sound intensity as it travels through a medium is known as **attenuation**. Attenuation occurs because sound waves transfer energy to the particles in the medium they are traveling through, causing them to vibrate and dissipate the energy of the sound wave.

Knowledge Base: Reverberation is a phenomenon commonly experienced in enclosed spaces such as concert halls, churches, and auditoriums. It can be caused by a variety of factors including the size and shape of the room, the materials used in the construction of the walls and floors, and the amount of sound-absorbing materials present. Reverberation can affect the clarity and quality of sound in a space and is often managed through the use of acoustic treatments such as sound-absorbing panels or diffusers.

Source: https://www.acousticalsurfaces.com/acoustic_IOI/reverberation.htm

Q.29) Which of the following statements explains why an astronaut in a spaceship orbiting the Earth feels weightlessness?

- The gravitational pull of the Earth on the astronaut is balanced by the centripetal force of the astronaut's orbital motion.
- The spacecraft and the astronaut inside it are falling towards the Earth at the same rate as the Earth is curving away from them.

3. There is no solid surface for the astronaut to push against, so there is no opposing force to create a feeling of weight.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Weightlessness is essentially free fall, where gravity is the only force acting on the astronaut and their spaceship. Spaceships are able to stay in orbit because they are traveling so quickly in the forward direction that they end up orbiting around the Earth in a circular pattern, despite being pulled towards Earth.

Statement 1 is incorrect: It is true that the gravitational pull of the Earth on the astronaut is balanced by the centripetal force of the astronaut's orbital motion, **but this only explains why the astronaut does not fall back to the Earth. It does not explain why the astronaut feels weightless.**

Statement 2 is correct: Spacecraft and the astronaut inside it are falling towards the Earth at the same rate as the Earth is curving away from them. This creates a feeling of weightlessness because the astronaut and the spacecraft are essentially in freefall, with no opposing force to create a sensation of weight.

Statement 3 is correct: The absence of a solid surface to push against means that there is no reaction force pushing back on the astronaut's body, which creates a sensation of weightlessness.

Source:

[https://sitn.hms.harvard.edu/flash/2018/free-falling-the-science-of-weightlessness/#:~:text=\(B\)%20An%20astronaut%20orbiting%20the,than%20crashing%20into%20the%20Earth.](https://sitn.hms.harvard.edu/flash/2018/free-falling-the-science-of-weightlessness/#:~:text=(B)%20An%20astronaut%20orbiting%20the,than%20crashing%20into%20the%20Earth.)

Q.30) The Prime Minister recently paid tribute to Subramania Bharathiyar. Which of the following statements are correct regarding Subramania Bharathiyar?

- 1. He was a poet, freedom fighter and a member of Indian National Congress.
- 2. 'Sudesa Geethangal' is his best-known poem.
- 3. He became the first ever poet whose works were nationalised by the state government.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Prime Minister Narendra Modi paid tributes to Subramania Bharathiyar, one of the most influential Tamil literary figures and also a freedom fighter, on his birth anniversary.

Statement 1 is correct. Subramania Bharathiyar was born on this day in 1882. He was a poet, freedom fighter, and activist from Tamil Nadu and played a proactive role as a member of the Indian National Congress.

Statement 2 is correct. Subramania Bharathiyar is best known for his poem Sudesa Geethangal, written in 1908. His contributions to modern Tamil literature earned him the title of 'Mahakavi Bharathiar.'

Statement 3 is correct. In 1949, Subramania Bharathiyar became the first ever poet whose works were nationalised by the state government.

Knowledge Base:

More about Subramania Bharathiyar

- 1) Owing to his revolutionary patriotic fervour, he was forced to live in exile from 1910 to 1919 in Pondicherry (now Puducherry), then a French colony.
- 2) Bharathi was a vocal critic of the caste system and he had himself taken off his sacred thread. He also condemned certain shastras that denigrated women and championed the cause of social justice by preaching equality of humankind.

Source: <https://www.google.com/amp/s/www.outlookindia.com/national/pm-modi-pays-tributes-to-tamil-poet-mahakavi-bharathiar-who-was-subramania-bharathi--news-244060/amp>

Q.31) Which of the following fields can have potential application of LASER technology?

1. Military operations
2. Medicine
3. Communication
4. Art and Entertainment
5. General-purpose illumination

Select the correct answer using the code given below:

- a) 1, 2, 3 and 4 only
- b) 1, 3, 4 and 5 only
- c) 2, 3, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

The potential applications of LASER technology are diverse and varied. While it is well-known that LASERS have been used in **military operations, medicine, and communication**, Lasers have also found their way into the realm of art and entertainment and are used in light shows, CD and DVD technology, and **special effects in movies**.

Statement 1 is correct : The probability of intercepting a laser signal is very low due to its narrow beam divergence and coherent optical beam, making the laser a suitable candidate for secure **military tactical operations**.

Statement 2 is correct : Lasers were first used for medical applications in 1961 for treatment of skin discoloration and detached retinas. Presently lasers are being widely used for numerous medical applications. These include surgery, ophthalmology, dermatology, angioplasty, cancer treatment, urology, cosmetic applications such as laser hair removal, tattoo removal and liposuction etc.

Statement 3: Laser light is used in optical fiber communications to send information over large distances with low loss. Laser light is used in underwater communication networks. Also, lasers are used in space communication, radars and satellites.

Statement 4: Lasers are typically bright, bold, and beautiful by nature, which is why they stand out over typical lighting fixtures. Not to mention, lasers aren't limited to projecting a specific gobo or effect, they're extremely versatile. Making them capable of virtually any event. Commonly referred to as "Laser Projectors" or "Laser Light Projectors", these entertainment lasers are sophisticated devices that are controlled using dedicated laser control hardware from either a PC or lighting console, allowing you to project all types of laser light effects

Statement 5 is correct: LASER technology is still in its early stages of development for general purpose lighting but has the potential to offer significant benefits in terms of energy efficiency, color rendering, and design flexibility.

Much Research shows that laser-based lighting, although still a growing technology, can push the limits of solid-state lighting in terms of efficiency at high currents thanks to low droop and optical management of the emitted light.

Source: https://www.iitk.ac.in/stc/Publications/DGoswami/marked_Chapter_07.pdf

<https://www.led-professional.com/resources-1/articles/laser-technology-for-lighting-applications-a-review-and-analysis-of-a-promising-technology>

<https://ieeexplore.ieee.org/document/8048469>

<https://www.led-professional.com/resources-1/articles/laser-technology-for-lighting-applications-a-review-and-analysis-of-a-promising-technology>

<https://www.worldoflasers.com/laserapplmedical.htm>

<https://www.physics-and-radio-electronics.com/physics/laser/applicationsoflasers.html>

<https://lasershowprojector.com/blogs/laser-light-applications/lasers-for-entertainmen>

Q.32) With reference to the Geographic Information System (GIS), consider the following statements:

1. It is a computer-based system to record, store and analyse data related to positions on Earth's surfaces.
2. It can be helpful in city administration and property tax assessment.
3. It is among the cheapest way of data aggregation and assessment for efficient decision making.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

A geographic information system (GIS) consists of integrated computer hardware and software that store, manage, analyse, edit, output, and visualize geographic data. GIS technology integrates common database operations such as query and statistical analysis with the unique visualization and geographic analysis benefits offered by maps.

Statement 1 is correct: A geographic information system (GIS) is a computer based system for capturing, storing, checking, and displaying data related to positions on Earth's surface. GIS can show many different kinds of data on one map, such as streets, buildings, and vegetation. This enables people to more easily see, analyse, and understand patterns and relationships.

Statement 2 is correct: GIS aids in the monitoring of property tax revenue and city administration by establishing a platform that spatially interconnects all property- related data, such as the number of storeys in each building, the total structured area of each building, individual plot areas, locality details, and municipal colony boundaries, etc. For example, Pune city has its own GIS portal for tax administration. There are several other cities in India which have gone high tech to manage property taxes in respective civil administration.

Statement 3 is incorrect: Information from GIS is very accurate and provides users with better assessment and predictions. With the availability of detailed and specific data, decision making has improved. **However, GIS technology is very costly technology to install. The GIS setup is complex and additional cost is imputed on training and dataset upgradation.**

Source: <https://education.nationalgeographic.org/resource/geographic-information-system-gis/>

<https://analyticsindiamag.com/how-smart-cities-are-tackling-property-tax-evasion-via-gis/>

https://www.researchgate.net/publication/333510563_Merits_and_Demerits_of_GIS_and_Geostatistical_Techniques

Q.33) With reference to the Hyperspectral Imaging technology, consider the following statements:

1. It is a technology that captures hundreds of images at different wavelengths of the same object or spatial area.
2. It can improve the monitoring of pollutants in the atmosphere.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Hyperspectral imaging samples a wide variety of bandwidths in the light spectrum to provide a rich dataset and detect objects of interest not visible to single-bandwidth imaging sensors.

Statement 1 is correct: Hyperspectral imaging is a growing area in remote sensing in which an imaging spectrometer collects hundreds of images at different wavelengths for the same spatial area/ object. It captures and analyses the image of an object from literally hundreds of narrow, adjacent wavelength bands, and across a wider range of wavelengths than visible to the naked eye.

Statement 2 is correct: Hyperspectral imagery has the potential to significantly improve the ease of monitoring pollutants in the atmosphere. This includes the study and monitoring of particulate matter or greenhouse gasses such as **carbon monoxide, carbon dioxide, nitrous oxide and methane** in the atmosphere over time.

Knowledge Base: **Modern digital cameras can sense energy in limited portions of the electromagnetic spectrum. Whereas, hyperspectral imaging has capability to generate large data and identify unique spectral signatures or fingerprints that each material or substance has,** and classify them accordingly into different types of land cover such as crops, forests, grasslands, and bodies of water which can help administration in better land management and urban planning.

Source: <https://timesofindia.indiatimes.com/blogs/voices/seeing-the-unseen-hyperspectral-imagery-the-technology-and-its-applications/>

<https://www.sciencedirect.com/topics/earth-and-planetary-sciences/hyperspectral-imaging>

Q.34) Which of the following animals can produce infrasonic sound?

1. Whales
2. Elephants
3. Bats
4. Rhinoceros
5. Dolphins

Select the correct answer from the codes given below:

- a) 1, 2 and 3 only
- b) 1, 2 and 4 only
- c) 2, 3 and 5 only
- d) 1, 4 and 5 only

Ans) b

Exp) Option b is the correct answer.

The audible range of sound for human beings extends from about 20 Hz to 20000 Hz. The sound of frequencies below 20 Hz are called as infrasonic sound or infrasound. Whereas sound of frequencies above

20000 Hz are called as ultrasonic frequencies or ultrasound. Hence, both infrasonic and ultrasonic sounds are inaudible to man.

Option 1 is correct: Whale can vocalize and hear very low-pitched, or infrasonic sound, using which they can travel great distances and scatter to large areas in water. With infrasonic sound, whales can communicate with each other over geographic areas as large as an ocean basin.

Option 2 is correct: Elephants can produce and can communicate using very low frequency sounds, with pitches below the range of human hearing. These low-frequency infrasound can travel several kilometres and provide elephants with a "private" communication channel that plays an important role in elephants' complex social life.

Option 3 is incorrect: Bats do not produce infrasound, rather they use ultrasonic waves (>20000 Hz) for communication and navigation.

Option 4 is correct: Rhinoceros can produce infrasonic sounds of frequency as low as 5 Hz for communication.

Option 5 is incorrect: Dolphins also do not produce infrasound; they use ultrasonic waves for communication and navigation under the water.

Source: <https://ncert.nic.in/ncerts/l/iesc112.pdf>

<https://carnegiemuseums.org/carnegie-magazine/archive-article/how-whales-hear-jul-aug-1997/#:~:text=By%20contrast%2C%20the%20baleen%20whale,large%20as%20an%20ocean%20basin.>

<https://www.sciencedaily.com/releases/2012/08/120803103421.htm#:~:text=Elephants%20can%20communicate%20using%20very,in%20elephants'%20complex%20social%20life.>

Q.35) Consider the following statements with respect to the Veer Baal Diwas which was announced recently by the Prime Minister.

1. It is to be commemorated on 26th December every year.
2. It is commemorated to honour martyrdom of Guru Govind Singh.
3. The Battle of Chamkaur was an important event in history to commemorate this day.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Prime Minister, Shri Narendra Modi participated in a historic programme marking 'Veer Bal Diwas' at Major Dhyan Chand National Stadium in Delhi. During the programme, the Prime Minister attended a 'Shabad Kirtan' performed by about three hundred Baal Kirtanis.

Statement 1 is correct. On 9th January 2022, the day of the Prakash Purab of Sri Guru Gobind Singh Ji, the Prime Minister had announced that 26th December would be observed as 'Veer Bal Diwas'.

Statement 2 is incorrect. It is celebrated to mark the martyrdom of **sons of Sri Guru Gobind Singh - Sahibzadas Baba Zorawar Singh Ji and Baba Fateh Singh Ji.**

Statement 3 is correct. On the morning of 7 December 1705, the day of the fateful battle of Chamkaur, Baba Zorawar Singh ji, along with Baba Fateh Singh ji and their grandmother, was taken into custody by Jani Khan and Mani Khan Ranghar, the officials at Morinda. They were then threatened with death, but they remained undaunted. On 12 December 1705, Baba Zorawar Singh ji and Baba Fateh Singh ji were martyred by sealing alive in a wall.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1886675>

<https://vikaspedia.in/education/childrens-corner/important-days/veer-bal-diwas>

Q.36) What happens when table salt (Sodium Chloride) is mixed with water?

- The boiling point of water decreases.
- The pH of the resultant solution increases.
- The surface tension of the resultant solution increases.
- The density of the resultant solution decreases.

Ans) c

Exp) Option c is the correct answer.

Water (H₂O) consists of the elements hydrogen (H) and oxygen (O) in a 2-to-1 molar ratio. This means that there are two H atoms for every O atom in water. It is a polar covalent compound. Table salt (sodium chloride, or NaCl) is an ionic compound, meaning that the bond it forms results from the donation of an electron from one atom (Na) to another (Cl), rather than from the electron sharing seen in covalent bonds. When table salt is placed in water, the slightly electropositive sodium portion is attracted to the slightly electronegative oxygen portion of water molecules. At the same time, the slightly electronegative chlorine portion of NaCl is attracted to the slightly electropositive hydrogen portion of water.

Statement a is incorrect: When the salts are dissolved in water, the intermolecular attraction between salt-water molecule is greater than water-water attraction. Hence, when water is heated at 100-degree Celsius (i.e., at its boiling point), the salt molecules make it difficult for the water molecules to evaporate due to greater attractive force. **Therefore, the boiling point of the resultant solution increases.**

Statement b is incorrect: When Sodium Chloride is added to water it breaks down into ions of sodium and chloride. Neither of them reacts to water so adding it to water will only change the volume, not the pH. In order for a type of salt to affect the pH it has to react with water to release or bind the hydrogen atoms from the water. No chemical reaction takes place when salt is added to water.

Statement c is correct: Surface Tension is the property of the surface of a liquid that allows it to resist an external force, due to the cohesive nature of its molecules. When salt is added to the water the intermolecular attraction in the solution increases (as intermolecular attraction between salt-water molecules is greater than the water-water molecules), **hence the property of intermolecular cohesion increases thus increasing the surface tension of the resultant solution.**

Statement d is incorrect: As we know, density of a substance is mass per unit volume, and when salt is added to water the density of the solution increases (and not decreases). The Dead Sea is much denser than the Red sea, because the salinity of the Dead sea is much higher than the Red sea.

Source: <https://sciencing.com/happens-salt-added-water-5208174.html>

Q.37) Which of the following statements best describes the reason why satellites are usually launched from the eastern coast of a country?

- To minimise the impact of pollution caused by rocket propulsion.
- The area near eastern coast is less affected by the stratospheric winds.
- It provides an initial boost to rockets due to rotational velocity of the Earth.
- Due to less density of population in the Eastern coasts of a country.

Ans) c

Exp) Option c is the correct answer.

The choice of the perfect launch site for spacecraft, quite predictably, involves the study and analysis of many different parameters. One of the primary concerns of space engineers and scientists is to ensure that the satellite in question gets as much natural 'push' as possible during its initial ascent.

Option c is correct: As the Earth rotates from west to east, launching a rocket from the east coast gives an additional boost to the rocket, due to the rotational speed of Earth. This initial boost aids in reducing cost of rockets used to launch satellites.

Another reason is that if something goes wrong during the ascent, the debris will fall into an ocean instead of a densely populated area. Additionally, most launch sites are located near the equator because rockets launched from these sites get an additional natural boost that helps save on fuel and boosters.

Option a is incorrect: Launching of rockets from the eastern coast has nothing to do with the impact of pollution caused during the rocket ignition and propulsion. Pollution will anyway occur.

Option b is incorrect: The stratospheric winds blow a few kilometres above the surface of the Earth. They blow uniformly over a latitude. Hence, they do not necessarily/significantly favour the launching from the Eastern Coast.

Option d is incorrect: Eastern coasts all over the world do not necessarily have less population. For example, eastern coast of the China is densely populated. Hence, it is not one of the possible reasons.

Source: <https://www.scienceabc.com/eyeopeners/why-are-rockets-launched-from-areas-near-the-equator.html>

Q.38) With reference to the ‘Total Solar Eclipse’, consider the following statements:

1. ‘Ring of fire’ is a unique characteristic of Total Solar Eclipse.
2. Total Solar Eclipse are rare as compared to Total Lunar Eclipse
3. Total Solar Eclipse provides an opportunity for scientists to study the corona of the Sun.

Which of the statements given above are correct?

- a) 2 and 3 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) a

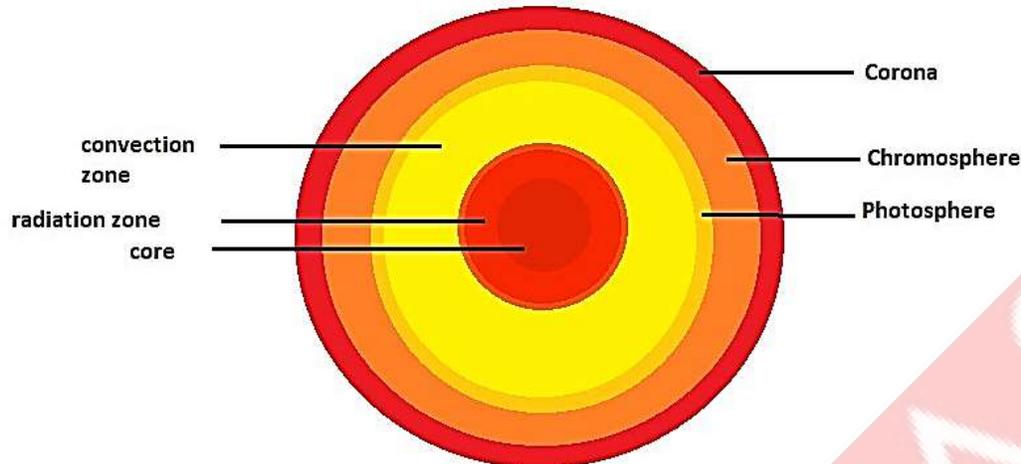
Exp) Option a is the correct answer.

A solar eclipse occurs when the **moon is positioned between Earth and the Sun** and casts a shadow over Earth. Sometimes the Moon only blocks part of the Sun’s light. This is called a partial solar eclipse. There are various types of solar eclipse – **Total Solar Eclipse, Annular solar, Partial solar eclipse and Hybrid solar eclipse.** **When Moon blocks all of the Sun’s light. This is called a total solar eclipse.**

Statement 1 is incorrect: ‘Ring of fire’ is a characteristic of Annular Solar Eclipse (Not Total Solar Eclipse). The Annular solar eclipse occurs when the moon passes between the sun and Earth when it is near its farthest point from Earth. At this distance, the moon appears smaller than the sun and **doesn't cover the entire face of the sun. Instead, a ring of light is created around the moon, which is popularly known as ‘Ring of Fire’.**

Statement 2 is correct: Lunar eclipses are more frequently visible because during a lunar eclipse, Earth casts a much bigger shadow on the Moon than the Moon casts during a solar eclipse on Earth. **The reason solar eclipses are so rare is that the umbra of the Moon rarely hits the surface of the Earth.** Even during a total solar eclipse, a small area on Earth is covered by the umbra. **Hence, Total Solar Eclipse are rare as compared to Total Lunar Eclipse.**

Statement 3 is correct: Total darkness during the Total Solar Eclipse is very crucial for scientists who study the Sun’s atmosphere, called the **corona. The corona is very dim. It’s usually hard to see because the Sun is so much brighter.** But, when the Moon blocks the Sun’s light during an eclipse, all scientists can see the light from the corona for their study.



SOLAR ECLIPSE

Things to know about this astronomical event

TYPES OF SOLAR ECLIPSE



TOTAL
The Moon completely blocks off the Sun's rays and casts a shadow over the Earth.



ANNULAR
The Moon covers the Sun fully but due to its relatively small size the outer ring of the Sun is completely visible from Earth. This is also known as the Ring of Fire.



PARTIAL
The Moon covers a part of the Sun and casts only the outer part of its shadow, the penumbra, on Earth.

HYBRID: A rare form of solar eclipse which changes from an annular to a total solar eclipse, and vice versa, along its path. During a Hybrid Solar Eclipse you could see any of the three forms of eclipses, depending on exactly where you stand.

WHAT IS A SOLAR ECLIPSE?
During a Solar eclipse the Sun, Moon and Earth are in a straight line and the Moon comes between the Sun and Earth. This blocks the rays of the Sun from reaching the Earth causing a solar eclipse.

FACT
A solar eclipse usually occurs around two weeks prior or after a lunar eclipse.

Source: timeanddate.com, news reports

Source: <https://spaceplace.nasa.gov/eclipse-snap/en/>

<https://www.space.com/15584-solar-eclipses.html>

[https://www.google.com/url?sa=t&source=web&rct=j&url=https://stardate.org/nightsky/eclipses%23%20%20Lunar%2520and%2520solar%2520eclipses%2520occur,eclipse%2520than%2520a%2520solar%2520eclipse.&ved=2ahUKEwib47CMvaj-](https://www.google.com/url?sa=t&source=web&rct=j&url=https://stardate.org/nightsky/eclipses%23%20%20Lunar%2520and%2520solar%2520eclipses%2520occur,eclipse%2520than%2520a%2520solar%2520eclipse.&ved=2ahUKEwib47CMvaj-AhUGcGwGHfEbCy0QFnoECBgQBQ&usg=AOvVaw3VMsEw4p_FeU2tGQDp19Sh)

[AhUGcGwGHfEbCy0QFnoECBgQBQ&usg=AOvVaw3VMsEw4p_FeU2tGQDp19Sh](https://www.google.com/url?sa=t&source=web&rct=j&url=https://stardate.org/nightsky/eclipses%23%20%20Lunar%2520and%2520solar%2520eclipses%2520occur,eclipse%2520than%2520a%2520solar%2520eclipse.&ved=2ahUKEwib47CMvaj-AhUGcGwGHfEbCy0QFnoECBgQBQ&usg=AOvVaw3VMsEw4p_FeU2tGQDp19Sh)

Q.39) Which of the following is/are the preventive measures taken so that the trains don't topple when moving along a curved track?

1. The curved railway tracks are slightly inclined.
2. The shape of wheel is made slightly conical.

Select the correct answer using the code given below.

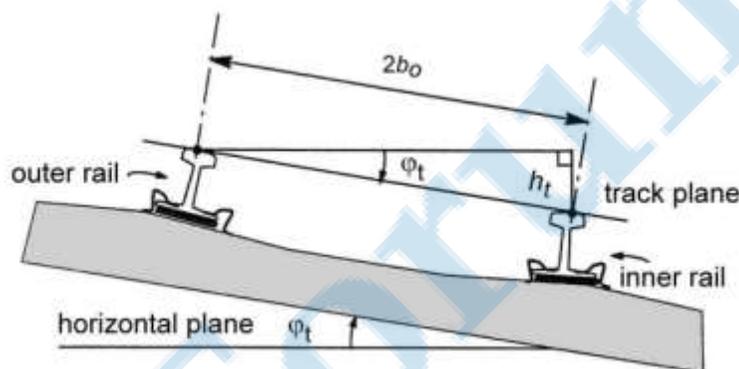
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

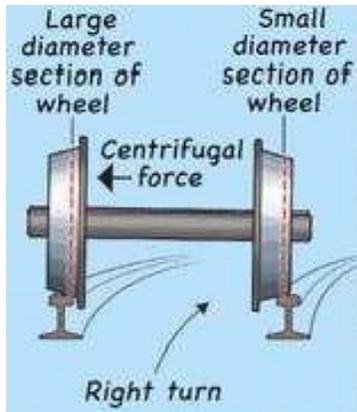
Exp) Option c is the correct answer.

Toppling implies that an object or an item will effortlessly fall over. Trains can topple on curved surfaces if tracks are made without using proper engineering.

Statement 1 is correct: The reason for trains don't topple when moving along a curved tracks because railway tracks are banked. The outer rail is positioned at a slightly higher level than the inner one. This is the reason why tracks are often inclined. The forces acting on the train in such a case are its weight, acting straight downward and the normal reaction force exerted by the tracks. Because of the inclination (due to the embankment) the normal force (reaction of the weight) exerted from the ground has a horizontal component. As long as this equals the centripetal force of the curve at that point, the train does not fall sideways.



Statement 2 is correct: The wheels on each side of a train car are connected with a metal rod called an axle. This axle keeps the two train wheels moving together, **both wheel turning at the same speed when the train is moving.** This construction is great for straight tracks. But when a train needs to go around a bend the fact that both wheels are always rotating at the same rate can become a problem. **The outside of a curve is slightly longer than the inside, so the wheel on the outside rail actually needs to cover more distance than the wheel on the inside rail. To help the wheels stay on the track their shape is usually slightly conical.** This means that the inside of the wheel has a larger circumference than the outside of the wheel. As a result when a train is turning it is momentarily running on wheels that are effectively two different sizes. As the outside wheel's circumference becomes larger it is able to travel a greater distance even though it rotates at the same rate as the smaller inside wheel.



Source: <https://www.telegraphindia.com/science-tech/why-don-t-trains-topple-when-moving-along-a-curved-track/cid/1541627>

<https://www.scientificamerican.com/article/train-wheel-science/#:~:text=To%20help%20the%20wheels%20stay,from%20falling%20off%20the%20tracks.>

<https://www.indiatimes.com/explainers/news/explained-what-is-tilting-train-that-india-will-have-its-first-by-2025-586132.html#:~:text=In%20order%20for%20high%2Dspeed,or%20skidding%20off%20the%20track.>

Q.40) What is 'Erra Matti Dibbalu', which was recently seen in news?

- It is a rare red sand dune seen in Andhra Pradesh.
- It is a newly discovered species of Indian beetle
- It is a sedimentary cave from the state of Meghalaya
- It is a living roots bridge found in North East India

Ans) a

Exp) Option a is the correct answer.

Locals in Vishakhapatnam have taken up the initiative to preserve one of their heritages, Erra Matti Dibbalu, a notified National Geo-heritage monument.

Option a is correct. Erra Matti Dibbalu are rare red sand dunes and carry with them millions of years of geological processes. The dissected and stabilized coastal red sediment mounds are located between Vishakhapatnam and Bhimuniapatnam.

Option b is incorrect. 'Omorgus Khandesh', a newly discovered Indian beetle: It can help forensic science. The beetle is important for forensic science as it helps detect the time of death of an animal or human.



Option c is incorrect. Mawmluh Cave in Meghalaya, locally known as Krem Mawmluh, has been listed as UNESCO's one of the 'First 100 IUGS (International Union of Geological Sciences) Geological Sites' in the world.

Option d is incorrect. Jing kieng jri, the living root bridges are one of Meghalaya's most beautiful tangible heritage sites. These sites have recently been added to the tentative UNESCO world heritage site list. They are made of intertwined roots which are a sort of magic, but they aren't imaginary. They are majorly made by Khasi tribes.



Source: <https://newsonair.com/2022/02/13/locals-take-up-clean-up-drives-at-erra-matti-dibbalu-indias-treasure-of-geological-evolution/>
<https://indianexpress.com/article/lifestyle/destination-of-the-week/mawmluh-cave-meghalaya-unescos-first-100-iugs-geological-sites-in-the-world-8188878/>
<https://www.downtoearth.org.in/news/wildlife-biodiversity/meet-omorgus-khandesh-a-newly-discovered-indian-beetle-it-can-help-forensic-science-87718>

Q.41) A rainbow is a meteorological and optical phenomenon that is caused by reflection, refraction and dispersion of light in water droplets resulting in a spectrum of light appearing in the sky. Consider the following statements with reference to the rainbow:

1. The shape of rainbow is always semi-circular or arc shaped.
2. Rainbows formed by sea spray are usually smaller than rainbows formed by rain.
3. When a 'double rainbow' is seen, the secondary rainbow has the same order of the colors as primary rainbow.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

A rainbow is a **multicolored arc in the sky which appears when sunlight hits water droplets.**

Statement 1 is incorrect: Rainbows appear semi-circular over level ground at sunrise or sunset, when the sun is exactly on the horizon, the majority of the time a smaller segment of an arc is seen. **A full rainbow is actually a complete circle, but from the ground we see only part of it. From an airplane, in the right conditions, one can see an entire circular rainbow. Hence, the shape of rainbow is circular but we can see only part of it from ground.**

Statement 2 is correct: The radius of a rainbow is determined by the water droplets' refractive index. A refractive index is the measure of how much a ray of light refracts (bends) as it passes from one medium to another—from air to water, for example. **A droplet with a high refractive index will help produce a rainbow with a smaller radius. Saltwater has a higher refractive index than freshwater. This is the reason that rainbows formed by sea spray are smaller than rainbows formed by rain.**

Statement 3 is incorrect: Sometimes, a viewer may see a "double rainbow". In this phenomenon, **a fainter secondary rainbow appears above the primary one but has opposite order of the colors as primary rainbow.** The primary rainbow is caused from one reflection inside the water droplet. The secondary rainbow is caused by a second reflection inside the droplet, and this "re-reflected" light exits the drop at a different angle. This is why the secondary rainbow appears above the primary rainbow. **The secondary rainbow will have the order of the colors reversed, too, with red on the bottom and violet on the top.**

Knowledge Base: The position of the sun and the raindrops in relation to the observer need to be just right for a rainbow to form: 1. **The sun needs to be behind the viewer.** 2. The sun needs to be low in the sky, at an **angle of less than 42°** above the horizon. The lower the sun in the sky the more of an arc of a rainbow the viewer will see. 3. **Rain, fog or some other source of water droplets must be in front of the viewer**

Source: [https://www.metoffice.gov.uk/weather/learn-about/weather/optical-effects/rainbows/how-are-rainbows-](https://www.metoffice.gov.uk/weather/learn-about/weather/optical-effects/rainbows/how-are-rainbows-formed#:~:text=Rainbows%20are%20formed%20when%20sunlight,a%20rainbow%20to%20be%20seen.https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.wdrb.com/weather/wdrb-weather-blog/fact-or-fiction-a-full-rainbow-is-actually-a-complete-circle/article_50733e84-c1bf-11ec-9053-2711b5d80490.html%23:~:text=%3DWhy%2520is%2520a%2520rainbow%2520a,see%2520a%2520full%2520circle%2520rainbow.&ved=2ahUKEwjghPwMx6j-AhVwT2wGHZoDCKgQFnoECAQQBQ&usg=AOvVaw0-qecFdN9m3K6Y0TCL-1_Q)

formed#:~:text=Rainbows%20are%20formed%20when%20sunlight,a%20rainbow%20to%20be%20seen.https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.wdrb.com/weather/wdrb-weather-blog/fact-or-fiction-a-full-rainbow-is-actually-a-complete-circle/article_50733e84-c1bf-11ec-9053-

2711b5d80490.html%23:~:text=%3DWhy%2520is%2520a%2520rainbow%2520a,see%2520a%2520full%2520circle%2520rainbow.&ved=2ahUKEwjghPwMx6j-AhVwT2wGHZoDCKgQFnoECAQQBQ&usg=AOvVaw0-qecFdN9m3K6Y0TCL-1_Q

<https://education.nationalgeographic.org/resource/rainbow/>

Q.42) With reference to the telescope, consider the following statements:

1. Reflecting telescope is made from mirrors while refracting telescope is made from lenses.
2. Unlike Refracting telescope, reflecting telescope always creates chromatic aberration.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

A **telescope** is a tool that astronomers use to see faraway objects.

Statement 1 is correct: A telescope made with lenses is called a **refracting telescope** and a telescope that uses mirrors is called a **reflecting telescope**. **Refracting telescopes** utilize specialized lenses that make them a favorite for deep space objects like galaxies and nebulae. In contrast, **reflecting telescopes** are more popular with larger and brighter objects like the Moon and planets because they use mirrors that provide more sensitivity to all wavelengths.

Statement 2 is incorrect: The main advantage of reflection (by a mirror) over refraction (by a lens) is that all colours of light are reflected equally, so the images do not suffer from chromatic aberration.

Chromatic aberrations occur in the case of lenses and the mirrors are free from the chromatic aberrations. Hence, refracting telescope creates chromatic aberration, not reflecting telescope.

Knowledge Base: To see far away, there is need a big powerful lens in refracting telescope. **Unfortunately, a big lens is very heavy.** Unlike a lens, a mirror can be very thin. **A bigger mirror does not also have to be thicker.** Light is concentrated by bouncing off of the mirror. So, the mirror just has to have the right curved shape. It is much easier to make a large, near-perfect mirror than to make a large, near-perfect lens. **Hence, refracting telescope is heavier than reflecting telescope.**

Source:

<https://spaceplace.nasa.gov/telescopes/en/#:~:text=The%20shape%20of%20the%20mirror,we%20look%20into%20a%20telescope.&text=A%20telescope%20is%20a%20tool,light%20from%20the%20night%20sky.>

[https://museums victoria.com.au/scienceworks/visiting/melbourne-planetarium/fact-sheets/how-do-telescopes-](https://museums victoria.com.au/scienceworks/visiting/melbourne-planetarium/fact-sheets/how-do-telescopes-work/#:~:text=They%20use%20mirrors%20to%20collect,%2Dof%2Dfocus%20and%20blurry.)

[work/#:~:text=They%20use%20mirrors%20to%20collect,%2Dof%2Dfocus%20and%20blurry.](https://museums victoria.com.au/scienceworks/visiting/melbourne-planetarium/fact-sheets/how-do-telescopes-work/#:~:text=They%20use%20mirrors%20to%20collect,%2Dof%2Dfocus%20and%20blurry.)

Q.43) Which of the following principles/laws of physics make it possible for a plane to fly in the air?

1. Bernoulli's Principle
2. Newton's Third Law of Motion
3. Faraday's law

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

An aircraft in straight and level flight is acted upon by **four forces: lift, gravity, thrust and drag**. The opposing forces balance each other: Lift equals gravity, and thrust equals drag. Thrust is the force that moves an airplane forward through the air. Thrust is created by a propeller or a jet engine. Drag is created by the air resistance.

Option 1 is correct: As the wing moves through the air, the air flowing over the top of the wing moves faster than the air flowing below the wing. This creates an area of lower pressure on the top of the wing. Higher pressure remains below the wing and is able to lift the wing into the air. **This principle is known as Bernoulli's principle. It helps in lift of Plane.**

Option 2 is correct: Newton's Third Law of Motion also works to the creation of lift. The law states that for every action, there is an equal and opposite reaction. As the air flows around the wing, it gets deflected downward. The equal and opposite reaction then is that the wind pushes the wing upward. It's the combination of both the lower pressure air flowing above the wing and this equal and opposite reaction that enables a wing to generate lift.

Option 3 is incorrect: Faraday's law of induction, in physics, a quantitative relationship expressing that a changing magnetic field induces a voltage in a circuit, developed on the basis of experimental observations made in 1831 by the English scientist Michael Faraday.

Source:

<https://aircraftmaintenancestands.com/blog/what-makes-airplanes-fly/>

[https://www.sciencedirect.com/topics/engineering/archimedes-](https://www.sciencedirect.com/topics/engineering/archimedes-principle#:~:text=in%20Still%20Water-)

[principle#:~:text=in%20Still%20Water-](https://www.sciencedirect.com/topics/engineering/archimedes-principle#:~:text=in%20Still%20Water-)

[,Archimede's%20Principle%20states%20that%20a%20body%20immersed%20in%20a%20fluid,on%20it%20due%20to%20gravity.](https://www.sciencedirect.com/topics/engineering/archimedes-principle#:~:text=in%20Still%20Water-)

https://www.airpilots.org/file/2547/extract---e-journal_gjsfr_a_vol_17_issue_1.pdf

Q.44) Consider the following statements regarding the phenomenon of electroplating:

1. Depositing a layer of a conductive material on the surface of another conductive material by means of electricity is known as electroplating.
2. Iron objects are sometimes electroplated with zinc to prevent rusting of iron.
3. Electroplating is used in the making of jewellery.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: The process of depositing a layer of any desired metal on another material by means of electricity is called electroplating. It is one of the most common applications of chemical effects of electric current.

Statement 2 is correct: Iron is used in bridges and automobiles to provide strength. However, iron tends to corrode and rust. So, a coating of zinc is deposited on iron to protect it from corrosion and formation of rust.

Statement 3 is correct: Commonly, jewellers use electroplating because it helps improve the durability of the jewellery. With this method, objects are less likely to tarnish over time. Jewellery makers do the electroplating of silver and gold on less expensive metals. These ornaments have the appearance of silver or gold but are much less expensive.

Source: <https://blog.prv-engineering.co.uk/electroplating-process-applications/>
<https://ncert.nic.in/ncerts/l/hesc114.pdf>

Q.45) With reference to the Gamma-ray bursts, consider the following statements:

1. They are the strongest and brightest explosions in the universe.
2. It is thought to be generated during the formation of black holes.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Gamma-ray bursts (GRBs) are immensely energetic explosions that have been observed in distant galaxies (still not seen in Milky Way Galaxy). They are the most energetic and luminous electromagnetic events since the Big Bang.

Statements 1 and 2 are correct. Gamma-ray bursts (GRB) are the **strongest and brightest explosions** in the universe. They are thought to be generated during the formation of black holes.

Knowledge Base:

More about gamma-ray bursts

- 1) So far, gamma-ray bursts have only been detected in distant galaxies. However, it is possible for one to occur in our Milky Way galaxy.
- 2) The photons emitted from gamma-ray bursts all oscillate in the same direction, but for some reason, the direction changes over time.
- 3) Burst and Transient Source Experiment (BATSE), which discovered roughly one new gamma-ray burst per day. BATSE found that gamma-ray bursts **were distributed evenly across the sky**, meaning they were occurring everywhere in the cosmos. BATSE also showed that there were two types of gamma-ray bursts with distinct signatures: those that lasted 2 to 30 seconds, and those that flashed for less than 2 seconds.

Source: <https://www.space.com/gamma-ray-burst.html>

Q.46) Consider the following statements regarding quantum physics:

1. Quantum objects may have both particle-like properties and wave-like properties.
2. According to quantum mechanics, it is possible for a particle to exist in two different locations at the same point of time.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: One of the most important principles underlying quantum physics is that of wave-particle duality. **Quantum objects have both particle-like properties (such as mass, charge, and energy) and wave-like properties (such as wavelength and frequency).**

Statement 2 is correct: The principle of quantum superposition states simply that a quantum particle can exist in two distinct locations at the same time. According to this theory, quantum particle can exist simultaneously in multiple states, unless the operation of measurement is made.

Source: <https://www.futurelearn.com/info/courses/frontier-physics-future-technologies/0/steps/240867#:~:text=One%20of%20the%20most%20important,light%20traveling%20through%20a%20prism.>

<https://becominghuman.ai/quantum-superposition-and-what-that-means-to-quantum-computation-3fbb5a711b9a>

Q.47) Consider the following statements regarding the Diodes:

1. Diode is an electronic component made of semiconductor material that allows conduction of current primarily in one direction.
2. Light Emitting Diodes (LEDs) are also known as Photodiodes.
3. Silicon and germanium are commonly used in the making of diodes.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: An electronic component made of semiconductor material that allows conduction of current in only one direction is termed as a Diode. It is a two-terminal device normally formed by fusing p and n-type semiconductor materials each having majority and minority carriers.



Statement 2 is incorrect: LEDs and photo diodes are not same. The working of a photodiode is completely reversed to that of an LED. **While an LED converts electrical energy into light (emits light), a photodiode converts light to electrical energy.** It is used to measure the intensity of light with high accuracy. Photodiodes are reverse biased.

Statement 3 is correct: The commonly used semiconductor materials for making the diodes are silicon, germanium, and gallium arsenide. Of the three, germanium was one of the earliest semiconductor

materials used. Germanium has four valence electrons, which are electrons located on the outer shell of the atom.

Source: <https://electronicsdesk.com/diode.html>

<https://learn.sparkfun.com/tutorials/diodes/real-diode-characteristics>

<https://ncert.nic.in/ncerts/l/leph206.pdf>

Q.48) Consider the following statements regarding single phase and three phase power supply:

1. Residential homes are usually served by a single-phase power supply, while commercial and industrial facilities usually use a three-phase supply.
2. Three phase power is more efficient and transmits more power compared to the single-phase power.
3. In India, the maximum voltage that can be reached in both types of supplies is 230 Volts.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

In electricity, the phase refers to the distribution of a load. Single-phase power is a two-wire alternating current (ac) power circuit. Typically, there is one power wire—the phase wire—and one neutral wire, with current flowing between the power wire (through the load) and the neutral wire. Three-phase power is a three-wire ac power circuit with each phase ac signal 120 electrical degrees apart.

Statement 1 is correct: Residential homes are usually served by a single-phase power supply, while commercial and industrial facilities usually use a three-phase supply. One key difference between single-phase vs. three-phase is that a three-phase power supply better accommodates higher loads. Single-phase power supplies are most commonly used when typical loads are lighting or heating, rather than large electric motors.

Statement 2 is correct: Compared to the single-phase power, three-phase power supplies are more efficient. A three-phase power supply can transmit three times as much power as a single-phase power supply, while only needing one additional wire (that is, three wires instead of two).

Statement 3 is incorrect: In India a single-phase supply is a 230V supply through two wires (one called phase and another neutral) and 3-phase supply is 415 V supply through 4 wires and in the house, the line can be divided to give 230V (by selection any one phase and another neutral) at an individual point. The basic difference between the two is that a three-phase connection can handle heavy load while a single-phase cannot.

Source: <https://www.fluke.com/en-us/learn/blog/power-quality/single-phase-vs-three-phase-power>

<https://www.bijlibachao.com/electricity-bill/what-are-single-phase-and-three-phase-connections-and-how-to-choose-between-the-two.html>

Q.49) Which of the following vitamins are fat-soluble?

1. Vitamin C
2. Vitamin D
3. Vitamin A
4. Vitamin K

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 3 and 4 only
- d) 1, 2, 3, and 4

Ans) b

Exp) Option b is the correct answer.

Vitamins are nutrients that the body needs in small amounts to stay healthy and work the way it should. A vitamin that can dissolve in fats and oils. They are absorbed into the body in different ways and excreted from the body at different rates. Fat-soluble vitamins are absorbed along with fats in the diet and are stored in the body's fatty tissue and in the liver. Vitamins A, D, E, and K are fat-soluble.

Option 1 is incorrect: Vitamin C is a water (not fat) soluble vitamin. This means that it is **dissolved** in the **watery components** of our **tissues and fluids** for **immediate use** and is **not stored**. So, it **needs** to be regularly **replenished**. It gets **excreted with urine**.

Vitamin C is central to **iron absorption and collagen synthesis**. It aids in **wound healing** and **bone formation** while improving **overall immune function**. It is found in foods such as Indian gooseberry (amla), lemons, lime, pineapple, oranges, watermelon, green peppers, tomatoes, cabbage, turnip, carrots, green mint, guava, etc. A **deficiency** of Vitamin C leads to diseases like **Scurvy**, etc.

Option 2 is correct: Vitamin D is a fat soluble vitamin. It aids in the **development of teeth and bone** by encouraging the **absorption and metabolism of phosphorus and calcium**. Vitamin D occurs **naturally only in animal foods** such as **liver, butter, fatty fish** (fish containing high levels of cholesterol or fatty acids as glycerides), and **egg yolks**. A **deficiency** of Vitamin D leads to diseases like **Rickets** in children and **osteomalacia and osteoporosis** in adults.

Option 3 is correct: Vitamin A is a fat soluble vitamin. It is also known as **carotenoids and retinoids**. Vitamin A is integral to **bone formation, tooth formation, and vision**. It contributes to **immune and cellular function** while keeping the **intestines working properly**. It occurs **naturally** only in foods of **animal origin**, such as **liver, butter, whole milk**, and **egg yolks**, but the **body converts** certain carotenoids, especially **β -carotene**, to **vitamin A**. **Carotenoids** are present in **dark-green, leafy vegetables** and in **yellow and orange vegetables and fruits** like carrots, tomatoes, pumpkin, etc. A **deficiency** of Vitamin A leads to diseases like **Night Blindness**, etc.

Option 4 is correct: Vitamin K is a fat soluble vitamin. It is central to **blood clotting (helps create blood clotting factors like prothrombin, etc)** and also keeps **bones healthy**. Vitamin K1, (phylloquinone) is synthesized by plants, whereas vitamin K2 homologs (menaquinones) are synthesized by bacteria. The **human body can obtain** vitamin K from **dietary sources** as well as through **synthesis by the gut microflora**. **Larger amounts** of vitamin K are present in **dark-green leafy vegetables**; **lower levels** are found in **cereals, dairy products, meats, and fruits**. A **deficiency** of Vitamin K causes **excessive blood loss** upon **wounding** due to **inability to form blood clots**.

Knowledge Base:

- 1) Fat-soluble vitamins are dissolved in fats.
- 2) They are absorbed by fat globules that travel through the small intestines and distributed through the body in the bloodstream.
- 3) Unlike water-soluble vitamins, excess fat-soluble vitamins are stored in the liver and fatty (adipose) tissues for future use.
- 4) They are found most abundantly in high-fat foods and are better absorbed if eaten with fat.

5) Vitamin B Complex (B1, B2, B3, B5, B6, B7, B9, B12) are also water soluble. They are responsible for a variety of important functions in the body (Important for prelims - read more here <https://ncert.nic.in/textbook/pdf/iehp111.pdf> Pg 4,5)

Source: <https://ncert.nic.in/textbook/pdf/iehp111.pdf>

<https://www.ncbi.nlm.nih.gov/books/NBK218749/#:~:text=Vitamins%20A%2C%20D%2C%20E%2C,similar%20to%20that%20of%20fats.>

Q.50) SHREYAS is a programme basket comprising the initiatives of three Central Ministries. Which of the following is the objective of the SHREYAS scheme:

- to provide industry apprenticeship to general graduates
- to provide scholarship to meritorious minority community students
- to promote enrollment of girl child in the age group of 14-18 at secondary stage
- to enhance access to secondary education and to improve its quality

Ans) a

Exp) Option a is the correct answer.

Option a is correct. The Minister for Human Resources Development launched the Scheme for Higher Education Youth in Apprenticeship and Skills (SHREYAS) for providing industry apprenticeship opportunities to the general graduates exiting in April 2019 through the National Apprenticeship Promotional Scheme (NAPS).

Option b is incorrect. Merit Cum Means based Scholarship for Professional and Technical Courses aims to provide financial assistance to the poor and meritorious students belonging to minority communities to enable them to pursue professional and technical courses.

Option c is incorrect. The Centrally Sponsored Scheme - National Scheme of Incentives to Girls for Secondary Education was launched in May 2008. It aims to promote enrollment of girl child in the age group of 14-18 at secondary stage, especially those who passed Class VIII and to encourage the secondary education of such girls.

Option d is incorrect. Rashtriya Madhyamik Shiksha Abhiyan (RMSA) was launched in March, 2009 with the objective to enhance access to secondary education and to improve its quality.

Source: <https://pib.gov.in/newsite/PrintRelease.aspx?relid=188989>

<https://www.mudra.org.in/>

<https://vikaspedia.in/education/policies-and-schemes/scholarships/post-matric-scholarship/cbse-merit-scholarship-schemes>

Q.1) Consider the following statements with reference to Prokaryotic Cells and Eukaryotic cells:

1. Unlike Prokaryotic cells, the Eukaryotic cells have a well-defined Nucleus.
2. Unlike Eukaryotic cells, Prokaryotic cells are characterized by the absence of Mitochondria.
3. Vacuoles are present in both Eukaryotic and Prokaryotic cells.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

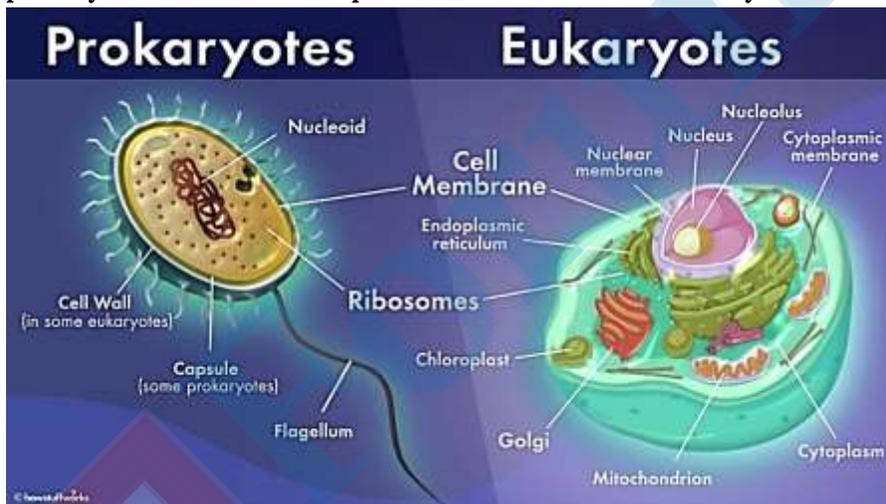
Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Prokaryotes have a cell wall surrounding the cell membrane except in mycoplasma. The fluid matrix filling the cell is the cytoplasm. **There is no well-defined nucleus. In addition to well defined nucleus, eukaryotic cells include other membrane-bound structures called organelles.**

Statement 2 is correct: Mitochondria is known as the powerhouses of the cell. They are responsible for energy production. **Prokaryotes lack mitochondria** and instead produce their ATP on their cell surface membrane. Prokaryotes do not have mitochondria. **Mitochondria are only found in eukaryotic cells.** This is also true of other membrane-bound structures like the nucleus and the Golgi apparatus.

Statement 3 is correct: The vacuole is the membrane-bound space found in the cytoplasm. It contains water, sap, excretory product and other materials not useful for the cell. **The vacuoles present in prokaryotes are smaller compared to the ones found in eukaryotic cells due to the smaller cell size.**



Source: Chapter 8- CELL: STRUCTURE AND FUNCTIONS of 11th NCERT

<https://www.technologynetworks.com/cell-science/articles/prokaryotes-vs-eukaryotes-what-are-the-key-differences-336095>

https://www.diffen.com/difference/Eukaryotic_Cell_vs_Prokaryotic_Cell

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5354521/#:~:text=Mitochondria%2C%20for%20exampl%2C%20are%20organelles,on%20their%20cell%20surface%20membrane.>

Q.2) Consider the following statements with reference to Acquired Immunity:

1. The immunity that is present at the time of birth of an individual is known as Acquired Immunity.
2. It is non-pathogen specific in nature as it attacks every antigen encountered by the body.
3. T Cells and B Cells are involved in the acquired immune response.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Acquired (adaptive or specific) immunity is not present at birth. It is learned. The learning process starts when a person's immune system encounters foreign invaders and recognizes nonself substances (antigens). Then, the components of acquired immunity learn the best way to attack each antigen and begin to develop a memory for that antigen.

The immunity that is present at the time of birth of an individual is known as innate immunity. Also called non-specific immunity, it is inherited or passed genetically from parents to children. It also provides the first line of defense to the body.

Statement 2 is incorrect: Acquired immunity is also called specific immunity because it tailors its attack to a specific antigen previously encountered. Its hallmarks are its ability to learn, adapt, and remember.

Statement 3 is correct: Acquired immunity takes time to develop after first exposure to a new antigen. The **T and B lymphocytes (T and B Cells) are involved in the acquired or antigen-specific immune response** given that they are the only cells in the organism able to recognize and respond specifically to each antigenic epitope. The B Cells have the ability to transform into plasmocytes and are responsible for producing antibodies (Abs). Thus, humoral immunity depends on the B Cells while cell immunity depends on the T Cells.

Source: Page 135, Chapter 7-Human Health and Disease of 12th biology NCERT

<https://www.msmanuals.com/en-in/home/immune-disorders/biology-of-the-immune-system/acquired-immunity>

Q.3) Consider the following pairs with reference to important nutrients and their role in plant growth and survival:

Important Nutrients	Role
1. Calcium	Provide structural support to cell walls
2. Magnesium	Helps in the maintenance of ribosome structure
3. Potassium	Helps to maintain the anion-cation balance in cells

Which of the pairs given above are correctly matched?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Plants absorb water, gases, mineral, nutrients, etc. from their surroundings. Green plants for the synthesis of their organic food need inorganic substances (elements) which are obtained from soil in the form of minerals.

Pair 1 is correctly matched: The primary function of **calcium** in plant growth is to **provide structural support to cell walls**. Calcium also serves as a secondary messenger when plants are physically or biochemically stressed. **Calcium is involved in selective permeability of cell membranes; it activates certain enzymes required for development of stem and root apex** and as calcium pectate in the middle lamella of the cell wall.

Pair 2 is correctly matched: Magnesium maintains ribosome structure. Magnesium is involved in photosynthesis. It serves as an activator for many enzymes required in plant growth processes and stabilizes the nucleic acids.

Pair 3 is correctly matched: Potassium is absorbed as potassium ion (K⁺). In plants, this is required in more abundant quantities in the meristematic tissues, buds, leaves and root tips. **Potassium helps to maintain an anion-cation balance in cells** and is involved in protein synthesis, opening and closing of stomata, activation of enzymes and in the maintenance of the turgidity of cells.

Source: Page 146, chapter 7- Plant Growth and Mineral Nutrition of Maharashtra state 12th SCERT.

https://extension.msstate.edu/sites/default/files/publications/information-sheets/is1039_web.pdf

<https://ncert.nic.in/ncerts/l/kebo112.pdf> (page 197)

Q.4) Consider the following pair with reference to various cell organelle and their functions:

Cell Organelle	Functions
1. Ribosomes	Involved in protein synthesis.
2. Endoplasmic reticulum	Acts as suicide bags of the cell by digesting macromolecules like carbohydrates.
3. Nucleus	Stores the cell's DNA (deoxyribonucleic acid).

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- All the three pairs
- None of the pairs

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: Ribosomes are the protein factories of the cell. Composed of two subunits, they can be found floating freely in the cell's cytoplasm or embedded within the endoplasmic reticulum. Using the templates and instructions provided by two different types of RNA, ribosomes synthesize a variety of proteins that are essential to the survival of the cell.

Statement 2 is incorrect: The endoplasmic reticulum (ER) is a membranous organelle that shares part of its membrane with that of the nucleus. Some portions of the ER, known as the rough ER, are studded with ribosomes and are involved with protein manufacture. The rest of the organelle is referred to as the smooth ER and serves to produce vital lipids (fats)

Lysosomes are called suicide bags of the cell. A lysosome has three main functions: the breakdown/digestion of macromolecules (carbohydrates, lipids, proteins, and nucleic acids), cell membrane repairs, and responses against foreign substances such as bacteria, viruses and other antigens.

Statement 3 is correct: Nucleus, also known as the cell's "command center," is a large organelle that stores the cell's DNA (deoxyribonucleic acid). The nucleus controls all of the cell's activities, such as growth and metabolism, using the DNA's genetic information. Within the nucleus is a smaller structure called the

nucleolus, which houses the RNA (ribonucleic acid). RNA helps convey the DNA's orders to the rest of the cell and serves as a template for protein synthesis.

Source:

<https://www.britannica.com/list/6-cell-organelles>

Chapter 8- Cell: The Unit of Life of 11th ncert

<https://www.kenhub.com/en/library/anatomy/cellular-organelles>

Q.5) Consider the following statements regarding Just Energy Transition Partnership (JETP):

1. It aims to bridge the gap between developed and developing nations in moving towards clean energy.
2. India is one of the founding members of the JETP.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) option a is the correct answer.

Statement 1 is correct: Just Energy Transition Partnerships aims to bridge the gap between developed and developing nations in moving towards clean energy. South Africa, Indonesia, and Vietnam are the first three countries to receive funding.

Statement 2 is incorrect: India has not yet joined the JETP. Recently, G7 countries have asked India to join Just Energy Transition Partnership (JETP) that will help finance rapid deployment of clean energy projects in India and possibly reduce the country's dependence on coal. India has not responded to the partnership offer as yet.

Source: <https://www.iisd.org/articles/insight/just-energy-transition-partnerships#:~:text=The%20first%20such%20JETP%20emerged,Indonesia%2C%20Vietnam%2C%20and%20Senegal.>

<https://www.iisd.org/articles/insight/just-energy-transition-partnerships#:~:text=The%20first%20such%20JETP%20emerged,Indonesia%2C%20Vietnam%2C%20and%20Senegal.>

<https://greennetwork.asia/news/what-is-just-energy-transition-partnerships/>

https://ec.europa.eu/commission/presscorner/detail/it/ip_21_5768

<https://www.hindustantimes.com/india-news/g7-countries-urge-india-to-join-just-energy-transition-partnership-101666982898901.html>

Q.6) Which of the following diseases are caused by Viruses?

1. Chickenpox.
2. Filariasis.
3. Malaria.
4. Measles.

Select the correct answer from the code given below:

- a) 1 and 4 only
- b) 1, 3 and 4 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: Chickenpox is a highly contagious disease caused by the varicella-zoster virus (VZV). It can cause an itchy, blister-like rash among other symptoms. The rash first appears on the chest, back, and face, and then spreads over the entire body.

Statement 2 is incorrect: Lymphatic filariasis, considered globally as a neglected tropical disease (NTD), is a parasitic disease caused by microscopic, thread-like worms. Adult worms only live in the human lymph system. The lymph system maintains the body's fluid balance and fights infections. Lymphatic filariasis is spread from person to person by mosquitoes.

Statement 3 is incorrect: Malaria is an acute febrile illness caused by protozoa of the genus Plasmodium, which are spread to people through the bites of infected female Anopheles mosquitoes. It is preventable and curable. Malaria is not contagious and cannot spread from one person to another through direct contact. Five species of parasites can cause malaria in humans and 2 of these Plasmodium falciparum and Plasmodium vivax – pose the greatest threat.

Statement 4 is correct: Measles is caused by a virus in the paramyxovirus family and it is normally passed through direct contact and through the air. The virus infects the respiratory tract, then spreads throughout the body. Measles is a human disease and is not known to occur in animals.

Source:

<https://www.cdc.gov/chickenpox/about/index.html#:~:text=Chickenpox%20is%20a%20highly%20contagious,spreads%20over%20the%20entire%20body.>

<https://www.cdc.gov/parasites/lymphaticfilariasis/index.html#:~:text=Parasites%20%2D%20Lymphatic%20Filariasis,->

[Related%20Pages&text=Lymphatic%20filariasis%2C%20considered%20globally%20as,fluid%20balance%20and%20fights%20infections.](#)

[https://www.who.int/news-room/questions-and-answers/item/malaria?gclid=CjwKCAjw8-](https://www.who.int/news-room/questions-and-answers/item/malaria?gclid=CjwKCAjw8-OhBhB5EiwADyoY1Q_7byx9n-px4_nfiEq-8zOME2JURRD4bodO3n4JLsDd5KnLQb7ExBoCyoMQAvD_BwE)

<https://www.who.int/news-room/fact-sheets/detail/measles>

Q.7) Blood contains cells like Red Blood Cells (RBC) and White Blood Cells (WBC). In this context, consider the following statements regarding RBC and WBC:

1. Unlike RBC, the WBC does not contain haemoglobin.
2. During normal circumstances, the number of WBCs in the human body are much higher than the number of RBCs.
3. In most of the mammals, RBC are devoid of nucleus whereas the WBC are nucleated.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) c

Exp) Option c is the correct answer.

Blood is a special connective tissue consisting of a fluid matrix, plasma, and formed elements

Statement 1 is correct: White blood cell, also called leukocyte, a cellular component of the blood that lacks haemoglobin. White blood cells contain a nucleus, is capable of motility, and defends the body against infection and disease by ingesting foreign materials and cellular debris. They also fight against diseases and infections by destroying infectious agents and cancer cells, or by producing antibodies. Whereas Erythrocytes or red blood cells (RBC) contain hemoglobin.

Statement 2 is incorrect: Red blood cells (RBC) are the most abundant of all the cells in blood. A healthy adult man has, on an average, **5 millions to 5.5 millions of RBCs mm⁻³ of blood.** White blood cells (WBC) are relatively lesser in number which averages **6000–8000 mm⁻³ of blood.**

Statement 3 is correct: RBCs are formed in the red bone marrow in the adults. **RBCs are devoid of nucleus in most of the mammals** and are biconcave in shape. **White blood cells (WBC) are nucleated** and are generally short lived.

Source: Page 194, chapter15 - BODY FLUIDS AND CIRCULATION of 11th class NCERT.

<https://ncert.nic.in/ncerts/l/kebo118.pdf> (Page 279)

Q.8) Natural selection is a mechanism of evolution. In this context, consider the following statements regarding Natural Selection:

1. The individuals with adaptive traits are more likely to survive and reproduce in natural selection.
2. Natural selection can lead to speciation, where one species gives rise to a new and distinctly different species.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Natural selection is the process through which populations of living organisms adapt and change. Individuals in a population are naturally variable, meaning that they are all different in some ways. This variation means that some individuals have traits better suited to the environment than others.

Statement 1 is correct: Natural selection is the process through which populations of living organisms adapt and change. Individuals in a population are naturally variable, meaning that they are all different in some ways. This variation means that some individuals have traits better suited to the environment than others. **Individuals with adaptive traits—traits that give them some advantage—are more likely to survive and reproduce.** These individuals then pass the adaptive traits on to their offspring. Over time, these advantageous traits become more common in the population.

Statement 2 is correct: Natural selection can lead to speciation, where one species gives rise to a new and distinctly different species. It is one of the processes that drives evolution and helps to explain the diversity of life on Earth.

Source: Page118, chapter 6 – EVOLUTION of 12th NCERT

<https://education.nationalgeographic.org/resource/natural-selection/>

<https://www.nhm.ac.uk/discover/what-is-natural-selection.html#:~:text=Natural%20selection%20is%20a%20mechanism,change%20and%20diverge%20over%20time.>

Q.9) Consider the following statements with reference to Phloem and Xylem in plants:

1. Unlike in the phloem, the movement of nutrients in the xylem is unidirectional in nature.
2. Xylem mainly contains living tissues whereas phloem contains only dead tissues.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Both the xylem and phloem are complex permanent tissues. But they perform different roles in plants. The xylem facilitates the transportation of water from roots to the other part of the plant. Whereas the phloem aids the translocation of photosynthesized food material from the source to the other parts.

Statement 1 is correct: The xylem flow is unidirectional and occurs only from roots to the upper plant body. In contrast, the phloem carries the food material in a bidirectional manner from up to down and vice versa

Statement 2 is incorrect:

All tissues in the xylem except the xylem parenchyma are dead. Their cytoplasm is highly reduced and they only perform the function of conduction. The xylem tissues also lack cell organelles. Phloem is the living tissue.

Source: Page 95 chapter 5- Life Processes of 10th NCERT

Page 120, chapter 6- Plant Water Relation of Maharashtra state 12th SCERT.

<https://www.britannica.com/science/xylem>

Q.10) Consider the following statements regarding River Cities Alliance:

1. It is an international initiative launched by the United Nations Environment Programme.
2. It aims to provide a platform to discuss and exchange information on aspects that are vital for sustainable management of urban rivers.
3. Any river city in India is allowed to join this alliance.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 2 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect and Statement 2 is correct: River Cities Alliance (RCA) is a joint initiative of the Ministry of Jal Shakti and the Ministry of Housing and Urban Affairs. The RCA has been launched with the objective to provide the member cities **with a platform to discuss and exchange information on aspects that are vital for sustainable management of urban rivers**, sharing best practices and supporting innovation.

Statement 3 is correct: The Alliance is open to all river cities of India. Any river city can join the Alliance at any time. State Governments are implementing Action Plans for restoration of water quality of the identified polluted river stretches. The implementation is being monitored regularly at State level by Chief Secretary of the respective State/UT and at Central level by the Central Monitoring Committee under the Chairmanship of Secretary, Ministry of Jal Shakti.

Knowledge Base: The River Cities Alliance has been launched initially with 30 cities namely Dehradun, Rishikesh, Haridwar, Srinagar, Varanasi, Kanpur, Prayagraj, Farrukhabad, Mirzapur, Mathura, Bijnor, Ayodhya, Patna, Bhagalpur, Begusarai, Munger, Sahibganj, Rajmahal, Howrah, Jangipur, Hugli-Chinsurah, Behrampore, Maheshtala, Aurangabad, Chennai, Bhubaneswar, Hyderabad, Pune, Udaipur and Vijaywada.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1795103>

Q.11) With reference to Humoral Immunity and Cell Mediated Immunity, consider the following statements:

1. Humoral immunity and Cell-Mediated immunity are two forms of innate immunity.
2. Unlike Cell Mediated immunity, Humoral immunity relies on antibodies to fight pathogens.

Which of the statements given above is/are correct?

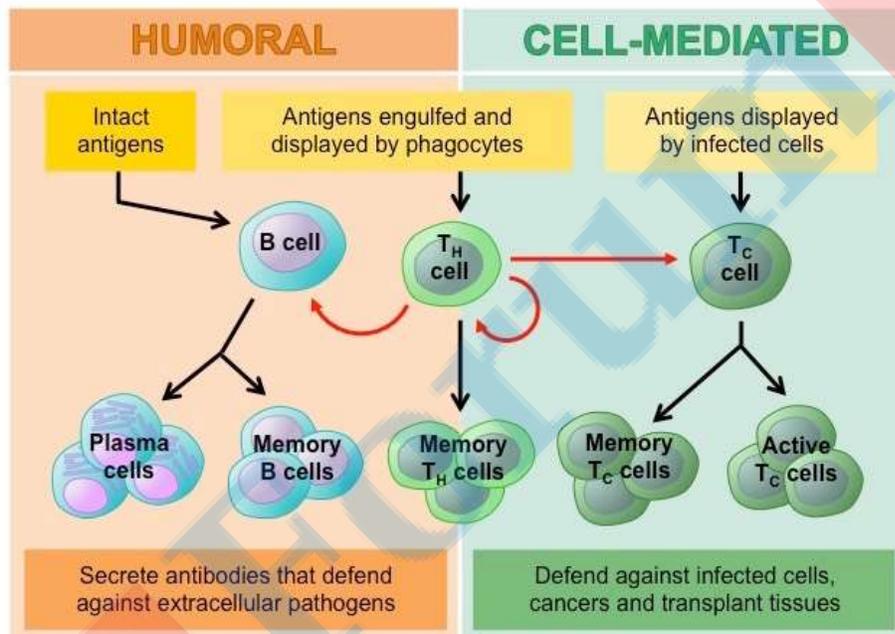
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1, nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Humoral immunity and cell-mediated immunity are two forms of Acquired immune responses that allow the human body to protect itself against dangerous agents including bacteria, viruses, and poisons, in a targeted manner. While there is some overlap between these immune response arms - both rely on lymphoid cell functions - there are also some significant differences.

Statement 2 is correct: Humoral immunity-When foreign material - antigens - is recognized in the body, the body responds with an antibody-mediated reaction. **Cell-mediated immunity, unlike humoral immunity, does not rely on antibodies to perform adaptive immunological activities. Mature T cells, macrophages, and the production of cytokines in response to an antigen are the main drivers of cell-mediated immunity.**



Source: Page 135, Chapter 7-Human Health and Disease of 12th biology NCERT
<https://www.news-medical.net/health/Humoral-vs-Cell-mediated-Immunity.aspx>

Q.12) With reference to placenta, which of the following statements is **incorrect**?

- a) It is a temporary organ that is formed during pregnancy.
- b) It also acts as an exocrine gland.
- c) It facilitates supply of oxygen and nutrients to the embryo.
- d) It is connected to the embryo through an umbilical cord.

Ans) b

Exp) Option b is the correct answer.

Option a is correct. The placenta is a temporary endocrine organ that develops during pregnancy, which produces hormones important in the maintenance of a healthy pregnancy.

Option b is incorrect. Placenta acts as an endocrine tissue (not exocrine) and produces several important hormones during pregnancy like human chorionic gonadotropin (hCG), human placental lactogen (hPL), estrogens, progesterones, etc. These hormones work together to control the growth and development of the placenta and the foetus.

Option c is correct. The placenta facilitates the supply of oxygen and nutrients to the embryo and also the removal of carbon dioxide and excretory/waste materials produced by the embryo.

Option d is correct. The placenta is connected to the embryo through an umbilical cord which helps in the transport of substances to and from the embryo.

Source: Biology, NCERT XII, Chapter-3, Pg. 53

<https://www.epa.gov/endocrine-disruption/what-endocrine-system>

<https://academic.oup.com/bjaed/article/15/2/84/248526>

Q.13) Why it is more challenging to develop antiviral medicines than antibacterial medicines?

- Viruses can replicate on their own whereas bacteria must need a host to replicate.
- It is very difficult to kill viruses without harming the host cells.
- Unlike bacteria, viruses have double-stranded DNA genomes
- Unlike bacteria, Viruses do not mutate frequently.

Ans) b

Exp) Option b is the correct answer.

Option a is incorrect: Unlike bacteria, viruses cannot replicate independently outside a host cell. To replicate, viruses enter a host cell and hijack its machinery.

Once inside, some viruses lie dormant, some replicate slowly and leak from cells over a prolonged period, and others make so many copies that the host cell bursts and dies. The newly replicated virus particles then disperse and infect new host cells.

Option b is correct: An antiviral treatment that intervenes in the viral “life” cycle during these events could be successful. **The problem is that if it targets a replication process that is also important to the host cell, it is likely to be toxic to the human host as well.**

Killing viruses is easy. Keeping host cells alive while you do it is the hard part. Successful antivirals target and disrupt a process or structure unique to the virus, thereby preventing viral replication while minimizing harm to the patient. The more dependent the virus is on the host cell, the fewer targets there are to hit with an antiviral. Unfortunately, most viruses offer few points of unique difference that can be targeted.

Option c is incorrect: Most bacteria have a haploid genome, a single chromosome consisting of a circular, **double stranded DNA molecule.**

Option d is incorrect: Both Bacteria and viruses mutate over time and develop resistance over their respective drugs and treatments.

Source: <https://theprint.in/health/why-there-are-so-many-antibiotics-and-so-few-antivirals-in-the-world/422299/>

<https://www.ncbi.nlm.nih.gov/books/NBK209704/>

Q.14) With reference to the effect of various factors on photosynthesis, consider the following statements:

- An increase in the Carbon Dioxide levels in the atmosphere can lead to an increase in the rate of photosynthesis.
- Increase in the temperature always increases the rate of photosynthesis.
- Increase in the amount of chlorophyll in the leaves can increase the rate of photosynthesis

Which of the above given statements is/are correct?

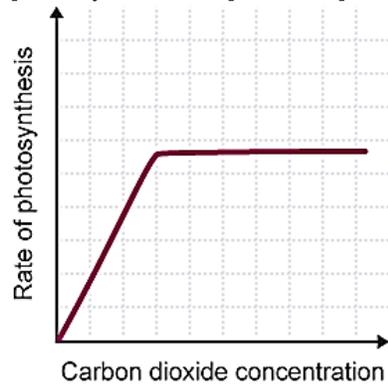
- a) 1 and 2 only
- b) 1 only
- c) 1 and 3 only
- d) 3 only

Ans) c

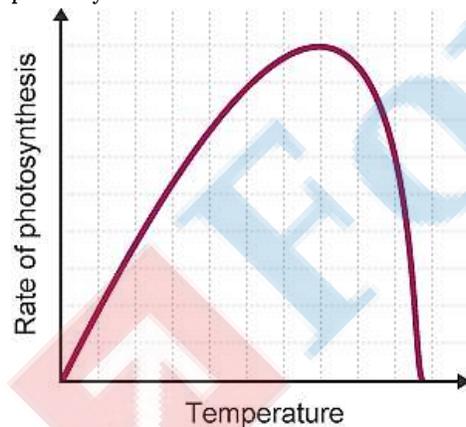
Exp) Option c is the correct answer.

Photosynthesis is the process by which plants convert light energy into chemical energy in the form of glucose. The rate of photosynthesis is influenced by several factors such as:

Statement 1 is correct: An increase in the concentration of CO₂ can lead to an increase in the rate of photosynthesis as plants require carbon dioxide as one of the raw materials to produce glucose.



Statement 2 is incorrect: Photosynthesis is a biochemical process that is temperature dependent. A moderate increase in temperature can enhance the rate of photosynthesis up to a certain limit. Beyond that limit, the enzymes involved in the process start to denature, leading to a decrease in the rate of photosynthesis.



Statement 3 is correct: Chlorophyll is the primary pigment in plants that absorbs light energy during photosynthesis. An increase in the amount of chlorophyll can increase the rate of photosynthesis as it can absorb more light energy.

Source: <https://www.bbc.co.uk/bitesize/guides/zs4mk2p/revision/2>

Q.15) Which of the following statements best describes the term Roche Limit, that has been often mentioned in the news?

- a) It refers to the maximum mass theoretically possible for a stable white dwarf star.

- b) It is the distance from a planet within which accretion of material into large moons is prevented by planetary tides.
- c) It is the boundary between heliosphere and interstellar space.
- d) It refers to lowest velocity which a body must have to escape the gravitational attraction of a particular planet.

Ans) b

Exp) Option b is the correct answer.

Option a is incorrect: Chandrasekhar limit, in astrophysics, is the maximum mass theoretically possible for a stable white dwarf star. This limiting value was named for the Indian-born astrophysicist Subrahmanyan Chandrasekhar, who formulated it in 1930. Using Albert Einstein's special theory of relativity and the principles of quantum physics, Chandrasekhar showed that it is impossible for a white dwarf star, which is supported solely by a degenerate gas of electrons, to be stable if its mass is greater than 1.44 times the mass of the Sun. If such a star does not completely exhaust its thermonuclear fuel, then this limiting mass may be slightly larger.

Option b is correct: The Roche limit is the distance from a planet within which accretion of material into large moons is prevented by planetary tides. Material in orbit outside the Roche limit would be aggregating to become natural satellites. The rings of other planets lie within the Roche limit. **The rings of Saturn lie inside Saturn's Roche limit** and may be the debris of a demolished moon. The limit was first calculated by the French astronomer Édouard Roche (1820–83). Artificial satellites are too small to develop substantial tidal stresses. If the satellite and the primary body are of similar composition, the theoretical limit is about $2\frac{1}{2}$ times the radius of the larger body.

Option c is incorrect: The heliopause is the final known boundary between the heliosphere and the interstellar space.

Option d is incorrect: Escape velocity is the lowest velocity which a body must have in order to escape the gravitational attraction of a particular planet or other object.

Source: <https://www.britannica.com/science/Chandrasekhar-limit>

<https://www.britannica.com/science/Roche-limit>

<https://www.britannica.com/science/Poissons-spot>

<https://www.britannica.com/science/Casimir-effect>

Q.16) Consider the following statements:

Assertion (A): Organ transplant fails if the donor organ does not match the recipient's blood.

Reason (R): The immune system identifies foreign cells and attacks them.

Which of the options given below is correct based on the above given statements?

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true.

Ans) a

Exp) Option a is the correct answer.

Assertion is correct: Organ **transplant fails** if the donor organ does not match the recipient's blood and tissue. Human organs cannot be transplanted from any given donor. Tissue matching, **blood group matching is essential** before undertaking any transplant, otherwise the grafts would be rejected sooner or later.

Reason is correct and also explains Assertion: Without matching of tissues and blood for transplanting the immune system will **distinguish between self and non-self-cells**. In this way immune system is able to identify cells belonging to the body and **foreign cells** that need to be **attacked**.

Source: <https://www.philoid.com/epub/ncert/12/287/lebo108>

Q.17) What is the possible blood group of a child if one parent has blood group A and the other has blood group B?

1. Blood group AB
2. Blood group A
3. Blood group B
4. Blood group O

Select the correct answer from the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

		FATHER'S BLOOD TYPE				
		A	B	AB	O	
MOTHER'S BLOOD TYPE	A	A or O	A, B, AB, or O	A, B, or AB	A or O	CHILD'S BLOOD TYPE
	B	A, B, AB, or O	B or O	A, B, or AB	B or O	
	AB	A, B, or AB	A, B, or AB	A, B, or AB	A or B	
	O	A or O	B or O	A or B	O	

Blood groups are determined by the presence or absence of antigens on the surface of red blood cells. The ABO blood group system has four types: A, B, AB, and O. Blood group A has antigen A, blood group B has antigen B, blood group AB has both antigens A and B, and blood group O has neither antigen A nor B. When parents with blood group A and B have a child, there is a 25% chance that the child will have blood group AB, which means the child will inherit one A allele from one parent and one B allele from the other parent. The other 75% of the time, the child will have either blood group A, blood group B, or blood group O, depending on the alleles inherited from the parents.

Therefore, the child can have either A or B or O or AB as the blood group.

Source: <https://www.britannica.com/science/blood-group/Blood-groups-and-genetic-linkage>
<https://www.ncbi.nlm.nih.gov/books/NBK2269/>

Q.18) With reference to difference between Plant Cell and Animal cell, consider the following statements:

1. Plant cells have a cell wall made up of cellulose while animal cells lack a cell wall.
2. In general, chloroplasts are found only in animal cells.
3. Unlike in plant cells, Lysosomes are completely absent in animal cells.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 2 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Both plant and animal cells are eukaryotic, so they contain membrane-bound organelles like the nucleus and mitochondria. However, plant cells and animal cells do not look exactly the same or have all of the same organelles, since they each have different needs. Plant cells have a cell wall, chloroplasts for photosynthesis, and larger vacuoles, while animal cells have centrioles and lysosomes.

Statement 1 is correct: Plant cells have a cell wall made up of cellulose, which provides them with a rigid structure and helps to maintain the shape of the cell. Animal cells, on the other hand, do not have a cell wall.

Statement 2 is incorrect: Chloroplasts are found only in plant cells and are responsible for photosynthesis, which is the process by which plants make their own food. Animal cells do not have chloroplasts.

In general, we can say that chloroplasts are not found in Animal cells. However, there are very few exemptions for this. For example, a small number of sea slugs are able to incorporate carbon from CO₂ by performing photosynthesis using sequestered chloroplasts from the macroalgae in their diet. These sea slugs use the stolen chloroplasts (also known as kleptoplasts) to produce metabolites, such as sugars and fatty acids, which can then be transported from the slug's digestive gland to other tissues in the body.

Statement 3 is incorrect: Lysosomes are organelles that are found in animal cells that contain digestive enzymes. They are responsible for breaking down waste materials and recycling cellular components. Lysosomes are rarely found in plant cells.

Source: <https://elifesciences.org/articles/64057>

<https://a-z-animals.com/blog/plant-cells-vs-animal-cells-10-key-differences-explained/>

Q.19) Which of the followings are considered as macro nutrients for plants?

1. Nitrogen
2. Calcium
3. Phosphorous
4. Iron
5. Magnesium
6. Zinc

Select the correct answer from the codes given below.

- a) 1, 2, 3 and 4 only
- b) 2, 3, 5 and 6 only
- c) 1, 2, 3 and 5 only
- d) 1, 3, 4 and 5 only

Ans) c

Exp) Option c is the correct answer.

Plant nutrition is an important factor, which directly affects the growth, yield and quality of a crop. Soil contains many mineral nutrients, organic material and water, which are absorbed by plants. If any of these nutrients are deficient or not available in the soil, it affects crop development, and a plant shows deficiency symptoms.

Nutrients required for plants can be classified according to their requirement and importance in plant life. They can be classified into basic nutrients, macro-nutrients and micro-nutrients.

Macro-nutrients are those nutrients which are required in large quantity by plants. They are further classified into two types:

- 1) Primary nutrients: These consist of **Nitrogen, Phosphorus and Potassium**. These nutrients are supplied through fertilisers.
- 2) Secondary nutrients: They include **Calcium, Magnesium and Sulphur**.

Option 1 is correct: Nitrogen is essential for plant development, since it plays a fundamental role in energy metabolism and protein synthesis.

Option 2 is correct: Calcium serves as a constituent of cell walls and membranes and thus contributes to the structure of cells and the upholding of physical barriers against pathogens.

Option 3 is correct: Phosphorus is a vital component of ATP, the "energy unit" of plants.

Option 5 is correct: Magnesium is the central core of the chlorophyll molecule in plant tissue. Thus, if Mg is deficient, the shortage of chlorophyll results in poor and stunted plant growth. Magnesium also helps to activate specific enzyme systems.

Option 4 and 6 are incorrect: Micro-nutrients on the other hand, are also known as minor or trace elements. They include **Iron (Fe)**, Manganese (Mn), Copper (Cu), **Zinc (Zn)**, Chlorine (Cl), Boron (B) Molybdenum (Mo) and Nickel (Ni).

Source: <https://ncert.nic.in/textbook/pdf/ievsl04.pdf>

<https://www.frontiersin.org/articles/10.3389/fpls.2019.00440/full#:~:text=Calcium%20is%20an%20essential%20element%20in%20plants,of%20physical%20barriers%20against%20pathogens.>

<https://extension.umn.edu/micro-and-secondary-macronutrients/magnesium-crop-production#:~:text=Magnesium%20is%20the%20central%20core,to%20activate%20specific%20enzyme%20systems.>

Q.20) Consider the following statements regarding Volatile Organic Compounds (VOCs):

1. These are compounds that have a high vapor pressure and low water solubility.
2. They comprise of carbon-containing chemicals released by petrol and diesel vehicles.
3. Some VOCs are also released by the Plants to attract the pollinators.
4. Benzene is an example of the Volatile Organic Compounds.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Volatile organic compounds are compounds that have a high vapor pressure and low water solubility. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, pharmaceuticals, and refrigerants.

Statement 2 is correct: VOCs are carbon-containing chemicals released by petrol and diesel vehicles. They impact air quality and human health.

Statement 3 is correct: VOCs can have a natural origin as well. Plants emit these chemicals to attract pollinators, defend themselves from pests and predators and adapt to environmental stress.

Statement 4 is correct: Benzene belongs to a class of chemicals called volatile organic compounds, so called because they evaporate in the air. Benzene is made from coal and petroleum sources and is present in gasoline.

Source: <https://www.downtoearth.org.in/news/pollution/electric-vehicles-can-lower-emissions-of-volatile-organic-compounds-in-india-by-2030-study-81488>

[https://www.epa.gov/indoor-air-quality-iaq/what-are-volatile-organic-compounds-vocs#:~:text=Air%20Quality%20\(IAQ\)-,What%20are%20volatile%20organic%20compounds%20\(VOCs\)%3F,paints%2C%20pharmaceuticals%2C%20and%20refrigerants.](https://www.epa.gov/indoor-air-quality-iaq/what-are-volatile-organic-compounds-vocs#:~:text=Air%20Quality%20(IAQ)-,What%20are%20volatile%20organic%20compounds%20(VOCs)%3F,paints%2C%20pharmaceuticals%2C%20and%20refrigerants.)

,What%20are%20volatile%20organic%20compounds%20(VOCs)%3F,paints%2C%20pharmaceuticals%2C%20and%20refrigerants.

Q.21) Why do mitochondria are known as the powerhouse of the cell?

- It destroys worn out cellular organelles and organic debris.
- It produces the adenosine triphosphate (ATP) which is known as energy currency of the cell.
- It is responsible for packaging and transporting essential plant proteins.
- It acts as a site for protein synthesis in the cell.

Ans) b

Exp) Option b is the correct answer.

Mitochondrion is a membrane-bound organelle which is found in the cytoplasm of almost all the eukaryotic cells (cells with clearly defined nuclei). **Mitochondria are known as the powerhouse of the cell because it is responsible for the extracting energy from food through cellular respiration. The energy is released in the form of adenosine triphosphate (ATP). It is an energy currency of the cell.** The body uses energy stored in ATP for making new chemical compounds and for mechanical work.

Option a is incorrect: Lysosomes destroy the worn-out cellular organelles and organic debris..

Option c is incorrect: The Golgi apparatus, or Golgi complex, functions as a factory in which proteins received from the Endoplasmic Reticulum are further processed and sorted for transport to their eventual destinations.

Option d is incorrect: Ribosomes are the sites in which protein synthesis takes place.

Source: <https://ncert.nic.in/textbook/pdf/iesc105.pdf>

Q.22) Which of the following statements is correct about the Hardy-Weinberg equilibrium?

It states that:

- if an equilibrium is disturbed by changing the conditions, the position of equilibrium shifts to counteract the changes to re-establish an equilibrium.
- it is impossible to measure or calculate exactly, both the position and the momentum of a particle.
- genetic variation in a population will remain constant from one generation to the next in the absence of disturbing factors.
- Organs that are frequently used by organisms become more efficient and organs that are less used are lost in the succeeding generations.

Ans) c

Exp) Option c is the correct answer.

The Hardy-Weinberg equilibrium is a principle stating that the genetic variation in a population will remain constant from one generation to the next in the absence of disturbing factors. When mating is random in a large population with no disruptive circumstances, the law predicts that both genotype and allele frequencies will remain constant because they are in equilibrium.

The Hardy-Weinberg equilibrium can be disturbed by a number of forces, including mutations, natural selection, nonrandom mating, genetic drift, and gene flow. For instance, mutations disrupt the equilibrium of allele frequencies by introducing new alleles into a population.

Option a is incorrect: Le Châtelier's principle (and not Hardy Weinberg's) states that if a dynamic equilibrium is disturbed by changing the conditions, the position of equilibrium shifts to counteract the change to re-establish an equilibrium.

Option b is incorrect: Heisenberg's uncertainty principle states that it is impossible to measure or calculate exactly, both the position and the momentum of an object.

Option d is incorrect: Lamarck theory of evolution states that, the organs which are used frequently by the organism develop and the characteristics/organs that are used seldom are lost in the succeeding generations. For eg., a giraffe stretches its neck to eat leaves, a "nervous fluid" would flow in its neck and it enlarges. The organs which the organisms have stopped using would shrink with time. As the organisms adapted to their surroundings, they became increasingly complex from the simpler forms.

Source: <http://www.nature.com/scitable/definition/hardy-weinberg-equilibrium-122>

Q.23) Consider the following statements about Auto-Immune Diseases, often seen in news:

1. Auto-immune diseases are conditions in which one's own immune system mistakenly attacks the healthy cells of the body.
2. Rheumatoid Arthritis and Type 1 diabetes are some of the examples of autoimmune diseases.
3. Almost all auto-immune diseases can be permanently cured, at the current level of technology.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

In higher vertebrates, the memory based acquired immunity has evolved based on the ability to differentiate foreign organisms (pathogens) from the body cells. In case of the attack from foreign material, the immune system gets activated and attacks the foreign material. However, due to factors like genetics and several other unknown reasons body's immune system can attack itself as well.

Statement 1 is correct: Body's immune system when mistakenly attacks the own healthy cells, then the condition is known as Auto-immune disease/disorder. The exact cause of autoimmune disorders is unknown. One theory is that some microorganisms (such as bacteria or viruses) or drugs may trigger changes that confuse the immune system. Genetics also may have a bigger role to play in this.

Statement 2 is correct: There are more than 80 types of autoimmune diseases. They can affect almost any part of your body. Some of the commonly known auto-immune diseases are, Rheumatoid Arthritis, Type 1 diabetes, Celiac disease, etc.

Statement 3 is incorrect: Auto-immune diseases in general cannot be cured completely. However, the condition can be controlled in many cases. The overactive immune response can be tamed down to bring down the inflammation.

Source: <https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/autoimmune-disorders#:~:text=Autoimmune%20disorders%20in%20general%20cannot,corticosteroids%20%E2%80%93%20to%20reduce%20inflammation.>

<https://www.niehs.nih.gov/health/topics/conditions/autoimmune/index.cfm>

Q.24) Consider the following statements about Plasma fluid in blood:

1. Plasma is the liquid component of blood, which constitute more than half of its total content.
2. Plasma plays an important role in blood coagulation and maintenance of osmotic balance in the blood.
3. Plasma plays an important role in the immune system of the human beings.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Plasma can be defined as an extracellular and liquid portion of blood, which is transparent and pale yellow or straw-coloured.

Statement 1 is correct: Plasma is a straw coloured, viscous fluid constituting nearly 55 per cent of the blood. Thus, plasma is the liquid portion of the blood. About 55% of our blood is plasma, and the remaining 45% are red blood cells, white blood cells and platelets that are suspended in the plasma.

Statement 2 is correct: Plasma is about 92% water, and the remaining portion is contributed by various proteins. Some of the major proteins are: fibrinogen, globulins and albumins. **Fibrinogens are needed for clotting or coagulation of blood. Globulins primarily are involved in defence mechanisms of the body and the albumins help in osmotic balance.** Hence, plasma helps in coagulation of blood and in maintaining the osmotic balance in the blood.

Statement 3 is correct: Immunoglobulins and antibodies in plasma play an important role in the body's defense against bacteria, viruses, fungi, and parasites. Antibodies are naturally produced by plasma cells within the human body to mediate an adaptive immune response against invading pathogens. There are five predominant antibodies produced (IgG, IgM, IgA, IgD, and IgE), each specialized to execute certain functions. Antibodies are hence, produced primarily to mediate the immune response towards foreign pathogens, as part of the adaptive immune response.

Source: <https://ncert.nic.in/ncerts/l/kebo118.pdf>

<https://www.ncbi.nlm.nih.gov/books/NBK546670/#:-:text=Antibodies%20are%20naturally%20produced%20by,specialized%20to%20execute%20certain%20functions.>

Q.25) Omorgus Khandesh, recently seen in news, is a species of which of the following?

- Fish
- Shrimp
- Butterfly
- Beetle

Ans) d

Exp) Option d is the correct answer.

A new beetle species called Omorgus Khandesh has been recently discovered in India. The beetle is important for forensic science as it helps detect the time of death of an animal or human.

Omorgus Khandesh is necrophagous and is, therefore, also called a keratin beetle. During the decomposition of a body, blowflies are amongst the first ones to arrive in the early stages. Meanwhile, the final successional stage is with the arrival of the keratin feeders, thus their importance in forensic science.

Source: <https://www.downtoearth.org.in/news/wildlife-biodiversity/meet-omorgus-khandesh-a-newly-discovered-indian-beetle-it-can-help-forensic-science-87718>

Q.26) Consider the following statements about plastids, an essential cell organelle:

- Plastids are found in all the eukaryotic cells.
- Plastids are the only cell organelle to have their own biosynthetic machinery for making RNA.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

The plastids are double-membrane organelles that contain the pigments used in photosynthesis and manufacture and store the important chemical compounds used by the cells.

Statement 1 is incorrect: Eukaryotes are organisms whose cells contain a nucleus and other membrane-bound organelles. There is a wide range of eukaryotic organisms, including all animals, plants, fungi, and protists, as well as most algae. **Plastids are found in all plant cells and in euglenoids and not in animal cells. Hence, all the eukaryotes do not contain plastids.**

Statement 2 is incorrect: It is widely accepted that mitochondria and plastids evolved from bacteria that were engulfed by nucleated ancestral cells. As a relic of this evolutionary past, **both types of organelles (not only plastids) contain their own genomes, as well as their own biosynthetic machinery for making RNA and organelle proteins.**

Knowledge Base: Three different types of plastids are recognised on the basis of their pigments or colouration.

- 1) **Chromoplasts**–These are coloured plastids containing variously coloured pigments such as yellow, red, pink, violet colours of flowers, fruits, leaves, etc. In chromoplasts, fat soluble pigments like carotene, xanthophylls and others are present.
- 2) **Leucoplasts**–These are colourless plastids. They are usually involved in the storage of various kinds of reserve food materials and are named accordingly, as Amyloplasts (storage of starch), Aleuroplasts (storage of protein) and Elaioplasts or Lipoplast (storage of oil).
- 3) **Chloroplasts**–These are the green plastids, universally found in all the green parts of the plant, especially the green leaves. It contains large quantities of green pigments, called chlorophyll. Chlorophyll is a collection of four pigments, chlorophyll a, chlorophyll b and the yellow pigments–carotenoids and xanthophylls.

Source: <https://ncert.nic.in/ncerts/l/kebo108.pdf>

<https://www.ncbi.nlm.nih.gov/books/NBK26924/#:~:text=It%20is%20widely%20accepted%20that,make%20RNA%20and%20organelle%20proteins.>

Q.27) Consider the following statements about the functions of the blood and blood circulation in the human body:

1. The blood transports oxygen from the lungs to various cells of the body.
2. Hormones produced by endocrinal glands are transported to the target tissues by the blood stream.
3. The blood can carry various nutrients, minerals and proteins across the body.
4. Blood transports waste generated by cells of body to the excretory organs like Kidney.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Complex organisms use special fluids within their bodies to transport materials like oxygen, nutrients, sugar, salts and proteins. Blood is the most commonly used body fluid by most of the higher organisms including humans for this purpose. Another body fluid, lymph, also helps in the transport of certain substances.

Statement 1 is correct: **Blood is a special connective tissue consisting of a fluid matrix, plasma, and formed elements. The blood transports oxygen from the lungs to the cells of the body, where it is needed for metabolism.** The carbon dioxide produced during metabolism is carried back to the lungs by the blood, where it is then exhaled (breathed out).

Statement 2 is correct: **Hormones produced by the endocrinal glands are transported from the place of origin to the target cells through the blood stream.** Endocrine glands secrete hormones into the

bloodstream. The hormones dissolve in plasma and travel the circulatory pathways through various body tissues. When they reach target tissues, hormones effect the target tissues this is because, only those target cells have receptors for that particular hormone.

Statement 3 is correct: The blood carries nutrients such as vitamins, minerals, sugars, fats and proteins around the body. Digested nutrients are absorbed into the blood through capillaries in the small intestine. They are then moved to the cells around the body where they are needed.

Statement 4 is correct: Waste generated by cells of body is transported via blood to specific body organs who can get rid of them like, the liver, the kidneys and the intestines.

For example, excess water is filtered out by the kidneys and toxins are removed from the blood by the liver.

Source: <https://ncert.nic.in/ncerts/l/kebo118.pdf>

<https://www.blood.co.uk/news-and-campaigns/the-donor/latest-stories/functions-of-blood-transport-around-the-body/>

[https://www.ncbi.nlm.nih.gov/books/NBK279392/#:~:text=The%20blood%20transports%20oxygen%20from,then%20exhaled%20\(breathed%20out\).](https://www.ncbi.nlm.nih.gov/books/NBK279392/#:~:text=The%20blood%20transports%20oxygen%20from,then%20exhaled%20(breathed%20out).)

<https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/hormonal-endocrine-system#:~:text=Summary&text=Endocrine%20glands%20secrete%20hormones%20straight,still%20bein%20investigated%20and%20understood.>

Q.28) Consider the following pairs of disorders caused due to deficiency of specific vitamins in body:

Vitamin Deficiency : Disorder

1. Vitamin A : Night Blindness
2. Vitamin B1 : Rickets
3. Vitamin C : Pellagra
4. Vitamin D : Beri Beri

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All the four pairs

Ans) a

Exp) Option a is the correct answer.

Vitamins are organic substances that we require in adequate quantities for good health. Our body, however, cannot synthesise them. Therefore, we need to consume their natural sources such as fruits and vegetables. Vitamins are divided into two groups–fat soluble vitamins (Vitamins A, D, E, and K) and water–soluble vitamins (Vitamins of B group and Vitamin C). Each vitamin has a specific function and its deficiency leads to a particular deficiency disease.

Pair 1 is correct: Deficiency of Vitamin A can lead to night blindness. It may also lead to irregular growth of teeth.

Pair 2 is incorrect: Vitamin B1 deficiency may cause Beri Beri. Rickets occur due to deficiency of vitamin D.

Pair 3 is incorrect: Deficiency of Vitamin C leads to Scurvy (swelling of gums, may lead to bleeding). Pellagra is caused by deficiency of Vitamin B3 (Niacin).

Pair 4 is incorrect: Rickets occur due to deficiency of vitamin D. Whereas, Vitamin B1 deficiency may cause Beri Beri.

Vitamin/Mineral	Deficiency disease/disorder	Symptoms
Vitamin A	Loss of vision	Poor vision, loss of vision in darkness (night), sometimes complete loss of vision
Vitamin B1	Beriberi	Weak muscles and very little energy to work
Vitamin C	Scurvy	Bleeding gums, wounds take longer time to heal
Vitamin D	Rickets	Bones become soft and bent
Calcium	Bone and tooth decay	Weak bones, tooth decay
Iodine	Goiter	Glands in the neck appear swollen, mental disability in children
Iron	Anaemia	Weakness

Source: <https://ncert.nic.in/textbook/pdf/fesc102.pdf>

Q.29) Consider the following statements regarding vegetative propagation in plants:

1. It is a mode of asexual reproduction in plants.
2. The new offspring produced by vegetative propagation is genetically identical to its parent plant.
3. New varieties can be easily developed in plants using vegetative propagation.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: Vegetative propagation is also called asexual propagation'. The vegetative parts of a plant like leaf, stem, root or their modified forms are used for propagation. Most of the horticultural crops are commercially propagated by vegetative or asexual method of propagation.

Statement 2 is correct: Merits of asexual propagation are discussed below.

- 1) Many fruit and ornamental plants that do not produce seeds are multiplied by this method.
- 2) **Plants propagated by asexual propagation are true-to-type genetically.**
- 3) By top working (using budding and grafting), old and economically low productive fruit plants can be converted into superior ones.
- 4) Advantages offered by rootstocks and scion can be exploited through asexual method.
- 5) Maturity is uniform and the plant gives quality yield.
- 6) Plants propagated by asexual method are small in size, so spraying of chemicals and harvesting are easy.
- 7) This method enables noble plant production, e.g., different colours of flowers in a single rose plant and different types of mangoes in one mango plant can be produced through asexual method only.

Statement 3 is incorrect: Demerits of asexual propagation are discussed below:

- 1) **By vegetative propagation, new varieties cannot be developed.**
- 2) It requires specialised skills, so it is an expensive method of propagation.

- 3) The life span of asexually propagated plants is short as compared to sexually propagated ones.
 4) These plants are more prone to biotic and abiotic stresses.

Source: <https://ncert.nic.in/vocational/pdf/kegr103.pdf>

Q.30) Consider the following statements regarding anti-microbial peptides:

1. They do not occur naturally and can only be produced artificially.
2. They play an important role in the immunity of the host against bacteria.
3. They also help the immune system in fighting against some of the viruses.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

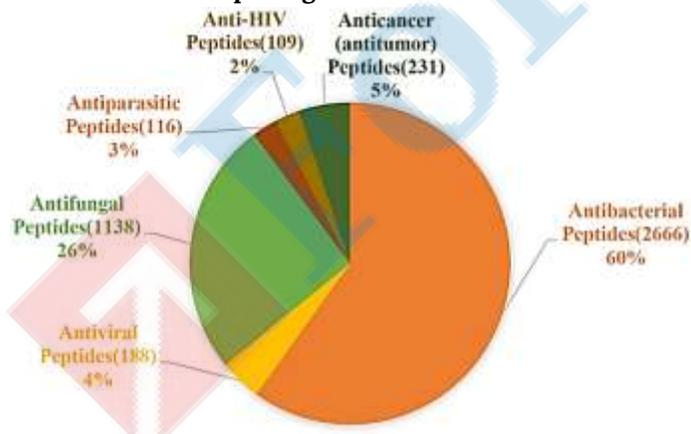
Ans) c

Exp) Option c is the correct answer.

The management of bacterial infections is becoming a major clinical challenge due to the rapid evolution of antibiotic resistant bacteria. As an excellent candidate to overcome antibiotic resistance, antimicrobial peptides (AMPs) that are produced from the synthetic and natural sources demonstrate a broad - spectrum antimicrobial activity with the high specificity and low toxicity.

Statement 1 is incorrect: Antimicrobial peptides (AMPs) are a class of small peptides that widely exist in nature and they are an important part of the innate immune system of different organisms. AMPs have a wide range of inhibitory effects against bacteria, fungi, parasites and viruses. Antimicrobial peptides are an abundant and diverse group of molecules that are produced by many tissues and cell types in a variety of invertebrate, plant and animal species.

Statement 2 is correct: Antimicrobial peptides (AMPs) are the small molecular peptides that play a crucial role in the innate immunity of the host against a broad range of microorganisms, including bacteria, fungi, parasites and viruses. **Antibacterial peptides account for a large part of AMPs and have a broad inhibitory effect on common pathogenic bacteria.**



Statement 3 is correct: Antiviral peptides, a type of anti-microbial peptides, show a strong killing effect on viruses mainly by (1) inhibiting virus attachment and virus cell membrane fusion, (2) destroying the virus envelope, or (3) inhibiting virus replication.

Source: <https://www.frontiersin.org/articles/10.3389/fmicb.2020.582779/full>

<https://www.nature.com/articles/nrmicro1098>

<https://mmrjournal.biomedcentral.com/articles/10.1186/s40779-021-00343-2>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7596191/>

Q.31) It is a type of neurotransmitter. It is made in brain and acts as a chemical messenger between nerve cells in brain and the rest of the body. It also acts as a hormone and plays a role in the “fight-or-flight” syndrome. It is known as the “feel-good” hormone giving one a sense of pleasure.

Which of the following hormones is described in above passage?

- a) Dopamine
- b) Oxytocin
- c) Progesterone
- d) Melatonin

Ans) a

Exp) Option a is the correct answer.

Option a is correct: Dopamine is a type of monoamine **neurotransmitter**. It's made in brain and acts as a **chemical messenger** between nerve cells in brain and the rest of the body. Dopamine also **acts as a hormone** made by adrenal gland, a small hat-shaped gland located on top of each of your kidneys. Dopamine is also a neurohormone released by the **hypothalamus in human brain**.

As a hormone, dopamine is released into bloodstream. It plays a small role in the “**fight-or-flight syndrome**”. The fight-or-flight response refers to body's response to a perceived or real stressful situation, such as needing to escape danger. Dopamine is known as the “feel-good” hormone. It gives you a sense of pleasure.

Option b is incorrect: **Oxytocin** is a natural hormone that **stimulates uterine contractions** in childbirth and lactation after childbirth. It also affects aspects of human behavior and the male and female reproductive systems.

Option c is incorrect: In women or people assigned female at birth (AFAB), **progesterone supports menstruation and helps maintain the early stages of a pregnancy**. Too little progesterone can cause complications with pregnancy or produce side effects similar to menopause.

Option d is incorrect: **Melatonin** is a hormone that brain produces in **response to darkness**. It helps with the timing of body's circadian rhythms (24-hour internal clock) and with sleep. Being exposed to light at night can block melatonin production.

Knowledge Base: Dopamine agonists are drugs that mimic the natural neurotransmitter dopamine. Dopamine agonists bind to and activate the dopamine receptors on nerve cells in brain, causing nerve cells to react in the same way as they would to natural dopamine. Dopamine agonists are used to treat Parkinson's disease, depression, restless legs syndrome, attention deficit hyperactivity disorder, low sex drive and hyperprolactinemia.

Source: <https://my.clevelandclinic.org/health/articles/22581-dopamine>

<https://my.clevelandclinic.org/health/body/24562-progesterone>

<https://my.clevelandclinic.org/health/articles/22618-oxytocin>

<https://www.nccih.nih.gov/health/melatonin-what-you-need-to-know>

Q.32) Consider the following statements regarding Deoxyribonucleic acid (DNA) and Ribonucleic acid (RNA):

1. While DNA stores genetic information, RNA acts as a template for protein synthesis.
2. Unlike DNA, RNA is more stable under alkaline conditions.
3. As compared to RNA, DNA is more susceptible to damage from Ultraviolet rays.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

DNA stands for deoxyribonucleic acid, while RNA is ribonucleic acid. Although DNA and RNA both carry genetic information, there are quite a few differences between them.

Statement 1 is correct: DNA replicates and stores genetic information. Whereas RNA acts as a template for protein synthesis. DNA is a blueprint for all genetic information contained within an organism. RNA converts the genetic information contained within DNA to a format used to build proteins, and then moves it to ribosomal protein factories.

Statement 2 is incorrect: Due to its deoxyribose sugar, which contains one less oxygen-containing hydroxyl group, DNA is a more stable molecule than RNA, which is useful for a molecule which has the task of keeping genetic information safe. RNA, containing a ribose sugar, is more reactive than DNA and is not stable in alkaline condition.

Statement 3 is correct: DNA is vulnerable to damage by ultraviolet rays. whereas RNA is more resistant to damage from UV light than DNA. Presence of uracil makes RNA more resistant to UV rays. Uracil (U) is one of the four nucleotide bases in RNA.

Source: <https://www.geeksforgeeks.org/difference-between-dna-and-rna/>

<https://www.technologynetworks.com/genomics/lists/what-are-the-key-differences-between-dna-and-rna-296719#:~:text=Due%20to%20its%20deoxyribose%20sugar,not%20stable%20in%20alkaline%20conditions.>

Q.33) Hydroponic farming is the technique of growing plants using a water-based nutrient solution rather than soil. In this context, which among the following crops **cannot** be grown in a hydroponic system?

1. Sweet potatoes
2. Corn
3. Pumpkin
4. Tomatoes
5. Leaf lettuce

Select the correct answer using the codes given below:

- a) 3 and 5 only
- b) 1, 2 and 3 only
- c) 2, 4 and 5 only
- d) 1, 2, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Hydroponic farming has become a foundation of sustainable agriculture since it is both efficient as well as environmentally safe. However, following crops cannot be grown in the hydroponic systems:

Option 1 is correct: Sweet potatoes and potatoes need a lot of **room to grow**, and their roots must be allowed to spread out. Potatoes and sweet potatoes are starchy crops; thus, they will require more nutrition as compared to other vegetables. Since potatoes require components found in soil, such as nitrogen, potassium, and phosphorus, a lack of soil is also a concern. Therefore, **sweet potatoes cannot be grown in hydroponic system.**

Option 2 is correct: Corn cannot be grown in a hydroponic system. Corn has deep roots that require a lot of sunlight to grow. Its roots can reach a depth of 60 inches. Another issue to consider is that maize is generally produced in fields with full sunlight. The LED, or Light Emitting Diode, would not have the same effect in a hydroponic farming arrangement.

Option 3 is correct: Pumpkins and other gourds are usually cultivated on the ground and **need a lot of room to spread out**. Thus, they **cannot be grown in a hydroponic system**. They are particularly challenging to cultivate in a hydroponic system due to their huge size. Pumpkins also require pollination from bees, which might be difficult in a confined environment.

Option 4 and 5 are incorrect. Most common crops grown hydroponically are tomatoes, leaf lettuce, peppers, strawberries, watercress, celery etc.

Source: <https://ag.umass.edu/greenhouse-floriculture/fact-sheets/hydroponic-systems#:~:text=background%20is%20required,->

,Crops,supported%20in%20the%20nutrient%20solution.

<https://krishijagran.com/agripedia/hydroponic-farming-crops-that-cannot-be-grown-in-a-hydroponic-system/>

Q.34) Consider the following statements regarding retrovirus:

1. It uses RNA (Ribonucleic acid) as its genomic material.
2. Retrovirus can be transmitted between humans through infected blood.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: A retrovirus is a virus that uses RNA, instead of DNA, as its genomic material. Upon infection with a retrovirus, a cell converts the retroviral RNA into DNA, which in turn is inserted into the DNA of the host cell. The cell then produces more retroviruses, which infect other cells. Many retroviruses are associated with diseases, including AIDS and some forms of cancer.

Statement 2 is correct: Retroviruses are a family of viruses that are grouped together based on how they are structured and how they replicate within a host. Besides human immunodeficiency virus (HIV), the virus that causes AIDS, there two other retroviruses that can cause human illness. One is called human T-lymphotropic virus type 1 (HTLV-1) and the other is called human T-lymphotropic virus type 2 (HTLV-II). Both of **these viruses are transmitted between people through sexual contact, infected blood or tissue exposure, or during pregnancy or childbirth from an infected person to their child.**

Source: <https://www.health.state.mn.us/diseases/retrovirus/index.html>

<https://www.genome.gov/genetics-glossary/Retrovirus>

<https://www.bioexplorer.net/diseases-caused-by-protozoa.html/>

<https://ncert.nic.in/textbook.php?lebo1=7-13>

Q.35) Consider the following statements regarding the yellow band disease in corals:

1. Unlike the effects of coral bleaching, the impact of yellow band disease cannot be reversed.
2. The disease was first observed recently in the Great Barrier Reefs of Australia.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Recently, it is reported that a rapidly spreading disease, commonly known as yellow band disease, is killing corals over vast stretches of the sea floor of Thailand. Scientists believe overfishing, pollution and rising water temperatures because of climate change may be making the reefs more vulnerable to yellow-band disease.

Statement 1 is correct: Scientists believe overfishing, pollution and rising water temperatures because of climate change may be making the reefs more vulnerable to yellow-band disease. **The impact of the yellow band disease cannot be reversed, unlike the effects of coral bleaching.**

Statement 2 is incorrect: It was first spotted decades ago and has caused widespread damage to the reefs in the Caribbean (thus, first occurrence is not from Australia). Over 600 acres of the sea is reported to have been infected due to this disease.

Source: https://oceanservice.noaa.gov/education/tutorial_corals/media/supp_coral10b.html

<https://www.thehindu.com/sci-tech/energy-and-environment/watch-why-are-corals-in-thailand-getting-destroyed/article66396891.ece>

<https://www.hindustantimes.com/world-news/it-just-dies-what-is-the-yellow-band-disease-ravaging-thailand-s-coral-reefs-101672205686483.html>

Q.36) Involuntary muscles are defined as those muscles whose movement cannot be controlled at will. In this context, which among the following are examples of involuntary muscles?

1. Pectoral muscle
2. Cardiac muscle
3. Hamstrings
4. Smooth muscle
5. Biceps

Select the correct answer using the codes given below:

- a) 2 and 4 only
- b) 1, 2 and 4 only
- c) 1, 3, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) a

Exp) Option a is the correct answer.

Voluntary muscles are those whose movement can be controlled at will or conscious control, while involuntary muscles are those whose movement cannot be controlled at will or without conscious control or that work involuntarily, i.e., automatic.

Option 1 is incorrect: Pectoral muscles are the muscles that connect the front of the human chest with the bones of the upper arm and shoulder. Pectoral muscles are **not considered as involuntary muscles.**

Option 2 is correct: Cardiac muscle is an involuntary striated muscle that is present on the wall of the heart and undergoes contractions and relaxations at regular intervals.

Option 3 is incorrect: Hamstrings which are a group of three muscles which predominantly act to flex the knee. Hamstrings muscles are **not considered as involuntary muscles.**

Option 4 is correct: Smooth muscle is an involuntary nonstriated muscle that consists of single-unit or unitary muscle and multiunit muscles. Smooth muscle lines the wall of various internal organs like the intestinal tract, urinary tract, and blood vessels.

Few examples of voluntary muscles are:

Option 5 is incorrect: The biceps are located on the front of the upper arm and provide arm flexion, while the triceps are found on the back of the upper arm and are responsible for arm extension. Biceps muscles are **not considered as involuntary muscles**.

Source: <https://www.biologyonline.com/dictionary/involuntary-muscle#:~:text=Pectoral%20muscles%2C%20hamstrings%2C%20biceps%2C,are%20involuntary%20muscles.>

<https://thebiologynotes.com/voluntary-vs-involuntary-muscles/#examples-of-voluntary-muscles>

<https://www.britannica.com/science/pectoralis-muscle>

<https://www.physio-pedia.com/Hamstrings>

<https://www.healthline.com/nutrition/biceps-vs-triceps#bottom-line>

Q.37) Consider the following pairs:

Diseases	Pathogens that cause the disease
1. Kyasanur Forest disease	Virus
2. Leishmaniasis	Fungi
3. Brucellosis	Protozoa
4. Typhoid	Bacteria

Which of the pairs given above is/are correctly matched?

- a) 1 only
- b) 1 and 4 only
- c) 2, 3 and 4 only
- d) 1 and 3 only

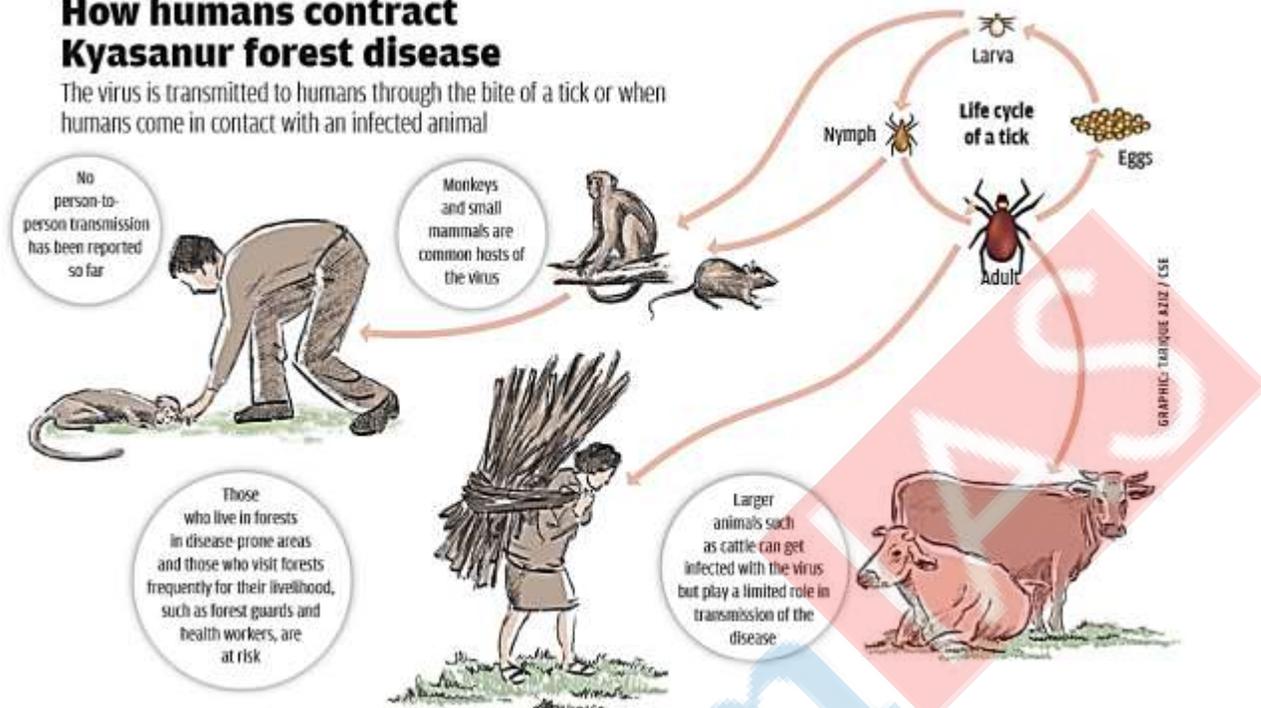
Ans) b

Exp) Option b is the correct answer.

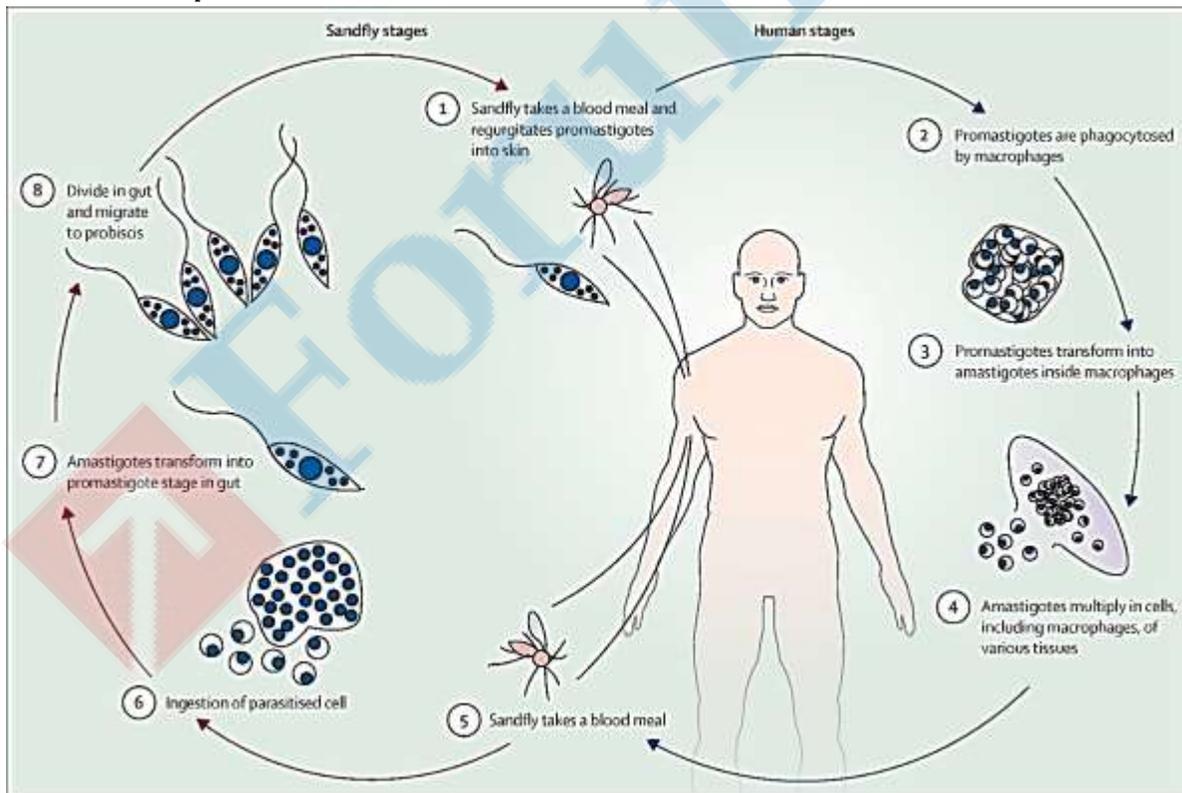
Pair 1 is correct: Kyasanur Forest disease (KFD) is caused by Kyasanur Forest disease **virus** (KFDV), a member of the virus family Flavivirida. Hard ticks are the reservoir of the KFD virus and once infected, remain so for life.

How humans contract Kyasanur forest disease

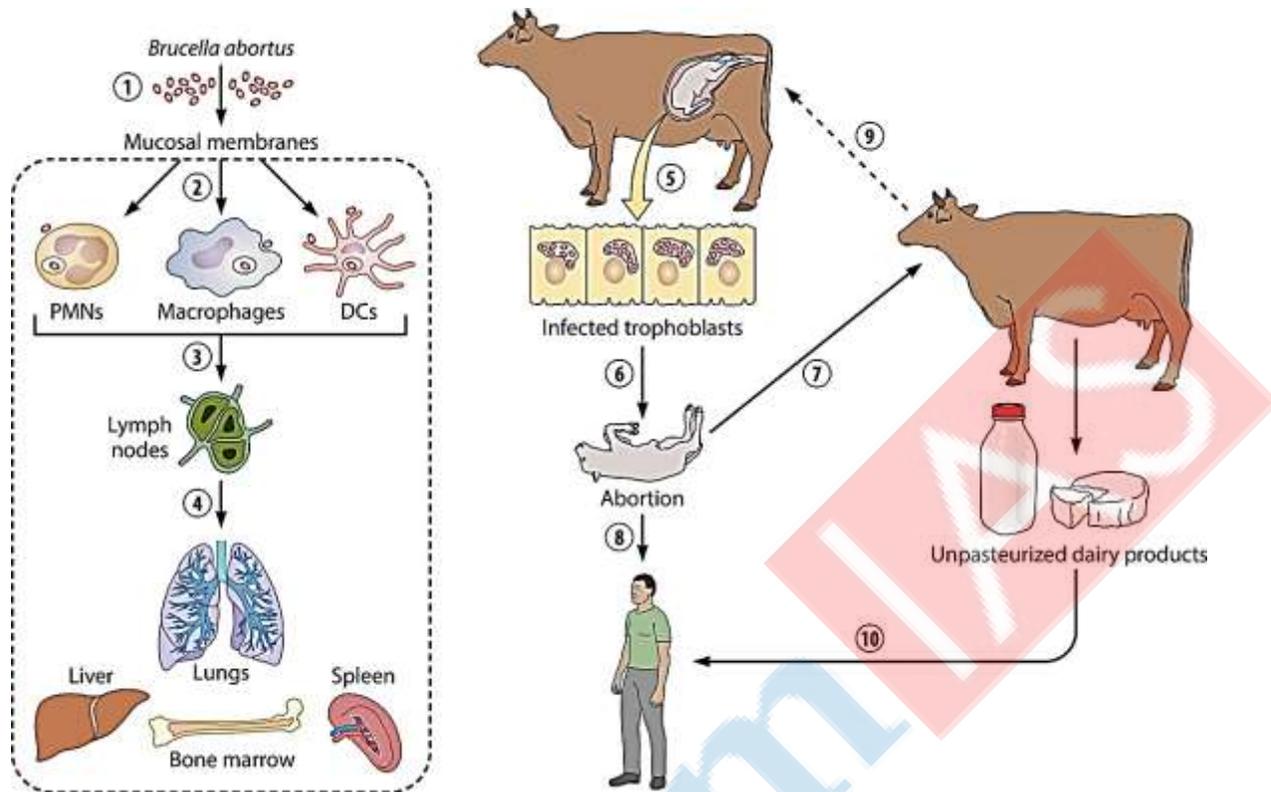
The virus is transmitted to humans through the bite of a tick or when humans come in contact with an infected animal



Pair 2 is incorrect: Leishmaniasis is caused by **protozoan** parasites which are transmitted by the bite of infected female phlebotomine sandflies.

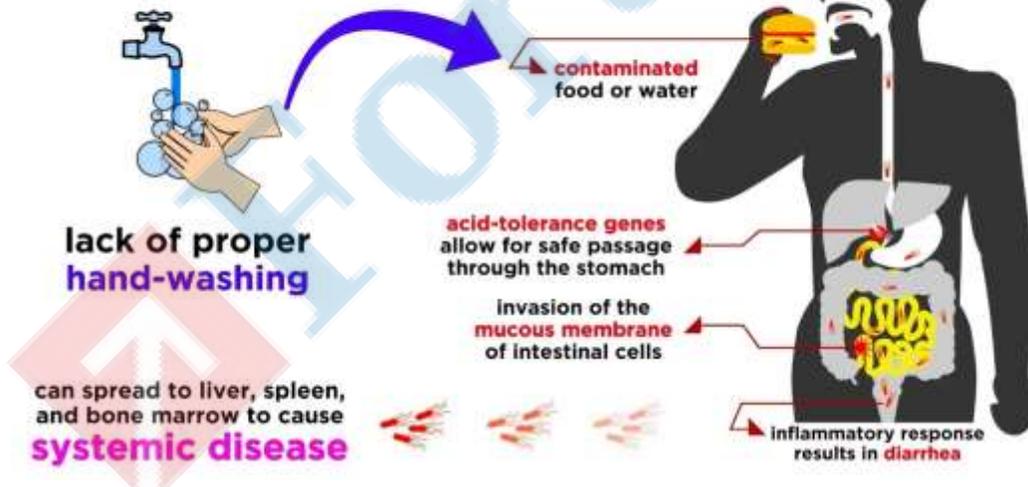


Pair 3 is incorrect: Brucellosis is a **bacterial infection** that spreads from animals to people. Most commonly, people are infected by eating raw or unpasteurized dairy products. Sometimes, the bacteria that cause brucellosis can spread through the air or through direct contact with infected animals.



Pair 4 is correct: Typhoid fever is caused by *Salmonella typhi* bacteria. Typhoid fever is rare in developed countries. It is still a serious health threat in the developing world, especially for children.

fecal-oral route



Source:

<https://www.cdc.gov/vhf/kyasanur/index.html#:~:text=Kyasanur%20Forest%20disease%20%28KFD%29%20is%20caused%20by%20Kyasanur,Kyasanur%20Forest%20in%20Karnataka%20%28formerly%20Mysore%29%20State%2C%20India.>

<https://www.who.int/news-room/fact-sheets/detail/leishmaniasis>

<https://www.who.int/news-room/fact-sheets/detail/typhoid>

<https://www.mayoclinic.org/diseases-conditions/brucellosis/symptoms-causes/syc-20351738>

Q.38) Consider the following statements regarding Protein, one of the essential macronutrients of body:

1. Protein is made up of building blocks called amino acids.
2. Main function of the proteins is to provide energy for the human body.
3. Kwashiorkor disease can be caused by severe protein malnutrition.

Which of the statements given above is/are correct?

- a) 3 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Proteins are **made up of building blocks** called **amino acids**. There are about 20 different amino acids that link together in different combinations. The body uses them to make new proteins, such as muscle and bone, and other compounds such as enzymes and hormones.

Statement 2 is incorrect: Proteins are large, complex molecules that play many critical roles in the body. They do most of the work in cells and are required for the structure, function, and regulation of the body's tissues and organs. **Protein is not usually used for energy.** However, if the body is not getting enough calories from other nutrients or from the fat stored in the body, protein is broken down into **ketone bodies** to be used for energy.

Statement 3 is correct: Kwashiorkor is one of the two main types of severe protein-energy undernutrition. People with kwashiorkor are especially deficient in protein, as well as some key micronutrients. Severe protein deficiency causes fluid retention in the tissues (edema), which distinguishes kwashiorkor from other forms of malnutrition. People with kwashiorkor may look emaciated in their limbs but swollen in their hands and feet, face and belly.

Source: <https://www.britannica.com/science/protein>

[https://my.clevelandclinic.org/health/diseases/23099-](https://my.clevelandclinic.org/health/diseases/23099-kwashiorkor#:~:text=Kwashiorkor%20is%20one%20of%20the,from%20other%20forms%20of%20malnutrition.)

[kwashiorkor#:~:text=Kwashiorkor%20is%20one%20of%20the,from%20other%20forms%20of%20malnutrition.](https://my.clevelandclinic.org/health/diseases/23099-kwashiorkor#:~:text=Kwashiorkor%20is%20one%20of%20the,from%20other%20forms%20of%20malnutrition.)

<https://www.nigms.nih.gov/education/Inside-Life-Science/Pages/what-do-fats-do-in-the-body.aspx#:~:text=Triglycerides%2C%20cholesterol%20and%20other%20essential,helping%20proteins%20do%20their%20jobs.>

<https://medlineplus.gov/genetics/understanding/howgeneswork/protein/#:~:text=Proteins%20are%20large%2C%20complex%20molecules,the%20body's%20tissues%20and%20organs.>

Q.39) Consider the following statements regarding Polyclonal Antibodies:

1. These are a complex mixture of several antibodies that are usually produced by different B-cell clones of an animal.
2. These antibodies are more sensitive to changes in pH compared to monoclonal antibodies.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: Polyclonal antibodies (pAbs) are a complex mixture of several antibodies that are usually produced by different B-cell clones of an animal. These antibodies recognize and bind to many different epitopes of a single antigen and hence can form lattices with the antigens.

Statement 2 is incorrect: One of the major advantages of pAbs is that they are highly stable and tolerant of pH or buffer changes. Whereas, monoclonal antibodies are more sensitive to pH and buffer conditions.

Knowledge Base: A Monoclonal antibody represents antibody from a single antibody producing B cell and therefore only binds with one unique epitope.

Source: <https://www.news-medical.net/life-sciences/Polyclonal-Antibodies.aspx>

<https://www.pacificimmunology.com/resources/antibody-introduction/polyclonal-vs-monoclonal-antibodies/>

Q.40) Muscat ministerial manifesto, recently seen in news, is related to which of the following issues?

- Addressing the issue of Antimicrobial Resistance
- Helping countries to develop disaster resilience
- Promoting sustainable urban growth
- Eliminating the barriers in international trade

Ans) a

Exp) Option a is the correct answer.

Recently, the World Antimicrobial Awareness Week 2022 concluded with the Muscat Ministerial Manifesto on AMR being agreed upon at the Third Global High-level Ministerial Conference on Antimicrobial Resistance (AMR).

The Muscat Ministerial Manifesto on AMR, which has been agreed upon at the conference, outlines three global targets:

- Reducing the total amount of antimicrobials used in agrifood systems by at least 30 per cent-50 per cent by 2030.
- Preserving critically important antimicrobials for human medicine and ending the use of medically important antimicrobials for growth promotion in animals.
- Ensuring that 'Access' group antibiotics (a category of antibiotics that are affordable, safe and have a low AMR risk) represent at least 60 per cent of overall antibiotic consumption in humans by 2030.
- Through the Manifesto, the countries also committed to revise and effectively implement National Action Plans (NAP) for AMR and strengthen surveillance systems. The manifesto also calls upon the Quadripartite organisations to provide guidance and technical support for implementation of the targets.

Source: <https://www.downtoearth.org.in/news/health/world-antimicrobial-awareness-week-2022-ends-with-muscat-ministerial-manifesto-on-amr-86219>

Q.41) Which of the following organs can help in the process of excretion from human body?

- Lungs
- Kidney
- Liver
- Skin
- Large intestine

Select the correct answer using the codes given below:

- 4 and 5 only
- 1, 3 and 5 only
- 1, 2, 3 and 4 only
- 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

Excretion is the process of removing wastes and excess water from the body. It is an essential process in all living things, and it is one of the major ways the human body maintains homeostasis. It also helps prevent damage to the body. Organs involved in the process of excretion in the human body are discussed below:

Option 1 is correct: The **lungs** are part of the respiratory system, but they are also important organs of excretion. They are responsible for the **excretion of gaseous waste** from the body. The main waste gas excreted by the lungs is carbon dioxide, which is a waste product of cellular respiration in cells throughout the body.

Option 2 is correct: The paired **kidneys** are often considered the main organs of excretion. The primary function of the kidneys is the **elimination of excess water** and wastes from the bloodstream by the production of the liquid waste known as urine.

Option 3 is correct: The **liver** has numerous major functions, including secreting bile for digestion of lipids, synthesizing many proteins and other compounds, storing glycogen and other substances, and secreting endocrine hormones. In addition to all of these functions, the liver is a very **important organ of excretion**. The liver breaks down many substances in the blood, including **toxins**. For example, the liver transforms ammonia – a poisonous by-product of protein catabolism – into urea, which is filtered from the blood by the kidneys and excreted in urine.

Option 4 is correct: The **skin** is part of the integumentary system, but it also plays a role in **excretion** through the production of **sweat** by sweat glands in the dermis.

Option 5 is correct: The **large intestine** (or colon) is the last structure to process food, taking the undigestible matter from the small intestine, absorbing water from it and leaving the waste product called feces. Feces are expelled from the body through the rectum and the anus.

Source: <https://humanbiology.pressbooks.tru.ca/chapter/18-2-organs-of-excretion/>

[https://medlineplus.gov/ency/imagepages/8832.htm#:~:text=The%20large%20intestine%20\(or%20colon,the%20rectum%20and%20the%20anus.](https://medlineplus.gov/ency/imagepages/8832.htm#:~:text=The%20large%20intestine%20(or%20colon,the%20rectum%20and%20the%20anus.)

Q.42) Consider the following statements with reference to warm-blooded and cold-blooded animals:

1. Warm-blooded animals usually maintain a constant body temperature while cold-blooded animals have fluctuating body temperature.
2. Warm-blooded animals usually have lower metabolic rates than cold-blooded animals.
3. Cold-blooded animals are generally more limited in their activity levels than warm-blooded animals.

Which of the above-given statements is/are correct?

- a) 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1 and 2 only

Ans) c

Exp) Option c is the correct answer.

Warm-blooded animals are known as endotherms while Cold-blooded animals are known as ectotherms.

Statement 1 is correct: **Warm-blooded animals, such as mammals and birds, maintain a constant body temperature** regardless of the surrounding environment. They achieve this through a combination of metabolic processes, insulation (fur, feathers, or blubber), and behavioral adaptations. These animals can generate heat internally when the environment is cold and dissipate heat when it is warm. **Cold-blooded animals, including reptiles, amphibians, fish, and most invertebrates, have body temperatures that fluctuate with the surrounding environment.** They rely on external sources of heat, such as sunlight or

warm surfaces, to warm up, and seek shade or cool environments to cool down. They also exhibit behavioral adaptations to help regulate their body temperature.

Statement 2 is incorrect: Warm-blooded animals typically have higher metabolic rates, which allows them to generate heat internally. They need more energy to maintain their constant body temperature, so they generally consume more food and have a higher calorie intake than cold-blooded animals. **Cold-blooded animals have lower metabolic rates and do not need as much energy to survive.** Their metabolism is highly dependent on their body temperature; when they are cold, their metabolism slows down, and they become less active. Conversely, as their body temperature rises, so does their metabolism and activity levels.

Statement 3 is correct: Due to their constant body temperature, Warm-blooded animals can remain active over a wide range of environmental conditions. This allows them to inhabit various climates and regions, including extreme environments such as the Arctic or the desert. They can also remain active during the day and night. **Cold-blooded animals are more limited in their activity levels, as their performance is highly dependent on their body temperature.** They may become sluggish or inactive when temperatures are too low or too high. This can restrict their ability to inhabit extreme environments or be active during certain times of the day or year.

Source: https://www.washingtonpost.com/lifestyle/kidspost/ever-wondered-about-warm-blooded-and-cold-blooded-animals/2015/11/27/575d30ca-6c57-11e5-aa5b-f78a98956699_story.html

<https://ncert.nic.in/textbook/pdf/kebo104.pdf>

<https://www.britannica.com/science/warm-bloodedness>

Q.43) Cuscuta, Indian paintbrush and Giant Padma are the examples of:

- Insect species
- Aquatic animals
- Parasitic plants
- Bird species

Ans) c

Exp) Option c is the correct answer.

Cuscuta, Indian paintbrush, and Giant padma are considered parasitic because they obtain nutrients and water from other plants rather than producing their own through photosynthesis. Cuscuta, also known as dodder, has thread-like stems that wrap around and parasitize other plants to obtain water and nutrients. Indian paintbrush, a genus of flowering plants, has specialized roots that tap into the roots of other plants to obtain nutrients. Rafflesia arnoldii or the Giant Rafflesia is an endoparasite, meaning it lives entirely within the tissues of its host plant, typically a vine in the genus Tetrastigma. Rafflesia lacks leaves, stems, and roots, and instead forms thread-like structures called mycelium, which penetrate the host's tissue to absorb nutrients. It is entirely dependent on its host for sustenance, as it cannot photosynthesize.

Knowledge Base:

Cuscuta:



Giant Padma:**Indian paintbrush:**

Source: <https://www.frontiersin.org/articles/10.3389/fpls.2015.00045/full>
<https://www.kew.org/plants/rafflesia-arnoldii>
<https://www.fs.usda.gov/wildflowers/plant-of-the-week/Castilleja-coccinea.shtml>

Q.44) Which among the following statements best describes the term ‘adaptive radiation’?

- The process by which a single ancestral species diversifies into a variety of differently adapted species.
- The process by which unrelated species evolve to acquire similar traits due to similar environments.
- The process by which different species converge to acquire the same ecological niche.
- The process by which a large number of species become extinct due to environmental changes.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: Adaptive radiation is the process by which a single ancestral species diversifies into a variety of differently adapted species, in order to exploit different ecological niches. This occurs when a group of organisms colonizes a new environment with many unoccupied ecological niches, and through natural selection, they evolve into different forms to exploit those niches. As the new species adapt to different ecological conditions and develop different traits, they become increasingly distinct from one another, eventually evolving into completely different species. Adaptive radiation can occur over relatively short time scales, such as a few thousand years, or over longer time scales, such as millions of years. **One classic example of adaptive radiation is the evolution of Darwin's finches in the Galapagos Islands.** These finches diversified over time, developing different beak shapes and sizes to exploit different food sources on different islands. This process of adaptive radiation helped to create the diversity of bird species that we see today.

Option b and c are incorrect: In evolutionary biology, convergent evolution is defined as the process whereby distantly related organisms independently evolve similar traits to adapt to similar necessities.

Thus, Convergent evolution occurs when species occupy similar ecological niches and adapt in similar ways in response to similar selective pressures.

Option d is incorrect: Adaptive radiation is not the process by which a large number of species becomes extinct due to environmental change. It is during Extinction when species are diminished because of environmental forces.

Source: <https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/adaptive-radiation>

<https://www.britannica.com/science/adaptive-radiation>

<https://www.biologyonline.com/tutorials/adaptive-radiation>

Q.45) This sanctuary is a proposed Tiger Reserve situated in Nuapada District of Odisha and it shares a common border with Chhattisgarh. It is situated on a plateau inhabited mainly by Gond, Bhunjia and Paharia tribes. This Sanctuary hosts a range of wildlife species including such as tigers, swamp deer, leopards, gaurs, sloth bear, barking deer etc.

Which of the following wildlife sanctuaries is identified with the description above?

- Coringa Wildlife Sanctuary
- Govind Wildlife Sanctuary
- Chinnar Wildlife Sanctuary
- Sunabeda wildlife sanctuary

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: Coringa Sanctuary, named after a tiny village coringa in East Godavari District of Andhra Pradesh a part of Godavari Mangroves was declared as a wildlife sanctuary by Govt. of Andhra Pradesh to conserve the mangrove vegetation of the estuary, extending in an area of about 235.Sq. Kms.

Option b is incorrect: The Govind Wildlife Sanctuary or Govind Pashu Vihar National Park and Sanctuary are located in the Uttarkashi district of Uttarakhand. Established in 1955, the sanctuary covers an area of 958 sq km and includes mountains like Swargarohini, Black Peak, and Bandarpunch. The altitude at the park ranges from the average elevation of 1400mts to an astonishing 6323mts and consists of Chirpine, scrub tropical Euphorbia scrub and oak species.

Option c is incorrect: Chinnar Wildlife Sanctuary in Kerala is home to the Great Grizzled Squirrel of India. Numbering less than 200, they are among the most endangered species on the planet. It provides a home to Panthers, Indian Elephants, Common Langur, Bonnet Macaque etc. A paradise for bird lovers, the Chinnar Wildlife Sanctuary is also famous for preserving a diverse range of birds. These include Black Eagle, Yellow-throated Bulbuls, Grey Heron, Serpent Eagle etc. The Chinnar Wildlife Sanctuary has mainly Dry Deciduous Forests, Wet Grasslands, High Sholas, Dry Thorny Scrub Forests, and Riparian Forests.

Option d is correct: Sunabeda wildlife sanctuary is a Proposed Tiger Reserve situated in Nuapada District of Odisha and it is sharing common border with Chhattisgarh. It also forms the catchment area of the Jonk River. It hosts a range of wildlife species including Indian mammals such as tigers, swamp deer, leopards, gaurs, sloth bear, barking deer etc. It is situated on a plateau inhabited mainly by Gond, Bhunjia and Paharia. The Plateau is the source of the river Jonk and Sundar.

Source: <https://eastgodavari.ap.gov.in/tourist-place/coringa-sanctuary/>

<https://www.euttaranchal.com/tourism/govind-wildlife-sanctuary.php>

<https://munnartourism.co.in/chinnar-wildlife-sanctuary-munnar>

<https://nuapada.nic.in/tourist-place/sunabeda/>

<https://www.holidaylandmark.com/india/odisha/wildlife-sancturies-in-odisha/sunabeda-wildlife-sanctuary.html>

<https://timesofindia.indiatimes.com/travel/orissa/sunabeda-wildlife-sanctuary/ps47988803.cms>

Q.46) Which among the following can be the cause of cancer?

1. Tobacco consumption
2. Exposure to human papillomavirus
3. Exposure to gamma rays

Select the correct answer using the code given below:

- a) 1 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Cancer is a disease in which some of the body's cells grow uncontrollably and spread to other parts of the body. Following options can be the cause of cancer:

Option 1 is correct: Tobacco consumption: Tobacco use, including smoking and chewing tobacco, is a major risk factor for many types of cancer, including lung cancer, throat cancer, and mouth cancer.

Option 2 is correct: Exposure to certain viruses (HPV): Human papillomavirus (HPV) is a virus that can cause cervical cancer, as well as other types of cancer, such as anal, penile, and throat cancer.

Option 3 is correct: Exposure to gamma rays: Exposure to high levels of radiation, such as gamma rays, can **damage DNA and increase the risk of cancer**. This can occur in people who work in certain industries, such as nuclear power plants or radiology, as well as people who have received radiation therapy for cancer treatment.

Source: <https://www.cdc.gov/vitalsigns/cancerandtobacco/index.html>

<https://www.cancer.gov/about-cancer/causes-prevention/risk/infectious-agents/hpv-and-cancer>

<https://www.cancer.org/healthy/cancer-causes/radiation-exposure/x-rays-gamma-rays/do-xrays-and-gamma-rays-cause-cancer.html>

Q.47) Which of the following types of reproduction methods/processes can be observed in animals?

1. Internal fertilization
2. External fertilization
3. Budding

Select the correct answer using the code given below:

- a) 2 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Option 1 is correct: Internal fertilization: This type of reproduction occurs when the male deposits sperm inside the female's body, where it fertilizes the female's eggs. **Internal fertilization is common in many types of animals, including mammals, reptiles, and birds.**

Option 2 is correct: External fertilization: This type of reproduction occurs when the female releases eggs into the environment, and the male fertilizes them with sperm. **External fertilization is common in many aquatic animals, such as fish and amphibians.**

Option 3 is correct: Budding: This type of reproduction occurs when a new individual grows on the body of an existing individual and then detaches to become a separate organism. **Budding is observed in some invertebrates, such as corals, hydras and sponges.**

Source: <https://opentextbc.ca/biology/chapter/24-2-fertilization/>
<https://opentextbc.ca/biology/chapter/13-1-how-animals-reproduce/>

Q.48) Which of the following are the functions of the Cell Membrane?

1. It allows the movement of nutrients into the cell.
2. It allows the movement of toxic substances out of the cell.
3. It provides interaction of one cell with another cell.
4. It provides structural support to the cell.

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 2 and 4 only
- c) 1 and 3 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

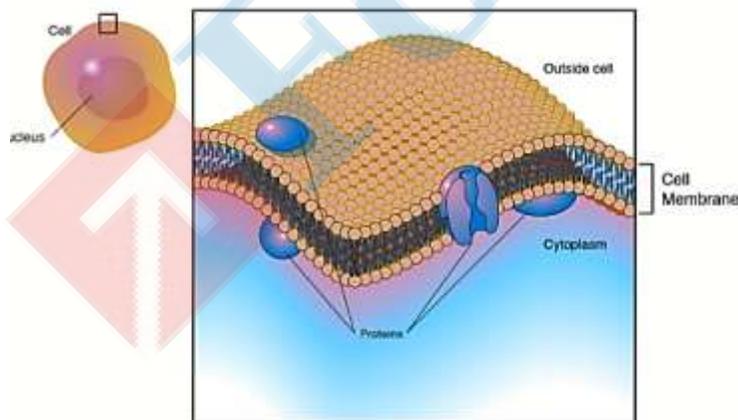
The basic components of a cell are cell membrane, cytoplasm and nucleus. The cytoplasm and nucleus are enclosed within the cell membrane, also called the plasma membrane.

The plasma membrane, or the cell membrane, provides protection for a cell. It also provides a fixed environment inside the cell, and that membrane has several different functions.

Statements 1 and 2 are correct. One of the functions of cell membrane is to **transport nutrients into the cell** and also to **transport toxic substances out of the cell.**

Statement 3 is correct. The cell membrane, also called the plasma membrane, is found in all cells and separates the interior of the cell from the outside environment. Plasma membrane, have proteins on it which interact with other cells. And those proteins which stick outside of the plasma membrane will **allow for one cell to interact with another cell.**

Statement 4 is correct. The cell membrane also provides some **structural support** for a cell. Cell membrane also helps in maintaining the shape of the cell.



Source: <https://www.genome.gov/genetics-glossary/Cell-Membrane#:~:text=The%20cell%20membrane%2C%20also%20called,entering%20and%20exiting%20the%20cell.>

<https://ncert.nic.in/textbook/pdf/hesc108.pdf> Pg No. 93

Q.49) Which of the following statements is **incorrect** regarding ‘Darwinian Theory of Evolution’?

- The existing living forms share a varying degree of similarities with life forms that existed millions of years ago.
- The organisms with disadvantageous variants are eliminated from nature during the struggle of existence.
- The population of species in the absence of environmental checks tends to increase very fast.
- New species arise due to sudden changes after catastrophic event.

Ans) d

Exp) Option d is the correct answer.

Various theories about the mechanism of evolution have been proposed which includes Lamarck's theory of “Inheritance of acquired characters”; De Vries' theory of ‘mutation’ and Darwin's theory of Natural selection.

Statement a is correct. Charles Darwin emphasizing on **gradual evolution of life forms** concluded that existing living forms share **similarities to varying degrees** not only among themselves but also with **life forms that existed millions of years ago**. Many such life forms do not exist anymore as there had been extinctions of different life forms in the years gone by just as new forms of life arose at different periods of history of earth.

Statement b is correct. According to Darwin, organisms produce more offspring than can survive because environmental resources are limited. During **struggle for existence**, organisms with **advantageous variations** are protected and allowed to reproduce while the **disadvantageous variants** are eliminated from nature. This is what was termed natural selection by Darwin.

Statement c is correct. The idea of Darwin's evolution by natural selection is based on another fact that every species, in the absence of **environmental checks** tends to increase in **geometrical manner**. If a population of a given species doubles in one year and if there are no checks on its increase, it will increase four times the next year and so on.

Statement d is incorrect. Darwin defined evolution as “descent with modification,” the idea that species change **over long time**, give rise to new species, and share a common ancestor. **New species is not a result of sudden change according to Darwin.**

Whereas, **Hugo de Vries** in his **mutation theory** of evolution believed new species rise by **sudden changes** called mutations rather than by gradual processes. According to him it was mutation and not natural selection which is the primary factor in evolution.

Source: <https://egyankosh.ac.in/bitstream/123456789/7517/1/Unit-2.pdf>

<https://ncert.nic.in/textbook/pdf/lebo107.pdf>

<https://nios.ac.in/media/documents/srsec314newE/PDFBIO.EL1.pdf>

Q.50) In the context of India's security market, which of the following statements is correct about the short selling?

It occurs when-

- both buying and selling of stocks are done within one day, irrespective of the prices of stocks.
- an investor borrows a security and sells it on the open market, planning to buy it back later for less money.
- An investor purchases securities at lower prices and sale when prices start increasing.
- companies reinvest the profits instead of improving operations and sharing dividends with investors.

Ans) b

Exp) Option b is the correct answer.

Short selling is an investment or trading strategy that speculates on the decline in a stock or other security's price. **Short selling occurs when an investor borrows a security and sells it on the open market, planning to buy it back later for less money.** Short sellers bet on, and profit from, a drop in a security's price. This can be contrasted with long investors who want the price to go up. Short selling has a high risk/reward ratio: It can offer big profits, but losses can mount quickly and infinitely due to margin calls.

Option d is incorrect: Growth investing is applied when a company continues to grow profits as the focus is on growth of the capital. Companies reinvest the profits instead of improving operations and enticing investors with dividends.

Knowledge Base:

According to the trend following strategy, purchase at booming prices and sale when prices start showing a downward trend. There are many mathematical factors and calculations to be used for determining stock moves and to understand how to analyse stock market trends in a better way.

Source: <https://www.investopedia.com/terms/s/shortselling.asp>

<https://www.motilaloswal.com/blog-details/8-ridiculously-powerful-stock-market-trading-strategies-for-beginners/19975>

Q.1) Which of the following statements about the applications of stem cells are correct?

1. They can be used to test the drugs for safety and quality.
2. They can be used to treat genetic diseases.
3. They can be used in tissue engineering.
4. They can be used to create lab grown cultured meat.

Select the correct answer from the code given below:

- a) 1, 2, and 4 only
- b) 2, 3, and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Stem cells are undifferentiated cells that have the intrinsic capacity to self-renew, that is, to divide and develop into different types of cells. Since its discovery in the 1960s, stem cell technology has harnessed the power of stem cells to solve problems in the field of medicine.

Statement 1 is correct: Stem cells can be used **to test the safety and effectiveness of new drugs**. This can help speed up the drug discovery process and reduce the need for animal testing.

Statement 2 is correct: Stem cell transplantation (SCT) is used to cure or greatly ameliorate a wide variety of genetic diseases, ranging from inherent defects of haemopoietic cell production or function to metabolic diseases.

Statement 3 is correct: **Stem cells can be used to create new tissues and organs for transplant. This is known as tissue engineering.** Researchers are working on developing techniques to grow replacement organs, such as kidneys and liver, from a patient's own stem cells.

Statement 4 is correct: **The stem cell technology is used to develop lab-grown meat.** This refers to meat that is comprised of animal cells but grown outside of the animal in controlled laboratory settings. To produce cultured meat, stem cells are isolated via simple biopsy from a living animal – chosen based on the meat being produced – and then cultured in vitro, without harming the animal.

Source: <https://www.hindustantimes.com/lifestyle/health/treatment-of-genetic-disorders-here-s-how-stem-cells-can-treat-genetic-diseases-101679382563350.html>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4969512/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2475566/>

<https://www.labiotech.eu/partner/stem-cell-technology-lab-grown-meat/>

<https://www.mayoclinic.org/tests-procedures/bone-marrow-transplant/in-depth/stem-cells/art-20048117#:~:text=People%20who%20might%20benefit%20from,%2C%20burns%2C%20cancer%20and%20osteoarthritis.>

Q.2) Recently, the Site-Directed Nucleases (SDN) technology was in the news. In this context, consider the following statements:

1. Zinc-Finger Nucleases (ZFNs) is a technique that is used in SDN technology.
2. In all types of SDN technologies (SDN-1, 2 and 3), foreign genetic material is inserted to make changes in DNA.
3. Recently, the Union Ministry of Environment, Forest and Climate Change has exempted crops derived from SDN1 and SDN2 from biosafety assessment requirements.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

A decade ago, scientists in Germany and the US discovered a technique which allowed them to ‘cut’ DNA strands and edit genes. For agriculture scientists this process allowed them to bring about desired changes in the genome by using site directed nuclease (SDN) or sequence specific nuclease (SSN). Nuclease is an enzyme which cleaves through nucleic acid – the building block of genetic material.

Statement 1 is correct: Site-directed nucleases (SDNs) are a type of genetic engineering tool that can be used to make precise changes to the DNA sequence of a cell or organism. There are several **different techniques for using SDNs**, including:

- 1) **Zinc Finger Nucleases (ZFNs):** ZFNs are engineered proteins that can recognize and bind to specific DNA sequences. When combined with a nuclease, they can cut the DNA at that specific site. ZFNs are widely used in research and have been used to create genetically modified organisms.
- 2) **Transcription Activator-Like Effector Nucleases (TALENs):** TALENs are similar to ZFNs, but use a different type of DNA-binding protein. TALENs are also widely used in research and have been used to create genetically modified organisms.
- 3) **Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) and CRISPR-associated (Cas) proteins:** CRISPR-Cas systems are a type of bacterial immune system that can be used to target and cut specific DNA sequences. CRISPR-Cas systems have revolutionized genetic engineering and are now widely used in research and industry.

Statement 2 is incorrect: Depending on the nature of the edit that is carried out, the site-directed nucleases (SDN) technology is divided into three categories SDN 1, SDN 2 and SDN 3. SDN1 introduces changes in the host genome’s DNA through small insertions /deletions without introduction of foreign genetic material. In the case of SDN 2, the edit involves using a small DNA template to generate specific changes. **Both SDN1 and SDN2 processes do not involve alien genetic material** and the end result is indistinguishable from conventionally bred crop varieties. On the other hand, **SDN3 process involves larger DNA elements or full length genes of foreign origin** which makes it similar to Genetically modified organisms (GMO) development

Statement 3 is correct: Recently, the Ministry of Environment, Forests and Climate Change has relaxed the rules regarding the GM crops made from the SDN1 and SDN2 technologies. The notification states that **“SDN1 and SDN2 genome-edited products free from exogenous introduced DNA be exempted from biosafety assessment”** in pursuance of rule 20 of the Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms/Genetically engineered Organisms or Cells Rules 1989.

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4970358/>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1871153>

<https://indianexpress.com/article/explained/everyday-explainers/what-is-genome-editing-technology-how-is-it-different-gm-technology-7846402/>

Q.3) With reference to “Chimeric Antigen Receptor (CAR) T-cell therapy”, consider the following statements:

1. A patient’s own cells cannot be used in the CAR T-cell therapy.
2. In this, T cells are genetically altered in a lab to enable them to locate and destroy cancer cells more effectively.

3. The therapy can help in treating diseases like leukemia and lymphomas.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Currently available CAR T-cell therapies are customized for each individual patient. They are made by collecting T cells from the patient and re-engineering them in the laboratory to produce proteins on their surface called chimeric antigen receptors, or CARs. The CARs recognize and bind to specific proteins, or antigens, on the surface of cancer cells.

Statement 1 is incorrect: Unlike chemotherapy or immunotherapy which involve taking drugs, **CAR T-cell therapies use a patient's own cells.** They are modified in the laboratory to activate T-cells and target tumor cells.

Statement 2 is correct: CAR T cell therapy is a type of cancer immunotherapy treatment that uses immune cells called T cells that are genetically altered in a lab to enable them in locating in destroying cancer cells more effectively.

Statement 3 is correct: CAR T treatment can be very effective against some types of cancer, even when other treatments are not working. Since 2017, **six CAR T-cell therapies have been approved by the Food and Drug Administration (FDA).** CAR T-cell therapies are approved for the treatment of blood cancers, including **lymphomas**, some forms of **leukemia**, and, most recently, multiple myeloma.

Source: <https://www.cancer.gov/about-cancer/treatment/research/car-t-cells>

<https://www.ncbi.nlm.nih.gov/books/NBK537294/>

<https://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/immunotherapy/car-t-cell1.html>

Q.4) Consider the following statements with reference to “Molecular Motors”:

1. They are a class of proteins that convert chemical energy into mechanical work.
2. These motors utilize the energy from the hydrolysis of Adenosine triphosphate (ATP) to generate force.
3. Myosins and kinesins are two important examples of molecular motors.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Molecular motors, an important class of molecular machines, harness various energy sources to generate unidirectional mechanical motion.

Statements 1 is correct: Molecular motors are a class of proteins that convert chemical energy into mechanical work, enabling various cellular processes such as muscle contraction, vesicle trafficking, and chromosome segregation.

Statement 2 is correct: These motors utilize the energy from ATP hydrolysis to generate force and movement along cytoskeletal filaments such as microtubules and actin filaments.

Statement 3 is correct: There are three major classes of molecular motors: myosins, kinesins, and dyneins, each with distinct structures and functions. For example, myosins are responsible for muscle contraction, while kinesins and dyneins play roles in intracellular transport and cell division.

Source:

<https://www.ncbi.nlm.nih.gov/books/NBK26888/#:~:text=Perhaps%20the%20most%20fascinating%20proteins,to%20move%20steadily%20along%20it.>

https://www.physio-pedia.com/Molecular_Motors

<https://pubs.acs.org/doi/10.1021/acs.chemrev.9b00819>

Q.5) Consider the following statements with reference to the Hallmark Unique Identification Number (HUID):

1. It has been introduced by the Ministry of Statistics and Programme Implementation.
2. It is a 6-digit Alphanumeric code.
3. One cannot sell gold jewelry without the HUID.

Which of the above-given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

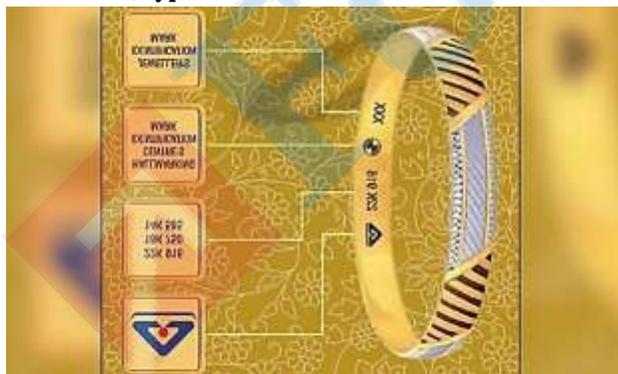
Ans) b

Exp) Option b is the correct answer.

Recently, the Bureau of India Standards (BIS) has prohibited the sale of hallmarked gold jewelry or gold artifacts without the Hallmark Unique Identification Number (HUID).

Statement 1 is incorrect: The Hallmark Unique Identification Number (HUID) is the **initiative of the Bureau of India Standards (BIS) which is the National Standards Body of India under the Department of Consumer Affairs, Ministry of Consumer Affairs, Food & Public Distribution, Government of India.**

Statement 2 is correct: HUID is a six-digit alphanumeric code and forms the part of hallmark which would now consist of 3 marks viz, BIS logo, purity of the article and six-digit alphanumeric HUID. It provides **information of the jeweller** who got the article hallmarked, **their registration number, purity of the article, type of article as well as details of hallmarking centre** which test and hallmark the article.



Statement 3 is correct: The sale of hallmarked gold jewelry or gold artefacts without 6 digit alphanumeric HUID is not be permitted after 31st March 2023 in order to safeguard and protect the consumers and enhance their confidence in purchase of hallmarked gold jewelry with traceability and assurance of quality.

Knowledge Base: As per BIS Rules, 2018, **in case Hallmarked jewelry bought by the consumer is found to be of lesser purity than that marked on jewelry, then the buyer/customer shall be entitled for**

compensation which shall be two times the amount of difference calculated on the basis of shortage of purity for the weight of such article sold and the testing charges.

Source:

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1904262#:~:text=It%20is%20further%20clarified%20that,traceability%20and%20assurance%20of%20quality.>

Q.6) Consider the following statements with reference to the term “Micro-LED”:

1. Only organic materials are used for the manufacturing of Micro-LEDs.
2. The LED used in this technology is self-illuminating.
3. They have brighter and better color reproduction than OLED display technology.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Micro LED is a display technology that uses arrays of tiny LEDs as pixels in a display. These LEDs are much smaller than the ones used in traditional LED displays, which allows for higher resolution, finer image fidelity and more compact displays.

Statement 1 is incorrect: Micro LED differs from OLED in the makeup of the LED materials. The O in OLED stands for organic and refers to the organic materials used in light producing part of the pixel stack.

MicroLED technology changes this to an inorganic Gallium Nitride (GaN) material, which is typically found in regular LED lighting.

Statements 2 and 3 are correct: Micro-LEDs are self-illuminating diodes that have brighter and better color reproduction than Organic Light Emitting Diode (OLED) display technology.

Micro LED TVs can be made up of a number of smaller panels that attach together to form a bigger screen like a Destructicon from Transformers. One can buy a couple of modules to make a smaller TV, and then add more if you move into a bigger house with more space for a TV.

Source: <https://www.androidauthority.com/micro-led-display-explained-805148/>

<https://www.thehindu.com/sci-tech/technology/what-are-microled-displays-and-why-is-apple-shifting-to-it/article66500256.ece>

<https://www.electronicworldtv.co.uk/blog/inorganic-led-the-future-of-television>

<https://www.microled-info.com/microled-vs-oled>

<https://www.businesstoday.in/tech-today/news/story/samsung-showcases-supersized-140-inch-micro-led-tv-at-ces-2023-rip-projectors-359365-2023-01-08>

<https://www.trustedreviews.com/explainer/what-is-micro-led-3435345>

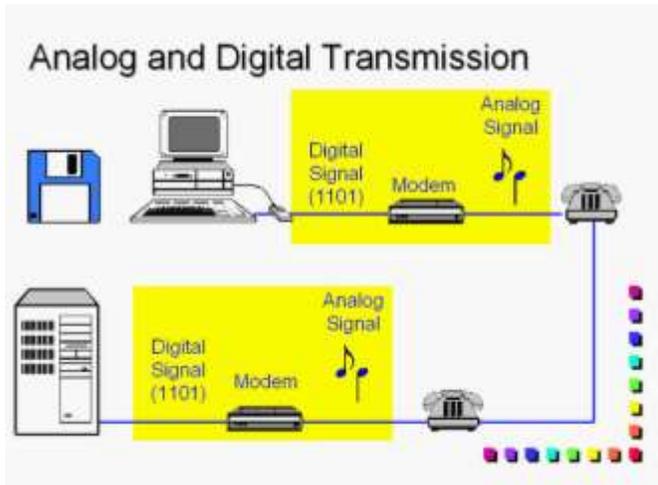
Q.7) With regard to difference between analog and digital data transmission, which of the following statements **is incorrect?**

- a) Analog transmission uses a continuous signal to transfer messages whereas Digital transmission transfers messages discretely.
- b) Analog transmission uses analog signal whose amplitude varies with time, whereas digital transmission uses digital signal whose amplitude is either of two levels i.e., 0 or 1
- c) Analog transmission can broadcast large number of channels simultaneously whereas Digital transmission can broadcast only a single channel at a time.
- d) In analog transmission separating out noise and signal is not possible whereas it is possible in digital communication.

Ans) c

Exp) Option c is the correct answer.

In analog communication the data is transferred with the help of analog signal in between transmitter and receiver. Any type of data is transferred in analog signal. Any data is converted into electric form first and after that it is passed through communication channel. In digital communication digital signal is used rather than analog signal for communication in between the source and destination. They digital signal consists of discrete values rather than continuous values.



Statement a is correct: Analog transmission uses a **continuous signal** varying in amplitude, phase, or another property that is in proportion to a specific characteristic of a variable. Digital transmission transfers messages **discretely**. These messages are represented by a sequence of pulses via a line code.

Statement b is correct: Analog communication uses analog signal whose amplitude varies continuously with time **from 0 to 100**. Digital communication uses digital signal whose amplitude is of two levels **either Low i.e., 0 or either High i.e., 1**.

Statement c is incorrect: In analog communication **only limited number of channels** can be broadcasted simultaneously whereas Digital transmission can broadcast **large number of channels** simultaneously.

Statement d is correct: Separating out noise and signal in **analog communication is not possible, while** separating out noise and signal in digital communication is possible.

Knowledge Base: In analog communication **noise immunity is poor**, while in digital communication noise immunity is **good**.

In analog communication coding is not possible. In digital **communication coding is possible**. Different coding techniques can be used to detect and correct errors.

Source: <http://www.differencebetween.net/technology/difference-between-analog-and-digital-transmission/#:~:text=%20Difference%20Between%20Analog%20and%20Digital%20Transmission%20,fi>
bre%20optic%20cable%2C%20the%20air%2C%20or...%20More%20

<https://www.geeksforgeeks.org/difference-between-analog-communication-and-digital-communication/>

Q.8) Consider the following statements with reference to the applications of Geospatial Technology:

1. It can be used in industries for supply chain management.
2. It can be used by insurance companies for risk-based assessments.
3. It can be utilized in agriculture to analyze soil data.
4. It can be used for tracking geographical spread of diseases.

Which of the statements given above are correct?

- a) 3 only
- b) 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 3, and 4

Ans) d

Exp) Option d is the correct answer.

Geospatial technologies is a term used to describe the range of modern tools contributing to the geographic mapping and analysis of the Earth and human societies

Statement 1 is correct: Geospatial Technology is used in Supply Chain Management

When a business is trying to keep track of its inventory and supply needs, they need to have the necessary tools for tracking how and when supply replenishment will arrive. When a business can keep track of inventory and shipments with geospatial technology, the supply chain grows, efficiency improves, and business costs are reduced.

Statement 2 is correct: Geospatial technology is used by insurance companies as a predictive model for risk-based assessments. If a certain location has a track record of things like frequent traffic accidents, high crime rates, etc., insurance companies can determine that may be a maximum risk area and define insurance policies specifically designed for that location.

Statement 3 is correct: Geospatial technology is currently being utilized to analyze soil data in order to determine which crops may grow in specific locations. It also helps farmers create more efficient harvesting procedures. Food production has soared and environmental standards have improved with the help of geospatial data.

Statement 4 is correct: Geospatial technologies are also incredibly important for tracking geographical spread of a disease. This can be demonstrated by the COVID-19 global pandemic. Without geospatial technology, the disease would not have been able to be effectively tracked around the world. Geospatial information was used to monitor the outbreak. The COVID-19 dashboard created by Johns Hopkins University is a great example.

Knowledge Base:

Some of the most **common geospatial technologies include:**

- 1) **Remote Sensing:** The geospatial technology used to study objects or surfaces at faraway distances using the images and data collected from space or airborne camera and sensor platforms.
- 2) **Geographic Information Systems (GIS):** It is a framework for gathering, managing, mapping, and analyzing the physical environment data of a specific location on the Earth's surface. GIS uses layers of geographic data to produce spatial analysis and derivative maps or 3D scenes.
- 3) **Global Positioning System (GPS):** It is a navigation system using satellites, a receiver, and algorithms to synchronize location, velocity and time data for air, sea and land travel.

Source: <https://www.studysmarter.co.uk/explanations/human-geography/introduction-to-human-geography/geospatial-technologies/>

<https://mgiss.co.uk/geospatial-technology-applications-and-benefits/>

<https://www.analyticsinsight.net/top-8-applications-of-geospatial-data-in-our-lives/>

<https://www.indiascienceandtechnology.gov.in/geospatial-technology/types-geospatial-technologies>

Q.9) “It is an encrypted portion of the internet that is not indexed by search engines and requires specific configuration or authorization to access. It can be accessed only by using specific browsers, such as TOR Browser.”

The above paragraph best describes which of the following?

- Open web.
- Surface Web
- Dark Web
- Telnet

Ans) c

Exp) Option c is the correct answer.

Options a and b are incorrect: Surface web/open web is the normal web which is visible for all users using internet. The websites on the surface web are indexed by search engines. The user can open websites and gain information. But the interesting thing is that the surface web is only a 4% area of internet that the users use.

Option c is correct: The term Dark Web or Dark Net refers to encrypted online content that is not indexed by conventional search engines. Accessing the dark web can only be done using specific browsers, such as TOR Browser. There is a great deal of privacy and anonymity that comes with using the dark web compared to traditional websites. As its name implies, the dark web is a secret network that exists underground. It's made up of a series of websites that are hidden from the general public. This means they aren't accessible through traditional search engines, such as Google.

Option d is incorrect: Telnet is a network protocol used to virtually access a computer and to provide a two-way, collaborative and text-based communication channel between two machines.



Source: <https://www.kaspersky.com/resource-center/threats/deep-web>

<https://www.techtarget.com/whatis/definition/dark-web>

<https://www.investopedia.com/terms/d/dark-web.asp>

<https://www.hitechnectar.com/blogs/introduction-surface-web-deep-dark-web/>

<https://medium.com/@hackersleague/what-is-surface-web-deep-web-and-dark-web-cdbaf71b30d5>

<https://www.ibm.com/docs/en/aix/7.1?topic=protocols-telnet-protocol>

Q.10) Consider the following statements with reference to the Forest Certification:

1. It is given to the industries that have completed their compensatory afforestation obligation.
2. It is based on standards developed by Forest Stewardship Council (FSC).
3. It will also help to combat desertification and promote forest sustainability.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Forest Certification is a **mechanism for forest monitoring, tracing and labelling timber, wood and pulp products and non-timber forest products**. It is a process through which quality of management from environmental, social and economic perspectives is judged against a series of agreed standards.

Statement 2 is correct: Forest Certification is based on **two major international standards for sustainable management of forests and forest-based products**. One has been developed by **Forest Stewardship Council (FSC)** and the other by Programme for Endorsement of Forest Certifications (PEFC).

Statement 3 is correct: **It is voluntary forest management standard will give impetus to third-party auditing of forest owners for various principles, criteria and indicators**. Forest certification is an important tool to combat desertification and promote forest sustainability.

Source: <https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1834772>

<https://indianexpress.com/article/explained/explained-climate/forests-under-threat-deforestation-investigation-8478180/>

Q.11) Which of the following statements is correct about the term ‘Splinternet’, that has been often mentioned in the media?

- a) It is a part of the internet that is used only for spying activities and for sharing sensitive information.
- b) It is a specific part of the internet which is predominated by the usage of Artificial Intelligence.
- c) It is the internet designed specifically to cater to the needs of people in the Technology industry.
- d) It means that the global internet is fragmented into pieces due to content filtering and censorship by countries.

Ans) d

Exp) Option d is the correct answer.

Recently, Russia is risking the creation of a “splinternet”. Facebook has been blocked entirely by Russian authorities, while Twitter is almost completely cut off.

Option d is correct: **The splinternet is the breaking of one global internet into several smaller and fragmented pieces due to content filtering and censorship**. This division can be caused by religion, politics, government, technology or commerce. The most famous example is China’s “Great Firewall.” When you visit China and go online, you are not on the global Internet. You are on the Chinese government’s so-called “safe” version. You see what they want you to see—and use what services they want you to use.

Option a is incorrect: **A splinter bomb is an explosive device that injures or kills people within its blast radius by dispersing deadly shrapnel**. They can be crafted using any shell or gunpowder type combined with sharp fragments.

Source: <https://www.techtargt.com/whatis/feature/The-splinternet-explained-Everything-you-need-to-know>

<https://indianexpress.com/article/explained/russia-ukraine-war-splinternet-7849249/>
<https://www.internetsociety.org/blog/2022/03/what-is-the-splinternet-and-why-you-should-be-paying-attention/>

Q.12) “It is a quantum mechanical phenomenon. In these, two subatomic particles can be intimately linked to each other even if separated by billions of light-years of space. Despite their vast separation, a change induced in one will affect the other.”

Which of the following phenomenon is mentioned in the above passage?

- a) Quantum Superposition.
- b) Quantum Entanglement.
- c) Quantum Interference.
- d) Quantum Chaos

Ans) b

Exp) Option b is the correct answer.

Quantum Entanglement is the physical phenomenon that occurs when a pair or group of particles is generated and they interact in such a way that the quantum state of each particle of the pair or group cannot be described independently of the state of the others.

Option b is correct: Quantum Entanglement is a quantum mechanical phenomenon. In these two subatomic particles can be intimately linked to each other even if separated by billions of light-years of space. Despite their vast separation, a change induced in one will affect the other. Once you have knowledge of one quantum state, you automatically know the quantum state of any entangled particles. In principle, you could place two entangled particles on opposite ends of the galaxy and still have this instantaneous knowledge, which appears to violate the limit of the speed of light.

Option a is incorrect: The principle of quantum superposition states that a quantum particle can exist in 2 distinct locations at the same time. According to this theory, an quantum particle can exist simultaneously in multiple states, unless the operation of measurement is made.

Option c is incorrect: Quantum interference is when subatomic particles interact with and influence themselves and other particles while in a probabilistic superposition state. It can influence the probability of the outcomes when the quantum state is measured.

Option d is incorrect: Quantum chaos is a branch of physics which studies how chaotic classical dynamical systems can be described in terms of quantum theory. The primary question that quantum chaos seeks to answer is: "What is the relationship between quantum mechanics and classical chaos?".

Chaos theory is an interdisciplinary area of scientific study and branch of mathematics focused on underlying patterns and deterministic laws of dynamical systems that were once thought to have completely random states of disorder and irregularities.

Source: <https://www.space.com/31933-quantum-entanglement-action-at-a-distance.html>

<https://www.livescience.com/what-is-quantum-entanglement.html>

<https://becominghuman.ai/quantum-superposition-and-what-that-means-to-quantum-computation-3fbb5a711b9a>

<https://www.techtarget.com/whatis/definition/quantum-interference#:~:text=Quantum%20interference%20is%20when%20subatomic,the%20quantum%20state%20is%20measured.>

<https://brilliant.org/wiki/quantum-teleportation/>

Q.13) The term “Proof-of-Stake (PoS)” mechanism is best described by which of the following statements?

- a) It is a cryptocurrency consensus mechanism used to verify new cryptocurrency transactions.
- b) It is a method to facilitate credit and debit card transactions by retail customers.

- c) It is a technique for demonstration of a product, service or solution in a sales context.
 d) It is a legal term used in courts, where the Defendant must provide proof in response to the case.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: Proof of stake is a consensus mechanism used to verify new cryptocurrency transactions. Since blockchains lack any centralized governing authorities, proof of stake is a method to guarantee that data saved on the network is valid. A consensus mechanism is a method for validating entries into a distributed database and keeping the database secure. In the case of cryptocurrency, the database is called a blockchain—so the consensus mechanism secures the blockchain. Proof-of-stake reduces the amount of computational work needed to verify blocks and transactions.

Option b is incorrect: A Point of sale (POS) is a device that is used to process transactions by retail customers. A cash register is a type of POS. The cash register has largely been replaced by electronic POS terminals that can be used to process credit cards and debit cards as well as cash. A POS may be a physical device in a brick-and-mortar store, or a checkout point in a web-based store.

Option c is incorrect: Proof of concept (POC) is a demonstration of a product, service or solution in a sales context. Proof of concept (POC) is evidence obtained from a pilot project, which is executed to demonstrate that a product idea, business plan, or project plan is feasible. For example, in drug development, clinical trials are used to gather proof of concept for a final product.

Option d is incorrect: Proof of stake is not a legal term used in courts.

Source: <https://www.forbes.com/advisor/investing/cryptocurrency/proof-of-stake/>
<https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-proof-of-stake>
<https://www.investopedia.com/terms/p/proof-stake-pos.asp>
<https://www.investopedia.com/terms/p/point-of-sale.asp>
<https://www.projectmanager.com/blog/proof-of-concept-definition>
<https://www.gartner.com/en/sales/glossary/proof-of-concept-poc->

Q.14) Consider the following statements with reference to '4D printing technology':

1. This technology involves changing the shape or structure of 3D printed objects under the influence of external stimuli.
2. In this technology, time is considered as the 4th dimension.
3. It uses 'smart material' like hydrogel or shape memory polymer as inputs.

Which of the statements given above are correct?

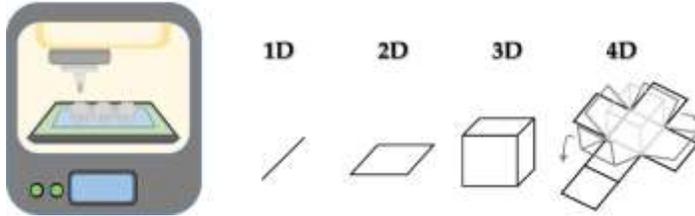
- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

A 4D printed object is printed just like any 3D printed shape. The difference is that the 4D Printing technology uses programmable and advanced materials that perform a different functionality by adding hot water, light or heat. That's why a non-living object can change its 3D shape and behavior over time.

Progress of 4D Polymer Printing Techniques

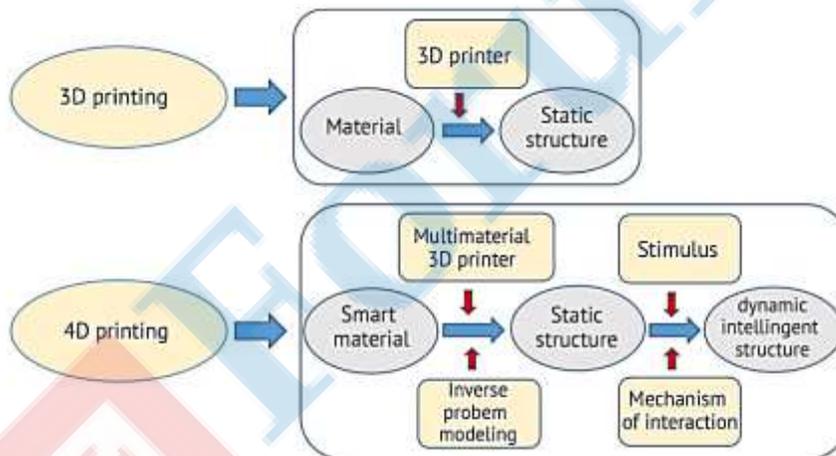


Statement 1 is correct: 4D printing is the process through which a **3D printed object transforms itself into another structure over the influence of external energy input** as temperature, light or other environmental **stimuli**.

4D printing refers to that the shape, property or functionality of 3D printed objects can change over time in response to external stimuli such as water, heat, light, electricity, etc. 4D printing has broad application prospects in many fields such as aerospace, drug delivery, biomedical equipment, and flexible electronic devices, and has been attracting widespread attention. To date, **most of the research on 4D printing involves the shapeshifting of 3D printed materials or structures**.

Statement 2 is correct: 3D Printing is about repeating a 2D structure, layer by layer in a print path, from the bottom to the top, layer by layer until a 3D volume is created. **4D Printing is referred to as 3D printing transforming over time. Thus, a fourth dimension is added: time.** So, the big breakthrough about 4D Printing over 3D Printing technology **is its ability to change shape over time**.

Statement 3 is correct: 4D printing technology uses commercial 3D printers, such as Polyjet 3D printers. **The input is a “smart material”, that can be either a hydrogel or a shape memory polymer.** Thanks to their thermomechanical properties and other material properties, smart materials are given the attributes of shape change and are differentiated from the common 3D printing materials.



Knowledge Base:

Potential Applications of 4D Printing

- 1) Self-repair piping system.
- 2) Self-assembly furniture.
- 3) Medical industry.

Source: <https://www.sculpteo.com/en/3d-learning-hub/best-articles-about-3d-printing/4d-printing-technology/#:~:text=its%20future%20applications,-,What%20is%204D%20Printing%3F,MIT%20Self%2Dassembly%20Lab.>

<https://builtin.com/3d-printing/4d-printing>

Q.15) Consider the following statements with reference to the MSME Competitive Scheme:

1. The scheme is for enterprises to promote lean manufacturing practices.
2. It is an initiative by the Ministry of Commerce.
3. Under this scheme, financial assistance is provided to MSMEs for hiring Lean Manufacturing Consultants.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Recently, Ministry of MSMEs launched the MSME Competitive (LEAN) Scheme to provide a roadmap to global competitiveness for the MSMEs of India.

Statement 1 is correct: The **MSME Competitive (LEAN) Scheme promotes the adoption of lean manufacturing techniques**, which focus on reducing waste, increasing efficiency, and improving product quality.

Statement 2 is incorrect: The **MSME Competitive (LEAN) Scheme is an initiative by the Indian Government's Ministry of Micro, Small and Medium Enterprises** to enhance the competitiveness of these enterprises.

Statement 3 is correct: Under the MSME Competitive (LEAN) Scheme, MSMEs will implement LEAN manufacturing tools like 5S, Kaizen, KANBAN, Visual workplace, Poka Yoka etc under the able guidance of trained and competent LEAN Consultants to attain LEAN levels like Basic, Intermediate and Advanced. **The government will contribute 90% of implementation cost for handholding and consultancy fees.**

Knowledge Base: Lean Manufacturing or Lean Production, known simply as LEAN, is a production practice that considers the expenditure of resources for any goal, other than the creation of value for the end customer, to be wasteful and hence should be eliminated

Source: <https://www.processexcellencenetwork.com/lean-six-sigma-business-performance/articles/what-is-lean>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1905561>

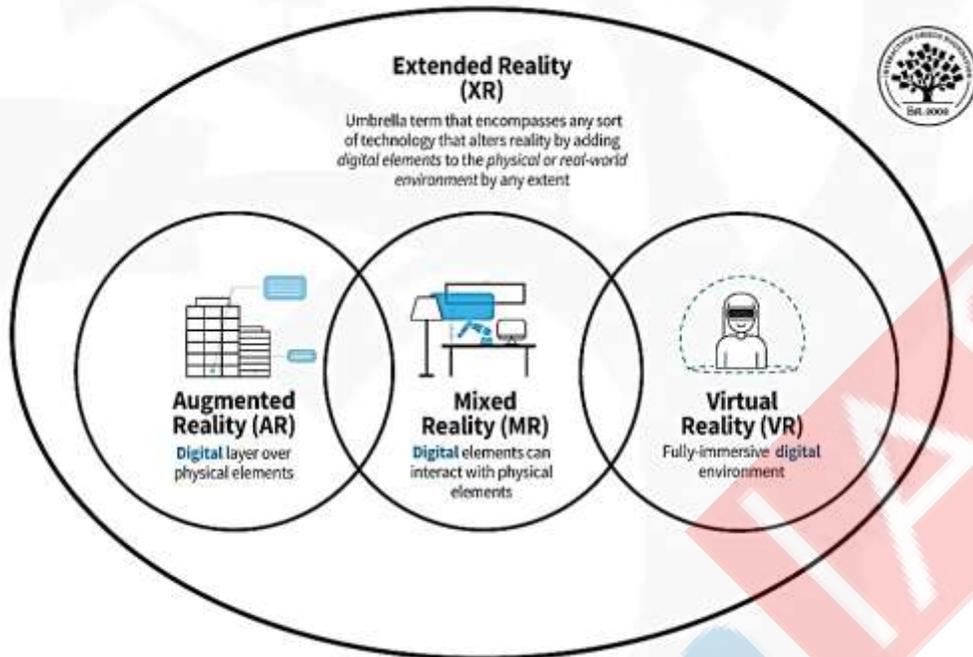
Q.16) “It is an umbrella term for any technology that alters reality by adding digital elements to the physical or real-world environment to an extent. It includes any existing or new technologies that may be created in the future that alter reality, either by blending the digital and the physical world or by creating a fully virtual environment.”

Which of the following options has been described in the above passage?

- a) Augmented Reality
- b) Mixed Reality
- c) Extended Reality
- d) Virtual Reality

Ans) c

Exp) Option c is the correct answer.



Option a is incorrect: In augmented reality, virtual information and objects are overlaid on the real world. This experience enhances the real world with digital details such as images, text, and animation. You can access the experience through AR glasses or via screens, tablets, and smartphones. This means **users are not isolated from the real world and can still interact and see what's going on in front of them**. The most well-known examples of AR are the Snapchat filters that put digital objects such as hats or glasses onto your head.

Option b is incorrect: Mixed reality is a seamless integration of the real world and rendered graphics, which creates an environment in which users can directly interact with the digital and physical worlds together. With MR, real and virtual objects blend, and are presented together within a single display. Users can experience MR environments through a headset, phone or tablet, and can interact with digital objects by moving them around or placing them in the physical world.

Option c is correct: Extended reality (XR) is an umbrella term for any technology that alters reality by adding digital elements to the physical or real-world environment to any extent and includes, but is not limited to, augmented reality (AR), mixed reality (MR) and virtual reality (VR). Therefore, the term extended reality does not refer to any specific technology; it includes any existing or new technologies that may be created in the future that alter reality, either by blending the digital and the physical world or by creating a fully virtual environment.

Option d is incorrect: Virtual reality (VR), the use of computer modeling and simulation that enables a person to interact with an artificial three-dimensional (3-D) visual or other sensory environment. VR applications immerse the user in a computer-generated environment that simulates reality through the use of interactive devices, which send and receive information and are worn as goggles, headsets, gloves, or body suits.

Source: <https://www.interaction-design.org/literature/topics/extended-reality-xr>

<https://blogs.nvidia.com/blog/2022/05/20/what-is-extended-reality/>

<https://www.forbes.com/sites/bernardmarr/2019/08/12/what-is-extended-reality-technology-a-simple-explanation-for-anyone/?sh=2815d6fb7249>

<https://www.britannica.com/technology/virtual-reality>

Q.17) Consider the following statements with reference to Double Asteroid Redirection Test (DART) mission:

1. It is the first-ever space mission to demonstrate asteroid deflection by kinetic impactor.
2. The mission aims to change the orbit of asteroid Bennu.
3. The spacecraft will return to the earth with samples collected from the targeted asteroid.

Which of the statements given above is/are correct?

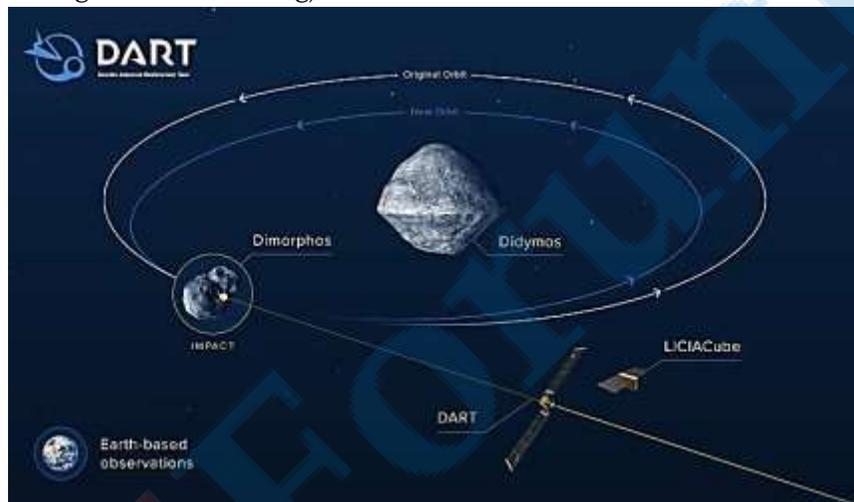
- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

NASA's Double Asteroid Redirection Test (DART) mission launched on a SpaceX Falcon 9 rocket from Vandenberg Space Force Base in California successfully impacted its target asteroid, Dimorphos, on Sept. 26, 2022.

Statement 1 is correct: The Double Asteroid Redirection Test (DART) mission is NASA's demonstration of kinetic impactor technology, impacting an asteroid to adjust its speed and path. **DART is the first-ever space mission to demonstrate asteroid deflection by kinetic impactor** (in simplest terms means smashing a thing into another thing).



Statement 2 is incorrect: The DART spacecraft successfully crashed into the asteroid Dimorphos. The impact should have nudged the asteroid slightly and subtly changed its orbit around Didymos, the larger asteroid. While Dimorphos posed no hazard to Earth, DART's successful collision with the asteroid demonstrated one method of asteroid deflection using kinetic impactor technology.

Statement 3 is incorrect: In the mission DART spacecraft was designed to collide with the asteroid Dimorphos to change its orbit. It is a suicide mission, and the spacecraft will be completely destroyed. Thus, the DART spacecraft will not return to the Earth.

Source: <https://www.nasa.gov/press-release/nasa-confirms-dart-mission-impact-changed-asteroid-s-motion-in-space>

<https://dart.jhuapl.edu/Mission/>

<https://indianexpress.com/article/technology/science/nasas-double-asteroid-redirection-test-successful-dart-crashes-into-dimorphos-8174857/>

<https://www.spacefoundation.org/2023/02/08/nasas-double-asteroid-redirection-test-team-2023-space-achievement-award/>

<https://scitechdaily.com/nasas-double-asteroid-redirection-test-dart-mission-receives-space-foundation-achievement-award/>

Q.18) A satellite or spacecraft is most often placed in one of several particular orbits around Earth. In this context, consider the pairs showing various orbits around the earth:

Type of orbit	Mostly used for
1. Geostationary Earth Orbit (GEO)	Telecommunication purposes
2. Sun-Synchronous Orbit (SSO)	To monitor forest fires
3. Low Earth Orbit (LEO)	Satellite imaging
4. Geostationary transfer orbit (GTO)	To transfer satellite from one orbit to another

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- Only three pairs
- All four pairs

Ans) d

Exp) Option d is the correct answer.

Satellites or spacecraft upon launch are placed in a particular orbit around Earth or sent on an interplanetary journey. The orbit selected depends on what the satellite is designed to achieve. Different types of orbits include Geostationary orbit (GEO), Low Earth orbit (LEO), Medium Earth orbit (MEO), Polar orbit, Sun-synchronous orbit (SSO), Transfer orbits, geostationary transfer orbit (GTO), and Lagrange points (L-points)

Pair 1 is correctly matched: Geostationary Earth Orbit (GEO) is **widely used for telecommunication purposes** because it allows the satellite to remain in a fixed position relative to a point on Earth's surface. It can also be used by weather monitoring satellites, because they can continually observe specific areas to see how weather trends emerge there

Pair 2 is correctly matched: Sun-synchronous orbit (SSO) is a type of polar orbit where a satellite travels over the polar regions and is synchronous with the Sun. This is useful for monitoring areas, taking series of images to investigate weather patterns, predict storms, monitor emergencies such as forest fires or flooding, and accumulate data on long-term problems like deforestation or rising sea levels.

Pair 3 is correctly matched: Low Earth Orbit (LEO) is a close proximity orbit commonly used for satellite imaging and is also used for the International Space Station (ISS) due to the ease of travel for astronauts. However, LEO satellites are less useful for telecommunication tasks as they move too fast across the sky and require significant effort to track from ground stations.

Pair 4 is correctly matched: Geo Transfer orbits (GTO) are a type of orbit that is used to move a satellite or spacecraft from one orbit to another. Satellites launched into space are often placed on a transfer orbit to reach their final orbit using built-in motors and relatively little energy.

Source: https://www.esa.int/Enabling_Support/Space_Transportation/Types_of_orbits

Q.19) Which of the following statements is/are correct about PARAM PORUL, a supercomputer dedicated to the nation under National Supercomputing Mission (NSM)?

- It is a part of joint initiative of Ministry of Electronics and Information Technology (MeitY) and Department of Science and Technology (DST).

2. It is equipped with Direct Contact Liquid Cooling technology.
3. It was inaugurated at the Indian Institute of Science (IISc), Bangalore

Select the correct answer from the code given below:

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

PARAM PORUL is a state-of-the-art supercomputer inaugurated on May 25, 2022, at NIT Tiruchirappalli under the National Supercomputing Mission. The facility has an 838 TeraFlops computing capacity and is equipped with a mix of CPU nodes, GPU nodes, High Memory nodes, High throughput storage, and high-performance Infiniband interconnect.

Statement 1 is correct: PARAM PORUL is a supercomputer dedicated to the nation under the National Supercomputing Mission (NSM), which is a joint initiative of Ministry of Electronics and Information Technology (MeitY) and Department of Science and Technology (DST).

Statement 2 is correct: PARAM PORUL is equipped with Direct Contact Liquid Cooling technology to obtain a high-power usage effectiveness and thereby reducing the operational cost.

Statement 3 is incorrect: PARAM PORUL was not inaugurated at IISc Bangalore. It was inaugurated at NIT Tiruchirappalli.

Knowledge Base:

Direct Contact Liquid Cooling (DCLC) is a cooling technology that uses a liquid coolant, typically water, to directly cool a hot surface, such as a computer chip or server processor. In DCLC, the coolant comes into direct contact with the hot surface, allowing for efficient heat transfer and dissipation. This technology is commonly used in high-performance computing (HPC) applications, such as PARAM PORUL, as it provides a more effective and energy-efficient cooling solution than traditional air-based cooling systems.

Source: <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1828171>

Q.20) Consider the following statements with reference to the Asia Energy Transition Initiative:

1. It is a China-led project aimed at promoting clean energy.
2. The key objective of the initiative is to achieve carbon neutrality in Asia.

Which of the above-given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer

Japan is eager to assist India in its clean energy transition by incorporating the country into the Asia Energy Transition Initiative (AETI).

Statement 1 is incorrect: The **Asia Energy Transition Initiative is a Japan-led project** aimed at promoting clean and sustainable energy alternatives in the Asia-Pacific region.

Statement 2 is correct: The initiative is initially targeted to supporting countries in the Association of South East Asian Nations (ASEAN) pushing toward net-zero carbon emissions. The **aim is to achieve both sustainable growth and carbon neutrality in Asia.**

Source: <https://www.downtoearth.org.in/news/world/india-japan-to-improve-bilateral-cooperation-towards-clean-energy-transition-88029>

Q.21) Which of the following statements is/are correct about Generative Artificial Intelligence (AI)?

1. It is a subset of artificial intelligence that generate new outputs based on the data they have been trained on.
2. Generative AI uses a type of deep learning called generative adversarial networks (GANs) to create new content.

Select the correct code from the options below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Generative artificial intelligence (AI) describes algorithms (such as ChatGPT) that can be used to create new content, including audio, code, images, text, simulations, and videos. Recent breakthroughs in the field have the potential to drastically change the way we approach content creation.

Statement 1 is correct: Generative artificial intelligence (AI) is a subset of AI that uses machine learning algorithms to generate new data based on existing data inputs.

Statement 2 is correct: Generative AI uses a type of deep learning called generative adversarial networks (GANs) to create new content. A GAN consists of two neural networks: a generator that creates new data and a discriminator that evaluates the data. The generator and discriminator work together, with the generator improving its outputs based on the feedback it receives from the discriminator until it generates content that is indistinguishable from real data.

Source: <https://www.weforum.org/agenda/2023/02/generative-ai-explain-algorithms-work/>

<https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-generative-ai>

<https://www.techtarget.com/searchenterpriseai/definition/generative-AI>

Q.22) With reference to Radio Access Network (RAN), Consider the following statements:

1. RAN is used for connecting end user devices to core network.
2. The demand for RAN will decline due to the emergence of 5G technology.

Which of the following statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Radio Access Networks (RANs) are essential components of telecommunications networks that connect end-user devices to the core network. They are crucial for network operators as they represent significant overall network expenses, perform intensive and complex processing.

Statement 1 is correct: RAN (Radio Access Network) is a component in a telecommunications system that connects end user devices (such as mobile phones) to the core network through radio access links.

Statement 2 is incorrect: The demand for RAN is increasing with the emergence of 5G technology as it requires more RAN infrastructure to provide the promised high-speed and low latency connectivity.

Source: <https://www.redhat.com/en/topics/5g-networks/what-is-radio-access-network>

<https://www.techtarget.com/searchnetworking/definition/radio-access-network-RAN>

Q.23) Which of the following countries participated in Sea Dragon 23 military exercise?

1. United States of America
2. Japan
3. Australia
4. India
5. Canada

Select the correct code from given below:

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 1, 2, 4 and 5 only
- d) 1, 2, 3, 4, and 5

Ans) c

Exp) Option c is the correct answer.

The Sea Dragon 23 exercise, a combined anti-submarine warfare training, featured five Indo-Pacific nations, including **the US, Canada, Japan, India, and the Republic of Korea**. The program involved more than 270 hours of in-flight training and exchange of tactics, techniques, and procedures among participants. The exercise is significant in light of the deteriorating regional maritime security environment, particularly around the South and East China Seas.

Source: <https://foreignbrief.com/daily-news/sea-dragon-23-anti-submarine-military-exercise-concludes/>

Q.24) Which of the following statements about Directed Energy Weapons (DEWs) and Hypersonic Weapons are correct?

1. DEWs use directed energy in the form of laser, microwave, or particle beams to destroy targets.
2. DEW are much cheaper to produce when compared with traditional kinetic weapons.
3. Hypersonic weapons travel at speeds greater than Mach 5.
4. Hypersonic cruise weapons have fixed trajectories and limited manoeuvrability.

Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 2, 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

DEWs are a ranged weapon that damages its target with highly focused energy without a solid projectile, including lasers, microwaves, particle beams and sound beams. Hypersonic weapons are weapons capable of travelling at hypersonic speed, defined as between five and 25 times the speed of sound.

Statement 1 is correct: DEWs use directed energy in the form of laser, microwave, or particle beams to destroy targets. These weapons are designed to damage or destroy targets by emitting highly focused energy in the form of lasers, microwaves, or particle beams.

Statement 2 is incorrect: DEWs can be expensive to produce and maintain compared with traditional kinetic weapons as they require complex and advanced technology.

Statement 3 is correct: Hypersonic weapons are weapons that can travel at speeds of Mach 5 to Mach 10, which is five to ten times the speed of sound. These weapons can be used to strike targets with high precision and at long ranges.

Statement 4 is incorrect: Hypersonic cruise weapons are highly manoeuvrable and able to change course during flight. They are different from ballistic missiles, which can also travel at hypersonic speeds (of at least Mach 5) but have set trajectories and limited manoeuvrability.

Source: <https://theprint.in/india/defence-industry-should-work-on-directed-energy-hypersonic-weapons-iaf-chief/1461852/> <https://www.indiatimes.com/explainers/news/explained-what-are-directed-energy-weapons-and-hypersonic-weapons-597340.html> <https://www.voanews.com/a/what-are-hypersonic-weapons-and-who-has-them-/6492459.html>
<https://www.prnewswire.com/news-releases/global-directed-energy-weapons-dew-market-sizeshare-estimated-to-reach-usd-22-10-billion-by-2032--at-9-2-cagr-growth-polaris-market-research-301793284.html>

Q.25) Consider the following statements with reference to the Suspension of Operation (SoO) agreement, seen in the news recently:

1. It is a pact between the Indian government, the Assam state government, and various armed insurgent groups.
2. The pact was first signed in 2008 to initiate a political dialogue with the insurgent groups.
3. As per the agreement, the government forces would not launch any operations against insurgent groups.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The **Suspension of Operation (SoO) agreement is a pact between the Indian government, the Manipur state government,** and various armed insurgent groups in Manipur.

Statement 2 is correct: The agreement aims to maintain peace and pave the way for negotiations, providing an opportunity for these groups to join the political mainstream. **Signed in 2008, the SoO has been extended periodically, with the most recent extension in 2021, and covers 25 Kuki and Zomi armed groups.** In February 2023, the Manipur government decided to withdraw from the SoO agreement, citing violations and a lack of commitment from the armed groups.

Statement 3 is correct: The important terms under the pact are that security forces, including state and central forces, are not to launch any operations, nor can the underground groups.

The signatories of United People's Front (UPF) and Kuki National Organisation (KNO) shall abide by the Constitution of India, the laws of the land and the territorial integrity of Manipur. They are prohibited from committing all kinds of atrocities, extortion, among others. The agreement's primary goal is to establish and maintain peace by suspending armed hostilities between the parties involved.

Source: <https://indianexpress.com/article/explained/explained-politics/what-is-the-soo-agreement-manipur-govt-withdrew-from-8494829/>

Q.26) With reference to Solid Fuel Ducted Ramjet (SFDR) booster, consider the following statements:

1. It has been developed by Defense Research and Development Organization (DRDO)
2. It enables the missiles to intercept aerial threats.
3. It can help in developing long range air to air missiles.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Defense Research and Development Organization (DRDO) successfully flight tested Solid Fuel Ducted Ramjet (SFDR) booster at the Integrated Test Range (ITR), Chandipur off the coast of Odisha on April 08, 2022. The test successfully demonstrated the reliable functioning of all critical components involved in the complex missile system and met all the mission objectives.

Statement 1 is correct: The SFDR has been developed by Defense Research and Development Laboratory, Hyderabad in collaboration with other DRDO laboratories such as Research Centre Imarat, Hyderabad and High Energy Materials Research Laboratory, Pune.

Statement 2 is correct: Solid Fuel Ducted Ramjet (SFDR) booster enables the missiles to intercept aerial threats at very long range at supersonic speeds.

Statement 3 is correct: It will provide DRDO with a technological advantage that will enable it to develop long-range air-to-air missiles. At present, such technology is available only with a handful of countries in the world.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1814813>

Q.27) Which of the following statements about the Pralay missile are correct?

1. It is India's first tactical quasi-cruise missile.
2. It was developed as a derivative of the Prahaar missile program.
3. It has a range of 150-500 kilometres.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) b

Exp) Option b is the correct answer.

India's Defense Ministry has approved the indigenous short-range ballistic surface-to-surface missile, Pralay, which will provide Indian military the ability to strike enemy positions and key installations in actual battlefield areas.

Statement 1 is incorrect: Pralay is India's first tactical quasi-ballistic missile (not a quasi-cruise) missile that has been developed by India and is capable of evading interceptor missiles.

Statement 2 is correct: It is derived from the Prahaar missile program, which was first tested in 2011, and has been developed according to the specifications and requirements of the Indian Army.

Statement 3 is correct: One of the key features of the Pralay missile is its range. It has a range of 150-500 kilometers, which makes it a potent weapon for the Indian military. In addition to its range, the missile is also capable of carrying a conventional warhead of about 350 kg to 700 kg, which makes it highly effective in combat situations.

Source: <https://theprint.in/defence/pralay-indias-first-tactical-quasi-ballistic-missile-a-step-towards-own-rocket-force/1283224/>

Q.28) Which of the following statements about Kamikaze Drones are correct?

1. They are unmanned aerial vehicles that are designed to collide with their target.
2. They are also known as Loitering Munitions.
3. Kamikaze drones are much more expensive than cruise missile.

Select the correct code from the following:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) a

Exp) Option a is the correct answer.

Kamikaze drones are unmanned aerial vehicles (UAVs) that are designed to crash into a target, effectively becoming a suicide weapon. In recent years, there has been an increase in the use of kamikaze drones in conflicts, including in the ongoing war between Russia and Ukraine.

Statement 1 is correct: Kamikaze drones, also known as suicide drones, are unmanned aerial vehicles (UAVs) that are designed to collide with their targets. They are equipped with explosive warheads and can be remotely operated or pre-programmed to fly to a specific target.

Statement 2 is correct: Kamikaze drones are also known as loitering munitions. This is because they can fly around an area for an extended period of time, waiting for a target to appear. They are equipped with sensors that allow them to identify and track targets, and can be directed to attack specific targets.

Statement 3 is incorrect: Kamikaze drones are typically smaller and cheaper than traditional cruise missiles, and are often built from off-the-shelf commercial drones. They can be equipped with explosives or other types of payloads, and can be remotely controlled or programmed to autonomously seek out and attack a target.

Source: <https://timesofindia.indiatimes.com/world/rest-of-world/what-are-kamikaze-drones-the-new-worry-for-ukraine-in-defending-against-russia/articleshow/94912735.cms>

<https://indianexpress.com/article/explained/everyday-explainers/kamikaze-drones-russia-ukraine-war-explained-8209717/>

Q.29) Which of the following statements about GSAT 7 series satellites are **incorrect**?

1. They are remote sensing satellites.
2. GSAT-7A is primarily designed for use by the Indian Army.
3. They are inducted into the Low Earth orbit (LEO)

Select the correct answer using the code given below:

- a) 1 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2, and 3

Ans) d

Exp) Option d is the correct answer.

GSAT-7 is a communication satellite designed by ISRO to provide a wide range of communication services, including low bit rate voice and high bit rate data communication. It is intended to serve a vast oceanic region as well as the Indian land-mass. The satellite's payload is compatible with ISRO's I-2.5K bus and features a multiband communication configuration.

Statement 1 is incorrect: The GSAT 7 series satellites are communication satellites, specifically designed to provide secure and real-time communication to the Indian armed forces, particularly the Indian Navy.

Statement 2 is incorrect: While the GSAT 7 series of satellites are primarily used by the Indian Navy, **GSAT-7A** is actually designed for use by the Indian Air Force (IAF) and provides secure and reliable communication to the IAF's airborne early warning and control (AEW&C) system. **GSAT 7B, which is yet to be launched is for primary use of Indian Army.**

Statement 3 is incorrect: They are placed into a geosynchronous orbit (not LEO), around 36,000 km above Earth.

Source: https://www.isro.gov.in/GSAT_7.html <https://timesofindia.indiatimes.com/india/after-navy-iaf-army-to-get-dedicated-satellite-gsat-7b-as-mod-inks-rs-3k-cr-deal-with-nsil/articleshow/99129740.cms?from=mdr> <https://indianexpress.com/article/explained/explained-the-gsat-7b-and-indias-other-military-satellites-7834659/>

Q.30) Consider the following statements with reference to the Erythritol:

1. Erythritol is used as a sugar substitute in food and beverages due to its low-calorie content.
2. One of the challenges of Erythritol is that it raises blood sugar levels.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

According to recent research, Erythritol, a popular artificial sweetener, is associated with an increased risk of heart attack and stroke.

Statement 1 is correct: Erythritol is a sugar alcohol (or polyol) that is used as a sugar substitute in food and beverages due to its sweet taste and low-calorie content. It is naturally occurring in small amounts in certain fruits and fermented foods, but most commercial erythritol is produced by fermenting glucose with the help of specific yeast or fungi.

Statement 2 is incorrect: Erythritol has about 70% of the sweetness of table sugar (sucrose) and has a glycemic index of zero, which means it does not raise blood sugar levels. Additionally, it has minimal impact on insulin levels, making it a popular choice for people with diabetes or those following low-carb diets. Erythritol is also non-cariogenic, meaning it does not contribute to tooth decay.

Source: <https://www.naturallysweet.com.au/glycemic-index>

<https://www.healthline.com/nutrition/erythritol>

Q.31) Consider the following statements about Imaging X-ray Polarimetry Explorer, often seen in news:

1. It will study the polarization of X-rays from different types of celestial objects.
2. It is a joint initiative of NASA and Japan Aerospace Exploration agency (JAXA).
3. It is the first X-ray observatory to be launched in space.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

NASA's Imaging X-ray Polarimetry Explorer, or IXPE, is a space observatory built to discover the secrets of some of the most extreme objects in the universe – the remnants of supernova explosions, powerful particle streams spit out by feeding black holes, and more.

Statement 1 is correct: IXPE is NASA's first mission to study the polarization of X-rays from many different types of celestial objects. Measuring the polarization of X-rays traces the story of where this light came from, including the geometry and inner workings of its source.

Statement 2 is incorrect: IXPE is an international collaboration between NASA and the Italian Space Agency (and not JAXA). Hundreds of engineers and scientists from more than 12 countries worked together to make IXPE a reality.

Statement 3 is incorrect: IXPE is not the first X ray observatory/telescope. There have been several earlier space telescopes and observatories like, Chandra X-ray observatory, XMM-Newton (European Space Agency's X-ray observatory).

Knowledge Base:

IXPE carries three identical telescopes. Each telescope includes a set of cylindrical mirrors, or optics, and a sensitive detector. The mirrors collect X-rays from celestial objects and focus them onto the detectors, which make an image of the incoming X-rays and measure the polarization. All three mirror sets are separated from their corresponding detectors by a deployable 12-foot (3.7-meter) boom.

IXPE builds on the discoveries of NASA's Chandra X-ray Observatory and other space telescopes by measuring the amount and direction of polarization of X-ray light. IXPE's polarization measurements will help scientists answer questions such as:

- 1) How do black holes spin?
- 2) Was the black hole at center of the Milky Way actively feeding on surrounding material in the past?
- 3) How do pulsars shine so brightly in X-rays?
- 4) What powers the jets of energetic particles that are ejected from the region around the supermassive black holes at the centers of galaxies?

Source: https://www.nasa.gov/mission_pages/ixpe/overview.html

Q.32) In the context of Dark Sky Reserves, recently seen in news, consider the following statements.

1. It is an area where light pollution is monitored, to allow better observation of sky at night.
2. A Dark Sky Reserve is to be set up at Hanle in Ladakh.
3. Currently, no Indian site has been certified as International Dark Sky Reserve by International Dark Sky Reserve Association (IDA).

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

A dark-sky preserve (DSP) is an area, usually surrounding a park or observatory that is kept free of artificial light pollution. The purpose of a dark sky preserve is generally to promote astronomy.

Statement 1 is correct: A dark sky reserve is an area where light pollution is monitored. Basically, there are several restrictions around the reserve where humans are not allowed to have any loud source of light. So, it allows better observation of skies at night for astronomy.

Statement 2 is correct: Recently, in a first-of-its-kind initiative, the Department of Science & Technology (DST) has announced the setting up of India's first Dark Sky Reserve in Hanle, Ladakh. Hanle,

which is about 4,500 metres above sea level, hosts telescopes and is regarded as one of the world's most optimal sites for astronomical observations.

Statement 3 is correct: The International Dark Sky Association (IDA) is a U.S.-based non-profit that designates places as International Dark Sky Places, Parks, Sanctuaries and Reserves, depending on the criteria they meet. Currently no Indian site is certified by IDA as an International Dark Sky Reserve.

Knowledge Base: The Indian Astronomical Observatory at Hanle also houses several telescopes like, the Himalayan Chandra Telescope (HCT), High Energy Gamma Ray telescope (HAGAR), the Major Atmospheric Cherenkov Experiment Telescope (MACE), GROWTH-India, etc.

Source: <https://www.iap.res.in/?q=iao.htm>

<https://timesofindia.indiatimes.com/travel/travel-news/ladakhs-hanle-is-indias-first-dark-sky-reserve/articleshow/96267024.cms>

<https://www.thehindu.com/sci-tech/science/india-to-have-first-astronomy-dark-reserve-in-ladakh/article65849890.ece#:~:text=In%20a%20first-of-its-kind%20initiative%2C%20the%20Department%20of%20Science,the%20world%E2%80%99s%20most%20optimal%20sites%20for%20astronomical%20observations.>

<https://www.darksky.org/our-work/conservation/idsp/reserves/>

Q.33) A joint international collaboration led by NASA launched the James Webb Space Telescope, which is the world's largest, most powerful, and most complex space science telescope ever built. Since its launch it has amazed astronomy community with its observations and space images. In this context, which of the following observations have been made by the James Webb Space Telescope?

1. It has observed the Pillars of Creation, where new stars are forming within dense clouds of gas and dust.
2. It spotted a set of concentric rings around a giant, distant star WR140.
3. It observed colourful auroras and massive storms on the planet Jupiter.
4. It captured an image of Einstein Ring in space.

Select the correct answer from the codes given below.

- a) 1 and 2 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

The James Webb Space Telescope is the world's largest, most powerful, and most complex space science telescope ever built. Webb will solve mysteries in our solar system, look beyond to distant worlds around other stars, and probe the mysterious structures and origins of our universe and our place in it. Webb is an international program led by NASA with its partners, ESA (European Space Agency) and the Canadian Space Agency. It made several astonishing observations in the recent times.

Option 1 is correct: It has captured a lush, highly detailed landscape – the iconic Pillars of Creation – where new stars are forming within dense clouds of gas and dust. The three-dimensional pillars look like majestic rock formations, but are far more permeable. These columns are made up of cool interstellar gas and dust that appear – at times – semi-transparent in near-infrared light.



Image on right by the Hubble telescope and on left by the James Webb telescope.

Option 2 is correct: The James Webb Space Telescope spotted a set of concentric angular rings around a giant, distant star, recently. A new study shows that, the first visible evidence of starlight pushing dust around, and exhibits the strange environment of the star WR140, which is in fact a system of two stars that orbit each other.



Option 3 is correct: The new images clicked by the observatory has presented Jupiter's massive storms, colourful auroras and faint rings.



Option 4 is correct: It has snapped a perfect shot of an "Einstein ring." The stunning halo is the result of light from a distant galaxy passing through warped space-time surrounding another galaxy aligned between the distant light source and Earth.



Source: <https://www.space.com/news/live/james-webb-space-telescope-updates>

<https://www.nasa.gov/feature/goddard/2022/nasa-s-webb-takes-star-filled-portrait-of-pillars-of-creation>

<https://webb.nasa.gov/index.html>

Q.34) Consider the following statements about Geomagnetic Storm, a natural phenomenon:

1. A geomagnetic storm is a disturbance of the Earth's magnetic field caused by solar emission like Coronal Mass Ejections.
2. A Geomagnetic storm can lead to the occurrence of high-rise tsunamis on Earth.
3. The severity of geomagnetic storms is ranked by the World Meteorological Organization.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

A geomagnetic storm is a major disturbance of Earth's magnetosphere that occurs when there is a very efficient exchange of energy from the solar wind into the space environment surrounding Earth. These storms result from variations in the solar wind that produces major changes in the currents, plasmas, and fields in Earth's magnetosphere.

Statement 1 is correct: According to NASA, a geomagnetic storm refers to the disruptions to the Earth's magnetic field caused by solar emissions. When a Coronal Mass Ejection (CME) or a high-speed solar stream reaches our planet, it slams into the magnetosphere. The Earth's magnetosphere is created by our magnetic fields, and it usually protects us from the particles emitted by the Sun.

Statement 2 is incorrect: According to the National Oceanic and Atmospheric Administration (NOAA), a Geomagnetic storm or a solar storm does not directly lead to occurrence of tsunamis on the Earth. For a tsunami to be unleashed on Earth, there has to be an earthquake rumbling below the ocean floor that displaces water and generates a colossal, ultra-fast wave through the entire water column.

Statement 3 is incorrect: The severity of geomagnetic storms is NOT ranked by the World Meteorological Organization. Rather, the National Oceanic and Atmospheric Administration (NOAA) Geomagnetic Storm Scale indicates the severity of geomagnetic storms. It is denoted by a G followed by a number from 1 to 5, with 1 being a minor event, and 5 being an extreme event. NOAA is a US government agency.

Source : <https://indianexpress.com/article/technology/science/severe-geomagnetic-solar-storm-8517938/>

<https://www.swpc.noaa.gov/phenomena/geomagnetic-storms>

<https://www.livescience.com/can-solar-storms-cause-tsunamis>

Q.35) Consider the following statements with reference to the Vernal Equinox:

1. The Vernal Equinox marks the beginning of spring in the Southern Hemisphere.
2. In the Northern Hemisphere, the vernal equinox corresponds to the beginning of autumn.
3. During the vernal equinox, the Sun is positioned directly above the Earth's equator.

Which of the above given statements is/are correct?

- a) 1 only
- b) 3 only
- c) 2 and 3 only
- d) 1 and 2 only

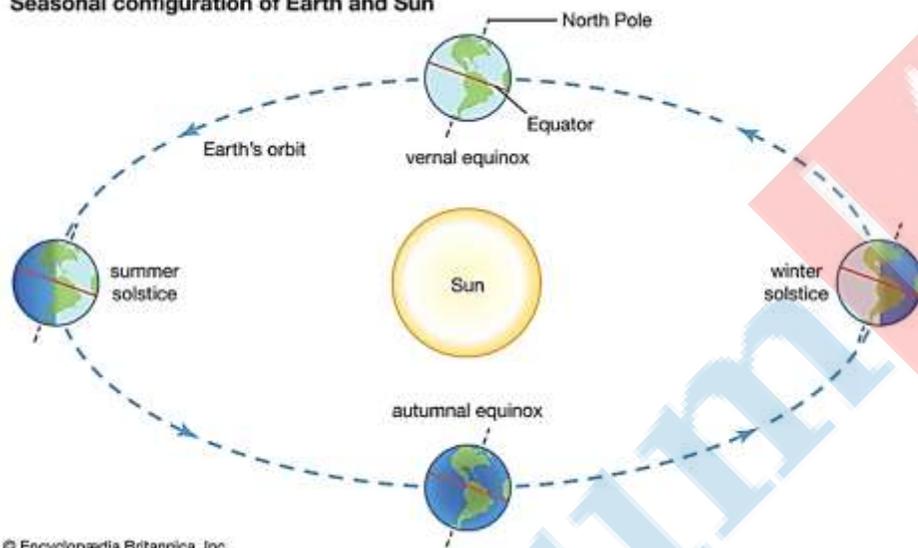
Ans) b

Exp) Option b is the correct answer.

Statements 1 and 2 are incorrect: A vernal equinox is an astronomical event that marks the beginning of spring in the Northern Hemisphere. It occurs around March 20th or 21st each year, when the tilt of Earth's axis is neither toward nor away from the Sun. In the Southern Hemisphere, the vernal equinox corresponds to the beginning of autumn, as the seasons are reversed. In this case, the event is referred to as the autumnal equinox and occurs around September 22nd or 23rd each year.

Statement 3 is correct: During the vernal equinox, the Sun is positioned directly above the Earth's equator. As a result both hemispheres receive an almost equal amount of sunlight. After the spring equinox, the northern hemisphere tilts closer to the sun in March, resulting in more hours of daylight, with earlier sunrises and later sunsets.

Seasonal configuration of Earth and Sun



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Source:

[https://www.weather.gov/cle/Seasons#:~:text=The%20Equinox%20\(Vernal%20%26%20Autumnal\)&text=These%20events%20are%20referred%20to,noon%20on%20these%20two%20equinoxes.](https://www.weather.gov/cle/Seasons#:~:text=The%20Equinox%20(Vernal%20%26%20Autumnal)&text=These%20events%20are%20referred%20to,noon%20on%20these%20two%20equinoxes.)

Q.36) Which of the statements given below is correct with reference to Cruise missiles and Ballistic missiles?

- Unlike a Cruise Missile, the flight path of Ballistic Missile is within the atmosphere.
- Compared to Cruise missiles, the payload capacity is much limited in case of Ballistic missiles.
- Both ballistic missiles and cruise missiles can be launched from aircraft, ships, and submarines.
- Prithvi is a Cruise missile while Nirbhay is a Ballistic missile.

Ans) c

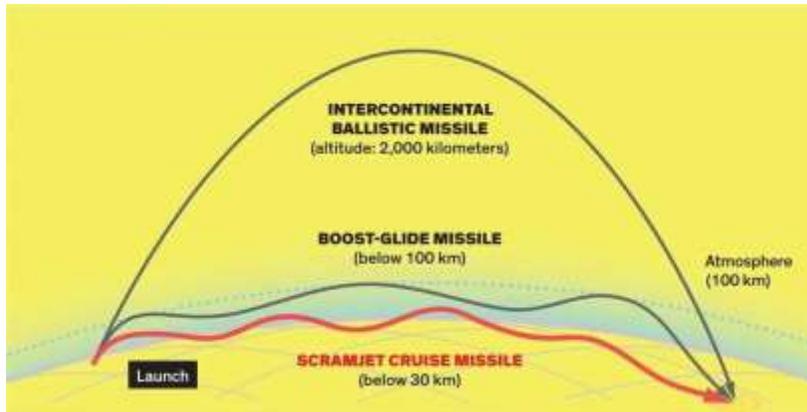
Exp) Option c is the correct answer.

Missile is a weapon that is self-propelled or directed by remote control, carrying conventional or nuclear explosive. There are two major types of Missiles- Ballistic and Cruise.

Any missile is called **Ballistic** when the trajectory it follows is ballistic.

A ballistic trajectory is the path of any object that is launched but with no active propulsion during its actual flight. Thus, in such missiles the trajectory has to be fully determined by a given initial velocity, effects of gravity, air resistance and earth's motion.

Cruise Missile is a guided missile where the target is pre-set. It is basically used against terrestrial targets. Such missiles are designed to deliver a large warhead over long distances with high precision.



Option a is incorrect. Cruise missile flies with in earth's atmosphere and use jet engine technology. Cruise missiles are known specifically for low-level flight which is staying relatively close to the surface of the earth to avoid detection from anti-missile systems. Ballistic missile travels well outside earth's atmosphere. They are launched directly into the upper layers of the earth's atmosphere. They travel outside the atmosphere, where the warhead detaches from the missile and falls towards a predetermined target.

Option b is incorrect. Payload capacity is limited in Cruise missiles. Cruise missile usually carries a single payload while Ballistic missiles can carry more than one payload (Multiple Independently targetable Re-entry Vehicle). Ballistic missile can carry huge payload. For instance, Dongfeng-41 (DF-41) is China's ICBM which have a maximum payload capacity of 2,500 kg.

Option c is correct. Both ballistic missiles and cruise missiles can be launched from aircraft, ships, and submarines in addition to land-based silos and mobile platforms. An advanced variant of BrahMos missile with indigenous sub-systems was test-fired from the Integrated Test Range off Odisha coast in January. A joint venture of India-Russia, the supersonic cruise missile can be launched from all platforms - land, aircraft, ships and submarines.

Option d is incorrect. Prithvi, Agni, Dhanush range missiles are Ballistic while BrahMos and Nirbhay missiles are cruise missiles.

Prithvi is India's first indigenously developed ballistic missile under IGMDP.

It is a short-range ballistic missile (SRBM) with a single-stage, two engines, and liquid-fuel propulsion. The Prithvi missile project has three versions for the Indian Army, Air Force, and Navy to use. Prithvi I, Prithvi II, and Prithvi III are the three variants of the Prithvi missile series that have been developed.

Source: <https://www.britannica.com/technology/missile#ref264829>

<https://www.19fortyfive.com/2022/01/crusie-missiles-vs-ballistic-missiles-whats-the-difference/>

<https://science.howstuffworks.com/difference-ballistic-cruise-missile.htm>

<https://armscontrolcenter.org/wp-content/uploads/2017/04/Ballistic-vs.-Cruise-Missiles-Fact-Sheet.pdf>

Q.37) Consider the following statements about NISAR satellite, recently seen in news:

1. It is a Low Earth Orbit (LEO) observatory designed to map the entire globe in 12 days.
2. It is a collaboration mission between Indian Space and Research Organisation (ISRO) and European Space Agency (ESA).
3. It will be launched by GSLV expendable launch vehicle of ISRO.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

NISAR is a joint Earth-observing mission between NASA and the Indian Space Research Organization (ISRO) with the goal to make global measurements of the causes and consequences of land surface changes using advanced radar imaging.

Statement 1 is correct: NASA-ISRO SAR (NISAR) is a Low Earth Orbit (LEO) observatory which will map the entire globe in 12 days and provide spatially and temporally consistent data for understanding changes in Earth's ecosystems, ice mass, vegetation biomass, sea level rise, ground water and natural hazards including earthquakes, tsunamis, volcanoes and landslides.

It carries L and S dual band Synthetic Aperture Radar (SAR), which operates with Sweep SAR technique to achieve large swath with high resolution data. The SAR payloads mounted on Integrated Radar Instrument Structure (IRIS) and the spacecraft bus are together called an observatory.

Statement 2 is incorrect: NISAR is a joint Earth-observing mission between the Indian Space Research Organization (ISRO) and NASA (and not ESA). NASA and ISRO signed a partnership to collaborate and launch NISAR on Sept. 30, 2014. The mission is targeted to launch in 2024. NASA is providing the mission's L-band synthetic aperture radar, a high-rate communication subsystem for science data, GPS receivers, a solid-state recorder and payload data subsystem. ISRO is providing the spacecraft bus, the S-band radar, the launch vehicle and associated launch services.

Statement 3 is correct: The NISAR Observatory will be launched from Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota on the southeast coast of the Indian peninsula, on the GSLV expendable launch vehicle contributed by ISRO. The target launch readiness date is January 2024.

Source: <https://www.isro.gov.in/NISARSatellite.html>

<https://nisar.jpl.nasa.gov/mission/isro-partnership/>

<https://www.thehindu.com/news/national/nisar-satellite-to-map-himalayas-seismic-zones/article66738274.ece>

Q.38) Consider the following statements about Sounding Rockets, often seen in news:

1. Sounding rockets are used to test/probe new components or subsystems to be used in actual satellite or launch systems.
2. Currently, Sounding Rockets utilise mixed both solid and liquid propellant in propulsion systems.
3. Recently, India has launched its first indigenous sounding rocket.
4. RH-200 is a sounding rocket belonging to Rohini series of rockets.

Which of the statements given above are correct?

- a) 1 and 4 only
- b) 1, 2 and 3 only
- c) 2 and 4 only
- d) 1, 3 and 4 only

Ans) a

Exp) Option a is the correct answer.

Space activities in the country started during early 1960s with the scientific investigation of upper atmosphere and ionosphere over the geo magnetic equator that passes over Thumba near Thiruvananthapuram, using small sounding rockets.

Statement 1 is correct: Sounding rockets are used for probing the upper atmospheric regions and for space research. They also serve as easily affordable platforms to test or prove prototypes of new components or subsystems intended for use in launch vehicles and satellites.

Statement 2 is incorrect: Presently Sounding rockets are single to multistage solid propellant rockets (and not mixed propellant rockets). Unlike GSLVs, the Sounding rockets only have solid propellant

propulsion system. Sounding rockets take their name from the nautical term "to sound," which means to take measurements.

Statement 3 is incorrect: The Indian Space Programme began with the launch of the first sounding rocket from Thumba near Thiruvananthapuram, Kerala on 21 November 1963. The first rockets were two-stage rockets imported from Russia (M-100) and France (Centaure). **ISRO started launching indigenously made sounding rockets from 1965.**

Statement 4 is correct: ISRO has developed a series of sounding rockets called Rohini series, important among them being RH-200, RH-300 and RH-560, number in the name indicating the diameter of the rocket in mm. 1545 RH-200 rockets have been launched so far (as of 27 Feb 2023).

Source:

<https://www.isro.gov.in/soundingRockets.html#:~:text=Sounding%20rockets%20are%20one%20or,in%20launch%20vehicles%20and%20satellites>.

https://www.isro.gov.in/100TH_SoundingRockets.html#:~:text=1545%20RH%2D200%20rockets%20have%20been%20launched%20so%20far.

Q.39) Which of the following statements best explain the term 'Quaoar', recently seen in news?

- It is a distant nebula observed by the Hubble space telescope.
- It is a minor planet observed in the Kuiper belt.
- It is a Quantum resistant cryptocurrency.
- It is a newly developed Quantum key distribution technology for Secure Communications.

Ans) b

Exp) Option b is the correct answer.

Astronomers have recently spotted a ring around a Pluto-sized minor planet called Quaoar in the outer reaches of the solar system. It is located in the Kuiper belt, at the edge of our solar system. Quaoar (named after a god of creation in Native American mythology) has a moon of its own, which is known as Weywot. The rings of the planet are positioned at a distance of over seven planetary radii (distance between a planet's centre and its surface) which is much further away from other planets that possess rings.

According to the study, the ring lies far away from the Roche limit – a mathematically determined distance beyond which rings aren't supposed to exist. Planetary rings possess small chunks of ice and other materials that orbit a larger object. Only Saturn, Jupiter, Uranus and Neptune, including two other minor planets, Chariklo and Haumea, are known to possess rings.

Many astronomers and space agencies like ESA (European Space Agency) have recognised it as a dwarf planet. However, International Astronomical Union (IAU) is yet to recognize it as a dwarf planet. According to IAU, a dwarf planet is an object in orbit around the Sun that is large enough to pull itself into a nearly round shape but has not been able to clear its orbit of debris. Aside from Pluto, there are four currently recognised dwarf planets in our Solar System: Ceres, Haumea, Makemake and Eris.

Source: <https://www.thehindu.com/sci-tech/science/astronomers-astonished-by-ring-around-frigid-distant-world-quaoar/article66488828.ece>

<https://www.iau.org/public/themes/pluto/#n6>

Q.40) A term 'MoMo Pregnancy' was recently seen in news. Which one of the following options correctly describes its meaning?

- This type of pregnancy occurs when the twins share the same placenta, amniotic sac and fluid but different umbilical cord.
- This pregnancy occurs as a result of the placenta forming in the uterus without a fetus to support.
- This type of pregnancy occurs when a fertilized egg implants in the fallopian tube instead of the uterus.
- This is a pregnancy in which one egg meets one sperm and one fetus develops.

Ans) a

Exp) Option a is the correct answer.

A US woman recently gave birth to two pairs of identical twins within six months of each other. Such twins, known scientifically as 'MoMo', an abbreviation for monoamniotic–monochorionic, are some of the rarest types of twins. Such MoMo twin pregnancies have a high risk of fetal complications.

Option a is correct: In a MoMo pregnancy, the twins are known to share the same placenta, amniotic sac and fluid. But they have different umbilical cords. They share everything except umbilical cords, which can easily become entangled in a single sac. Unfortunately, there is a high rate of stillbirths associated with MoMo twins. A mother gives birth to MoMo twins when a single fertilised ovum or egg leads to identical twins and these twins share the same placenta and amniotic sac. MoMo twins are mainly identified by ultrasound in the early pregnancy months.

Option b is incorrect: A complete molar pregnancy occurs as a result of the placenta forming in the uterus without a fetus to support. A partial molar pregnancy occurs when two sperm fertilize one egg, but two fetuses do not develop. The placenta is abnormal, and the fetus has too many chromosomes which always results in a spontaneous abortion as the fetus cannot develop safely.

Option c is incorrect: Tubal pregnancy is a type of ectopic pregnancy. This type of pregnancy occurs when a fertilized egg implants in the fallopian tube instead of the uterus. This type of pregnancy is not viable and must be terminated if a miscarriage does not occur naturally on its own.

Option d is correct: Singlet pregnancy is a pregnancy in which one egg meets one sperm and one fetus develops.

Source: https://www.emedicinehealth.com/what_are_the_types_of_pregnancy/article_em.htm
<https://indianexpress.com/article/lifestyle/health/us-woman-birth-momo-twins-rarest-of-rare-pregnancies-condition-8474768/>

Q.41) Consider the following statements about Artemis I, a lunar space mission often seen in news:

1. Its objective is to build a long-term human presence on moon.
2. It is a crewed mission that carried 4 astronauts on board including a woman.
3. It was launched by NASA's Space Launch System (SLS) rocket.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 1 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Artemis I, formerly Exploration Mission-1, will be the first integrated test of NASA's deep space exploration systems: the Orion spacecraft, Space Launch System (SLS) rocket and the ground systems at Kennedy Space Center in Cape Canaveral, Florida.

Statement 1 is correct: Artemis I is the first in a series of increasingly complex missions to build a long-term human presence at the Moon for decades to come. It is named after the sister of Apollo in Greek mythology. It is NASA's successor to the Apollo lunar missions from fifty years ago.

Statement 2 is incorrect: Artemis I is an uncrewed mission of NASA. The primary goals for Artemis I are to demonstrate Orion's systems in a spaceflight environment and ensure a safe re-entry, descent, splashdown, and recovery prior to the first flight with crew on Artemis II. **Artemis II will be a crewed mission carrying 4 astronauts including a woman.**

Statement 3 is correct: It was launched by NASA's Space Launch System (SLS) rocket, the most powerful rocket in the world. SLS is designed specifically for deep space missions for humans. It will travel 280,000 miles from Earth, thousands of miles beyond the Moon over the course of about a four to six-week mission. Source : <https://www.nasa.gov/feature/around-the-moon-with-nasa-s-first-launch-of-sls-with-orion> <https://indianexpress.com/article/explained/explained-sci-tech/attempt-no-3-for-artemis-1-with-the-promise-of-a-new-space-age-nasa-8270447/>

Q.42) We have been using nuclear energy for generation of electricity/power. Many of the nuclear power plants use nuclear fission. However, scientists have also promoted using nuclear fusion for generating power in recent past. In this context, Consider the following statements about the advantages of using nuclear fusion for power generation:

1. It doesn't produce any high activity or long-lived radioactive waste.
2. It doesn't pose any risk of meltdown or nuclear chain reaction.
3. The fuel used for fusion cannot be enriched and exploited to make nuclear weapons.

Select the correct answer using the codes given below.

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Nuclear fusion is the process by which two light atomic nuclei combine to form a single heavier one while releasing massive amounts of energy. Fusion reactions take place in a state of matter called plasma – a hot, charged gas made of positive ions and free-moving electrons with unique properties distinct from solids, liquids or gases. The sun, along with all other stars, is powered by this reaction.

ITER (International Thermonuclear Experimental Reactor) is an international nuclear fusion research and engineering megaproject aimed at creating energy through a fusion process similar to that of the Sun. It uses Tokomak reactor to carry out fusion reaction.

Statement 1 is correct: The Nuclear fusion reactors produce no high activity, long-lived nuclear waste. The activation of components in a fusion reactor is anticipated to be low enough for the materials to be recycled or reused within 100 years. However, fission reactors release radioactive wastes like, uranium mill tailings and spent (used) reactor fuel.

Statement 2 is correct: If any disturbance occurs, it is difficult to reach and maintain the precise conditions necessary for fusion, as the plasma cools within seconds and the reaction stops. Hence, a reactor meltdown cannot occur. The quantity of fuel present in the vessel at any one time is enough for a few seconds only and there is no risk of a chain reaction. Unlike in fission reactors, where risk of meltdown is very high. For example, Chernobyl and Fukushima disaster in fission reactors.

Statement 3 is correct: Fusion doesn't employ fissile materials like uranium and plutonium. (Radioactive tritium is neither a fissile nor a fissionable material.) There are no enriched materials in a fusion reactor like ITER that could be exploited to make nuclear weapons.

Knowledge Base:

Nuclear fission is the process of breaking large atomic nuclei into smaller atomic nuclei to release a large amount of energy. This is generally used in all the nuclear power plants in the world for generating power/electricity. Fusion releases several times the energy generated by fission, making it a far more powerful process.

Source: <https://www.iter.org/sci/Fusion>

<https://www.iaea.org/newscenter/news/what-is-nuclear-fusion>

Q.43) With reference to the Hyperloop Technology, consider the following statements:

1. The Hyperloop is a highly rapid means of mass transit that can move people as well as cargo.
2. It operates on the principle of shooting passenger pods or compartments through an airtight tube that is partially vacuumed.
3. The propulsion is done through magnetic levitation, with the air capsules or pods gliding or levitating over the tracks.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct. A new, extremely quick means of public transit called the hyperloop can move passengers and cargo via a pod in a vacuum. Inside a vacuum tube, a capsule carrying people moves at more than 1200 km/h. There is a low-pressure area inside this vacuum tube. These tubes are supported by sturdy pylons that are capable of withstanding earthquakes and crashes.

Statement 2 is correct. It functions on the principle of shooting passenger pods or compartments through an airtight tube that is partially vacuumed. Regenerative braking, solar energy, and wind power are some of the renewable energy sources utilised.

Statement 3 is correct. The propulsion is done through magnetic levitation, with the air capsules or pods gliding or levitating over the tracks. The train travels along these guided magnetic rails, which can control the vehicle's speed. Since there are no moving parts for any of the engine's functionality, these are clean, smooth, almost noiseless, and can reach very high speeds.

Source: <https://tumhyperloop.com/about-hyperloop/>

Q.44) Consider the following statements regarding fuel cells.

1. To produce electricity efficiently, fuel cells utilize the chemical energy of the fuels.
2. Since there are no carbon dioxide emissions from hydrogen fuel cells, they can address some climate challenges.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. A fuel cell generates electricity cleanly and effectively by utilising the chemical energy of hydrogen or other fuels. Electricity, water, and heat are the only byproducts if hydrogen is the fuel. In terms of the range of potential applications, fuel cells are unique and can run on a variety of fuels and feedstocks and can power devices as big as utility power stations and as small as laptop computers.

Statement 2 is correct. Due to the fact that hydrogen fuel cells emit only water and no carbon dioxide, they can effectively address significant climate change concerns. Compared to traditional combustion-based technologies, which are currently used in many power plants and vehicles, fuel cells offer a number of advantages. In contrast to conventional combustion engines, fuel cells run more efficiently and are capable of directly converting the chemical energy in fuel into electrical energy at efficiencies of more than 60%.

[https://www.energy.gov/eere/fuelcells/fuel-](https://www.energy.gov/eere/fuelcells/fuel-cells#:~:text=How%20Fuel%20Cells%20Work,)%E2%80%94sandwiched%20around%20an%20electrolyte)

[cells#:~:text=How%20Fuel%20Cells%20Work,\)%E2%80%94sandwiched%20around%20an%20electrolyte](https://www.energy.gov/eere/fuelcells/fuel-cells#:~:text=How%20Fuel%20Cells%20Work,)%E2%80%94sandwiched%20around%20an%20electrolyte)

Q.45) Consider the following statements regarding the recently released World Air Quality Report:

1. It was released for the first time in 2022 by the World Health Organisation.
2. India was among top 5 in the list of countries with the worst air quality index.
3. New Delhi has been declared as the most polluted city in the world.

Which of the statements given above is/are **incorrect**?

- a) 1 only
- b) 2 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: The World air quality report was released for the fifth time in 2022. Fifth **Annual World Air Quality Report was released by Swiss air quality technology company, IQAir**, states that roughly 60% of cities in India included in the report recorded annual PM2.5 levels at least seven times higher than the WHO guidelines.

Statement 2 is incorrect: According to the report, **India has ranked eighth in the list of countries with the worst air quality index** and 12 of the 15 most polluted cities in Central and South Asia are in India.

Statement 3 is incorrect: **Lahore was the most polluted city in the world**, followed by Hotan in China, and **Bhiwadi in Rajasthan. New Delhi** is the second most polluted **capital city** in the world, with N'Djamena in Chad topping the list.

Source: <https://www.thehindu.com/news/national/india-ranks-eighth-among-countries-with-the-worst-air-quality-index-world-air-quality-report/article66618661.ece>

Q.46) With reference to the Large Hadron Collider (LHC), consider the following statements:

1. The LHC is world's largest and the most powerful particle accelerator.
2. It is situated in the city of Stockholm.
3. Inside the accelerator, two high-energy particle beams travel in opposite direction, at close to the speed of light before they are made to collide.
4. The LHC is a Joint collaboration of National Aeronautics and Space Administration (NASA) and European Space Agency (ESA).

Which of the above statements are correct?

- a) 1, 2 and 3 only
- b) 2 and 4 only
- c) 1 and 3 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. The largest and most powerful particle accelerator in the world is known as the Large Hadron Collider (LHC). It became operational on September 10, 2008, and it continues to be the most recent addition of the CERN accelerator complex. The LHC, which is operated by CERN (the European Organisation for Nuclear Research), is one of the biggest science experiments in the world.

Statement 2 is incorrect. The 27 km long LHC is a circular pipe that is **situated close to Geneva**, Switzerland, on the Franco-Swiss border. The LHC is made up of a 27-kilometre-long ring of superconducting magnets and other accelerating components that serve to increase the energy of the particles as they travel through the system.

Statement 3 is correct. The LHC consists of a 27-kilometre ring of superconducting magnets with a number of accelerating structures to boost the energy of the particles along the way. **Inside the accelerator, two high-energy particle beams travel at close to the speed of light before they are made to collide. The beams travel in opposite directions in separate beam pipes** – two tubes kept at ultrahigh vacuum. .

Statement 4 is incorrect. The LHC experiment is under control of CERN (European Council for Nuclear Research, and not a collaboration between NASA and ESA

Source: <https://www.home.cern/science/accelerators/large-hadron-collider>
<https://cds.cern.ch/record/532705/files/malo06.pdf>

Q.47) With reference to the Urea, consider the following statements:

1. Nano Urea is developed by the Indian Farmers and Fertilizer Cooperative (IFFCO), a multi-state cooperative society.
2. IFFCO Nano Urea is the only nano fertiliser recognised by the Indian government and included in the Fertilizer Control Order (FCO).
3. Subsidy burden on account of urea import constitutes 60-70% of the overall urea subsidy paid in a year by the governments.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. The Indian Farmers and Fertiliser Cooperative (IFFCO), a multi-state cooperative society based in New Delhi, developed nano-urea, which the government is promoting as a panacea to help farmers become less dependent on packaged urea. According to field trials, a single 500 ml bottle of Nano Urea liquid can compensate for a 45 kg sack of urea granules.

Statement 2 is correct. The only nano fertiliser recognised by the Indian government and included in the Fertilizer Control Order (FCO) is IFFCO Nano Urea. It is developed and patented by IFFCO. Its availability to crops has increased by more than 80% due to its small size (20-50nm).

Statement 3 is incorrect. Over the years, urea imports have increased steadily, from 5.48 million tonnes (MT) in 2016-17 to 9.8 MT in 2020-21, and the subsidy burden resulting from these imports makes up 26% of the total urea subsidy paid in a year by the government.

Source: <https://www.financialexpress.com/economy/nano-urea-could-save-rs-25000-cr-in-fertilisers-subsidy-annually-nbsphouse-panel/3018109/>
<https://www.iffco.in/en/nano-urea-liquid-fertilizer#:~:text=IFFCO%20Nano%20Urea%20is%20the,least%201%20bag%20of%20Urea.>

Q.48) Consider the following statements about Synthetic Biology:

1. Synthetic Biology is an area of science which involves redesigning organisms for useful purposes.
2. Synthetic Biology can be utilised for developing microorganism which helps in Bioremediation of pollutants.
3. Synthetic Biology doesn't involve introduction of any foreign or new gene to the target organism.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. Synthetic biology is that field of science which involves redesigning organisms for useful purposes by engineering them to have new abilities. Researchers as well as companies working in synthetic biology harnessing nature's power to address issues in agriculture, manufacturing, and medicine.

Statement 2 is correct. Synthetic biology goals generally seek to redesign organisms so that they can create a substance, such as a medicine or fuel, or acquire a new ability, such as the ability to sense something in the environment. Here are a few examples of what scientists have produced with synthetic biology:

- 1) To remove pollutants from our water, soil, and air, microorganisms are used in bioremediation.
- 2) Beta-carotene, a nutrient normally associated with carrots that prevents vitamin A deficiency, is produced by rice that has been modified. Every year, between 250,000 and 500,000 children lose their vision due to vitamin A deficiency, which also significantly increases the risk of dying from infectious infections.
- 3) A sustainable, eco-friendly substitute to the real roses that perfumers use to develop luxury scents is yeast that has been engineered to produce rose oil.

Statement 3 is incorrect. Synthetic biology and another approach called "genome editing" both require changing an organism's genetic code, although certain people distinguish between the two approaches based on how that alteration is done. **In synthetic biology, large segments of DNA are often stitched together and inserted into the genome of an organism. These synthesized DNA segments may contain genes that are already present in other organisms, or they may be completely new.**

In genome editing, scientists generally use tools to make smaller changes to the organism's DNA. Genome editing tools can be utilized to delete or add small segments of DNA in the genome.

Reverse definition is written in the statement 3 hence it is incorrect.

Source: <https://www.genome.gov/about-genomics/policy-issues/Synthetic-Biology#:~:text=Synthetic%20biology%20is%20a%20field,them%20to%20have%20new%20abilitie%20s>

Q.49) In humans, DNA can be extracted from which of the following specimens?

1. Fingernails
2. Skin
3. Hair
4. Blood
5. Saliva

Select the correct answer using the code given below:

- a) 1, 2, 3 and 4 only
- b) 1, 2, 3 and 5 only
- c) 2, 3, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

DNA extraction is used to extract a useable DNA sample for further examination. Commercial extraction kits are available and provide all components necessary for extraction. DNA can be extracted from different biological samples, such as;

- 1) **Fingernail material** - can serve as an important source of DNA. Because of the special composition and structure of fingernails that embody DNA in keratinized cells, DNA extraction procedures are more complex than usual protocols applied for fresh somatic cells.
- 2) **Skin** - DNA can be extracted from skin cells, skin cells from the lower layers produce the best result.
- 3) **Hair** - **Hair roots contain genomic DNA** while hair shafts contain mitochondrial DNA.

4) Blood – **Blood is an excellent source of human DNA.** DNA is present in white blood cells of humans, but **not red blood cells** which lack nuclei.

5) Saliva – **DNA comes from white blood cells and buccal epithelial cells** (cheek cells) in the saliva.

Source: <https://forensicdnaproject.weebly.com/dna-extraction.html#:~:text=%20DNA%20extraction%20%201%20Blood%20%E2%80%93%20The,of%20nucleated%20cells.%20These%20cells%20are...%20More%20>

<https://www.sciencedirect.com/science/article/pii/S1525157814000671#:~:text=In%20forensic%20analysis%2C%20fingernail%20material%20can%20serve%20as,than%20usual%20protocols%20applied%20for%20fresh%20somatic%20cells.>

<https://www.sciencedirect.com/science/article/pii/S1525157814000671#:~:text=In%20forensic%20analysis%2C%20fingernail%20material%20can%20serve%20as,than%20usual%20protocols%20applied%20for%20fresh%20somatic%20cells.>

Q.50) Consider the following statements regarding Siang Uying Festival:

1. It is an important festival of the Khasi community in Meghalaya.
2. During this festival, all male members of a family go on a hunting spree for one week.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The colourful Siang Uying Festival is an important festival of the Adi community of Boleng, Arunachal Pradesh.

Whereas the most important festival of the Khasis in Manipur is **Ka Shad Suk Mynsiem** or Dance of the joyful heart. It is an annual thanksgiving dance held in Shillong in April.

Statement 2 is correct: In this festival, it is customary for **all male members of a family** to go on a **hunting spree (open season) and stay in the jungles for one week**. When they return home, they come back with various kills such as deers, birds, squirrels, fish etc. The children perform “Yakjong” (house to house) wearing colorful traditional attire and bless the house where they perform.

Source: <https://eastsiang.nic.in/culture-heritage/>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1902396>

Direction for the following six (6) items:

Read the following **five passages** and answer the items that follow the passages. Your answers to these items should be based on the passages only:

Passage-1

The systematic annihilation of a group of people based on their ethnicity, religion, or nationality is known as genocide. Despite the prevalence of genocidal activities, the international community has struggled to come up with a unified and effective approach to deal with it. One reason for this is that the motives for genocide are complex and varied, ranging from political power struggles to economic interests and ideological differences. In certain cases genocide is carried out with acquiescence of state actors. Another reason is that the means of genocide have evolved over time, the invention of new means of communication making it increasingly challenging to detect and prevent such activities. The genocide is a complex and multifaceted phenomenon. It's like a hydra headed monster which can't be killed at one stroke. Genocide has been a prevalent feature of human history.

Q.1) Based on the passage above, following assumptions have been made:

1. The international community is not focused on putting an end to genocide.
2. The genocide cannot be easily eradicated.
3. A body politic can also has involvement in genocide too.

Which of the above statements is/are valid assumptions?

- a) 1 and 3 only
- b) 2 only
- c) 3 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

The passage states that 'the international community has struggled to come up with a unified and effective approach to deal with it', but from this it can't be assumed that they are not focused on ending genocide. Hence statement 1 is an invalid assumption.

The passage mentions that 'It's like a hydra headed monster which can't be killed at one stroke', so it assumes that it can't be easily eradicated. Hence statement 2 is a valid assumption.

The passage states that 'In certain cases genocide is carried out with acquiescence of state actors.', so this assumes that body politic can also has involvement in genocide too. Hence statement 3 is a valid assumption.

Passage-2

The tea industry in India faces a myriad of complex challenges that threaten its sustainability and profitability. Among the most pressing of these challenges is the issue of climate change, which has led to erratic weather patterns, soil degradation, and reduced yields. The industry is also grappling with rising production costs, low wages for workers, and stiff competition from other tea-producing countries like China and Kenya. In addition, there are growing concerns over the environmental impact of tea cultivation, with critics raising issues around deforestation, soil erosion, and pesticide use. Moreover, the Indian tea industry has been plagued by deep-seated structural issues, including outdated farming practices, inadequate infrastructure, and a lack of modernization. These challenges have resulted in a decline in quality and a loss of market share.

Q.2) Which of the following statements best reflects the corollary to the passage above ?

- a) The tea industry should develop technologies to produce high quality tea.
- b) The tea industry should fix wages for their workers based on international standards.
- c) New farm practices should be adopted from tea Kenya and China.
- d) Government should put a ban on pesticide usage.

Ans) a

Exp) Option a is the correct answer.

The passage states that ‘These challenges have resulted in a decline in quality and a loss of market share’, so the best next step is to produce high quality tea. Hence option a is correct.

The passage mentions that the industry is also grappling with rising production costs, low wages for workers, but from this we can’t conclude that fixing wages based on international standards is the best way ahead. So, option b is incorrect.

The passage states that there is stiff competition from other tea-producing countries like China and Kenya. But we don’t know about their farm practices, so adopting farm practices from Kenya and China is not the best way ahead. Hence option c is incorrect.

The passage mentions ‘critics raising issues around deforestation, soil erosion, and pesticide use’ but putting a ban on pesticide usage is not the best way ahead. Hence option d is incorrect.

Passage-3

As technology advances, it seems that our ability to connect with one another diminishes. Forms of the digital world such as Social media, smartphones, and other devices have given us a false sense of connection, creating an illusion of intimacy where there is none. We have become increasingly reliant on technology to communicate, leaving us ill-equipped to deal with face-to-face interactions in the real world. As a result, our social skills have suffered, leading to higher levels of loneliness, depression, and anxiety. This trend is particularly concerning for young people, who are growing up in a world where virtual communication is the norm. Technology has become an inevitable part of our life. Despite the apparent benefits of technology, it seems that our addiction to it has left us more isolated than ever before. We have become so focused on our screens that we have forgotten how to interact with one another in meaningful ways. This loss of social skills has significant implications for our mental health and well-being, suggesting that we must find a way to find a balance amid two macrocosms.

Q.3) Which of the following statements best reflects the most critical inference drawn from the passage ?

- a) Social media and technology are the primary causes of loneliness, depression, and anxiety.
- b) The younger generation is highly vulnerable to the negative effects of technology.
- c) Face-to-face interaction is crucial for maintaining social skills and mental health.
- d) Striking a balance between digital and real-world life is the key to avoiding the negative effects of technology.

Ans) d

Exp) Option d is the correct answer.

The passage states that ‘Social media, smartphones, and other devices have given us a false sense of connection, creating an illusion of intimacy where there is none’, and our social skills have suffered, leading to higher levels of loneliness, depression, and anxiety. But from this we can’t infer that they are the “primary” cause. Hence option a is incorrect.

The passage discusses that ‘our social skills have suffered, leading to higher levels of loneliness, depression, and anxiety. This trend is particularly concerning for young people’, so option 2 is an aspect of ill effects of the technology on younger generations being discussed, but this is not the most critical inference drawn from the passage, hence option b is incorrect.

Option c is a message being conveyed by the passage, but not the most critical inference. Hence option c is incorrect.

The passage mentions that ‘Technology has become an inevitable part of our life’. So While the passage does discuss the negative effects of technology on social skills and mental health, it ultimately suggests that the key to avoiding these negative effects is to find a balance amid two microcosms (digital world and real world).

Passage-4

The issue of gig workers' rights has become a contentious topic, as the rapidly growing gig economy challenges traditional notions of employment and labor rights. While some argue that gig workers should be considered independent contractors with the right to flexible work arrangements, others contend that they are entitled to the same protections, salary and other benefits as traditional employees. One of the main challenges in defining gig workers' rights is the lack of a clear licit substructure. This has led to ambiguity around issues such as minimum wage, overtime pay, and social security contributions. In addition, gig workers often face issues around job security, access to benefits, and a lack of collective bargaining power.

Q.4) Which one of the following statements best reflects the critical message conveyed by the passage given above?

- a) The conventional employment and labor rights are unfit to today's economy..
- b) Policymakers should develop a legal framework to address issues of gig workers.
- c) Gig workers should have a say in formulating their pay structure like traditional employees.
- d) Government should begin social security contributions for gig workers.

Ans) b

Exp) Option b is the correct answer.

The passage mentions that ‘the rapidly growing gig economy challenges traditional notions of employment and labor rights’, but this doesn't imply that they are unfit. They might need some amendments. Hence option a is incorrect.

The passage discusses that ‘One of the main challenges in defining gig workers' rights is the lack of a clear licit substructure’ hence developing a legal framework will address the issue. Hence option b is correct.

The passage mentions that ‘others contend that they are entitled to the same protections, salary and other benefits as traditional employees’, but this doesn't convey the message that Gig workers should have a say in formulating their pay structure. Hence option c is incorrect.

The passage discusses that ‘This has led to ambiguity around issues such as minimum wage, overtime pay, and social security contributions’, but this does not convey that the Government should begin social security contributions for gig workers. Hence option d is incorrect.

Passage-5

The production of space is a fundamental aspect of social reproduction. The production of space involves the creation and organization of physical space, the creation and organization of social space, and the creation and organization of mental space. Physical space is the material environment in which people

live and work. Social space is the organization of social relationships and activities within physical space. Mental space is the way in which people perceive and experience physical and social space. The production of space is a dynamic process that is shaped by social relations of power and conflict. The dominant classes in society have the power to shape physical and social space according to their interests, while subordinate classes are often excluded from decision-making processes. The struggle over space is therefore an important aspect of social struggle. The production of space is also a spatially uneven process. Different regions and areas are characterized by different patterns of spatial organization and development. The uneven development of space is often linked to social and economic inequalities. The spatial division of labor is an important factor in shaping the spatial organization of society.

Q.5) Consider the following assumptions:

1. Spatial inequality is always the outcome of the production of space.
2. Power distribution can affect the production of space.

Which of the above given assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The passage states that the uneven development of space is often linked to social and economic inequalities. However, it does not explicitly state that spatial inequality is always the outcome of the production of space.

Statement 2 is correct: The passage explicitly states that the production of space is a dynamic process that is shaped by social relations of power and conflict. It also outlines that “The dominant classes in society have the power to shape physical and social space according to their interests, while subordinate classes are often excluded from decision-making processes.”

Q.6) According to the passage, what is the relationship between spatial division of labor and the spatial organization of society?

- a) Spatial division of labor has no effect on the spatial organization of society.
- b) Spatial division of labor is the only factor that shapes the spatial organization of society.
- c) Spatial division of labor is an important factor in shaping the spatial organization of society.
- d) Spatial division of labor is a factor in the production of mental space.

Ans) c

Exp) Option c is the correct answer.

The passage explicitly states that the spatial division of labor is an important factor in shaping the spatial organization of society. This means that the way in which labor is organized spatially (i.e., the distribution of labor across different regions and areas) has an impact on how the physical and social space is organized.

Q.7) Following Is a Matrix of certain entries. The entries follow a certain trend column wise. Choose the missing entry (?) accordingly.

80H	65G	51E
18B	33C	47E
14B	29C	?

- a) 24 E
 b) 4 D
 c) 15 A
 d) 44 A

Ans) c

Exp) Option c is the correct answer.

The matrix is of the form :

$z+y$	$z+x$	$y+x$
X	y	z
$z-y$	$z-x$	$y-x$

Where x is 18, y is 33, z is 47

$$z+y = 47+33 = 80, \quad z-y = 47-33=14$$

$$z+x = 18+47 = 65, \quad z-x = 47-18=29$$

$$y+x = 33+18 = 51, \quad y-x = 33-18 = 15$$

Similar is for alphabets :

position of E + position of C = position of H

Position of B + Position of E = Position of G

Position of B + Position of C is position of E::

position of E - position of C = position of B

Position of B - Position of E = Position of C

Position of B - Position of C is position of A

Q.8) Consider three statements and three Conclusions given below. You have to take the Statements to be true even if they seem to be at variance from the commonly known facts. Read all Conclusions and then decide which of the given Conclusions Logically follows/follow from the Statements, disregarding the commonly known facts.

Statement 1: All horses are monkeys.

Statement 2: All goats are monkeys.

Statement 3: Some monkeys are wolves.

Conclusion 1: Some wolves are goats,

Conclusion 2: Some horses are wolves.

Conclusion 3: Some monkeys are goats.

Which of the following is/are correct?

- a) Conclusion 1 only
- b) Conclusion 2 only
- c) Conclusion 3 only
- d) Neither Conclusion 1 nor Conclusion 2 nor Conclusion 3

Ans) c

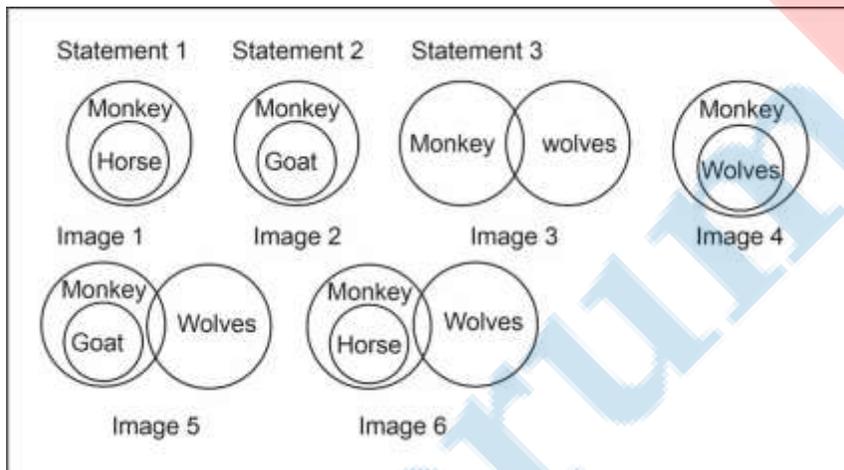
Exp) Option c is the correct answer.

From statement one we get image one. From statement two we get image two. From statement three we get image three and four.

From Image five obtained by image two and three we conclude that some wolves are not goats. Hence conclusion 1 doesn't follow.

From Image six obtained by Image one and three. We conclude that some horses are not wolves hence conclusion 2 doesn't follow.

From Image two we conclude that some monkeys are goats, hence conclusion, 3 follows.



Q.9) In a code language APPLES is written as 3, PARROT is written as 18. How is SCHOOL written in that code language?

- a) 12
- b) 18
- c) 6
- d) 7

Ans) a

Exp) Option a is the correct answer.

For APPLES,

$$(\text{Position of S} - \text{Position of A}) + (\text{Position of E} - \text{Position of P}) + (\text{Position of L} - \text{Position of P}) = (19-1) + (5-16) + (12-16) = 3$$

For PARROT,

$$(\text{Position of T} - \text{Position of R}) + (\text{Position of O} - \text{Position of A}) + (\text{Position of R} - \text{Position of R}) = (20-16) + (15-1) + (18-18) = 18$$

For SCHOOL,

$$(\text{Position of L} - \text{Position of S}) + (\text{Position of O} - \text{Position of C}) + (\text{Position of O} - \text{Position of H}) = (12-19) + (15-3) + (15-8) = 12$$

Q.10) Karan has 24 books on Indian history and Reshma has 18 books on Indian mythology. They want to arrange the books in such a way that each row contains an equal number of books, and each row must contain either only history books or only mythology books. What is the greatest number of books that can be arranged in a row?

- a) 3
- b) 6
- c) 8
- d) 12

Ans) b

Exp) Option b is the correct answer.

No. of history books Karan has = 24

of Mythology book Reshma has = 18

Each row contains an equal no. of books

Each row contains either only history books or only mythology books

We can find this by finding Highest Common Factor (H. C. F)

$$24 = 2 \times 3 \times 4 \times 1$$

$$18 = 2 \times 3 \times 3 \times 1$$

$$\text{HCF} = 6$$

We have four possibilities

- 1) 1 book in each row
- 2) 2 books in each row
- 3) 3 books in each row
- 4) 6 books in each row
- 5) In all other cases, rows will get more than one type of book.

Hence, the greatest number of books that can be arranged in a row is 6.

Q.11) Rohan and Sujit appeared for an exam. Rohan scored 84 marks more than the passing marks and secured 60% marks. Sujit scored 63 marks less than the passing marks and secured 25% marks. What are the maximum marks possible in this exam?

- a) 220
- b) 320
- c) 420
- d) 520

Ans) c

Exp) Option c is the correct answer.

Total Marks in Exam = X

Marks of Rohan = 60% of Total Marks
= $60X/100$

Marks of Sujit = 25% of Total Marks
= $25X/100$

According to the question:

Passing marks of Rohan and Sujit are same.

Marks of Rohit - 84 = Marks of Sujit + 63

$$60X/100 - 84 = 25X/100 + 63$$

$$60X/100 - 25X/100 = 63 + 84$$

$$35X/100 = 147$$

$$X = (147 \times 100)/35$$

$$X = 420$$

Q.12) Rajesh earns a monthly salary and spends 20% of it on food. After spending on food, he donates one-fourth of the remaining salary to charity. If he saves Rs. 9,600 per month, which is equal to half of the balance after spending on food and charity, what is Rajesh's monthly salary?

- a) 28,000
- b) 32,000
- c) 26,000
- d) 30,000

Ans) b

Exp) Option b is the correct answer.

Let the salary be = S

Rajesh earns a monthly salary and spends 20% of it on food.

So, the amount he spends on food every month is $20/100 * S = 0.2 * S$.

The remaining amount after spending on food = $0.8 * S$.

Now, Rajesh donates one-fourth of this remaining amount to charity.

So, the amount he donates to charity is $1/4 * 0.8 * S = 0.2 * S$

The balance amount after spending on food and charity is $0.8 * S - 0.2 * S = 0.6 * S$

We know that Rajesh saves 9,600 per month, which is equal to half of the balance after spending on food and charity. Therefore, we can write:

$$0.6 * S / 2 = 9,600$$

Solving for salary, we get:

$$S = 2 * 9,600 / 0.6 = 32,000$$

Therefore, Rajesh's monthly salary is Rs. 32,000.

Q.13) Keshav can do 30% of work in 54 days; Raghav can do a third of work in 70 days; Sandhya can do 35% of work in 105 days and Vikas can do 15% of the work in 30 days. All four are assigned to complete a work separately. Who will complete the work last?

- a) Keshav
- b) Vikas
- c) Raghav
- d) Sandhya

Ans) d

Exp) Option d is the correct answer.

If Keshav can do 30% of the work in 54 days,

Then he can do 100% of the work in $(54 / 30) * 100 = 180$ days.

For Raghav, if he can do a third of the work in 70 days,

Then he can do 100% of the work in $3 * 70 = 210$ days.

For Sandhya, if she can do 35% of the work in 105 days,

then she can do 100% of the work in $(105 / 35) * 100 = 300$ days.

For Vikas, if he can do 15% of the work in 30 days,
then he can do 100% of the work in $(30 / 15) * 100 = 200$ days.
We can see clearly that Sandhya would complete the work last.

Q.14) A group of friends is going on a road trip to a hill station. While returning, their average speed increases by 25% compared to their average speed while going. If they also spend 2 hours sightseeing during the trip and the total time taken for the entire journey is 47 hours, covering a distance of 1000 km, find the time taken for the return journey.

- 15 hours
- 20 hours
- 25 hours
- 30 hours

Ans) b

Exp) Option b is the correct answer.

Total time taken = 47 hours

Total distance = 1000 km

Average speed while returning = 25% more than the average speed while going

Let average speed while going be $100x$

: Average speed while returning = $125x$

Now, total distance = 1000 km

It means distance while going and returning = 500 km each

Time taken while going = $500/100x$

Time taken while returning = $500/125x$

Time taken while sightseeing = 2 hours

Now, total time taken = $500/100x + 500/125x + 2$ hours = 47 hours

1) $500/100x + 500/125x = 45$ hours

2) $(2500 + 2000)/500x = 45$ hours

3) $4500/500x = 45$ hours

4) $500x = 100$

5) $x = 1/5$

Now, average speed while returning = $125x$

1) Average speed while returning = 25 km/hr

2) Total time taken while returning = $500/25$

3) Total time taken while returning = 20 hours

Direction for the following seven (7) items:

Read the following **five passages** and answer the items that follow the passages. Your answers to these items should be based on the passages only:

Passage-1

The differential preservation or innovation of human societies depends on a complex array of ecological, cultural, and historical factors. Access to domesticable plant and animal species, as well as to favorable climatic and geographic conditions, can provide the necessary foundations for the development of agricultural societies. However, the emergence of such societies also depends on a range of social and cultural factors, including population size, political organization, and the spread of technology and ideas.

The interaction of these various factors is highly contingent and historically specific, making it difficult to identify simple causal relationships between any given set of conditions and the development of a particular society or culture.

Q.15) What is the *central idea* of the above-given passage?

- a) Agriculture is only possible if domesticable plant and animal species are available.
- b) Ecological factors are the most important in the development of societies.
- c) Society's development depends on many ecological, cultural, and historical factors.
- d) Simple causal relationships can explain the development of any society.

Ans) c

Exp) Option c is the correct answer.

The central idea of the passage is that the emergence and development of human societies depend on a complex interplay of multiple factors, including ecological, cultural, and historical factors such as access to domesticable plant and animal species, favorable climatic and geographic conditions, population size, political organization, and the spread of technology and ideas.

Passage-2

Habit formation involves the interplay of multiple cognitive, behavioral, and neurological factors. The basal ganglia, a part of the brain responsible for motor control and reward processing, plays a crucial role in habit formation. As a behavior becomes more habitual, it becomes increasingly automatic and less dependent on conscious decision-making. At the same time, cues, routines, and rewards are important components of habit loops that shape our habitual behaviors. Changing a habit requires identifying and modifying these cues, routines, and rewards. This process involves rewiring the neural pathways that underlie habitual behaviors and developing new habits that can replace old ones. However, the success of habit change also depends on factors such as motivation, willpower, and social support, which can vary widely among individuals and situations. The complex nature of habit formation and change highlights the importance of understanding our own habits and the forces that shape them, in order to cultivate more positive and productive habits and lead a more fulfilling life.

Q.16) Consider the following assumptions:

1. Changing a habit requires rewiring neural pathways
2. Habit change can be done with rewards only.

Which of the above-given assumptions is/are valid as per the given passage?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: It is a valid assumption according to the passage because it highlights the neurological and behavioral factors that underlie habit formation and change. The passage explains that as habits become more automatic, they rely less on conscious decision-making and more on the basal ganglia in the brain. Therefore, changing a habit requires rewiring these neural pathways by developing new habits that can replace old ones.

Statement 2 is incorrect: While cues, routines, and rewards are important components of habit loops, the passage also emphasizes the importance of other factors such as motivation, willpower, and social support in habit change. Moreover, the success of habit change can vary widely among individuals and situations, making it difficult to predict or guarantee success solely by modifying cues, routines, and rewards.

Q.17) Which of the following is the *most logical corollary* of the above passage?

- Habits are solely dependent on conscious decision-making.
- Social support is the most important factor in the process of habit change.
- Developing new habits is the only way to rewire neural pathways.
- The success of habit change depends on a complex interplay of multiple factors

Ans) d

Exp) Option d is the correct answer.

The passage emphasizes the complex nature of habit formation and change, which involves a range of factors such as neural pathways, cues, routines, rewards, motivation, willpower, and social support. Therefore, the most logical corollary of the passage is that the success of habit change depends on a complex interplay of multiple factors, including cognitive, behavioral, and neurological factors.

Passage-3

Innovation is a messy and unpredictable process that is fraught with risk and uncertainty. Successful innovation requires a combination of technological expertise, market knowledge, and managerial skill, as well as a willingness to experiment, take risks, and embrace failure. The process of innovation is also subject to a variety of disruptive forces, such as changing market dynamics, new entrants, and technological discontinuities, which can upend established business models and transform entire industries. Managing these disruptive forces requires a flexible and adaptive approach to innovation, as well as a willingness to cannibalize existing products and business models in order to stay ahead of the curve. Moreover, the success of innovation depends not only on the quality of the technology itself, but also on the ability to create and capture value from that technology. This requires a deep understanding of customer needs, as well as the ability to build effective distribution channels, establish complementary assets, and create strong network effects.

Q.18) Consider the following assumptions:

- Innovation has the power to change the market dynamics
- Ability to withstand failure is important in seeking innovation

Which of the above-given assumptions is/are valid as per the given passage?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: The passage highlights that the process of innovation is subject to disruptive forces such as changing market dynamics, new entrants, and technological discontinuities, which can upend established business models and transform entire industries.

Statement 2 is correct: The passage emphasizes that successful innovation requires a willingness to experiment, take risks, and embrace failure, suggesting that the ability to withstand failure is an important aspect of the innovation process.

Q.19) What is most logical and critical inference that can be drawn from the above give passage?

- a) Successful innovation requires adaptability, expertise, and value creation amid disruptions.
- b) Innovation depends exclusively on access to the advanced technology.
- c) Disruptive forces are detrimental to innovation and should be shunned altogether.
- d) Success in innovation is achieved only through aggressive risk-taking.

Ans) a

Exp) Option a is the correct answer.

The passage highlights the complexity and unpredictability of the innovation process, and emphasizes the importance of adaptability, expertise, and value creation amid disruptions such as changing market dynamics and new technologies. The passage also suggests that the success of innovation depends on a combination of factors, including technological expertise, market knowledge, and managerial skill, as well as a deep understanding of customer needs and effective distribution channels.

Passage-4

The handloom industry in India has been facing a plethora of multifaceted challenges that have significantly impacted its growth and sustainability. Among the most pressing of these challenges is the lack of government support, which has led to a decline in demand for handloom products and a loss of market share to cheaper, mass-produced alternatives. In addition, the industry is grappling with issues around productivity and technology adoption, as outdated production methods and low levels of mechanization have resulted in low-quality products and limited competitiveness.

Furthermore, the handloom industry has been plagued by issues around labor exploitation, with many workers facing low wages, poor working conditions, and a lack of access to social protections. These factors have contributed to a high turnover rate and a shortage of skilled workers, further hampering the industry's growth potential.

Q.20) Which one of the following statements best reflects the most logical, rational and practical suggestion implied by the passage given above?

1. The government should not provide assistance to cheap alternatives of handloom goods,
2. The handloom industry should focus on skill development of workers to enhance their productivity.
3. Labor laws should be enacted to protect the rights of laborers.
4. Government should provide technological support to the handloom industries.
5. Ad campaigns should be organized to popularize and increase the demand of handloom.

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 1, 3 and 5 only
- c) 2 and 4 only
- d) 1, 2, 3, 4 and 5

Ans) c

Exp) Option c is the correct answer.

The passage states that ‘Among the most pressing of these challenges is the lack of government support, which has led to a decline in demand for handloom products and a loss of market share to cheaper, mass-produced alternatives.’, but this does not suggest that the government is providing support to cheap alternatives of handloom goods, so statement 1 is incorrect.

The passage discusses decline in productivity and the need for skill development, so statement 2 is a logical suggestion. Hence statement 2 is correct.

The passage explains the issues with workers, but it doesn't say that labor laws should be enacted, existing laws can be enforced in a better manner too. Hence statement 3 is incorrect.

The passage mentions that the handloom industry is grappling with technology adoption, so the government providing support to them will help these industries. Hence statement 4 is correct.

The passage does mention that there is a decline in the demand of handloom goods, but nowhere implicitly or explicitly, there is any talk about ad campaigns. His statement five is incorrect.

Passage-5

The Indian Ocean has emerged as an arena for competition between two great powers with the United States' ongoing military drills in the region eliciting concern from Beijing. These exercises, which involve joint operations with allies such as India, Japan, and Australia, have increased in frequency and scale in recent years, causing China to view them as a threat to its interests in the region. The United States has justified its presence in the Indian Ocean by citing concerns over piracy, terrorism, and the need to maintain freedom of navigation. However, China perceives these drills as a provocative move, aimed at containing its rising influence in the region. In response, Beijing has ramped up its naval presence in the Indian Ocean and established a military base in Djibouti, a move that has further escalated tensions between the two countries with both sides increasing their military capabilities and posturing for dominance.

Q.21) Which one of the following statements best reflects the most critical inference that can be made from the passage given above?

- The United States is an advocate of freedom of navigation in the Indian Ocean region.
- The increase of military presence in the Indian ocean is not righteous.
- The exercise of the United States is aimed at curbing Chinese influence in the Indian Ocean region.
- The Indian Ocean region is a strategic site of conflict for The United States and China.

Ans) d

Exp) Option d is the correct answer.

The passage states that ‘The United States has justified its presence in the Indian Ocean by citing concerns over piracy, terrorism, and the need to maintain freedom of navigation’, it's the justification of the US, this can't be inferred that they are the advocates of freedom of navigation in the Indian Ocean region. Hence option a is incorrect.

Both nations are increasing their presence in the region, but it is right or wrong is nowhere implicitly or explicitly discussed in the passage, hence option b is incorrect.

The passage does not explicitly state that they are aimed at curbing China's influence in the region. Hence option c is incorrect.

The passage discusses that ‘The Indian Ocean has emerged as an arena for competition between two great powers with the United States' ongoing military drills in the region eliciting concern from Beijing and the passage explains how it is becoming an area of conflict. So, this is the most critical inference drawn from the passage.

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Q.22) Consider two Statements and a Question:

Statement 1: The rank of Durga is better than Esha, Arun and Chetan, but not as good as Bijay.

Statement 2: The rank of Durga is better than Chetan but not as good as Bijay whose rank is better than Esha's.

Question: Which of the five friends Arun, Bijay, Chetan, Durga, Esha scored better?

Which one of the following is correct in respect of the statements and the question?

- Statement 1 alone is sufficient to answer the Question
- Statement 2 alone is sufficient to answer the Question
- Both Statement 1 and Statement 2 are required to answer the Question
- Neither Statement 1 alone nor Statement 2 alone is sufficient to answer the Question.

Ans) a

Exp) Option a is the correct answer.

Statement 1: The rank of Durga is better than Esha, Arun and Chetan, implies she is better than 3 persons, so she has to be at rank 2 or 1, but her rank is not as good as Bijay, implies Bijay's rank is better than Durga's, so Durga is at 2, and Bijay is at rank 1. Rest three can be at 2/3/4.

So Bijay scored better. Statement 1 alone is sufficient to answer the Question

Rank	Name
1	Bijay
2	Durga
3	
4	
5	

Using Statement 2: The rank of Durga is better than Chetan but not as good as Bijay whose rank is better than Esha's.

If we place Durga at rank 4, so that she is better than Chetan, then Chetan will be at rank 5. Now Bijay can be at rank 3 or 2, so that Esha is better than her. But Here nothing is given about Arun's rank. So Arun can be at rank 1 or rank 5. So statement 2 alone is not sufficient to answer the question.

Rank	Name
1	Esha/Arun
2	
3	
4	Durga
5	Chetan

Q.23) Consider two Statements and a Question:

Statement 1: Anita correctly remembers that her company was established in the fourth month of the year. The date was before the 23rd but after the 14th.

Statement 2: Anita's brother correctly remembered that her company was established in the ninth last month of the year, and it was after 19th but before 27th.

Question: On which date and month was the company established?

Which one of the following is correct in respect of the statements and the question?

- Statement 1 alone is sufficient to answer the Question
- Statement 2 alone is sufficient to answer the Question
- Both Statement 1 and Statement 2 are required to answer the Question
- Neither Statement 1 nor Statement 2 is sufficient to answer the Question.

Ans) d

Exp) Option d is the correct answer.

Statement 1: Anita correctly remembers that her company was established in the fourth month of the year. The date was before the 23rd but after the 14th.

So, the month is April,

The dates can be 15,16,17,18,19,20,21,22

Using Statement 1 alone is not sufficient to answer the Question.

Statement 2: Anita's brother correctly remembered that her company was established in the ninth last month of the year, and it was after 20th but before 27th.

So, the ninth last month is April.

The date can be 21,22,23,24,25,26

Statement 2 alone is not sufficient to answer the Question.

Using both the statements:

The month is April.

The dates are 21 and 22.

So even using both the statements we cannot find out what is the date of establishment of the company.

Hence, neither statement 1 statement two are sufficient to answer the Question.

Q.24) The hotel Leelavati spent Rs 68 daily on its laundry department in the month of August. For the first 15 days of the month the average daily payment made to the laundry was Rs 85 and for the last 17 days the average daily payment made to the laundry was Rs 51. What was the money paid to the laundry on the 15th of the month ?

- 42
- 36
- 52
- 34

Ans) d

Exp) Option d is the correct answer.

Here in the average daily payment of the first 15 days is given and that of the last 17 days is given, which implies the 15th day is counted twice.

Month is August, so number of days is 31

Money paid for first 15 days = Rs (15x85) = Rs 1275

Money paid for last 17 days = Rs (17x51) = Rs 867

Money paid for entire month = Rs (31×68) = Rs 2108

Money paid on the 15th of the month = Rs $(1275 + 867) - (2108)$ = Rs 34

Q.25) The cars of Maruti and Honda are owned by Sita and Kavita. Sita's car runs on diesel while Kavitha's car runs on petrol. Kavitha's car gives an average that is 20% higher than Sita's car. The average of a car is calculated as liters per kilometers. The cost of diesel is 60% less than petrol. What is the ratio of cost per kilometer for Kavitha's car to Sita's car?

- a) 3:1
- b) 2:1
- c) 1.92:1
- d) 1:1.8

Ans) a

Exp) Option a is the correct answer.

Let the cost of petrol be p

Cost of diesel will be 40% less than petrol, as petrol is 60% of its price higher than diesel,

So, cost of diesel is $0.4p$

Let the average of Sita's car is y liter per km

So, the average of Kavitha's car is $\{y + (y \times 20)/100\} = 1.2y$

Cost per kilometer = (Average in liter per km) \times (cost of fuel)

Cost per kilometer for Sita's car = $0.4p \times y = 0.4py$

Cost per kilometer for Kavitha's car = $p \times 1.2y = 1.2py$

Ratio of cost per kilometer for Kavitha's car to Sita's car = $1.2py/0.4py = 3:1$

Q.26) A juice shop bought a combined total of 25 mango shakes and papaya shakes bottles. He marked up the mango shakes by 20% on the cost price, while each papaya shake was marked up by Rs 20. He was able to sell 75% of the mango shakes bottles and 2 papaya shakes bottles and make a profit of Rs490. The remaining mango shakes bottles and 3 papaya shakes bottles could not be sold by him. What is the overall profit or loss percentage if he gets no return on unsold items and it is known that a papaya shake bottle costs 50% of a mango shake bottle?

- a) 16.5% profit
- b) 14.3 % loss
- c) 18.4% profit
- d) 20.3% loss

Ans) b

Exp) Option b is the correct answer.

Given, he sold 2 papaya shakes bottle and he was left with 3 papaya shakes bottle,

Total bottles of papaya shakes bought was = $(3+2) = 5$

Total number of mango shake bottles bought was = $(25-5) = 20$

Total number of mango shakes bottle sold were 75% = $20 \times 75/100 = 15$

Total number of papaya shakes bottle sold were 2

Since each papaya shake bottle was marked up by Rs20, and he sells two papaya shake bottles, so he makes a profit of Rs $(20 \times 2 = 40)$ on sale of papaya shake bottles.

He makes a total profit of Rs 490

So, the total profit made on sale of mango shake bottle is $(490 - 40)$ Rs 450

Profit per mango shake bottle = $450/15 = \text{Rs } 30$

He marked up the mango shakes bottle by 20% on the cost price, implies 20% of the cost price of, a go shake bottle is Rs 30

So, using unitary method, the cost price of one mango shake bottle is = Rs 150

Sale price is a mango shake bottle is = $(150+30) = \text{Rs } 180$

Given, papaya shake bottle costs 50% of a mango shake bottle, so cost do papaya shake bottle is = Rs 75

Papaya shake bottle is marked up by Rs 20, so sale price of one papaya shake bottle is Rs $(75+20)=95$

Total cost price for all = (number of papaya shakes bottle bought x price of one papaya shake bottle) + (number of mango shakes bottle bought x price of one mango shake bottle)

= $(5 \times 75) + (20 \times 150) = \text{Rs } 3375$

Total revenue earned = (number of papaya shakes bottle sold x sale price of one papaya shake bottle) + (number of mango shakes bottle sold x sale price of one mango shake bottle)

= $(2 \times 95) + (15 \times 180) = \text{Rs } 2890$

Loss = $3375 - 2890 = \text{Rs } 485$

Loss percentage = $(485/3375) \times 100 = 14.3\%$

Q.27) Aman completes two thirds of a certain job in six days. Babitha can complete one third of the same job in eight days and Chetan can complete three fourth of the same work in 12 days. All of them start working together but after four days Aman and Chetan leave the job. How long will it take for Babitha to complete the remaining work alone?

- a) 9.33 days
- b) 5.33 days
- c) 3.33 days
- d) 7.33 days

Ans) c

Exp) Option c is the correct answer.

Aman completes $\frac{2}{3}$ of the job in 6 days, so he completes full job in $\{6 / (\frac{2}{3})\} = 9$ days.

Babitha can complete one third of the same job in eight days, so she completes full work in $\{8 / (\frac{1}{3})\} = 24$ days and Chetan can complete three fourth of the same work in 12 days, so he completes full work in $\{12 / (\frac{3}{4})\} = 16$ days

They work together for four days,

So four days work = $4\{(\frac{1}{9}) + (\frac{1}{24}) + (\frac{1}{16})\} = \frac{31}{36}$ of the work

Rest work = $1 - (\frac{31}{36}) = \frac{5}{36}$, which Babitha has to do alone,

Using unitary method, Time taken by Babitha = $24 \times (\frac{5}{36}) = 3.33$ days.

Q.28) A shooter at Nandi Hills fires from there at a difference of 11 minutes 45 seconds. Shyam is traveling towards Nandi Hills in his car and he hears the second firing after 11 minutes. What is the speed of Shyam's car?

- a) 90km/h
- b) 72 km/h
- c) 108 km/h
- d) 81 km/h

Ans) d

Exp) Option d is the correct answer.

The speed of sound is 330 m/second

There is difference of (11 minutes 45 seconds - 11 minutes) = 45 seconds in hearing the firing

So, the distance covered by sound in 45 seconds is equal to distance covered by Shyam in 11 minutes

distance covered by sound in 45 seconds = $330 \times 45 = 14850$ m

Distance covered by Shyam is 14850 m

This distance Shyam covered in 11 minutes

So, speed of car in which he is traveling is $14850/11 = 1350$ meter per minute = 81 km per hour.

Q.29) Nine friends Aman, Barun, Chaman, Dev, Eshan, Farhan, Gautam, Hira, Ishan are sitting on first bench in the classroom facing North. Barun is at one end of the row. Hira is seated adjacent to both Farhan and Gautam. Chaman is to the immediate right of Dev and third place to the right of Eshan. Aman is immediately to the left of Farhan. Farhan is at the third place to the left of Braun. Who is sitting at second from the left end in the row?

- a) Ishan
- b) Aman
- c) Dev
- d) Farhan

Ans) a

Exp) Option a is the correct answer.

Step 1: Barun is at one end of the row, and Farhan is at the third place to the left of Barun. So Barun has to be at index 9, so that Farhan is to the left of him at index 6.

Step 2: Aman is immediate left of Farhan .so he is at index 5.

Step 3: Hira is seated adjacent to both Farhan and Gautam. So, he has to be at index 7, and Gautam at index 8

Step 4: Chaman is third place to the right of Eshan. So, Eshan has to be at index 1, then Chaman will be at index 4.

Step 5: Chaman is to the immediate right of Dev. So, Dev is at index 3.

Now we are left with one position and one person, so Ishan is at index 2.

So, he is second in the row from the left end.

Index	1	2	3	4	5	6	7	8	9
person	Eshan	Ishan	Dev	Chaman	Aman	Farhan	Hira	Gautam	Barun

Q.30) Consider two Statements and a Question.

Statement-1: Reddy is son of Sharma who is wife of Varun. Patel is son of Shah who is father in law of Sharma.

Statement-2: Varun is brother of Patel and son of Shah who is father in law of Sharma, who is mother of Reddy.

Question: How is Patel related to Reddy?

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Which one of the following is correct in respect of the statements and the question?

- Statement-1 alone is sufficient to answer the Question.
- Statement-2 alone is sufficient to answer the Question.
- Either Statement-1 alone or Statement-2 alone is sufficient to answer the Question.
- Neither Statement-1 alone nor Statement-2 alone is sufficient to answer the Question.

Ans) a

Exp) Option a is the correct answer.

Step 1: Reddy is son of Sharma who is wife of Varun. From this we get Image 1.

Step2: Patel is son of Shah, from this we get Image 2.

Step3: Shah is father in law of Sharma, from this we get Image 3.

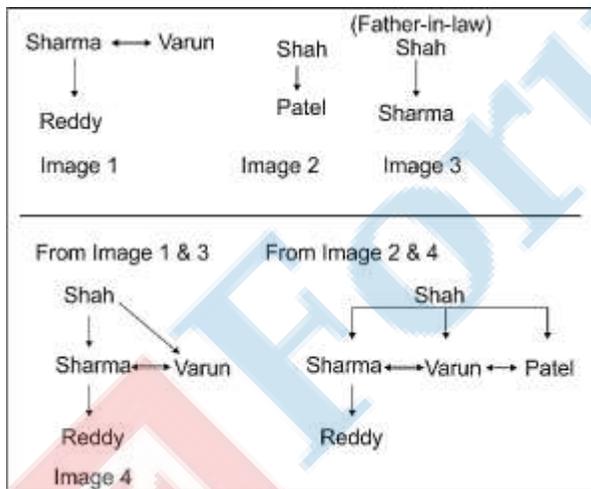
From image 1 and 3 we get image 4, which makes it evident that Varun is the son of Shah and Sharma is the daughter in law of Shah.

From Image 2 and 4, we get Image 5, which makes it clear that Patel is the brother of Varun and Reddy is the son of both Sharma and Varun. So, Patel is the paternal uncle of Reddy.

Hence statement 1 alone is sufficient to answer the Question.

Codes:

- : Female
- : Male
- ↔ : Sibling
- ↔ : Spouse
- : Child



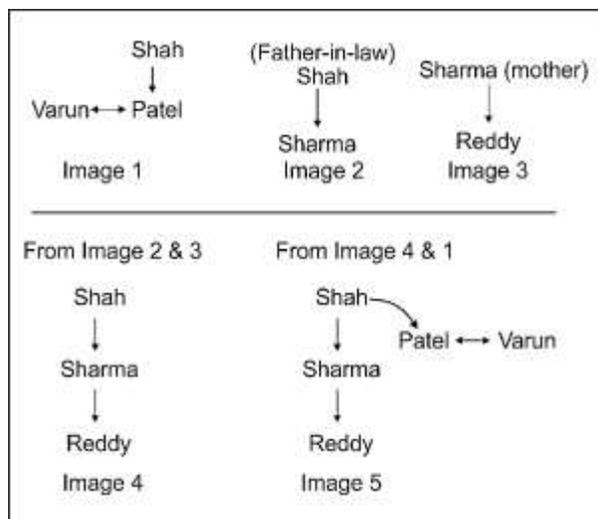
Using Statement 2: Step 1: Patel is son of Shah and Varun is brother of Patel, from this we get Image 1.

Step 2: Shah is father in law of Sharma, from this we get Image 2.

Step 3: Sharma is the mother of Reddy. From this we get Image 3.

From Image 2 and 3, we get Image 4.

From image 4 and 1, we get image 5. From image 5, we get that Patel and Varun are sons of Shah, But what is the relation of Sharma with Patel and Varun is not known, so Patel might be father or Uncle of Reddy. So, the relation can't be known. Hence Statement 2 alone is not sufficient to answer the Question.

**Direction for the following eight (8) items:**

Read the following **seven passages** and answer the items that follow the passages. Your answers to these items should be based on the passages only:

Passage-1

Cricket is a game of time, a game of patience, a game of possibility. The bowler has time to run up, the batsman has time to get into position, the ball has time to come down, the fielder has time to move, and time is allowed for everything that happens. The bowler can vary his pace, his length and his direction. The batsman can play forward, back, off his legs, over the top, square of the wicket, straight, and so on. The fielders can move around in any position, but always with a purpose. But cricket is also a game of surprises. Just when you think you have it all worked out, the unexpected happens. The game is never over until it is over. Cricket is a game that demands discipline, self-control, concentration and fitness. It is a game that requires courage, determination and skill. It is a game that can be played at the highest level by men and women of all ages, races and backgrounds. It is a game that can be played for fun or for serious competition.

But cricket is also more than just a game. It is a way of life, a philosophy, a metaphor for the struggle of human existence. It is a game that has reflected and influenced the social, political and cultural life of many nations. It is a game that has brought people together, that has inspired literature, music and art. It is a game that has given joy and pain, triumph and despair, to millions over the years. It is a game that is forever changing and yet forever the same.

Q.31) Which statement among the following best represents the key message of the passage?

- Cricket is solely a sport that requires skill and dedication.
- Cricket is a game that unites people and influences various aspects of life.
- Cricket is an exclusive sport, played only by a select few.
- Cricket is a game with few variations or challenges.

Ans) b

Exp) Option b is the correct answer.

The passage not only discusses the gameplay and strategies of cricket but also emphasizes its broader impact on society, culture, and the human experience. By describing cricket as a way of life, a philosophy,

and a metaphor for human existence, the passage highlights the game's ability to bring people together, inspire various forms of art, and reflect the social, political, and cultural life of many nation.

Passage-2

India has been at the forefront of global efforts to conserve its big cat populations, including tigers, lions, and leopards. The country has implemented a range of initiatives, including habitat conservation, anti-poaching measures, and community-based conservation programs. In addition, India has launched several successful tiger reintroduction programs and established protected areas and wildlife corridors. But policymakers should expand their efforts. Despite these efforts, India's big cat populations continue to face significant threats from habitat loss due to expansion of human settlements, agriculture and infrastructure development that has led to fragmentation of forest habitats. Big cats are highly valued for their skins, bones which are used in traditional medicines and luxury goods which make them vulnerable to trade.

Q.32) Which of the following statements best reflect the rational, plausible and practical implications that can be derived from the passage given above?

1. The government initiatives are not sufficient to protect big cats.
2. The increased man animal conflict is a big threat to big cat conservation.
3. Illegal wildlife trade poses a difficult challenge to protect the big cat population.
4. Investing in conservation initiatives is vital for big cats' long term survival.

Select the correct answer using the code given below:

- a) 2 and 3 only
- b) 1 and 4 only
- c) 1 and 2 only
- d) 2, 3 and 4 only

Ans) d

Exp) Option d is the correct answer.

The passage discusses that the government has launched various initiatives, and some have been successful too. So, this does not imply that they are insufficient to protect big cat populations. Hence statement 1 is incorrect.

The passage explains that 'Despite these efforts, India's big cat populations continue to face significant threats from habitat loss due to expansion of human settlements, agriculture and infrastructure development that has led to fragmentation of forest habitats. , so this implies that the increased man animal conflict is a big threat to big cat conservation. Hence statement 2 is correct.

The passage discusses that 'Big cats are highly valued for their skins, bones which are used in traditional medicines and luxury goods which make them vulnerable to trade'. Hence it implies that Illegal wildlife trade poses a difficult challenge to protect the big cat population. Hence statement 3 is correct.

The passage mentions that 'policymakers should expand their efforts', so this implies that Investing in conservation initiatives is vital for big cats' long term survival. Hence statement 4 is correct.

Passage-3

As the world continues to grapple with the effects of climate change, there is a growing awareness that our current economic systems may not be sustainable. Capitalism, with its emphasis on perpetual growth and profit maximization, has driven a relentless pursuit of resources and consumption. This has led to the depletion of natural resources and the degradation of the environment, which in turn has created a

vicious cycle of further resource exploitation to maintain economic growth. The current economic model assumes that growth is necessary for prosperity, but this assumption ignores the limits of the planet's resources and the ecological consequences of overconsumption.

Q.33) Which of the following statements best reflects the crux of the passage ?

- a) There is an urgent need to develop alternative economic systems.
- b) Economic growth is necessary for prosperity.
- c) Capitalism is the cause of unsustainable development.
- d) The overconsumption is a concern for the planet's resources.

Ans) a

Exp) Option a is the correct answer.

The passage discusses the limitations of the current economic system and the need to develop alternative economic systems that take into account social and environmental factors. Therefore, the crux of the passage is that there is a need to develop alternative economic systems. Hence Option a is correct.

The passage mentions that 'The current economic model assumes that growth is necessary for prosperity,' this is not the crux, just the assumption. Hence option b is incorrect.

The passage does discuss the impact of capitalism on the environment and economic development, but the crux is not this. Hence option c is incorrect.

The passage argues that overconsumption has led to the depletion of natural resources and the degradation of the environment. So, this is an aspect being discussed, but not the crux. Hence option d is incorrect.

Passage-4

The Taliban's recent takeover of Afghanistan has triggered widespread concern and alarm in the international community. The group's previous rule, which lasted from 1996 to 2001, was marked by extreme levels of human rights abuses, particularly against female gender and the communities which have lesser populations. Reports suggest that the Taliban has already begun to implement similar policies, including restrictions on women's rights and freedoms, and the targeting of journalists, activists, and other perceived opponents. Furthermore, the Taliban's return to power has raised concerns about regional stability and the potential for increased terrorist activity. The group has long been associated with terrorism and has provided a safe haven for several extremist groups, including Al-Qaeda. But the Taliban has expressed a willingness to engage with other countries and has indicated that it may be open to a power-sharing agreement.

Q.34) Based on the passage following assumptions have been made :

1. The terrorist government does not value the rights of women and ethnic minorities.
2. Journalists are a significant threat to Taliban rule.
3. The Taliban's rule is a breeding ground for terrorist organizations.
4. Power sharing agreement brings political stability.

Which of the above assumptions is/are valid ?

- a) 2 only
- b) 3 only
- c) 2 and 4 only
- d) 1, 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

The passage talks about Taliban's rule, so we can't conclude about "the" terrorist organizations in general. Hence statement 1 is an invalid assumption.

The passage does mention that the Taliban targets journalists, but they can be targeted due to their ideologies which are not appreciated by the Taliban. So, we can't assume that they are a significant threat to them. Hence statement 2 is an invalid assumption.

The passage states that 'The group has long been associated with terrorism and has provided a safe haven for several extremist groups', so statement 3 is a valid assumption.

The passage mentions that the Taliban is open to Power sharing agreement. But this does not imply that this agreement will bring political stability. Hence statement 4 is an invalid assumption.

Passage-5

Despite efforts to bring in a casteless society, the caste system is deeply ingrained in Indian society, and its legacy continues to shape social, economic, and political relationships. Despite constitutional guarantees and affirmative action policies, caste-based discrimination and inequality persist in various forms, including access to education, employment, and healthcare. Furthermore, the caste system remains a powerful force in shaping cultural and social norms, with many individuals continuing to identify strongly with their caste and the associated cultural practices. The intergenerational transmission of caste-based prejudices and biases also poses a significant challenge to creating a casteless society. As such, while the aspiration of a casteless society remains an important goal, it must be recognized that achieving this will require significant efforts to address the structural and cultural barriers that perpetuate caste-based discrimination and inequality.

Q.35) Which of the following statements best reflects the central idea being conveyed by the passage above?

- a) The concept of casteless society has been a long-standing aspiration for all in India.
- b) The reality of achieving a truly casteless society remains elusive.
- c) The aim of Indian society is to eliminate systemic discrimination and oppression.
- d) The Constitutional guarantees are not sufficient to eradicate inequalities in the society.

Ans) b

Exp) Option b is the correct answer.

The passage begins on the note that 'Despite efforts to bring in a casteless society, the caste system is deeply ingrained in Indian society', so obviously casteless society is an aspiration, but not for all. Hence option a is incorrect.

The passage mentions that 'while the aspiration of a casteless society remains an important goal, it must be recognized that achieving this will require significant efforts', and in the beginning also it's stated that despite efforts discrimination persists. Hence it is conveyed that 'The reality of achieving a truly casteless society remains elusive(difficult). Hence option b is the central idea, that we want to have a casteless society, efforts are being made, but it is still difficult to achieve. So, option b is correct.

Option c is an idea being discussed, that is what we want, but it is not the central idea. Hence option c is incorrect.

The passage mentions that 'Despite constitutional guarantees and affirmative action policies, caste-based discrimination and inequality persist in various forms,' so this does not refer to the fact that they are insufficient, might be they are not implemented strictly. So, option d is incorrect.

Passage-6

Gun culture in America has long been a topic of heated debate, as the nation struggles to balance the right to bear arms with the need to protect its citizens. Supporters of gun ownership see guns as a fundamental part of American culture, with the Second Amendment enshrining the right to bear arms as a cornerstone of democracy. Gun ownership is often tied to concepts of freedom and individualism, with proponents arguing that the ability to protect oneself and one's property is a basic human right. However, opponents of gun ownership see the proliferation of firearms as a key factor in the nation's epidemic of gun violence. From mass shootings in schools and public spaces to the everyday violence of urban crime, the presence of guns in American society is seen as a major threat to public safety. Calls for gun control legislation have been met with resistance, as gun rights advocates see such measures as an infringement on their personal liberties.

Q.36) With reference to the above passage, the following assumptions have been made:

1. Gun ownership is an essential aspect of American identity.
2. The Second Amendment is an outdated relic of the past.
3. The Americans do not support gun control legislation.
4. Gun control measures are necessary to reduce gun violence.

Which of the above assumptions are valid?

- a) 1 and 2 only
- b) 1, 3 and 4 only
- c) 2 and 3 only
- d) 1 and 4 only

Ans) d

Exp) Option d is the correct answer.

The passage states that 'Second Amendment enshrining the right to bear arms as a cornerstone of democracy.' So, it assumes that Gun ownership is an essential aspect of American identity as it is backed by law. Hence statement 1 is a valid assumption.

The passage states that the second amendment has given the right to bear arms, which is a cornerstone of democracy, though the right to bear arms is debated, but we cannot say that the second amendment is an outdated relic of the past. Hence statement 2 is an invalid assumption.

It is mentioned in the passage 'Calls for gun control legislation have been met with resistance', so it means that there are some groups who are calling for legislation but there are some groups who are opposing this legislation. It implies that Americans are divided on the need for legislation to control gun culture. Hence statement 3 is an invalid assumption as it has used 'The Americans' which implies all.

In the passage it is mentioned that 'From mass shootings in schools and public spaces to the everyday violence of urban crime, the presence of guns in American society is seen as a major threat to public safety', so it assumes that 'Gun control measures are necessary to reduce gun violence' as gun is leading to increased violence. Statement 4 is a valid assumption.

Passage-7

The Israel-Palestine conflict is one of the most enduring and complex geopolitical issues of our time. At its core, the conflict revolves around competing claims to the same land, with Israelis and Palestinians both seeking to establish their own independent states. However, the history and politics of the region are deeply intertwined, and there is hard won solution to the conflict.

One of the most significant issues in the conflict is the status of Jerusalem, which both Israelis and Palestinians claim as their capital. The city is home to holy sites revered by both Jews and Muslims, making it a highly symbolic and emotionally charged issue. Efforts to resolve the conflict have been complicated by competing claims to the city and the difficulty of finding a solution that satisfies both sides. Another issue is the ongoing Israeli occupation of Palestinian territories, which has been condemned by the international community as a violation of international law. Israel argues that it has a right to defend itself against terrorism and to protect its citizens, while Palestinians argue that the occupation has resulted in the displacement of thousands of people and the destruction of their homes and communities.

Q.37) What is the most logical and crucial message conveyed by the passage?

- The international community should impose sanctions against Israel.
- The Israel-Palestine conflict is an intractable issue with no easy solution.
- Making Jerusalem, the combined capital of both Israel and Palestine will end the conflict.
- Protecting citizens and countering terrorism is a priority for countries.

Ans) b

Exp) Option b is the correct answer.

In the passage it's mentioned that the international communities have condemned the Israeli occupation of Palestinian territories, but overall what is the stand of the international community is not known. Hence option a is not the crucial message being conveyed. Hence option a is incorrect.

Throughout the passage, the author describes the complexity and difficulty of the Israel-Palestine conflict, emphasizing that there is no easy solution to the conflict. The passage means that the history and politics of the region are deeply intertwined and there is a hard won solution (no easy solution) to the conflict which directly conveys that the Israel Palestine conflict is an intractable issue with no easy solution. Hence, option b is correct.

In the passage, it's stated that one of the significant issues in the conflict is the status of Jerusalem, so obviously resolving the issue of Jerusalem will help in ending the Israel Palestine conflict, but it will not end the Israel Palestine conflict because there are other issues also. Hence, option c is incorrect.

The passage states that 'Israel argues that it has a right to defend itself against terrorism and to protect its citizens,' this is the argument of Israel, but it can't be generalized for all the countries. Hence option d is incorrect.

Q.38) With reference to the above passage, the following assumptions have been made:

- Both Israelis and Palestinians have legitimate claims to the same land.
- History and politics of the region is the cause of ongoing conflict between Israel and Palestine.
- Both Israeli and Palestinian have equal right to create their sovereign states.

Which of the above assumptions is/are valid?

- 1 only
- 2 only
- 1 and 2 only
- 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The passage states that 'the conflict revolves around competing claims to the same land', so it assumes that both have legitimate claims to the same land. Hence statement one is a valid assumption.

In the passage it's mentioned that the history and politics of the region are deeply intertwined, and there is hard won solution to the conflict, but it doesn't indicate towards it being the cause of conflict. Statement 2 is an invalid assumption.

The passage mentions that 'Israelis and Palestinians both seek to establish their own independent states', but from this it can't be assumed that both have equal right to create their sovereign states. Hence statement 3 is an invalid assumption.

Q.39) Six friends A, B, C, D, E and F participated in a 100-meter race and finished at different times. D is not the slowest runner. E finished the race first. F finished faster than D but slower than B. C is the 3rd fastest runner. D finished faster than A. Who finished the race last?

- a) A
- b) B
- c) C
- d) D

Ans) a

Exp) Option a is the correct answer.

E is the fastest.

Since C is the 3rd fastest runner, and E is the fastest, there must be a runner between E and C. The order so far: $E > ? > C$.

A is slower than C, so A cannot be the second-fastest runner. Since D is faster than A, D cannot be the second-fastest runner either.

So, B must be the second-fastest runner. The order now is $E > B > C$.

F is faster than D but slower than B. So, F must be the fourth-fastest runner. The order now is $E > B > C > F$.

D is faster than A, so D must be the fifth-fastest runner, and A must be the slowest.

The final order is $E > B > C > F > D > A$.

Therefore, A finished the race last.

Q.40) Sanjay is the husband of Kavita. Anil is the brother of Divya. Anil is the only son of Balram. Divya is the sister of Kavita. Rakesh is married to Divya. Manoj is the father of Rakesh. Neha is the daughter of Kavita. How is Divya related to Sanjay?

- a) Sister
- b) Sister-in-law
- c) Mother-in-law
- d) Daughter

Ans) b

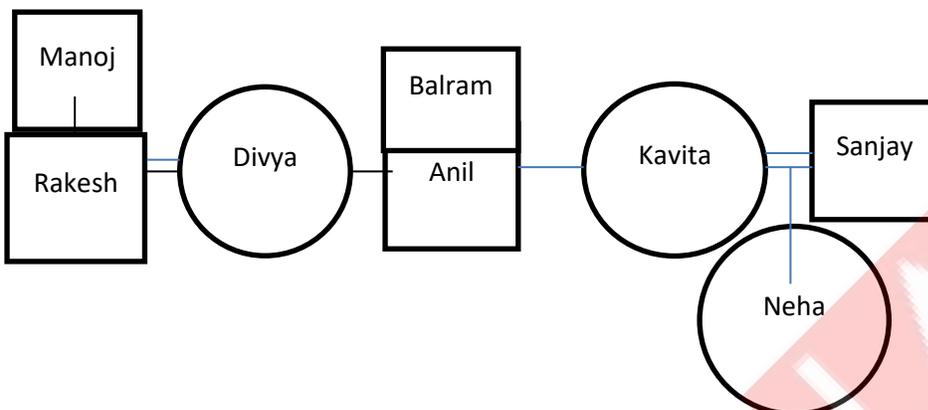
Exp) option b is the correct answer.

Given information:

- 1) Sanjay is the husband of Kavita.
- 2) Anil is the brother of Divya.
- 3) Divya is the sister of Kavita. Kavita, Anil, and Divya are siblings.
- 4) Rakesh is married to Divya.

- 5) Anil is the only son of Balram.
- 6) Manoj is the father of Rakesh.
- 7) Neha is the daughter of Kavita.

We can draw the following:



From the above we can see that Divya is the sister-in-law of Sanjay.

Q.1) Which of the following are the products of photosynthesis process?

1. Oxygen
2. Glucose
3. Carbon dioxide
4. Nitrogen

Select the correct answer using the code given below:

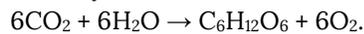
- a) 1 and 2 only
- b) 1, 2 and 4 only
- c) 2 and 3 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

Photosynthesis is the process by which green plants, algae, and some bacteria convert light energy from the sun into chemical energy that can be used as food. Additionally, photosynthesis plays a significant role in regulating the Earth's climate, as it removes carbon dioxide from the atmosphere and produces oxygen.

Photosynthesis Reaction:



Option 1 is correct: Oxygen is produced during the light-dependent reactions that occur in the thylakoid membrane of the chloroplasts. These reactions use energy from sunlight to split water molecules into hydrogen ions and oxygen.

Option 2 is correct: Glucose is produced during the light-independent reactions (also called the Calvin cycle), which occur in the stroma of the chloroplasts.

Option 3 is incorrect: Carbon dioxide is the reactants of photosynthesis, not the product.

Options 4 is incorrect: Nitrogen is not the product of photosynthesis.

Source: <https://www.biologyonline.com/dictionary/photosynthesis>

Q.2) Which of the following statements accurately defines the concept of Gause's law in ecology?

- a) Two species competing for the same resources can coexist indefinitely.
- b) Two species competing for the same resources will eventually evolve to avoid competition.
- c) Two species competing for the same resources cannot coexist indefinitely.
- d) Two species competing for the same resources will form a symbiotic relationship.

Ans) c

Exp) Option c is the correct answer.

Gause's law, also known as the competitive exclusion principle, states that **two species competing for the same resources cannot coexist indefinitely**. The law suggests that one species will outcompete and eventually displace the other, leading to the extinction of the weaker species. The law has been supported by numerous ecological studies and has significant implications for conservation efforts and management of natural resources. Additionally, there are some exceptions to the law, such as instances where species partition resources or occupy different niches to avoid direct competition.

Source: <https://www.thehindu.com/opinion/op-ed/what-is-gauses-law-in-ecology/article25551522.ece>

Q.3) Which of the following statements is/are true regarding ecological pyramids?

1. Saprophytes are not represented in ecological pyramids.
2. The base of ecological pyramids is always occupied by autotrophs.
3. The Pyramid of energy is always upright.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Ecological pyramids are graphical representations of the structure of an ecosystem. These pyramids depict the trophic structure and flow of energy and nutrients through the different levels of an ecosystem. There are three types of ecological pyramids: Pyramid of numbers, Pyramid of biomass and Pyramid of energy.

Statement 1 is correct: Saprophytes are organisms that feed on dead and decaying matter, and they are not represented in ecological pyramids as they do not occupy a trophic level.

Statement 2 is correct: The base of ecological pyramids is always occupied by autotrophs, which are organisms that produce their own food through photosynthesis or chemosynthesis.

Statement 3 is correct: Energy pyramid is always upright, as it reflects the laws of thermodynamics and the fact that energy is lost at each transfer to another trophic level. The available energy decreases as we move up the pyramid, which results in the pyramid being upright.

Source: <https://egyankosh.ac.in/bitstream/123456789/16250/1/Unit-5.pdf>

<http://science.halleyhosting.com/sci/ibbio/ecology/notes/pyramid.htm>

Q.4) Consider the following statements with reference to food chains in ecosystems:

1. A food chain illustrates a sequence of eaten and being eaten in an ecosystem.
2. There is no restriction on number of trophic levels in a food chain.
3. A food chain illustrates number of organisms eaten at each trophic level.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

A food chain is the sequence of transfers of matter and energy in the form of food from organism to organism. A food chain starts with producers and ends with top carnivores.

Statement 1 is correct: The sequence of eaten and being eaten, produces transfer of food energy which is known as food chain. Hence, a food chain illustrates a sequence of organisms that feed on one another.

Statement 2 is incorrect: The number of trophic levels in a food chain depends upon the net available energy at the end of the trophic level. Since so little energy is available for the next level of consumers, food chains generally consist of only three or four steps. **The loss of energy at each step is so great that very little usable energy remains after four trophic levels.** The transfer of energy generally follows 10% law, wherein only 10% of the available energy is transferred to the next trophic level. **Hence, the number of trophic levels in a food chain is restricted by the net energy available for consumption at the next trophic level.**

Statement 3 is incorrect: A food chain does not illustrate the number of organisms eaten at each trophic level. It only illustrates the sequence of consumption or direction of flow of energy in a chain.

Source: <https://ncert.nic.in/textbook/pdf/jesc115.pdf> <https://ncert.nic.in/textbook/pdf/lebo114.pdf>

Q.5) Which of the following statements best explains the term 'Scrub Typhus', recently seen in the news?

- It is a tropical disease caused by a certain type of bacteria.
- It is a non-communicable viral disease affecting larger part of Africa.
- It is a drug produced by Indian pharma companies, recently banned by some African nations.
- It is an Injectable Typhoid Conjugate Vaccine, recently developed by Bharat biotech.

Ans) a

Exp) Option a is the correct answer.

Recently, a team of Indian Scientists has identified a significantly more effective treatment for severe Scrub typhus. **Scrub typhus, also known as bush typhus, is a disease caused by a bacteria called Orientia tsutsugamushi.** Scrub typhus is spread to people through bites of infected chiggers (larval mites). The most common symptoms of scrub typhus include fever, headache, body aches, and sometimes rash.

As per estimates, nearly one million cases are reported from South and Southeast Asia with 10% mortality. India is one of the hotspots with at least 25% of the disease burden; in CMC Vellore alone, 500-1,000 patients are treated each year, of which 250-300 have severe disease.

Saving lives by faster resolution of complications

India is one of the hotspots for scrub typhus disease with at least 25% disease burden



Of concern: Mortality due to severe disease with multi-

- Combination therapy with doxycycline and azithromycin achieved faster resolution of complications compared with monotherapy using either drug

- Combination therapy achieved faster clearance of the bacteria compared with monotherapies

- Faster resolution of

thousands of lives

- Scrub typhus infection does not cause typical symptoms, making correct and early diagnosis difficult

- Awareness about the infection and disease is very low, despite the high disease burden and mortality rate

- In Vellore, increased awareness and early diagnosis led to sharp

Scrub typhus is a tropical disease caused by a bacteria called Orientia tsutsugamushi, hence, statement b, c and d are incorrect.

Source: <https://www.thehindu.com/sci-tech/science/scrub-typhus-trial-shows-combination-therapy-can-save-more-lives/article66578021.ece>

<https://pubmed.ncbi.nlm.nih.gov/36252451/#:~:text=Scrub%20typhus%20is%20an%20under,hilly%20areas%20of%20Ttsutsugamushi%20triangle.>

Q.6) Which of the followings are biotic components of the environment?

- Symbionts
- Parasites
- Soil
- Topography
- Decomposers

Select the correct answer from the codes given below.

- 1, 2 and 3 only
- 3, 4 and 5 only
- 1, 2 and 5 only
- 1, 2, 4, and 5 only

Ans) c

Exp) Option c is the correct answer.

In ecology, biotic and abiotic factors make up an ecosystem. Organisms require both biotic and abiotic factors to survive. Also, a deficit or abundance of either component can limit other factors and influence an organism's survival.

Biotic Factors: Biotic factors include any living component of an ecosystem. They include related biological factors, such as pathogens, effects of human influence, and diseases. Living components fall into one three categories:

- 1) Producers: Producers or autotrophs convert abiotic factors into food. Plants are examples of producers.
- 2) Consumers: Consumers or heterotrophs obtain energy from producers or other consumers. Most consumers are animals.
- 3) **Decomposers: Decomposers or detritivores break down chemicals made by producers and consumers into simpler molecules.**

Components of Environment	
Abiotic	Biotic
Energy	Green plants
Radiation	Non-green plants
Temperature & heat flow	Decomposers
Water	Parasites
Atmospheric gases and wind	Symbionts
Fire	Animals
Gravity	Man
Topography	
Soil	
Geologic substratum	

Options 1 and 2 are correct: Biotic components also include parasites and symbionts. Symbionts are those living species which have a long term, intimate association with the host species for survival.

Option 5 is correct: As decomposers are one of the three major categories of the biotic component.

Option 3 is incorrect: Abiotic factors are the non-living components of an ecosystem that an organism or population needs for growth, maintenance, and reproduction. Soil is an abiotic factor.

Option 4 is incorrect: Topography, i.e., the arrangement of the natural and artificial physical features of an area is also an abiotic component.

Source: <https://www.thoughtco.com/biotic-versus-abiotic-factors-4780828>

Q.7) Which of the following food chains represent spindle shaped pyramid of number?

- a) Grass -> Insects-> Todd
- b) Tree -> Birds->Hawk
- c) Grass -> Rabbit -> Fox -> Lion
- d) Plants -> Grasshopper->Frog-> Snakes-> Eagle

Ans) b

Exp) Option b is the correct answer.

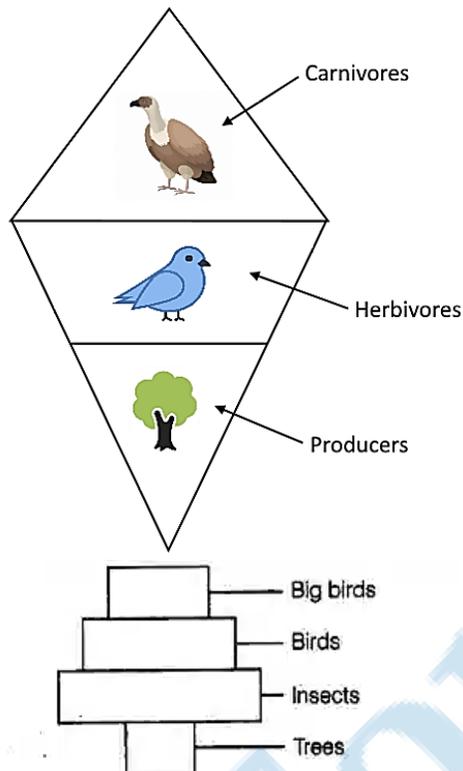
The steps of trophic levels expressed in a diagrammatic way are referred as ecological pyramids. The food producer forms the base of the pyramid, and the top carnivore forms the tip. Other consumer trophic levels are in between.

Pyramid of Numbers deals with the relationship between the numbers of primary producers and consumers of different levels. It is a graphic representation of the total number of individuals of different species,

belonging to each trophic level in an ecosystem. A Spindle shaped pyramid is Having the shape of a spindle, which is wide in the centre and tapered at both ends.

Option a is incorrect: In GRASS -> INSECT-> TODD chain, the pyramid is upright in shape. As grasses as producers are larger in number than the insects at the 2nd trophic level. Todds who are at the top are slightly lesser in number than the 2nd trophic level.

Option b is correct: In this food chain TREE-> BIRDS->HAWK, tree is a single major producer which provides food to multiple herbivores, such as birds, in a forest environment. These little herbivorous birds are typically eaten by hawks or eagles. The eagle population is, however, quite modest. **As a result, the pyramid of number derived from this type of interaction is spindle shaped.**



Pyramid of number (spindle-shaped)

Option c is incorrect: The food chain of grass -> Rabbit -> Fox -> Lion will have a a pyramid of numbers in upright triangle shape.

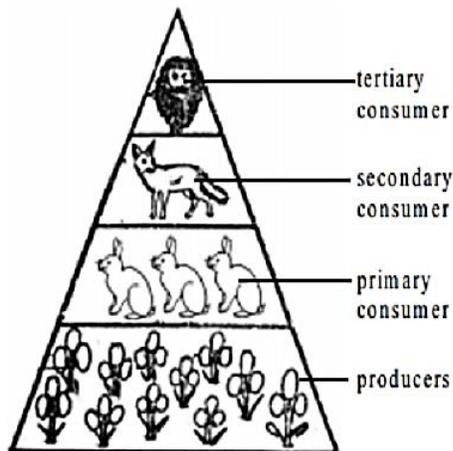
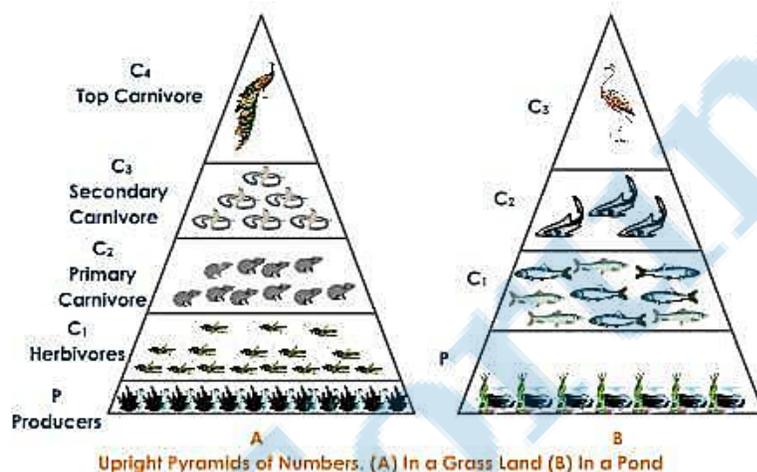


Fig. Pyramid of energy in a forest

Option d is incorrect: This food chain PLANTS-> GRASSHOPPER->FROG-> SNAKES-> EAGLES form a pyramid of number which is upright as number of consumers at each trophic level decreases consistently.



Upright Pyramids of Numbers. (A) In a Grass Land (B) In a Pond

Source: Shankar IAS, Environment

Q.8) Arrange the above Biomes in the decreasing order according to their net productivity:

1. Desert Biomes.
2. Savanna Biomes.
3. Temperate Deciduous Forest Biome.
4. Tropical Forest Biome.

Select the correct answer from the code given below:

- a) 4 - 2 - 3 - 1
- b) 4 - 3 - 2 - 1
- c) 3 - 4 - 1 - 2
- d) 4 - 2 - 1 - 3

Ans) b

Exp) Option b is the correct answer.

Net primary productivity (NPP) is the amount of carbon retained in an ecosystem (increase in biomass). It is equal to the difference between the amount of carbon produced through photosynthesis and the amount of energy that is used for respiration.

Option b is correct: The correct sequence of decreasing order of productivity is as follows- 4 - 3 - 2 - 1.

Option 1: Deserts generally occur in a band around the world between 15–30° N and S latitude. They cover between 26–35% of the land surface of the Earth. The climate of deserts is dominated by low precipitation, generally below 250 mm yr. There is a great deal of variation in the biodiversity, productivity and organisms found in different types of desert. The dominant plant biomass in most deserts is composed of perennial shrubs with extensive roots and small, gray or white leaves.. **There is a positive relationship between productivity and precipitation, and values of net primary productivity can range from near 0 to 120 g m⁻² yr⁻¹.** Just as with savannas, productivity will vary with soil depth and local drainage pattern.

Option 2: Savannas Biomes are located north and south of tropical forest They have lower yearly rainfall and longer dry seasons. These biomes are dominated by a mix of grasses and small trees. They represent a transition from tropical forests to deserts. Trees in savannas are usually drought deciduous. Fire plays a major role in the balance between trees and grasses in Savanna. **Net primary productivity ranges from 400–600 g m⁻² yr⁻¹, but varies depending upon local conditions such as soil depth.**

Option 3: Temperature deciduous forests occur in mid-latitudes where cool winters, warm summers, and high year round precipitation occurs. **Net primary productivity ranges from 600–1500 g m⁻² yr⁻¹ with high litter production.** Litter serves as a major pathway for nutrient recycling. This biome is named for the dominant trees that drop their leaves during the winter months. Biodiversity is relatively high in this biome due to the niche partitioning allowed by the multiple forest layers..

Option 4: Tropical forests are found in areas centered on the equator Climate in these biomes shows little seasonal variation with high yearly rainfall and relatively constant, warm temperatures. The dominant plants are phanerophytes - trees, lianas, and epiphytes. Tropical forests have the highest biodiversity and primary productivity of any of the terrestrial biomes. **Net primary productivity ranges from 2–3 kg m⁻² y⁻¹ or higher.** This high productivity is sustained despite heavily leached, nutrient poor soils, because of the high decomposition rates possible in moist, warm conditions.

Source: <https://www.nature.com/scitable/knowledge/library/terrestrial-biomes-13236757/>

Q.9) Consider the following statements with reference to the Endo Parasite:

1. They can be found inside the cells of human beings.
2. Protozoan Plasmodium, the causative agent of malaria, is an example of endoparasites.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Parasitism is one of the many forms of symbiosis. In parasitism, one organism (called parasite) benefits at the expense of another organism usually of different species (called host). The parasite benefits at the expense of the host organism

Endoparasites are those that live inside the host body at different sites (liver, kidney, lungs, red blood cells, etc.). **The parasites that feed on the external surface of the host organism are called ectoparasites.**

Statement 1 is correct: Endoparasites are of two forms: intercellular parasites and intracellular parasites. Intercellular parasites are those that inhabit the spaces of the body of the host. Intercellular parasites are endoparasites that live within the cell of the host.

Statement 2 is correct: Examples of intracellular parasites are the protozoan Plasmodium, the causative agent of malaria. They thrive inside the cells of their human host. Plasmodium species have different stages in their life cycle. Within the definitive host (human), the sporozoite stage of Plasmodium species occurs within the liver cells where the sporozoite gives rise to a merozoite or to a hyponozoite, which then infects the red blood cell of the host.

Source: Page 200, Chapter 11 - Organisms and Populations of 12th NCERT.

Q.10) Consider the following statements about the Dragon Fruit:

1. It is an herbaceous perennial climbing cactus.
2. It has its origin to Mexico and Central America.
3. It is also known as the “Wondrous Fruit of the 21st century”.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The dragon fruit (also known as Kamalam in India), a new introduction in India, is highly valued for its reported nutraceutical properties. The Kamalam (Dragon fruit) has recently drawn much attention of the growers worldwide, not only because of their red purple colour and economic value as food products but also for their enormous health benefits. The skin of the fruit is covered with bracts or scales which may have attributed the fruits resembling the mythical creature 'dragon', hence the name dragon fruit.

Statement 1 is correct: Kamalam or Dragon Fruit (Hylocereus undatus) is an herbaceous perennial climbing cactus. Although they are members of the cactus family, Hylocereus species all grow like vines, climbing, clambering, crawling, and sprawling as far as 30 feet (9 meters). In optimal conditions, some can grow almost 10 feet (3 meters) in their first year! Most take root in the soil and climb into trees, but some grow as epiphytes (on other plants).

Statement 2 is correct: It originated from the tropical regions of Mexico and Central and South America. From its centres of origin, dragon fruit has spread over tropical and sub-tropical America, Asia, Australia and Middle East. Currently it is being cultivated in at least 22 countries of tropics. Historical evidence indicates that the French introduced the crop to Vietnam about 100 years ago and it was grown for the King. Later, it became popular among the wealthy families of the entire country.

Statement 3 is correct: Dragon fruit is popular by different names such as Pithaya in Mexico, Pitaya Roja in Central and Northern America, Pithajah in Thailand and Kamalam after the Sanskrit name lotus in India. **It is also known as “Wondrous Fruit of the 21st century”.**

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1906572>

<https://animals.sandiegozoo.org/animals/dragonfruit-pitahaya-pitaya>

<https://www.livemint.com/news/india/in-a-first-maharashtra-exports-kamalam-to-dubai-all-you-need-to-know-about-this-exotic-dragon-fruit-11624713335849.html>

Q.11) Consider the following pairs:

Lakes	Description
1. Pulicat lake	Freshwater lake
2. Kanwar Lake	Oxbow lake
3. Vembanad lake	Lagoon lake

Which of the pairs given above is/are correctly matched?

- 1 and 2 only
- 2 and 3 only
- 3 only
- 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Lakes are classified into various types based on their origin or mode of formation. These can be further classified into the freshwater lake, saltwater lake, Natural lake, oxbow lake, Artificial lake, crater lake etc.

Pair 1 is incorrect: Pulicate lake is 2nd largest **brackish water lake** in India after Chilika lake. It lies along Coromonadal coast.

Pair 2 is correct: Kanwar lake is **Asia's largest freshwater oxbow lake** and Bihar's only Ramsar site, located in Begusarai district. It is currently facing threat of running dry.

Pair 3 is correct: The Vembanad Wetland System is a Ramsar site of the country. It is the **second largest lagoon** in India. It is in grave danger due to the accumulation of silt on the beds and illegal filling.

Source: <https://timesofindia.indiatimes.com/city/chennai/pulicat-declared-eco-sensitive-zone/articleshow/80914721.cms>

<https://www.hindustantimes.com/cities/patna-news/bihars-biggest-lake-left-high-and-dry-despite-ramsar-tag-101617208132502.html>

<https://www.newindianexpress.com/states/kerala/2022/feb/03/vembanad-wetland-system-shrinking-dramatically-report-2414562.html>

Q.12) The gradual and fairly predictable change in the species composition of a given area is called ecological succession. In this context, arrange the following species found in water on the basis of the correct sequence in terms of succession:

1. Rooted floating angiosperms
2. Reed Swamp
3. Free floating plants
4. Scrub
5. Marsh- meadow

Which of the options given below is correct?

- 1-3-5-4-2
- 1-2-3-5-4
- 1-2-3-4-5
- 1-3-2-5-4

Ans) d

Exp) Option d is the correct answer.

Based on the nature of the habitat – whether it is water (or very wet areas) or it is on very dry areas – succession of plants is called hydrarch or xerarch, respectively. Hydrarch succession takes place in wetter areas and the successional series progress from hydric to the mesic conditions.

In primary succession in water, the pioneers are the small phytoplanktons, they are replaced with time by rooted-submerged plants, rooted-floating angiosperms followed by free-floating plants, then reed swamp, marsh-meadow, scrub and finally the trees. The climax again would be a forest. With time the water body is converted into land.

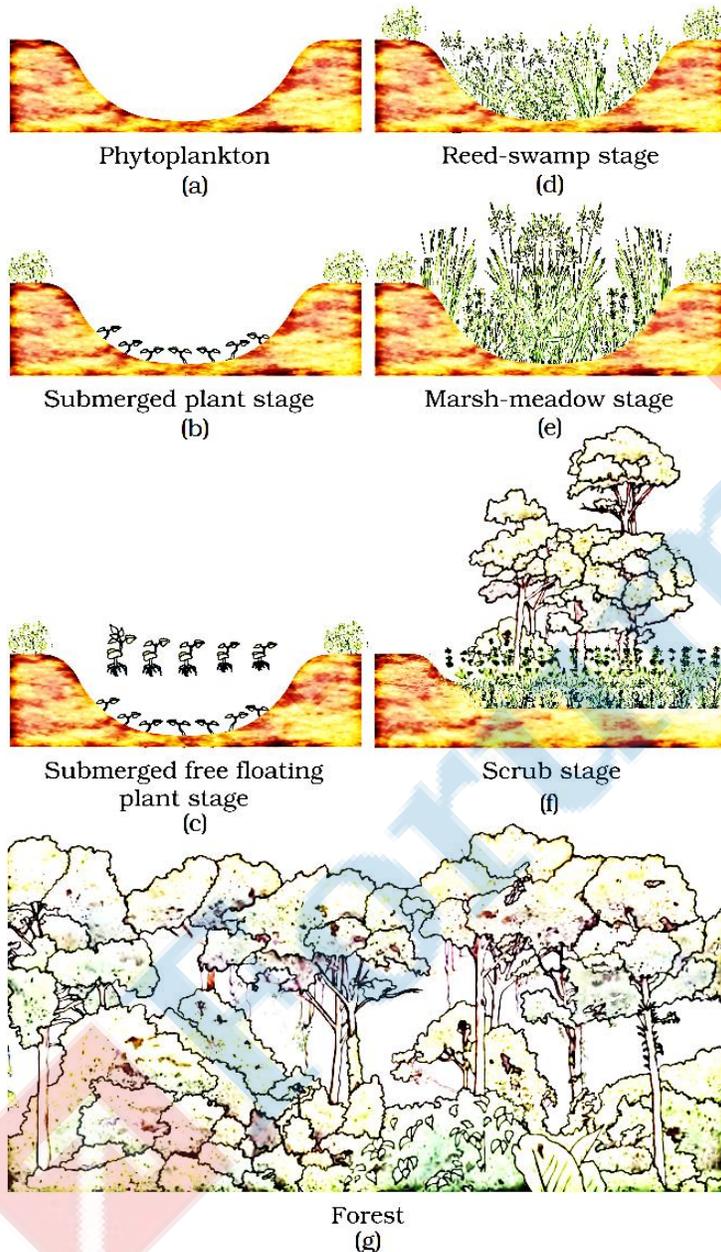


Figure 14.5 Diagrammatic representation of primary succession

Thus, based on the above information, the correct sequence of succession of species in water is 1-3-2-5-4.

Source: <https://ncert.nic.in/ncerts/l/lebo114.pdf>

Q.13) Consider the following statements regarding Ecological Niche:

1. The ecological niche describes how a species interacts within an ecosystem.
2. The niche of a species depends on both biotic and abiotic factors.
3. It is possible for more than one species to share a particular niche in one ecosystem.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: An ecological niche is the ecological role an organism plays within its habitat. **The ecological niche describes how a species interacts within an ecosystem.**

Statement 2 is correct: **The niche of a species depends on both biotic and abiotic factors, which affect the ability of a species to survive and endure.** Biotic factors affecting a species' niche include food availability and predators. Abiotic factors affecting ecological niche include temperature, landscape characteristics, soil nutrients, light and other non-living factors.

Statement 3 is incorrect: **No two species can have the exact same niche, otherwise they would be in direct competition for resources with one another.** If this occurs, then one species will outcompete the other. If the losing species then does not adapt, it would lead to its extinction.

Source: <https://education.nationalgeographic.org/resource/niche/>

<https://sciencing.com/ecological-niche-definition-types-importance-examples-13719219.html>

Q.14) Which of the following factors is/are responsible for decreasing amount of Dissolved Oxygen (DO) in aquatic water bodies?

1. Decreasing salinity of the water body
2. Warmer surface water
3. Increasing atmospheric pressure

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 and 3 only
- c) 2 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Dissolved oxygen enters water through the **air or as a plant by-product**. From the air, oxygen can slowly diffuse across the water's surface from the surrounding atmosphere, or be mixed in quickly through aeration, whether natural or man-made. The aeration of water can be caused by wind (creating waves), rapids, waterfalls, ground water discharge or other forms of running water.

The actual amount of dissolved oxygen (in mg/L) depends on **temperature, pressure and salinity of the water body**.

Statement 1 is incorrect: Dissolved oxygen decreases exponentially as salt levels increase. That is why, at the same pressure and temperature, **saltwater holds about 20% less dissolved oxygen than freshwater**. **Therefore, decreasing amount of salinity increases the dissolved oxygen level in the water body.**

Statement 2 is correct: The **solubility of oxygen decreases as temperature increases**. This means that warmer surface water requires less dissolved oxygen to reach 100% air saturation than does deeper, cooler water. For example, at sea level (1 atm or 760 mmHg) and 4°C (39°F), 100% air-saturated water would hold 10.92 mg/L of dissolved oxygen. But if the temperature were raised to room temperature, 21°C (70°F), there would only be 8.68 mg/L DO at 100% air saturation. In summary, **colder, deeper fresh waters have the capability to hold higher concentrations of dissolved oxygen**.

Statement 3 is incorrect: Dissolved oxygen will **increase as pressure increases**. This is true of both atmospheric and hydrostatic pressures. Water at lower altitudes can hold more dissolved oxygen than water at higher altitudes.

Source: Dissolved Oxygen - Environmental Measurement Systems (fondriest.com)

Q.15) Consider the following pairs about military exercises and the participating nations:

Exercise : Participating countries

1. Bold Kurukshetra : India and Indonesia
2. Vajra Prahar : India and USA
3. Garuda Shakti : India and Malaysia

Which of the pairs given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 2 only

Ans) d

Exp) Option d is the correct answer.

The joint military exercises with friendly countries result in constructive engagements in operational terms and enhances the skills of our armed forces in a number of diverse areas of war-fighting by operating with armed forces of various nations. In this process the current tactical and technological practices / techniques etc., are exchanged during such exercises.

Pair 1 is incorrect: Exercise Bold Kurukshetra is conducted under the ambit of the bilateral arrangement for the joint Army Training and exercises between the Singapore Army (not Indonesia) and the Indian Army. First conducted in 2005, this exercise underscores the strong and long-standing bilateral defence relationship between both countries and enhances cooperation between the two armies.

Pair 2 is correct: Exercise VAJRA PRAHAR is an India-US Special Forces exercise, which is significant in terms of security challenges faced by both Nations in the backdrop of the current global situation. The joint military exercise has further strengthened the traditional bond of friendship between the special forces of both Nations as well as improved bilateral defence cooperation between India and the USA.

Pair 3 is incorrect: Garuda Shakti is a joint military exercise between India and Indonesia (and not Malaysia). The joint exercise facilitates both armies to know each other better, and share their wide experiences and combat experience on countering terrorist operations, Regional Security Operations & Peace Keeping Operations in an international environment. The exercise is yet another significant milestone in ensuring cordial relations between the two countries and another step forward towards ensuring regional security.

Source: <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1539020>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1906808>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1906351>

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1855014>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1878228>

Q.16) With reference to Species diversity, consider the following statements:

1. Sibling species are those species that look alike and can breed with each other.
2. Deme is a local group of individuals that cannot breed with each other.
3. Cline represents the genetic diversity within the same species.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 3 only

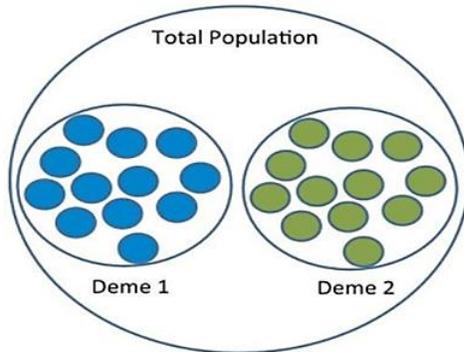
Ans) d

Exp) Option d is the correct answer.

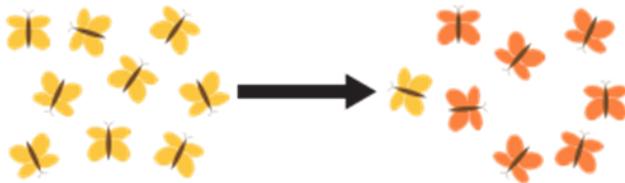
Statement 1 is incorrect: Sibling species are **species which look alike, but cannot breed with each other.** Sibling species do not breed with each other and are incapable of producing fertile offspring, but their morphology, structure and form are nearly indistinguishable. Example being the **Willow flycatcher (left) and Alder flycatcher (right)** that look alike but cannot breed with each other.



Statement 2 is incorrect: Deme is a local group of animals (from the same taxon) that can breed with each other and share a gene pool. A population of a species usually has multiple demes and they are largely the result of local environment. For instance in **Adaptive Deme Formation (ADF) hypothesis** in which **herbivorous insects can become adapted to specific host plants** in their local environment. Local plants can have unique nutrient patches to which insects will be adopted.



Statement 3 is correct: A cline represents a genetic diversity within the species. Clines are the result of two opposing drivers: **selection and gene flow**. **Selection causes adaptation to the local environment**, resulting in genetic diversity among species and **gene flow, which has a homogenising effect on populations** and prevents genetic diversity. The **yellow figure represents the gene flow** from one group to another, which counters the genetic difference between these two sets of species.



Source: <https://u.osu.edu/biomuseum/2015/09/28/examples-of-sibling-species/comment-page-1/>
<https://www.sciencedirect.com/topics/earth-and-planetary-sciences/cline#:~:text=A-,cline,-is%20a%20gradient>
https://www.bio.miami.edu/dana/dox/rana_aurora.html

Q.17) Which one of the following is the best description of the 'ecosystem'?

- A closed relationship between animals and humans.
- A system created by interaction of only flora and fauna of two different climatic regions.
- A system in which all living organisms interact with each other together with the non-living organisms.
- A geographical area in which land, water and air interact with each other.

Ans) c

Exp) Option c is the correct answer.

Option c is correct: Ecosystems contain **biotic or living parts, as well as abiotic factors, or nonliving parts**. Biotic factors include plants, animals, and other organisms. Abiotic factors include rocks, temperature, and humidity.

Every factor (biotic and abiotic factors) in an ecosystem depends on every other factor, either directly or indirectly. For instance a non biotic factor (temperature) often affects what plants (biotic) will grow there. Plants in an area influences the animal population there (this shows interaction among biotic factors).

An ecosystem is a geographic area where plants, animals, and other organisms, as well as weather and landscape, work together to form a bubble of life. Therefore, it is **true that the Ecosystem is a system in which all living organisms interact with each other together with the non-living organisms**.

Options a and b are incorrect: Both options a and b talk about the interaction between the flora and fauna (or biotic factors of the ecosystem). But abiotic factors also included in the ecosystem, and they play important role in shaping the ecosystem.

Option d is incorrect: Statement d is focussing only on the abiotic factors of the ecosystem, and it ignored the biotic factors.

Source: <https://australian.museum/learn/species-identification/ask-an-expert/what-is-an-ecosystem/>

Q.18) With reference to Putrefying bacteria, consider the following statements:

1. All putrefying bacteria necessarily require oxygen to decompose the organic matter.
2. These organisms can be found naturally inside human bodies.
3. Putrefying bacteria play an important role in the Nitrogen cycle.

Which of the statements given above is/are correct?

- a) 1, 2 and 3
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect: Putrefaction refers to the breaking down of a body of a living organism post death. Putrefying bacteria is a broad term used to define several species of bacteria involved in decomposition and fermentation. **Putrefying bacterias can either be aerobic (need oxygen for decomposition) or anaerobic (does not require oxygen for decomposition).**

Statement 2 is correct: Putrefying bacteria can be found naturally inside human bodies especially in the large intestine. These bacteria aid in **digestion of nutrients** that a human's gastrointestinal tract could not process on its own. Hence Putrefying bacteria in the gut play a key role in fermenting or decomposing proteins not broken down by the body.

Statement 3 is correct: Putrefying bacteria use amino acids or urea as an energy source to decompose dead organisms. **In the process, they produce ammonium ions.** Nitrifying bacteria then convert this ammonium into nitrate by oxidation, which can then be used by plants to create more proteins thus completing the nitrogen cycle.

Source: <https://www.ncbi.nlm.nih.gov/books/NBK539741/#:~:text=the%20gram%2Dpositive%2C-,anaerobic,-%2C%20and%20rod%2Dshaped>

Q.19) With reference to Biosphere, consider the following statements:

1. It refers to only the terrestrial portion of the planet.
2. The areas in the atmosphere, such as the uppermost layers, where conditions are inhospitable for most life forms to survive are not part of the Biosphere.
3. The biotic component of the biosphere includes the land, air, and water.

Which of the above given statements is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 2 only

Ans) b

Exp) Option b is the correct answer.

The biosphere refers to the zone of the Earth where life exists, including the land, water, and air. It consists of three major components: the lithosphere, the hydrosphere, and the atmosphere. The biosphere is home to millions of different species, including plants, animals, and microorganisms. These organisms interact

with each other and with the abiotic components of the environment to form complex ecosystems. These ecosystems can range from a small pond or a patch of forest to the entire biosphere.

Statement 1 is incorrect: The biosphere refers to the zone of the Earth where life exists, including the land, water, and air. It is not limited to the largest terrestrial portion of the planet.

Statement 2 is correct: The Biosphere is commonly defined as the layer of the Earth where living organisms can exist, which typically excludes the higher regions of the atmosphere characterized by low air density and extreme temperatures, making it unsuitable for most life forms to survive.

Statement 3 is incorrect: The abiotic component is the nonliving part of the ecosystem, which includes the flow of energy, nutrients, air, water, and gases, land as well as the concentrations of organic and inorganic substances in the environment. The biotic component is the living part of the ecosystem, which includes producers (plants), consumers (animals), and decomposers (bacteria and fungi).

Source:

<https://www.biologyonline.com/dictionary/biosphere#:~:text=The%20biosphere%20consists%20of%20three,things%20thriving%20or%20inhabiting%20them.>

Q.20) Consider the following statements regarding the Defense Acquisition Council (DAC):

1. It is responsible for the co-ordination, supervision and monitoring of the defence acquisition process.
2. It also gives 'in principle' approval to Capital acquisitions in the Long-Term Perspective Plan.
3. The Defence Minister of India acts as the chairman of the DAC.

Which of the statements given above is/are correct?

- a) 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: DAC is the highest decision-making body in the defence ministry for deciding on new policies and capital acquisitions of the Army, the Navy and the Air Force along with the Indian Coast Guard.

Whereas, the **Defense Procurement Body (DPB)** is created to oversee all activities related to acquisition on the capital account in the Department of Defence flowing out of the 'Buy' and 'Buy & Make' decisions of the DAC. **DPB functions as the body responsible for the co-ordination, supervision and monitoring of the acquisition process.**

Statement 2 is correct: The DAC is tasked to give '**in principle' approval to Capital acquisitions in the Long-Term Perspective Plan (LTPP)** covering a 15-year time span at the beginning of a Five-Year Plan period. (The approval will, in particular, identify the 'Make' projects in the Perspective Plan where long gestation periods are involved).

(c) Monitor the progress of major projects on feedback from the Defence Procurement Board

Statement 3 is correct: A Defence Acquisitions Council has been created as an overarching structure with the following composition:

Chairman: Defence Minister (Raksha Mantri)

Members: Raksha Rajya Mantris (RRMs)

Chief of Defence Staff (CDS) (when appointed)

Chief of Army Staff (COAS)

Chief of Naval Staff (CNS)

Chief of Air Staff (CAS)

Defence Secretary

Secretary Dept. of Defence Production and Supplies
 Secretary, Defence Research and Development
 Secretary, Defence Finance
 Vice Chief of Defence Staff (when appointed)/CISC
 Special Secretary (Acquisition)

Member Secretary: Dy. Chief of Defence Staff (PP&FD)

Source: https://mod.gov.in/dod/sites/default/files/DEFENCE_PROCUREMENT_ORGANISATION.pdf
<https://www.livemint.com/>

Q.21) With regard to different zones of lake, which of the following statements is/are correct?

1. Rooted aquatic plants and algae can grow in Littoral zone.
2. Profundal zone refers to the area in a deep lake where no light reaches.
3. Diversity in Benthic zone is usually very less.

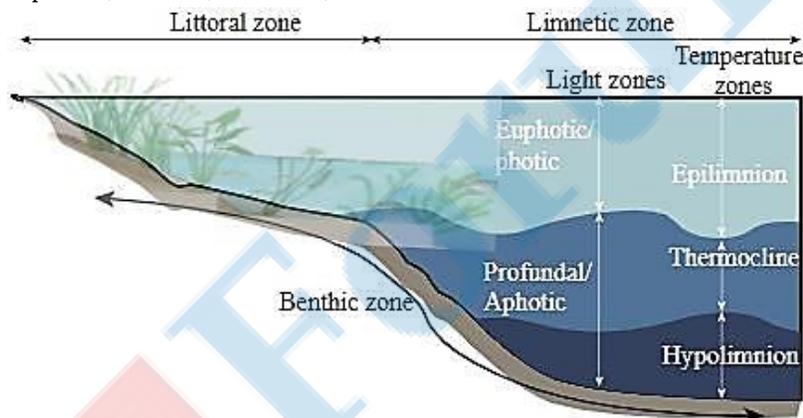
Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

A typical lake has three distinct zones (limnetic, littoral and the benthic zone) of biological communities linked to its physical structure. With regard to light penetration, a lake can have five distinct zones- Euphotic, Littoral, Limnetic, Profundal and Benthic.



Statement 1 is correct: Littoral zone refers to the nearshore area that is the shallow and warmest part of the lake where sunlight penetrates all the way to the bottom sediments and **allows rooted aquatic plants, or macrophytes**, and attached algae to grow. This zone is most affected by changes at the shoreline.

Statement 2 is correct: Profundal zone refers to the area in a deep lake where no light reaches. Limnetic zone refers to the area of open water where the lake is too deep to allow rooted plant growth.

Statement 3 is correct: Benthic Zone refers to bottom sediment where a diverse variety of activities take place. The lake bottom may be made up of sand, mud, marl and/or a mixture of any or all of these materials. Changes that occur in the benthic zone of the littoral zone are sensitive to shoreline development and can result in reduced food sources, spawning and safety areas. So **there is reduced diversity in this zone** which results in a reduction in fish populations.

Source: https://www.canr.msu.edu/news/inland_lake_habitats_critical_to_maintaining_healthy_lake_ecosystems

Q.22) Which of the following statements about wetlands is/are correct?

1. They constitute about 6% of the world's geographical area.
2. Wetlands can store about 50 times more carbon than rain forests of the same size.
3. The world's largest protected wetland is Llanos de Moxos, located in Bolivia.

Select the correct code from given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

A wetland is a place in which the land is covered by water—salt, fresh, or somewhere in between—either seasonally or permanently. It functions as its own distinct ecosystem. You can recognize wetlands from other types of land or bodies of water primarily by the vegetation that has adapted to wet soil.

Statement 1 is correct: Globally, wetlands cover 6.4 per cent of the geographical area of the world. In India, according to the National Wetland Inventory and Assessment compiled by the Indian Space Research Organisation (ISRO), wetlands are spread over 1,52,600 square kilometres (sq km) which is 4.63 per cent of the total geographical area of the country.

Statement 2 is correct: Wetlands are an important natural resource that can store 50 times more carbon than rainforests, which helps in mitigating climate change. They can capture high carbon matter and bury them through sedimentation, thereby locking them away for a long time.

Statement 3 is incorrect: The largest protected wetland in the world is the Pantanal Conservation Area, located in Brazil, Bolivia, and Paraguay. Llanos de Moxos is a significant wetland in Bolivia, but it is not the largest protected wetland in the world.

Source: <https://www.worldwildlife.org/stories/what-is-a-wetland-and-8-other-wetland-facts>

<https://indianexpress.com/article/explained/ramsar-sites-significance-wetlands-listing-7757266/>

Q.23) “These roots are large, prominent roots that radiate out from the base of a tree and sometimes extend several meters above the ground. They are commonly found in tropical rainforests and are believed to be an adaptation to the shallow, nutrient-poor soil found in these regions.”

Which of the following options best describes the above passage?

- a) Tap root
- b) Fibrous root
- c) Adventitious root
- d) Buttress root

Ans) d

Exp) Option d is the correct answer.

There are several types of roots found in plants, each with their own unique characteristics and functions.

Option a is incorrect: A taproot is a single, large, central root that grows vertically into the soil. It is found in dicotyledonous plants and provides the main support to the plant.

Option b is incorrect: Fibrous roots are thin and numerous roots that grow horizontally in the soil. They are found in monocotyledonous plants and provide a larger surface area for the absorption of water and minerals.

Option c is incorrect: Adventitious roots are roots that grow from non-root tissues, such as stems or leaves. They are often found in plants that require additional support, such as climbers.

Option d is correct: Buttress roots are large, prominent roots that radiate out from the base of a tree and sometimes extend several meters above the ground. They are commonly found in tropical rainforests and are believed to be an adaptation to the shallow, nutrient-poor soil found in these regions.

Source : <https://www.homestratosphere.com/types-of-roots/>

Q.24) Which of the following are the strategies adopted by animals to survive in extreme cold conditions?

1. Reducing their metabolic rate
2. Huddling in groups
3. Shutting down non-essential bodily functions
4. Excreting concentrated urine

Select the correct code from given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 4 only
- d) 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Cold temperatures present many challenges for animals, such as difficulties in finding food, conserving energy, and avoiding freezing. However, animals have developed various adaptations to help them survive, such as insulation in the form of thick fur or feathers, regulating metabolic rates, and huddling together to conserve heat.

Statement 1 is incorrect: Animals in cold environments often need to increase their metabolic rate to generate enough body heat to stay warm. Reducing metabolic rate is a strategy adopted by some desert animals to conserve water and survive in the hot and dry desert environment.

Statement 2 is correct: Huddling in groups is a strategy adopted by animals in extreme cold conditions to conserve heat, as the collective body heat generated from a group is much greater than that produced by an individual.

Statement 3 is correct: Some animals, such as emperor penguins, are able to withstand extreme cold by regulating their blood flow and shutting down non-essential bodily functions.

Statement 4 is incorrect: Excreting concentrated urine is a strategy adopted by animals in the desert to conserve water, but it is not a strategy used by animals to survive extreme cold conditions.

Source: https://www.coolantarctica.com/Antarctica%20fact%20file/science/cold_all_animals.php

<https://blog.therainforestsite.greatergood.com/cs-desert-animals/>

Q.25) Consider the following statements regarding critical minerals:

1. These minerals can be used in making mobile phones, computers and batteries.
2. Based on their individual needs and strategic considerations, different countries create their own lists of critical minerals.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

As countries around the world scale up their transition towards clean energy and digital economy, critical mineral resources are key to the ecosystem that fuels this change.

Statement 1 is correct: Critical minerals are elements that are the building blocks of essential modern-day technologies, and are at risk of supply chain disruptions. These minerals are now used everywhere from **making mobile phones, computers to batteries, electric vehicles and green technologies** like solar panels and wind turbines.

Statement 2 is correct: Based on their individual needs and strategic considerations, different countries create their own lists. Generally, lists of critical minerals of individual countries mostly include graphite, lithium and cobalt, which are used for making EV batteries.

Source: <https://indianexpress.com/article/explained/explained-what-are-critical-minerals-the-centerpiece-of-a-new-india-australia-collaboration-8010268/>

Q.26) Consider the following statements about the types of ecological successions occurring in nature.

1. When a mature tree produces shade on the nearby region, it will change the structure and properties of soil and lead to allogenic succession in the region.
2. Overgrazing of a grassland by cattle causes elimination of grass ecosystem and may lead to growth of invasive weeds, which is an example of autogenic succession.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Ecological succession or ecosystem development involves the changes in the structure and function of community over time. Succession may also be described as the gradual change which occurs in vegetation of a given area of the earth's surface on which one population succeed the other over a period.

Autogenic succession (self-generated): When course of succession is largely driven or determined by internal coactions then such type of succession is known as Autogenic Succession i.e., the change in both the environment and the community is brought about by the activities of organisms themselves.

Allogenic Succession (externally generated): When course of succession is controlled by some external driving forces, i.e., the forces beyond the control of the indigenous organisms or the changes in the environment are caused by some external factor unaffected by the organism (e.g., storms, fire etc.), such type of succession is known as allogenic succession.

Statement 1 is incorrect: Change in environment which is brought about by plant shade or litter input to soil which in turn will result into change in structure and properties of soil leading to change in species composition with time, is known as autogenic succession (and not allogenic succession).

Statement 2 is incorrect: Animals play an important role in allogenic changes as they are pollinators, seed dispersers and herbivores. **When a grassland is severely overgrazed by cattle, the most palatable species will disappear. As grazing continues, the grass cover is reduced, and in the open area weeds characteristic of initial stages of succession may become established. This is an example of allogenic succession (and not autogenic succession).**

Source: https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000004BY/P000092/M020106/ET/1513076728Successione-text.pdf

https://bio.libretexts.org/Courses/Gettysburg_College/01%3A_Ecology_for_All/18%3A_Ecological_Succession/18.04%3A_What_causes_successional_change

<https://www.accessscience.com/content/article/a212400>

Q.27) Which of the following factors can promote the process of desertification of land in the long run?

1. Excessive use of fertilizers and pesticides
 2. Excessive Mining of natural resources
 3. Rampant Urbanization
 4. Over-drafting of Groundwater
- Select the correct answer from the codes given below.

- a) 1 and 2 only
- b) 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Desertification is not the natural expansion of existing deserts but the degradation of land in arid, semi-arid, and dry sub-humid areas. It is a gradual process of soil productivity loss and the thinning out of the vegetative cover because of human activities and climatic variations such as prolonged droughts and floods. What is alarming is that though the land's topsoil, if mistreated, can be blown and washed away in a few seasons, it takes centuries to build up. It can be caused by various natural and anthropogenic factors.

Option 1 is correct: Excessive use of fertilizers and pesticides to increase crop yields in the near term frequently results in substantial soil degradation. This could eventually turn fertile land into desert land. After a few years of intensive farming, the resulting arid land will no longer be suitable for farming since the soil has been degraded too much. Hence, it leads to desertification.

Option 2 is correct: Mining also leads to land desertification. Large amounts of resources need to be extracted by industries to meet daily demand for material goods. For mining, large areas of land must be used, which causes deforestation as well as pollution of the nearby areas. By the time, the region is excessively mined, the soil gets damaged significantly, turning it into an arid land. Hence, leading to land desertification.

Option 3 is correct: Rampant urbanisation due to overpopulation leads to excessive deforestation. The land without plants become prone to various types of erosions. This ultimately leads to desertification of land.

Option 4 is correct: Over drafting of groundwater is the process in which groundwater is extracted in excess from the aquifers than it can be recharged. Depleting groundwater can lead to fall in the natural water table of the region. **This will adversely affect the groundwater dependent ecosystem thus may lead to loss of vegetation cover and ultimately land desertification.**

Source: <https://www.conserve-energy-future.com/causes-effects-solutions-of-desertification.php>

<https://www.ipcc.ch/srcl/chapter/chapter-3/>

<https://www.unccd.int/unccd-faq#:~:text=What%20is%20Desertification%3F,and%20dry%20sub%2Dhumid%20areas.>

Q.28) Consider the following statements about Eutrophication, an environmental condition often seen in news:

1. Eutrophication is a natural process of accumulation of excessive nutrients in lakes or other water bodies which may lead to harmful algal blooms.
2. Eutrophication of coastal waters may lead to dominance of gelatinous organisms like jellyfish in the region.
3. Eutrophication may lead to increase in the pH level of the water body.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Nutrients are essential for plant growth, but the overabundance of nutrients in water can have many harmful health and environmental effects. An overabundance of nutrients—primarily nitrogen and phosphorus—in water starts a process called eutrophication. Algae feed on the nutrients, growing, spreading, and turning the water green.

Statement 1 is correct: Eutrophication is a natural process that results from accumulation of nutrients in lakes or other bodies of water. This may further lead to overgrowth of algae and phytoplankton in the water bodies. Eutrophication occurred naturally over centuries as lakes aged and got filled in with sediments. However, human activities have accelerated the rate and extent of eutrophication through both point-source discharges and non-point loadings of limiting nutrients, such as nitrogen and phosphorus, into aquatic ecosystems.

Statement 2 is correct: Excess nutrients in coastal waters can cause excessive growth of phytoplankton, microalgae (i.e., epiphytes and microphytes), and macroalgae (i.e., seaweed). This in turn will lead to change in species composition and biomass of the benthic (bottom-dwelling) aquatic community, eventually leading to reduced species diversity and the dominance of gelatinous organisms such as jellyfish.

Statement 3 is incorrect: Eutrophication sets off a chain reaction in the ecosystem, starting with an overabundance of algae and plants. The excess algae and plant matter eventually decompose, producing large amounts of carbon dioxide. **The abundance of carbon dioxide leads to production of weak carbonic acid, thus lowering the pH of water and making it more acidic (not increasing the pH of water).**

Source:

<https://oceanservice.noaa.gov/facts/eutrophication.html#:~:text=the%20nation's%20estuaries.-,Harmful%20algal%20blooms%2C%20dead%20zones%2C%20and%20fish%20kills%20are%20the,to%20estuaries%20and%20coastal%20waters.>

<https://www.usgs.gov/mission-areas/water-resources/science/nutrients-and-eutrophication>

<https://www.wri.org/initiatives/eutrophication-and-hypoxia/learn>

<https://www.nature.com/scitable/knowledge/library/eutrophication-causes-consequences-and-controls-in-aquatic-102364466/>

Q.29) Which of the following criterion are considered for identification of wetlands of International Importance, as per the Ramsar Convention?

1. If a wetland supports vulnerable, endangered, or critically endangered species or threatened ecological communities.
2. If a wetland regularly supports 20,000 or more waterbirds.
3. If a wetland supports plant and/or animal species at a critical stage in their life cycles or provides refuge during adverse conditions.

Which of the statements given above are correct?

- a) 2 and 3 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Criteria for Identifying Wetlands of International Importance were adopted by the 7th (1999) and 9th (2005) Meetings of the Conference of the Contracting Parties, to guide implementation of Article 2.1 on designation of Ramsar wetlands.

Option 1 is correct: A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.

Option 2 is correct: A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds.

Option 3 is correct: A wetland should be considered internationally important if it supports plant and/or animal species at a critical stage in their life cycles or provides refuge during adverse conditions.

Source: <https://www.ramsar.org/document/the-ramsar-sites-criteria>

Q.30) Consider the following pairs regarding various types of Bails:

Types of bail	Description
1. Regular Bail	Issued to an accused person to apply for bail before being arrested.
2. Interim Bail	Issued for short period till the application seeking Anticipatory Bail or Regular Bail is pending.
3. Anticipatory Bail	Issued to an individual who is already arrested and detained by police.

How many pairs given above are correctly matched?

- Only one pair
- Only two pairs
- All three pairs
- None of the pairs

Ans) a

Exp) option a is the correct answer.

Judicial phenomenon called bail is described as mechanism established for attaining the synthesis of the right of an accused to personal freedom and the public interest in which a person's release is conditional on the surety producing the accused person in court to stand trial.

Depending on the stage of the criminal proceeding, a person may ask for one of four types of bail in India:

Pair 1 is incorrect: Regular bail is frequently issued to an individual who has already been arrested and detained by police. The accused has the right to be freed from such confinement under Section 437 and Section 439 of the CrPC. So, regular bail is simply the release of an accused from jail to ensure his attendance at the trial.

Pair 2 is correct: Interim bail is bail issued for a short period. Interim bail is granted to an accused before the hearing for regular or anticipatory bail.

Pair 3 is incorrect: If a person suspects that he may be arrested for a non-bailable offence, he may petition for anticipatory bail. Thus, it is a legal provision that allows an accused person to apply for bail before being arrested. In India, pre-arrest bail is granted under section 438 of the Code of Criminal Procedure, 1973. It is issued only by the Sessions Court and High Court.

Knowledge Base: The fourth type of bail is **Statutory Bail**. The remedy of statutory bail, also known as default bail. As the name implies, statutory bail is given when the police or investigating agency fails to file its report/complaint within a certain time frame.

Source: [https://blog.ipleaders.in/types-of-](https://blog.ipleaders.in/types-of-bail/#:~:text=Interim%20Bail%3A%20Interim%20bail%20is,may%20petition%20for%20anticipatory%20bail.)

[bail/#:~:text=Interim%20Bail%3A%20Interim%20bail%20is,may%20petition%20for%20anticipatory%20bail.](https://blog.ipleaders.in/types-of-bail/#:~:text=Interim%20Bail%3A%20Interim%20bail%20is,may%20petition%20for%20anticipatory%20bail.)

Q.31) Mangrove vegetation are found in which of the following places in India?

1. Sundarbans
2. Kullu valley
3. Vikhroli Wetlands
4. Gulf of Mannar
5. Gulf of Kutch

Select the correct answer from the codes given below.

- a) 1, 2, and 4 only
- b) 1, 4 and 5 only
- c) 1, 3, 4 and 5 only
- d) 1, 2, 3, 4, and 5

Ans) c

Exp) Option c is the correct answer.

Mangroves are tropical trees that thrive in conditions most timber could never tolerate – salty, coastal waters, and the interminable ebb and flow of the tide. With the ability to store vast amounts of carbon, mangrove forests are key weapons in the fight against climate change.

In India they can be found in the deltas of the Ganga, the Mahanadi, the Krishna, the Godavari and the Kaveri and other river deltas.

Option 1 is correct: The Sundarbans mangrove forest, one of the largest such forests in the world (140,000 ha), lies on the delta of the Ganges, Brahmaputra and Meghna rivers on the Bay of Bengal. It is adjacent to the border of India's Sundarbans World Heritage site inscribed in 1987. The area is known for its wide range of fauna, including 260 bird species, the Bengal tiger and other threatened species such as the estuarine crocodile and the Indian python.

Option 2 is incorrect: The Kullu valley is a hilly region and the vegetation found here is of pine and deodar forests. The southern parts of Kullu have a profusion of Shisham, sal, pine and broad shiny leaved trees. Hence, Mangroves cannot be found here.

Option 3 is correct: Vikhroli wetland is in Mumbai, Maharashtra. It is one of the largest (2000ha) private mangrove forests in the country. More than 16 mangrove species, 82 butterfly species, 208 bird species, 13 crab species, 7 prawn species, 20 fish species and mammals like jackals, wild boards, mongoose, otters and leopards can be spotted at the mangrove ecosystem.

Option 4 is correct: The Gulf of Mannar endowed with three distinct Coastal ecosystems namely coral reef, seagrass bed and mangroves. Most of the islands in the gulf of Mannar have luxuriant growth of mangroves on their shorelines and swampy regions.

Option 5 is correct: Gulf of Kachchh harbours one of the major mangrove formations of India extending to an area of 980 km².

Source: <https://www.conservation.org/stories/mangroves-facts>

[https://www.kulluonline.in/city-guide/geography-of-](https://www.kulluonline.in/city-guide/geography-of-kullu#:~:text=As%20much%20as%2070%25%20of,and%20fir%20trees%20in%20Kullu.)

[kullu#:~:text=As%20much%20as%2070%25%20of,and%20fir%20trees%20in%20Kullu.](https://en.unesco.org/biosphere/aspac/gulf-mannar)

<https://en.unesco.org/biosphere/aspac/gulf-mannar>

<https://www.hindustantimes.com/mumbai-news/two-mangroves-from-mumbai-region-on-list-the-12-unique-wetlands-in-india/story-EiVR3zcmlQBL2y19wYLMiJ.html>

Q.32) Coral bleaching is a process when corals lose their vibrant colors and turn white. In this context, which among the following can be considered as factors responsible for coral bleaching?

1. Increases in seawater temperature.
2. Elevated levels of solar irradiance in the form of ultraviolet radiations
3. Changes in seawater chemistry due to pollution
4. Decreased levels of sediment in seawater
5. Coral's exposure to sodium cyanide

Select the correct answer using the codes given below:

- a) 1 and 4 only
- b) 2, 3 and 5 only
- c) 1, 2, 3 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) c

Exp) Option c is the correct answer.

Coral bleaching, whitening of coral that results from the loss of a coral's symbiotic algae (zooxanthellae) or the degradation of the algae's photosynthetic pigment. Bleaching is associated with the devastation of coral reefs, which are home to approximately 25 percent of all marine species.

Coral bleaching has a variety of causes. It may result from:

Option 1 and 2 are correct: Increases in seawater temperature, particularly when associated with elevated levels of solar irradiance (e.g., ultraviolet radiation)

Option 3 is correct: Changes in seawater chemistry (e.g., due to ocean acidification or pollution)

Option 4 is incorrect: Increased levels of sediment in seawater.

Option 5 is correct: a coral's exposure to sodium cyanide (a chemical used in the capture of coral reef fish)

Under such conditions the zooxanthellae may lose substantial amounts of their photosynthetic pigmentation, which decreases rates of photosynthesis and produces bleaching.

Source: <https://www.britannica.com/animal/coral>

Q.33) Which of the following terms best describes the succession in which biotic factors or living organisms bring changes in the environment to which they themselves belong to?

- a) Primary succession
- b) Secondary succession
- c) Allogenic succession
- d) Autogenic succession

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect: The formation of ecosystem from bare rock, sand or clear glacial pool where previous life does not exist is called primary succession. In this case, the ecosystem is formed from the start. So, it is a long process. It often requires thousands of years.

Option b is incorrect: The formation of a new ecosystem after the disturbance of an existing ecosystem is called secondary succession. The disturbance may be in the form of, forced fire or an abandoned farm field. The previous community leaves some mark in the form of improved soil and seeds. Therefore, secondary succession occurs more rapidly than primary succession.

Option c is incorrect: The succession in which external environmental factors cause change in the environment during succession is called allogenic succession. Soil erosion, leaching or the deposition of silt can change the soil. Similarly, clays can alter the nutrient content and water relationships in the ecosystems. Animals also play an important role in allogenic changes. They act as pollinators, seed dispersers and herbivores. They can also increase nutrient content of the soil in certain areas.

Option d is correct: The succession in which biotic factors or living organisms bring change in the environment of which they themselves belong to, is called autogenic succession. The organisms cause change in the soil. These changes include accumulation of organic matter in form of humus or litter alteration of soil nutrients and change in pH of soil. The structure of the plants themselves can also change the community. For example, larger species like trees produce shade on to the developing forest floor. It destroys the light-requiring species. Shade-tolerant species-establish in the area.

Source: <https://www.dspmuranchi.ac.in/pdf/Blog/PLANT%20SUCCESSION.pdf>

Q.34) Consider the following statements regarding Ecotone:

1. It is a transitional area of vegetation between two different ecological communities.
2. The Ecotone region may contain species not found independently in overlapping communities.
3. Estuaries and lagoons are not considered ecotones as they form the boundary between the water and the land.
4. The influence of the two bordering communities on each other is known as the edge effect.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Ecotone is a transitional area of vegetation between two different ecological communities, such as forest and grassland.

Statement 2 is correct: Ecotone has some of the characteristics of each bordering biological community and often contains species not found in the overlapping communities. An ecotone may exist along a broad belt or in a small pocket, such as a forest clearing, where two local communities blend.

Statement 3 is incorrect: Ecotones also appear where one body of water meets another (e.g., estuaries and lagoons) or at the boundary between the water and the land (e.g., marshes). Freshwater and marine ecotones are characterized by the presence of large plants that rise from roots attached to the submerged substrate, and thus they occur in areas where ample light is available at the bottom of the basin to permit growth.

Statement 4 is correct: The influence of the two bordering communities on each other is known as the edge effect. An ecotonal area often has a higher density of organisms of one species and a greater number of species than are found in either flanking community. Some organisms need a transitional area for activities such as courtship, nesting, or foraging for food.

Source: <https://www.britannica.com/science/ecotone>

Q.35) Consider the following statements regarding New India Literacy Program:

1. The scheme aims to reach non-literates in the age group of 15 years and above.
2. To become a beneficiary non-literates can also register directly through a mobile app.
3. Performance Grading Index (PGI) will show the performance of States on a yearly basis.
4. The scheme is mainly implemented through volunteerism in online mode.

Which of the statements given above are correct?

- a) 3 and 4 only
- b) 1 and 2 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Government approved a new scheme “New India Literacy Programme for the period FYs 2022–2027 to cover all the aspects of Adult Education to align with National Education Policy 2020 and Budget Announcements 2021–22.

Statement 1 is correct: The scheme aims to cover a target of 5.00 crore **non-literates in the age group of 15 years and above**. The Scheme has five components: (i) Foundational Literacy and Numeracy, (ii) Critical Life Skills, (iii) Vocational Skills Development, (iv) Basic Education and (v) Continuing Education.

Statement 2 is correct: For identification of beneficiaries' door-to-door surveys on a mobile app are conducted by surveyors in the States/UTs to identify beneficiaries. Further, **non-literates can also register directly through a mobile app**.

Statement 3 is correct: **Performance Grading Index (PGI) for State/UT and district level will show the performance of States and UTs to implement the scheme and achievements on yearly basis** by weighing both the physical and financial progress through UDISE portal.

Statement 4 is correct: **The scheme will be implemented through volunteerism through online mode**. The training, orientation, workshops of volunteers, may be organized through face-to-face mode. All material and resources shall be provided digitally for easy access to registered volunteers through easily accessible digital modes, viz, TV, radio, cell phone-based free/open-source Apps/portals, etc.

Source) <https://dsel.education.gov.in/nlp>

Q.36) Symbiosis refers to close and often long-term interactions between different species which can take on various forms in nature. In this context, Egret and Rhinoceros share which type of relationship?

- a) Commensalism
- b) Mutualism
- c) Parasitism
- d) Amensalism

Ans) b

Exp) Option b is the correct answer.

Option a is incorrect: **Commensalism is a relationship between individuals of two species in which one species obtains food or other benefits from the other without either harming or benefiting the latter**. One of the best-known examples of commensalism is the remora (family Echeneidae) that rides attached to sharks and other fishes.

Option b is correct: **Mutualism is a form of symbiosis whereby both species benefit from the interaction with each other**.

The Egret is a small white bird found in Africa in Fresh water and Saltwater habitats. Rhinoceros are some of the largest remaining megafunda with all of the species able to reach one ton or more in weight. Symbiotic relationship between them is explained below:

- 1) The Egret cleans the Rhino, by eating ticks and other parasites off of it.
- 2) The Rhino cannot live without the Egret, because it has a hard time getting the ticks off of itself.
- 3) The Egret also warns the Rhino if an enemy is approaching, because the Rhino is near sighted.
- 4) Both organisms' benefit, because the Rhino is cleaned, and the Egret is fed.

Thus, **it can be concluded that Egret and Rhino follow concept of mutualism in their interaction.**

Option c is incorrect: Parasitism is a relationship between two species of plants or animals in which one benefits at the expense of the other, sometimes without killing the host organism. Malaria, which is caused by a protozoan of the genus Plasmodium transmitted to humans by the bite of an anopheline mosquito, is an example of this interaction.

Option d is incorrect: Amensalism is an association between organisms of two different species in which one is inhibited or destroyed and the other is unaffected. For example, destructive effect that the bread mold Penicillium has upon certain bacteria; the secretion, known as penicillin, has become a potent medicine in combating bacterial infections.

Source: <https://lalibela.net/symbiotic-relationships/>

<https://prezi.com/eamm2ukhxsjl/symbiotic-relationship-egret-rhinoceros/?frame=5a986ab65e079ab4bc0f8aa437ebf6ea57016f89>

<https://www.britannica.com/science/commensalism>

<https://www.britannica.com/science/amensalism>

Q.37) Consider the following statements regarding Seral community:

1. The individual transitional communities during the process of ecological succession are called as seral communities.
2. In the successive seral stages, there is an increase in the number of species and organisms in seral community.
3. The seral community remains stable as long as the surrounding environment in the ecosystem remains unchanged.

Which of the statements given above is/ are correct?

- a) 2 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

An important characteristic of all communities is that their composition and structure constantly change in response to the changing environmental conditions. These changes lead finally to a community that is in near equilibrium with the environment and that is called a climax community.

Statement 1 is correct: The entire sequence of communities that successively change in a given area are called sere(s). **The individual transitional communities are termed seral stages or seral communities.**

Statement 2 is correct: In the successive seral stages there is a change in the diversity of species of organisms, increase in the number of species and organisms as well as an increase in the total biomass.

The present-day communities in the world have come to be because of succession that has occurred over millions of years since life started on earth. Actually, succession and evolution would have been parallel processes at that time.

Statement 3 is incorrect: The species that invade a bare area are called pioneer species. In primary succession on rocks these are usually lichens which can secrete acids to dissolve rock, helping in weathering and soil formation. These later pave way to some very small plants like bryophytes, which can take hold in the small amount of soil. They are, with time, succeeded by bigger plants, and after several more stages, ultimately a stable climax forest community is formed. **The climax community (and not the seral community) remains stable as long as the surrounding environment in the ecosystem remains unchanged.**

Source: <https://ncert.nic.in/ncerts/l/lebo114.pdf>

Q.38) Allelopathy is a common biological phenomenon by which one plant produces biochemicals that influence the growth, survival, development, and reproduction of other plants. In this reference, which of the following statement is/are correct?

1. All the plants showing allelopathy are invasive species.
2. Allelopathic chemicals can be present in many parts of the plants.
3. The impact of allelopathic chemicals can be reduced if allelopathic plants are planted in sandy soils.

Select the correct answer using the code given below.

- a) 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Allelopathy is defined as direct or indirect harmful effect of one plant over the other crop species through the release of toxic substances from the roots or the decomposition of crop residues. The allelopathic plant competes with other species through "**chemical warfare**" by releasing chemicals that inhibit the growth of its neighboring plants. **For example**, trees that are known to exhibit allelopathic tendencies include maple, pine, and eucalyptus.

Statement 1 is incorrect: All the plants showing allelopathy are not invasive species of plants. Some important cover crops with allelopathic potential include the cereals rye, sorghum, wheat, barley, oat, black mustard, or rapeseed. **But they are not considered invasive species.** The allelopathic potential belonging to a native species could induce a biotic resistance against invasive plants, whereas allelochemicals released by exotic species could favor the establishment of invasive species (invasional meltdown).

Statement 2 is correct: Allelopathic chemicals can be present in any part of the plant. They can be found in leaves, flowers, roots, fruits, or stems. The allelopathic biochemicals of many plants are found in the foliage. As leaves drop and decompose these toxins accumulate in the soil and affect nearby plants. Some plants also release toxins via their roots, which are then absorbed by other plants and trees as well as insects and microbial organisms.

Statement 3 is correct: The physical properties of soil and particularly its texture determine the effect of a potentially allelopathic species. **The impact of allelopathic chemicals can be reduced if allelopathic plants are planted in sandy soils. Because Allelopathic chemicals in sandy soils leach out quickly.** How much chemicals accumulate there depends on how well the soil drains, how much aeration there is in the soil, temperature and a number of other factors. **Clay soils that are poorly drained** result in minimum toxin leaching, whereas **sandy soils are well drained**, which maximizes toxin leaching. **So if you're planting near allelopathic plants, don't put plants sensitive to the chemicals in heavy clay soils.**

Source: <http://agropedia.iitk.ac.in/content/allelopathy>

<https://www.sciencedirect.com/science/article/pii/S1658365514000090>

Q.39) A keystone species is an organism that helps define an entire ecosystem. With reference to keystone species, consider the following statements:

1. A keystone species is often a predator.
2. All the existing examples of keystone species are animals.
3. If a Keystone species disappear from the ecosystem, then the ecosystem would be forced to radically change, allowing new and possibly invasive species to populate the habitat.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

A keystone species is an organism that helps define an entire ecosystem. **Without its keystone species, the ecosystem would be dramatically different or cease to exist altogether.**

Statement 1 is correct: A keystone species are often, but not always, a predator. Just a few predators can control the distribution and population of large numbers of prey species. For example, Great white shark, Tiger and Saltwater crocodile.

Statement 2 is incorrect: Any organism, from plants to fungi, may be a keystone species. For example - the fig tree is a keystone species. It is a food resource for both the animals and birds. Its leaves are edible to animals but it is its fruits that are mostly sought after. Generally, plants or species are not always the largest or most abundant species in an ecosystem. However, It has been found that **most of examples of keystone species are animals** (but not all) that have a huge influence on food webs.

Statement 3 is correct: Keystone species have low functional redundancy. This means that if the species were to disappear from the ecosystem, no other species would be able to fill its ecological niche. The ecosystem would be forced to radically change, allowing new and possibly invasive species to populate the habitat. Whereas **Higher functional redundancy** provides a form of insurance against population fluctuations or species loss, resulting in stability in community structure.

Source: <https://education.nationalgeographic.org/resource/role-keystone-species-ecosystem/>
[https://pubmed.ncbi.nlm.nih.gov/22046474/#:~:text=Ophiocordyceps%20unilateralis%20\(Ascomycota%3A%20Hypocreales\),predominantly%20in%20tropical%20forest%20ecosystems.](https://pubmed.ncbi.nlm.nih.gov/22046474/#:~:text=Ophiocordyceps%20unilateralis%20(Ascomycota%3A%20Hypocreales),predominantly%20in%20tropical%20forest%20ecosystems.)

Q.40) Scientists have recently confirmed the existence of a fifth new layer in the Earth's interior. In this context, consider the following statements:

1. The fifth layer is the innermost inner core that lies at the Earth's centre, within the inner core.
2. The fifth layer is made of iron and nickel, the same materials that comprise the rest of the inner core.

Which of the statements given above are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Scientists have recently confirmed the existence of a fifth new layer in the Earth's interior. The idea that the Earth could hold a fifth layer was proposed in 2002. Few aspects of this layer are discussed below:

Statement 1 is correct: The four known layers of the Earth include the crust, mantle, outer liquid and inner solid core. **As per the recent study, the fifth layer – the innermost inner core – lies at the Earth’s centre, within the inner core.**

Statement 2 is correct: **The fifth layer is made of iron and nickel, the same materials that comprise the rest of the inner core.** The difference between the two parts of the inner core could stem from how iron atoms are arranged to form a solid. Alternatively, the iron in the innermost inner core could have solidified and grown in a different direction than the rest of the inner core.

Source: <https://www.downtoearth.org.in/news/science-technology/bowels-of-the-earth-meet-the-planet-s-new-layer-the-innermost-inner-core-87974#:~:text=fifth%20new%20layer,-,The%20four%20known%20layers%20of%20the%20Earth%20include%20the%20crust,February%2021%2C%202023%2C%20stated.>

Q.41) An ecosystem is the basic unit of the field of the scientific study of nature. The ecosystem is made up of two inseparable components which are biotope and biocenosis. In this context, consider the following statements:

1. Biocenosis represents the non-living components of an ecosystem with specific physical characteristics.
2. Biotope represents the living components of an ecosystem where living organisms are in constant interaction.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Ecosystem is a biological system (biogeocenosis), consisting of a community of living organisms (**biocenosis**), their habitat (**biotope**), interacting as a system, with its own metabolism and energy exchange.

Statement 1 is incorrect: Biotope (not biocenosis) represents the non-living components of an ecosystem. The soil, water, air, and all the physio-chemical processes going on in an ecosystem comes under the term biotop.

Statement 2 is incorrect: The biocenosis (not Biotope) is a set of living organisms such as animals, plants or micro-organisms, that are in constant interaction and are, therefore, in a situation of interdependence.

Source: <https://youmatter.world/en/definition/ecosystem-definition-example/>

<https://www.earthreminder.com/difference-between-biome-and-ecosystem/#:~:text=Biotope%20represents%20the%20non%2Dliving,living%20things%20in%20an%20ecosystem.>

<https://www.pichimahuida.info/ecosystem.html#:~:text=Biocenosis%20%3A%20interacting%20organisms%20living%20together,assemblage%20of%20plants%20and%20animals.>

Q.42) “These are the large brown algae. They are the underwater forests that grow in relatively shallow waters close to the shore. They are also considered as keystone species and help reduce coastal erosion. They are recognized as one of the most productive and dynamic ecosystems on Earth.”

Which of the following is most likely referred to in the above passage?

- a) Mangrove
- b) Kelp
- c) Vallisneria
- d) Sargassum

Ans) b

Exp) Option b is the correct answer.

Kelp forests are extensive underwater habitats that range along 25% of the world's coastlines. They grow best in cold, nutrient-rich water, where they attain some of the highest rates of primary production of any natural ecosystem.

Statement a is incorrect. Mangroves are the forests that grow in sheltered low-lying coasts, estuaries, mudflats, tidal creek backwaters, marshes and lagoons of the tropical and subtropical regions. They are salt-tolerant or halophytes and are adapted to harsh ecological conditions. E.g., *Sonneratia* and *Avicennia*.

Statement b is correct. Kelp forests are large brown algae seaweeds. They grow in "underwater forests" in shallow oceans and nutrient-rich waters. Generally speaking, kelps live farther from the tropics than coral reefs. However, a few species have been known to occur exclusively in tropical deep waters.

- 1) They are considered as keystone species.
- 2) They help reduce coastal erosion and acts as a breakwater during large storms.
- 3) They are an important source of potash and iodine.
- 4) Many kelps produce algin, a complex carbohydrate useful in industries such as tire manufacturing, ice-cream industry.

Statement c is incorrect. *Vallisneria* is commonly called the eel grass or tape grass. It is the most commonly found aquatic weed plant. It was introduced as an ornamental aquarium plant in India. The genus is widely distributed in tropical and subtropical regions of Asia, Africa, Europe, and North America. In Malayalam, it is known as thalayattipullu, vazhakala and mudipayal. It was recently in news as it is posing a threat to paddy cultivation in the state of Tamil Nadu.

Statement d is incorrect. Recently, the Surge in nitrogen has turned sargassum into the world's largest harmful algal bloom. Sargassum is a genus of large brown seaweed (a type of algae) that floats in island-like masses and never attaches to the seafloor. The Sargasso Sea, lying within the Norwegian current circuit, is full of large quantities of Sargassum seaweed and is an important geographical feature.

Source: Forum IAS Environment Red Book; Chapter 1

<https://www.thehindu.com/sci-tech/agriculture/submerged-aquatic-plants-a-new-threat-to-paddy-cultivation/article36336505.ece>

<https://www.sciencedaily.com/releases/2021/05/210524091959.htm>

Q.43) Consider the following pairs with reference to the phenotypes of organisms due to environmentally induced changes:

Phenotypes of organisms	Description
1. Ecotypes	They are genetically distinct organisms and can interbreed.
2. Ecophenes	They are genetically similar organisms and can interbreed.
3. Ecospecies	They are genetically distinct organisms and cannot produce viable off-springs.

Which of the pairs given above is/are correctly matched?

- a) 3 only
- b) 1 and 2 only
- c) 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Ecotype shows permanence in the adaptation due to the changes in genes, while ecophene shows temporary variations to survive in new conditions, and there are no changes in genes. Ecospecies are the environmentally induced changes in organisms if two ecotones have been separated from each other for a very long time.

Pair 1 is correct: Ecotype is a phenotype of an organism when it lives in a new environment for too long a time period. Two ecotypes show variations in their genetic makeup. Ecotypes can interbreed with other geographically adjacent ecotypes without loss of fertility. When an ecophene remains in its new habitat for too long, it becomes an ecotype. Therefore, **the adaptations are permanent**, and genetic changes occur within the organism. The genes they carry are responsible for the success in the new environment. Adaptations of the ecotypes are based on the interactions between their genes with their new environment. Therefore, they become best adapted to the new habitat and the prevailing conditions. For example, *Euphorbia hirta* has two ecotypes. One ecotype is best adapted to surviving in moist conditions, while the other species is best adapted to surviving in dry conditions.

Pair 2 is correct: Ecophene is the first response or phenotype an organism shows when it arrives in a new environment. There is no genetic difference between these two ecophenes. Ecophene can interbreed with other geographically adjacent ecophene without loss of fertility. But the adaptation and changes are not permanent, and they are reversible. **These adaptations are temporary changes.** They develop only to survive under new environmental conditions. Genetic changes do not happen. Therefore, when the organism returns to the normal habitat, changes are reversed to the normal morphology. **For example**, suppose a European arrives in the tropics. The immediate response will be the development of melanin in his skin. Then the European becomes darker.

Pair 3 is correct: Ecospecies are the environmentally induced changes in organisms if two ecotones have been separated from each other for a very long time. **They are clearly genetically distinct.** The **adaptations become a permanent part of the genes.** However, they are still the same species, but their difference physically and genetically are very distinct. **Two ecospecies cannot produce viable off-springs** (which the ecophenes and ecotones can). When ecospecies are left alone for many, many generations, then develop sufficient changes in them to become a separate species.

Source: <https://www.differencebetween.com/difference-between-ecotype-and-ecophene/>
<https://eco-intelligent.com/2016/11/13/ecophene-ecotone-ecospecies/>

Q.44) Which of the following marine species are generally considered as primary consumers in the aquatic ecosystem?

- a) Bluefin Tuna
- b) Bull shark
- c) Molluscs
- d) Cyanobacteria

Ans) c

Exp) Option c is the correct answer.

A primary consumer is an organism that feeds on primary producers. Organisms of this type make up the second trophic level and are consumed or predated by secondary consumers, tertiary consumers or apex predators.

Options a and b are incorrect: Tertiary consumers are often the “top predators” in a food chain. This means that no other animals eat them. A great white shark leaps out of the water, catching a seal in its jaws. A shark is a tertiary consumer. **Examples of tertiary consumers are Bluefin Tuna and Bull Shark.**

Option c is correct: Molluscs feed on photosynthetic algae or phytoplankton present in the aquatic ecosystem. As they directly feed on the producers, they are considered to be the primary consumers or herbivores of an aquatic ecosystem.

Option d is incorrect: In aquatic environments, cyanobacteria are important primary producers and form a part of the phytoplankton. They may also form biofilms and mats (benthic cyanobacteria).

Source: <https://education.nationalgeographic.org/resource/marine-food-chain/#:~:text=fish%2C%20barnacles%2C%20and-,mollusks,-%E2%80%94drift%20across%20the>

Q.45) Consider the following statements with reference to the Social Stock Exchange (SSE):

1. It will help organizations with social causes to raise capital.
2. Both non-profit organizations and for-profit social enterprises would be eligible to be registered on the SSE.
3. Retail investors are not allowed to invest in the Social Stock Exchange.

Which of the above-given statements is/are correct?

- a) 3 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Recently, the National Stock Exchange of India received final approval from SEBI to set up the Social Stock Exchange (SSE).

Statement 1 is correct: The **Social Stock Exchange would function as a separate segment within the existing stock exchange and help social enterprises raise funds from the public through its mechanism.** It will help organizations with social causes to raise capital.

It would serve as a medium for enterprises to seek finance for their social initiatives, acquire visibility and provide increased transparency about fund mobilization and utilization.

Statement 2 is correct: Any **non-profit organisation (NPO) or for-profit social enterprise (FPSEs)** that establishes the primacy of social intent would be recognised as a Social Enterprise, which will make it eligible to be **registered or listed on the Social Stock Exchange.**

Statement 3 is incorrect: Securities issued by all social enterprises are only available for investment by institutional and **non-institutional investors.** Retail investors **can invest in securities offered by for-profit social enterprises.**

Source: <https://www.thehindu.com/business/Economy/explained-combining-social-welfare-and-capital-markets-through-sse/article66569251.ece>

Q.46) Consider the following statements regarding Antibiosis, a type of biotic interaction:

1. It is a form of commensalism where one species gets benefited due to chemical secretion by another species which remains unaffected.
2. Relationship between alfalfa grass and Azotobacter is an example of antibiosis.

Which of the above given statements is/are **incorrect**?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Antibiosis is a mode of species interaction between two or more organism where at least one organism is hurt/killed. It can also be an antagonistic association between an organism, or a metabolic substance produced by the other.

Statement 1 is incorrect- Antibiosis is a type of biotic interaction where one species gets harmed/killed and other species is unhurt. The species unhurt kills the other species using a chemical secretion. Conceptually, in commensalism, one species is benefited and other is unaffected,

Statement 2 is incorrect- Relationship between nitrogen-fixing bacteria (like **Azotobacter**, Bacillus, Clostridium, and Klebsiella) and leguminous plants such as clover, **alfalfa**, and soybeans **is an example of symbiotic type of biotic interaction**. These bacteria live in the roots of the plants and convert atmospheric nitrogen into a form that the plants can use, such as nitrates. The plants provide the bacteria with a place to live and access to carbohydrates produced through photosynthesis. This symbiotic relationship is important because it helps to replenish the soil with nitrogen, which is essential for plant growth.

Source: <https://www.britannica.com/science/amensalism#ref62739>

Q.47) According to the recent amendment to the Environmental Impact Assessment Rules, which of the following projects exempted from the mandatory requirement of environmental clearance from the respective authority?

1. All Thermal Power Plants project up to 15 MW production capacity.
2. All the ports and harbours.
3. Terminal building activities in an airport that do not involve in the increase of airport's existing area,
4. Highway projects of strategic and defence importance, within 100 KM distance from the Line of Control (LOC).

Select the correct answer from the code given below:

- a) 1 and 2 only
- b) 1, 3 and 4 only
- c) 2, 3 and 4 only
- d) 3 and 4 only

Ans) d

Exp) Option d is the correct answer.

The Ministry of Environment, Forests and Climate Change (MoEF&CC) has notified amendments to the Environmental Impact Assessment (EIA) Rules, making several exemptions to gaining environmental clearance.

Exemptions have been provided for the following projects:

Option 1 is incorrect: Biomass Based Power Plants: Thermal power plants up to 15 MW based on biomass or non-hazardous municipal solid waste using auxiliary fuel such as coal, lignite or petroleum products up to 15% have also been exempted – as long as the fuel mix is eco-friendly.

Option 2 is incorrect: Ports and Harbour dealing in Fish: Fish handling ports and harbours with less pollution potential compared to others, and caters to small fishermen, are exempted from environmental clearance. **The recent amendment did not exempt all the ports and harbours from the scope of EIA.**

Option 3 is correct: Expansion activities in existing airports related to terminal building expansion without increase in the airport's existing area, rather than expansion of runways are exempted from mandatory environmental clearance requirements.

It also exempts toll plazas that need more width for installation of toll collection booths to cater to a large number of vehicles.

Option 4 is correct- Strategic and Defence Projects: Exempts highway projects of strategic and defence importance, which are 100 km from the Line of Control, among other locations, from an environmental clearance before construction.

Highway projects related to defence and strategic importance in border states are sensitive in nature and in many cases need to be executed on priority keeping in view strategic, defence and security considerations.

Source: <https://www.thehindu.com/news/national/highways-within-100-km-of-loc-borders-will-not-need-environmental-clearance-centre/article65657889.ece>

<https://indianexpress.com/article/india/environment-ministry-amends-eia-rules-exempts-highways-strategic-importance-8039740/>

Q.48) Consider the following statements regarding ‘Biogeochemical Cycles’:

1. A perfect nutrient cycle is one in which the nutrients are replaced as fast as they are used up.
2. In the imperfect nutrient cycle, some nutrients are lost from the cycle and become unavailable for immediate cycling.
3. All the gaseous cycles are considered imperfect due to loss of nutrients in the atmosphere.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 3 only

Ans) b

Exp) Option b is the correct answer.

The mineral nutrients move from the non-living to the living and then back to the non-living components of the ecosystem in a more or less circular manner. This is known as **biogeochemical cycling** (bio for the living; geo for atmosphere, water, rocks and soil; and chemical for the elements and processes involved).

Statement 1 is correct: The biogeochemical cycle in which the **nutrients are replaced as fast as they, are utilized** is known as Perfect biogeochemical nutrient cycle.

Statement 2 is correct: Some nutrients are lost from the cycle into the soil and sediments and become **unavailable for immediate cycling** i.e., there are more stages in which short-term or long-term stagnation occurs. Such cycle is known as an **imperfect biogeochemical cycle**.

Statement 3 is incorrect: Most **gaseous cycles are generally considered perfect**. Example: The carbon cycle is essentially a perfect one, that is, **carbon is returned to the environment about as fast as it is removed**. The source of all carbon in living organisms, dead. Organic material and fossil deposits is carbon dioxide found in the atmosphere. In contrast, **sedimentary cycles are considered relatively imperfect**.

Source: Unit-6.pdf (egyankosh.ac.in)

Unit-6.pdf (egyankosh.ac.in) Pg 36

Q.49) Which of the following statements correctly explains the meaning of the ‘Carrying Capacity’ of an ecosystem?

- a) It refers to the number of resources each individual within the community is consuming.
- b) It is the maximum population size that an ecosystem can support without degrading itself.
- c) It refers to the total size of renewable resources available in the ecosystem.
- d) It is the sum of all the physical and chemical factors that a species needs to survive in an ecosystem.

Ans) b

Exp) Option b is the correct answer.

In ecological terms, the carrying capacity of an ecosystem is the size of the population that can be supported indefinitely upon the available resources and services of that ecosystem. In other words, it is defined as the maximum population size that an ecosystem can sustainably support without degrading itself.

The limits of an ecosystem depends on three factors:

- 1) the amount of resources available in the ecosystem;
- 2) the size of the population or community; and
- 3) the amount of resources each individual within the community is consuming.

Source: https://www.sustainable-environment.org.uk/Principles/Carrying_Capacity.php

Q.50) Consider the following statements with reference to the Academic Freedom Index Report:

1. It is published by Global Public Policy Institute.
2. Freedom to research and teach is one of the indicators of the report.
3. According to report, Indian universities and scholars experience more academic freedom today than they did ten years ago.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

According to the Academic Freedom Index report, India's academic freedom index is in the bottom 30% among 179 countries in 2022.

Statement 1 is correct: Academic Freedom Index report is published by **Global Public Policy Institute** as a part of a global time-series dataset (1900-2019) in close cooperation with Friedrich-Alexander University Erlangen-Nürnberg, Scholars at Risk and the V-Dem Institute.

Statement 2 is correct: The Academic Freedom Index report provides an overview of academic freedom in 179 countries by assessing five indicators. It is based on assessments by more than 2,197 country experts from around the world. The **indicators include, Freedom to research and teach Freedom of academic exchange and dissemination, Institutional autonomy of universities, Campus integrity, and the freedom of academic and cultural expression.**

Statement 3 is incorrect: Academic Freedom Index report identified 22 countries, including India, China, the United States and Mexico – where it said universities and scholars experience significantly **less academic freedom today than they did ten years ago.**

Source: <https://www.downtoearth.org.in/news/governance/india-s-academic-freedom-declined-strongly-since-2013-report-88033>

<https://academic-freedom-index.net>

Q.1) Consider the following statements about the Composting and Vermicomposting processes:

1. Composting is essentially an anaerobic process that converts organic materials into mulch.
2. Vermicompost is the process of using earthworms to convert organic waste into nutrient-rich compost.
3. Products of vermicompost generally have high nutrient density compared to the products obtained from normal composting process.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect. Through controlled aerobic (oxygen-required) breakdown, composting transforms organic materials into a nutrient-rich soil amendment or mulch. Compost, a material that is crumbly, dark, and has an earthy smell, is the end product. The materials added to the compost pile during the composting process are consumed by microorganisms. They require oxygen to breathe, carbon and nitrogen to grow and reproduce, water to digest food.

Statement 2 is correct. Worm composting or vermicomposting is the process of using earthworms to convert organic waste into compost that is rich in nutrients for the growth of plants.

Statement 3 is correct. Vermicompost has great potential as plant growth media, and also serve as a soil conditioner. It is rich in nutrients and beneficial microbes. **Vermicompost contains a higher percentage of both macro and micronutrients than the traditional compost.**

Source: <https://www.epa.gov/recycle/composting-home#:~:text=for%20Home%20Composting-,What%20is%20Composting%3F,crumbly%2C%20earthy%2Dsmelling%20material.>

<https://calrecycle.ca.gov/organics/worms/wormfact/#:~:text=They%20convert%20waste%20into%20worm,for%20the%20production%20of%20worms.>

<https://pubmed.ncbi.nlm.nih.gov/25130895/#:~:text=A%20number%20of%20researchers%20throughout,fertility%20physically%2C%20chemically%20and%20biologically.>

Q.2) With reference to the Photochemical Smog, consider the following statements:

1. It is formed by the interaction of sunlight with nitrogen oxides (NO_x) and volatile organic compounds (VOCs)
2. The formation of Photochemical smog can lead to an increase in Ground level Ozone.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Photochemical smog is a type of air pollution formed by the interaction of sunlight with nitrogen oxides (NO_x) and volatile organic compounds (VOCs) emitted from various sources, mainly in urban areas. Its components include ozone (O₃), nitrogen dioxide (NO₂), and other secondary pollutants. Exposure to photochemical smog can cause respiratory problems, eye irritation, and harm to vegetation and ecosystems.

Statement 1 is correct: Photochemical smog is a type of air pollution that is formed through the interaction of sunlight with nitrogen oxides (NO_x) and volatile organic compounds (VOCs) that are emitted from various sources, such as vehicles, industrial processes, and natural sources.

Statement 2 is correct: When photochemical smog is formed, it can increase the concentration of ground-level ozone in the affected area. This is because the same chemical reactions that produce photochemical smog also generate ground-level ozone as a secondary pollutant. Thus, when there is a high level of photochemical smog, there is also likely to be an increase in ground-level ozone, which can have harmful effects on human health and the environment.

Source: https://energyeducation.ca/encyclopedia/Photochemical_smog

https://www.epa.sa.gov.au/files/8238_info_photosmog.pdf

Q.3) With reference to Cyclone Warning System in India, consider the following statements:

1. The Indian Meteorological Department (IMD) is the nodal agency responsible for issuing cyclone warnings in India.
2. IMD has formulated the National Cyclone Risk Mitigation Project to protect the vulnerable local communities from the impact of cyclones.
3. There are total seven Cyclone Warning Centers covering the east and west coasts of India.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) c

Exp) Option c is the correct answer.

Cyclones, which are characterized by rapid inward air circulation around a low-pressure area and are usually accompanied by violent storms and bad weather. There are two types of cyclones: tropical cyclones and extra-tropical cyclones.

Statement 1 is correct: The Indian Meteorological Department (IMD) is the **nodal agency responsible for issuing cyclone warnings in India**. The IMD is also responsible for monitoring, forecasting, and issuing early warnings for severe weather conditions, including cyclones.

Statement 2 is incorrect: Although the IMD plays a critical role in formulating policies and guidelines related to disaster management, the **National Cyclone Risk Mitigation Project is formulated by the Ministry of Home Affairs**, Government of India, and not by the IMD.

Statement 3 is correct: There are **seven Cyclone Warning Centers (CWCs) in India**, covering the east and west coasts of India. The CWCs are located in Chennai, Visakhapatnam, Bhubaneswar, Kolkata, Ahmedabad, Mumbai, and Thiruvananthapuram.

Source: <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1706940>

[https://www.tropmet.res.in/ip4/ppt/28112019/1%20CWS-final\(27Nov\).pdf](https://www.tropmet.res.in/ip4/ppt/28112019/1%20CWS-final(27Nov).pdf)

<https://ndma.gov.in/sites/default/files/PDF/Reports/NCRMP-NDMA.pdf>

Q.4) Which of the following statements is/are correct regarding the National Disaster Management Plan (NDMP) 2019 of India?

1. The NDMP was formulated by the National Disaster Management Authority (NDMA).
2. The NDMP covers all phases of disaster management, from prevention to response and recovery.
3. It covers both natural and man-made disasters.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The National Disaster Management Plan (NDMP) 2019 is a comprehensive plan for disaster management in India. It aims to provide a framework for effective response and recovery during disasters, as well as mitigation and prevention measures to reduce the impact of disasters.

Statement 1 is correct: The National Disaster Management Plan (NDMP) of India was formulated and released by the National Disaster Management Authority (NDMA).

Statement 2 is correct: The plan covers **all phases of disaster management, including prevention, mitigation, preparedness, response, and recovery.**

Statement 3 is correct: The NDMP identifies 18 types of disasters, including natural and man-made disasters such as earthquakes, floods, cyclones, droughts, chemical and biological disasters, and nuclear disasters.

Source: <https://ndma.gov.in/sites/default/files/PDF/ndmp-2019.pdf>

Q.5) Which of the following categories of crimes fall under the jurisdiction of the International Criminal Court (ICC)?

- 1. Terrorism
- 2. Genocide
- 3. Corruption
- 4. War Crimes
- 5. Cybercrime

Select the correct code from options given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 5 only
- c) 2 and 4 only
- d) 1, 2, 3, 4 and 5

Ans) c

Exp) Option c is the correct answer.

The International Criminal Court (ICC) has jurisdiction over four main types of international crimes: **genocide, crimes against humanity, war crimes, and the crime of aggression.**

1. **Genocide:** involves the intent to destroy a national, ethnic, racial or religious group through killing, harm, destruction of living conditions, preventing births, or transferring children.
2. **Crimes against humanity** are serious violations committed as part of a large-scale attack against any civilian population, such as murder, rape, enslavement, and torture.
3. **War crimes:** are grave breaches of the Geneva conventions in the context of armed conflict, including the use of child soldiers and intentional attacks against hospitals or historic monuments.
4. **The crime of aggression:** involves the use of armed force by one state against another's sovereignty, integrity or independence. The ICC's jurisdiction over the crime of aggression was activated in 2018.

However, Terrorism, corruption, and cybercrime are not listed under the jurisdiction of the ICC.

Source: <https://www.icc-cpi.int/about/the-court> <https://www.icc-cpi.int/about/how-the-court-works>

Q.6) Consider the following statements about the Fly Ash, an unburnt residue obtained from combustion of coal:

1. In India, Fly ash is often used in agriculture to reduce the pH of soil.
2. In India, it is mandatory to use Fly Ash-based products in road embankments works within 300 km of thermal power stations.
3. Fly ash consists primarily of oxides of silicon, aluminium, iron and calcium.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Fly ash is a residue generated in combustion and comprises the fine particles that rise with the flue gases. It is an unburnt residue obtained from combustion of pulverized coal and is transported from the combustion chamber by exhaust gases.

Statement 1 is incorrect: Fly ash has been shown to act as a liming material to neutralize soil acidity and provide plant-available nutrients. Most of the fly ash produced in India is alkaline in nature; hence, its application to agricultural soils could increase the soil pH and thereby neutralize acidic soils. Fly ash contains some mineral nutrients such as K, Ca, Mg, Fe, Zn, B, Mo and S which promote plant growth and also alleviate the condition of nutrient deficient soils.

Statement 2 is correct: Notification on Fly Ash Utilization has the following features:

- 1) Mandatory to use Fly Ash-based products in all construction projects, road embankments and low-lying filling works within 300 km of thermal power stations.
- 2) Cost of transportation of Fly Ash to be borne entirely by thermal power plants up to 100 km and equally shared between user and thermal power plants for more than 100 km and up to 300 km.
- 3) Mandatory use of Fly Ash-based products in all government schemes like MGNREGA etc.
- 4) Target 100% Fly Ash utilization by 2017

Statement 3 is correct: Fly ash consists primarily of oxides of silicon, aluminium, iron and calcium. Magnesium, potassium, sodium, titanium, and sulfur are also present to a lesser degree.

Source: <https://dst.gov.in/fly-ash-unit-0>

<https://krishijagran.com/featured/fly-ash-in-agriculture-a-way-to-improve-soil-properties/>

Q.7) With reference to the environmental pollutants and their impact on human health, consider the following pairs:

Pollutants	Health Impacts
1. Nitrogen oxides	Inflammation of lungs
2. Cadmium	Itai-Itai disease
3. Carbon Monoxide	Hypoxia

How many pairs given above are correct?

- a) One pair only
- b) Two pairs only
- c) All three pairs
- d) None of the pairs

Ans) c

Exp) Option c is the correct answer.

Pollution is defined as an addition or excessive addition of certain materials to the physical environment (water, air and lands), making it less fit or unfit for life. Environmental pollutants can have immense impact on human health, ranging from normal cough and fever to death.

Pair 1 is correct: Nitrogen oxides can cause irritation and inflammation of lungs, breathlessness, impairs enzyme function in respiratory system and causes bronchitis and asthma.

Pair 2 is correct: Itai-itai disease is caused by cadmium (Cd) exposure, produced as a result of human activities related to industrialisation, and this condition was first recognised in Japan in the 1960s. Itai-itai disease is characterised by severe bone and joints pain and is also associated with renal tubular dysfunction.

Pair 3 is correct: Carbon monoxide reacts with oxygen, creating carboxy haemoglobin (COHb), which leads to hypoxia. In addition, it has direct effect of causing cellular damage. The most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain.

Source:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5530151/#:~:text=CO%20reacts%20with%20oxygen%2C%20creating,to%20CO%20can%20also%20seen.>

<https://www.who.int/news-room/fact-sheets/detail/mercury-and-health#:~:text=Health%20effects%20of%20mercury%20exposure&text=The%20inhalation%20of%20mercury%20vapour,induce%20kidney%20toxicity%20if%20ingested.>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5734474/#:~:text=Itai%2Ditai%20disease%20is%20caused,in%20Japan%20in%20the%201960s.&text=Itai%2Ditai%20disease%20is%20characterised,associate d%20with%20renal%20tubular%20dysfunction.>

Q.8) Consider the following statements in the context of impact of environmental pollutants on natural vegetation:

1. Exposure to Sulphur dioxide causes bleaching of leaves.
2. Ozone stunts plant growth and depresses flowering and bud formation.
3. Excessive fluoride exposure inhibits secretion of essential enzymes in plants.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Atmospheric pollutants have a negative effect on the plants; they can have direct toxic effects, or indirectly by changing soil pH followed by solubilization of toxic salts of metals like aluminium. Different pollutants have wide ranging impact on the plants and vegetation.

Statement 1 is correct: The exposure of plant leaves to sulphur dioxide (SO₂) and its by-product sulfuric acid usually results in dry, papery blotches that are generally white, tan, or straw-coloured. On some species, chronic injury causes brown to reddish brown or black blotches. Both the upper and lower leaf surfaces are affected. Hence, it leads to bleaching of leaves.



Statement 2 is correct: Ozone is a very active form of oxygen that causes a variety of symptoms on broad-leaved plants. It stunts plant growth and depresses flowering and bud formation. Ozone exposure reduces the plants' ability to photosynthesize and produce their own food.

Statement 3 is correct: Fluorides in general, are accumulated in the plant tissues over long times. Fluorides combine with metal components of proteins or inhibit them otherwise and thus **interfere with the activity of many enzymes. Thus, it inhibits the secretion of essential enzymes in plants.** As a result, various metabolic processes of plants are affected.

Source: <https://www.intechopen.com/chapters/18642>

<https://ssl.acesag.auburn.edu/pubs/docs/A/ANR-0913/ANR-0913-archive.pdf>

Q.9) Consider the following statements in the context of recent technologies used in controlling the automobile/vehicular emissions

1. EGR (Exhaust Gas Recirculation) system is used to reduce Nitrogen Oxides (NO_x) emission from Internal Combustion engine.
2. The three-way catalytic converters are used in modern vehicles to reduce emission of Carbon monoxide, hydrocarbons and Nitrogen Oxides.
3. Selective Catalytic Reduction (SCR) can significantly reduce tailpipe emission of CFCs (Chlorofluorocarbons) from motor vehicles.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The annual car sales in India are projected to increase from the current 3.5 million to about 10.5 million – a three times increase – by 2030, which will increase exposure to vehicular exhaust emissions. Vehicular emission is a major cause of air pollution in urban areas. Typically, vehicular emission contributes 20-30% of Particulate Matter (PM) 2.5 at the breathing level of air quality.

Major pollutants produced by vehicle exhausts include carbon monoxide, hydrocarbons, nitrogen oxides, particles, volatile organic compounds and Sulphur dioxide.

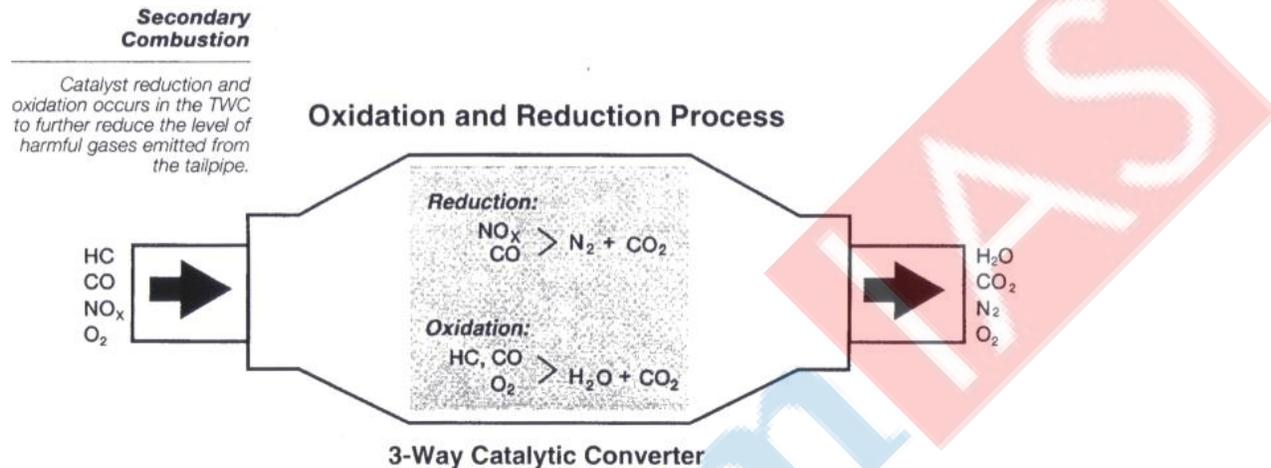
Various emission control technologies like, Catalytic converters, Particulate Filters, Traps & Adsorbers, Substrates, Catalytic coatings etc. are used based on different engine technologies, applications, etc.

Statement 1 is correct: Exhaust gas recirculation (EGR) is an emission control technology allowing significant NO_x emission reductions from most types of diesel engines. The EGR system works by returning a small portion of exhaust gas to the engine's combustion chambers through the intake manifold, lowering combustion temperatures and therefore reducing the amount of NO_x emitted.

Statement 2 is correct: Most modern cars are equipped with three-way catalytic converters. "Three-way" refers to the three regulated emissions which helps reduce - Carbon Monoxide, Hydrocarbon and Nitrogen Oxides. The converter uses different types of catalysts, for reducing and oxidizing the pollutants.

A three-way catalytic converter has three simultaneous functions:

- 1) Reduction of nitrogen oxides into elemental nitrogen and oxygen
- 2) Oxidation of carbon monoxide to carbon dioxide
- 3) Oxidation of hydrocarbons into carbon dioxide and water



Statement 3 is incorrect: Selective Catalytic Reduction is a technology that injects urea – a liquid-reducing agent – into the exhaust stream of a diesel engine. The urea sets off a chemical reaction that converts nitrogen oxides into nitrogen and water in the catalyst, which is then expelled through the vehicle tailpipe. Hence, SCR technology reduces the emission of NOx and not CFCs from the vehicle exhausts. Vehicular tailpipe exhaust doesn't contain significant CFCs emission, even though it may contain a few chlorine or Bromine.

Source: <http://www.ecmaindia.in/emission-control-technology.aspx?mpgid=8&pgidtrail=8#horizontalTab1>

Q.10) Which of the following statements about the Hindu Succession Act are correct?

1. The act does not provide equal rights to women belonging to Scheduled Tribes.
2. The Act is applicable to Sikhs who are not governed by any separate personal law.
3. The Act provides for the devolution of property in case of an intestate succession.
4. The act only applies to self-acquired property and not to ancestral property.

Select the correct code from the options below:

- a) 1 and 3 only
- b) 2 and 4 only
- c) 1, 2, and 3 only
- d) 1, 3, and 4 only

Ans) c

Exp) Option c is the correct answer.

The Hindu Succession Act of 1956 brought about significant changes to the Hindu Law of inheritance and gave daughters equal rights to ancestral and self-acquired property, along with sons. Prior to the Act, daughters were not treated as coparceners and were only entitled to a limited inheritance. The Act was

amended in 2005 to provide equal inheritance rights to daughters, which was a major step towards gender equality in inheritance laws in India.

Statement 1 is correct: Section 2(2) of the Hindu Succession Act excludes daughters of Scheduled Tribes from being considered as "Hindus" for the purpose of the Act. This exclusion results in the denial of their equal rights to inherit their father's or Hindu Undivided Family (HUF) properties. As a result, the daughters of Scheduled Tribes are not entitled to the same rights as other daughters under the Act.

Statement 2 is correct: The Hindu Succession Act is applicable to Sikhs, Jains, and Buddhists who are not governed by any separate personal law.

Statement 3 is correct: The Hindu Succession Act provides for the devolution of property in case of an intestate succession. An intestate succession is when someone dies without leaving a valid will, and their property is inherited according to the rules set out in the Act.

Statement 4 is incorrect: The Hindu Succession Act applies to both self-acquired property and ancestral property. The act provides for different rules for the devolution of ancestral property based on whether it is the property of a joint Hindu family or a divided family.

Source: <https://www.thehindu.com/news/national/include-st-women-in-hindu-succession-act-dmk-mp-wilson-tells-union-government/article66638686.ece>

<https://www.livelaw.in/lawschoolcolumn/hindu-succession-act-for-female-intestates-221707?infinitescroll=1>

Q.11) With reference to the environmental sciences, which of the following statements best explain the term 'Putrescibility'?

- It is the ability of sediments to reduce the potability of water.
- It is the process of thermal decomposition of waste material with the help of incineration.
- It is the process of leaching of heavy metals into groundwater.
- It is the process of decomposition of organic matter by micro-organisms.

Ans) d

Exp) Option d is the correct answer.

Putrescibility is the process of decomposition of organic matter present in water by micro-organisms using oxygen. 'Putrescible wastes' are referred to those solid wastes that contain organic matter capable of being decomposed by microorganisms causing odour-full gases as the products of the decomposition. They are also known as bio-degradable wastes.

Source : Shankar IAS, Environment, Chapter 5, Environmental Pollution.

Q.12) Thermal pollution is a sudden increase or decrease in the temperature of a natural body of water by human influence. In this context, which among the following factors can be considered as the effects of thermal pollution?

- Decrease in the dissolved oxygen levels in the water bodies.
- Adverse impact on biological diversity.
- Decreased metabolic rate in marine organisms.
- Adverse impact on the reproductive system of marine organisms.

Select the correct answer using the codes given below:

- 1 and 2 only
- 1, 2 and 4 only
- 2, 3 and 4 only
- 1, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

Thermal pollution is defined as a sudden increase or decrease in the temperature of a natural body of water, which may be an ocean, lake, river, or pond, by human influence. This normally occurs when a plant or facility takes in water from a natural resource and puts it back at an altered temperature. Plants that produce different products or wastewater facilities are often the culprits of this massive exodus of thermal pollution.

Some of the impacts of the thermal pollution are discussed below:

Statement 1 is correct: The warm temperature reduces the levels of DO (Dissolved Oxygen) in the water.

The warm water holds relatively less oxygen than cold water due to it being incapable. The decrease in DO can create suffocation for plants and animals such as fish, amphibians, and copepods, which may give rise to anaerobic conditions.

Statement 2 is correct: The sudden heating of waterbodies can kill off vulnerable organisms or drive them away. This is one of many serious issues for threatened and endangered animal species. This loss can come from organisms dying from the hot water, being unable to reproduce as effectively as before, or simply leaving the area. We usually think of animals as casualties of water pollution, but multi-celled aquatic plants are also at risk when thermal pollution changes the local aquatic ecosystem. Thus, thermal pollution has an adverse impact on biodiversity.

Statement 3 is incorrect: Thermal pollution increases the metabolic rate of organisms as increasing enzyme activity occurs, which causes organisms to consume more food than what is normally required if their environment were not changed. It disrupts the stability of the food chain and alters the balance of species composition.

Statement 4 is correct: A significant halt in the reproduction of marine wildlife can happen due to increasing temperatures, as reproduction can happen within a certain range of temperatures. Excessive temperatures can cause the release of immature eggs or can prevent the normal development of certain eggs.

Source: <https://www.conserve-energy-future.com/causes-and-effects-of-thermal-pollution.php>

Q.13) Consider the following statements regarding Microplastics:

1. Microplastics are tiny plastic particles which are 10mm or more in length.
2. Microplastics may consist of carbon and hydrogen atoms bound together in polymer chains.
3. Microbeads are a type of microplastics widely used as exfoliants in the cosmetic industry.
4. Consumption of microplastics by marine animals can result in neurological and reproductive toxicity.

Which of the statements given above are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2 and 4 only

Ans) c

Exp) Option c is the correct answer.

Microplastics are found in growing quantities in the ocean. According to the UN, there are as many as 51 trillion microplastic particles in the seas, 500 times more than stars in our galaxy. Some of the aspects of microplastics are discussed below:

Statement1 is incorrect: Plastic is the most prevalent type of marine debris found in our ocean and Great Lakes. Plastic debris can come in all shapes and sizes, but **those that are less than five millimeters in length are called “microplastics.”**

Statement 2 is correct: Microplastics consist of carbon and hydrogen atoms bound together in polymer chains. Other chemicals, such as phthalates, polybrominated diphenyl ethers (PBDEs), and tetrabromobisphenol A (TBBPA), are typically also present in microplastics, and many of these chemical additives leach out of the plastics after entering the environment.

Statement 3 is correct: Microbeads are a kind of microplastic with a specific function for scrubbing or exfoliating. Microbeads are widely used in the cosmetic industry.

Statement 4 is correct: By 2018, in marine and freshwater ecosystems combined, microplastics had been found in more than 114 aquatic species. Microplastics have been found lodged in the digestive tracts and tissues of various invertebrate sea animals, including crustaceans such as crabs. Fish and birds are likely to ingest microplastics floating on the water surface, mistaking the plastic bits for food. **The ingestion of microplastics can cause aquatic species to consume less food and therefore to have less energy to carry out life functions, and it can result in neurological and reproductive toxicity.**

Source: <https://www.britannica.com/technology/microplastic>

<https://oceanservice.noaa.gov/facts/microplastics.html#:~:text=Most%20plastics%20in%20the%20ocean,through%20waterways%20into%20the%20ocean.>

[https://www.europarl.europa.eu/news/en/headlines/society/20181116STO19217/microplastics-sources-effects-and-](https://www.europarl.europa.eu/news/en/headlines/society/20181116STO19217/microplastics-sources-effects-and-solutions#:~:text=Microplastics%20are%20found%20in%20growing,than%20stars%20in%20our%20galaxy.&text=They%20have%20been%20found%20in,beer%2C%20honey%20and%20tap%20water.)

[solutions#:~:text=Microplastics%20are%20found%20in%20growing,than%20stars%20in%20our%20galaxy.&text=They%20have%20been%20found%20in,beer%2C%20honey%20and%20tap%20water.](https://www.europarl.europa.eu/news/en/headlines/society/20181116STO19217/microplastics-sources-effects-and-solutions#:~:text=Microplastics%20are%20found%20in%20growing,than%20stars%20in%20our%20galaxy.&text=They%20have%20been%20found%20in,beer%2C%20honey%20and%20tap%20water.)

Q.14) Which one of the following factors is responsible for the occurrence of a neurological syndrome called Minamata disease?

- Lead poisoning
- Chromium poisoning
- Cadmium poisoning
- Mercury poisoning

Ans) d

Exp) Option d is the correct answer.

Heavy metal poisoning is the accumulation of heavy metals, in toxic amounts, in the soft tissues of the body. The heavy metals most commonly associated with poisoning of humans are lead, mercury, arsenic and cadmium. Heavy metal poisoning may occur as a result of industrial exposure, air or water pollution, foods, medicines, improperly coated food containers, or the ingestion of lead-based paints.

Option a is incorrect: Lead is a cumulative toxicant that affects multiple body systems and is particularly harmful to young children. Lead exposure also causes anaemia, hypertension, renal impairment, immunotoxicity and toxicity to the reproductive organs. The neurological and behavioural effects of lead are believed to be irreversible.

Option b is incorrect: When inhaled, chromium compounds are respiratory tract irritants and can cause pulmonary sensitization. Chronic inhalation of Cr(VI) compounds increases the risk of lung, nasal, and sinus cancer. Severe dermatitis and usually painless skin ulcers can result from contact with Cr(VI) compounds. Chromium compounds can be sensitizers as well as irritants. Ingestion of a lethal dose of chromate can result in cardiovascular collapse.

Option c is incorrect: Cadmium is a heavy metal that causes direct harm to humans in several forms. Large amounts of cadmium can severely irritate the stomach and cause vomiting and diarrhea. Breathing high levels of cadmium damages people's lungs and can cause death. Exposure to low levels of cadmium in air, food, water, and particularly in tobacco smoke over time may build up cadmium in the kidneys and cause kidney disease and fragile bones. Cadmium is considered a cancer-causing agent.

Option d is correct: Minamata disease is a large-scale mercury poisoning resulting from methylmercury contamination, usually in seafood. Minamata disease results in irreversible damage to the nervous system. The disease first occurred when toxic pollutants affected the fish that comprised the food supply of the coastal community in Minamata, Japan.

Minamata disease causes neurological signs and symptoms, including:

- 1) sensory disturbance
- 2) ataxia, a lack of muscle coordination that may affect a person's voluntary movements.
- 3) dysarthria, a collective term for a group of speech disorders that occur due to muscle weakness
- 4) tunnel vision**

Source : <https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health#:~:text=Lead%20exposure%20also%20causes%20anaemia,are%20believed%20to%20be%20irreversible.>

[https://www.atsdr.cdc.gov/csem/chromium/physiologic_effects_of_chromium_exposure.html#:~:text=Some%20Cr\(VI\)%20compounds%2C,may%20result%20in%20hematological%20toxicity.](https://www.atsdr.cdc.gov/csem/chromium/physiologic_effects_of_chromium_exposure.html#:~:text=Some%20Cr(VI)%20compounds%2C,may%20result%20in%20hematological%20toxicity.)

https://www.cdc.gov/biomonitoring/Cadmium_FactSheet.html#:~:text=Exposure%20to%20low%20levels%20of,considered%20a%20cancer%2Dcausing%20agent.

<https://www.medicalnewstoday.com/articles/minamata-disease#brief-history-of-the-disease>

<https://rarediseases.org/rare-diseases/heavy-metal-poisoning/>

Q.15) Which of the following statements about the Piezoelectric Effect are correct?

1. It is the property of certain materials to generate electric charge in response to applied mechanical stress.
2. Usually, the materials exhibiting the piezoelectric effect also exhibit the converse piezoelectric effect (i.e., the generation of stress when an electric field is applied).
3. It is a novel concept and is yet to be used on a commercial scale.

Select the correct code from the options below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) a

Exp) Option a is the correct answer.

The piezoelectric effect occurs due to the alignment of atoms or molecules in a crystal lattice structure. When an external force is applied to the crystal, it distorts the crystal lattice structure, causing a displacement of ions. This displacement creates an electric field, which in turn generates an electrical charge.

Statement 1 is correct: The Piezoelectric Effect is the property of certain materials to generate an electric charge in response to applied mechanical stress. This effect is observed in materials such as quartz, certain ceramics, and biological matter such as bone and DNA.

Statement 2 is correct: One of the unique characteristics of the piezoelectric effect is that it is reversible, meaning that materials exhibiting the direct piezoelectric effect (the generation of electricity when stress is applied) also exhibit the converse piezoelectric effect (the generation of stress when an electric field is applied).

Statement 3 is incorrect: Piezoelectric materials have been used in various commercial applications for many years. They are widely used in various applications, including ultrasonic transducers, sensors, actuators, and energy harvesters.

Source: <https://www.circuitbread.com/ee-faq/what-is-piezoelectric-effect>
<https://www.sciencedirect.com/topics/engineering/piezoelectric-effect>
<https://www.electronicdesign.com/power-management/article/21801833/what-is-the-piezoelectric-effect> <https://www.nanomotion.com/nanomotion-technology/the-piezoelectric-effect/#:~:text=Piezoelectric%20Effect%20is%20the%20ability,is%20Greek%20for%20%E2%80%9Cpush%20%E2%80%9D.>

Q.16) Consider the following statements with reference to the initiative “Forum for Decarbonizing Transport”, that has been often mentioned in the news:

1. It was recently launched by the Government of India in collaboration with the World Bank.
2. It aims to bring down the peak level of Greenhouse Gas emissions from the transport sector in Asia.

Which of the above given statements is/ are **incorrect**?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect. As a part of the NDC-Transport Initiative for Asia (NDC-TIA) initiative, NITI Aayog and World Resources Institute (WRI) India have created the Forum for Decarbonising Transport to catalyze and sustain stakeholder engagements to support policymaking for more ambitious transport action.

Statement 2 is correct. The initiative aims to bring down the peak level of Greenhouse Gas emissions (transport sector) in Asia (in line with a well below 2-degree pathway), resulting in reduction of problems like congestion and air pollution.

Knowledge Base: NDC Transport Initiative for Asia (TIA 2020-2023) is a joint programme of seven organisations that will engage China, India, and Vietnam in promoting a comprehensive approach to decarbonizing transport in their respective countries. The project is part of the International Climate Initiative (IKI). The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) support the initiative on the basis of a decision adopted by the German Bundestag.

Source:

<https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.pib.gov.in/PressReleasePage.aspx%3FPRID%3D1748514&ved=2ahUKEwjZso-Lybr-AhWW-TgGHSiCBDoQFnoECFsQAQ&usg=AOvVaw0rx7c5iYrHvl-3KZXBHzGn>

Q.17) Consider the following statements regarding Arsenic contamination in India:

1. Arsenic is introduced into soil and groundwater during weathering of rocks and minerals.
2. Long-term intake of arsenic contaminated water can lead to skin and lung cancer.
3. In India, Goa and Maharashtra are reported to be most affected by arsenic contamination of groundwater.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Arsenic is a natural component of the earth's crust and is widely distributed throughout the environment in the air, water and land. It is highly toxic in its inorganic form. The greatest threat to public health from arsenic originates from contaminated groundwater.

People are exposed to elevated levels of inorganic arsenic through drinking contaminated water, using contaminated water in food preparation and irrigation of food crops, industrial processes, eating contaminated food and smoking tobacco.

Statement 1 is correct: Arsenic is introduced into soil and groundwater during weathering of rocks and minerals followed by subsequent leaching and runoff. It can also be introduced into soil and groundwater from anthropogenic sources. Arsenic is emitted into the atmosphere by high-temperature processes such as coal-fired power plants, burning vegetation and volcanism. In water, particularly groundwater, where there are sulfide mineral deposits and sedimentary deposits deriving from volcanic rocks, the concentrations can be significantly elevated. Natural low-temperature biomethylation and reduction to arsines also releases arsenic into the atmosphere.

Statement 2 is correct: Long-term intake of arsenic contaminated water leads to arsenic poisoning or arsenicosis, with cancer of skin, bladder, kidney or lung or diseases of skin (colour changes, and hard patches on palms and soles), or blood vessels of legs and feet. Fresh evidence indicates possible association between intake of contaminated water to onset of diabetes, hypertension and reproductive disorders.

Statement 3 is incorrect: In India, the states of West Bengal, Jharkhand, Bihar, Uttar Pradesh, Assam, Manipur and Chhattisgarh are reported to be most affected by arsenic contamination of groundwater above the permissible level.

As per the latest ground water quality data generated by Central Ground Water Board (CGWB) in 2021, States like Maharashtra, Kerala, Uttarakhand, Goa, Tripura and Arunachal Pradesh have not reported arsenic contamination.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1706657>

<https://www.who.int/india/health-topics/arsenic>

<https://www.who.int/news-room/fact-sheets/detail/arsenic>

<https://cpcb.nic.in/about-namp/>

Q.18) With reference to Radioactive Pollution, consider the following statements:

1. Compared to non-ionizing radiation, ionizing radiation has lower frequency and longer wavelength.
2. Ionizing Radiation may cause significant damage to DNA whereas the non-ionizing radiation generally causes thermal damage to the tissues.

Which of the statements given above is/are correct?

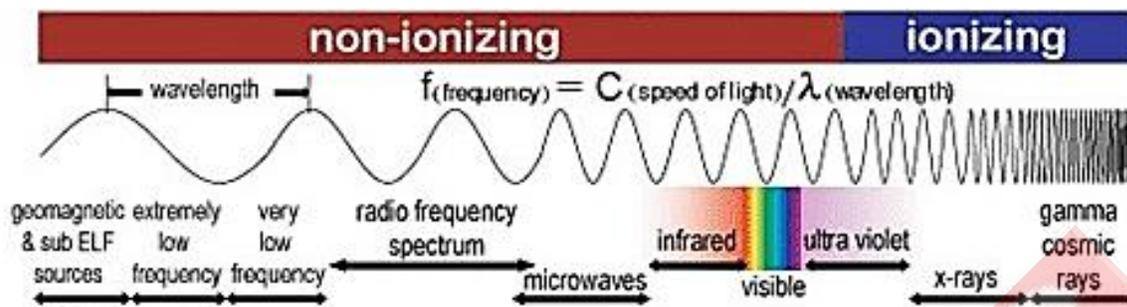
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Radiation is the energy that a body or source emits and that is then absorbed by another body after passing through a space or medium. Despite wave/particle duality in quantum physics, transmission occurs in the form of waves.

Statement 1 is incorrect: Radiation in the ultraviolet band and at lower energies (to the left of ultraviolet) is called non-ionizing radiation, while at the higher energies to the right of the ultraviolet band is called ionizing radiation. **Non-ionizing radiation has longer wavelength and lower frequency whereas ionizing radiation will have short wavelengths and high frequency.**



Statement 2 is correct. Ionizing Radiation contains sufficient energy to produce ions in matter at the molecular level. Significant harm, such as DNA damage and protein denaturation, may occur if the matter is a human. This is not to imply that non-ionizing radiation cannot harm people, but the harm is generally limited to thermal damage to tissues, such as burns.

Source: https://www.aocopm.org/assets/documents/10-31-11_Basic_Course_III_Orlando/ionizing%20an%20non.pdf

Q.19) Consider the following statements about the Dioxins:

1. Dioxins are a type of persistent environmental pollutants (POPs).
2. In human beings, dioxins can cause cancer as well as developmental and reproductive issues.
3. More than 90% of human exposure to dioxins happens through inhalation of the polluted air.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. Dioxins are a category of persistent environmental pollutants (POPs) that are a group of chemically related compounds. Dioxins can be found in the environment all around the world, and they build up in the food chain, especially in the fatty tissue of animals.

Over 90% of human exposure occurs through food, primarily through meat, dairy, fish, and shellfish.

Statement 2 is correct. Dioxins are extremely toxic, and they can harm the immune system, interfere with hormones, impair reproductive and developmental processes, and can even cause cancer. Due to the worldwide distribution of dioxins, all people have background exposure, which is unlikely to affect human health. The highly toxic potential, however, necessitates actions to reduce the current background exposure.

Statement 3 is incorrect. Dioxins are found throughout the world in the environment, and they accumulate in the food chain, mainly in the fatty tissue of animals. **According to WHO, more than 90% of human exposure is through food, mainly meat and dairy products, fish and shellfish.** Many national authorities have programmes in place to monitor the food supply.

Source: <https://www.who.int/news-room/fact-sheets/detail/dioxins-and-their-effects-on-human-health>

Q.20) What criteria are taken into consideration when selecting institutions for the Institution of Eminence (IoE) Scheme in India?

1. Academic excellence
2. Financial sustainability

3. Research output
4. Location in urban areas

Select the correct answer from the code given below:

- a) 1 and 2 only
- b) 1, 2 and 3 only
- c) 1, 2, 3 and 4
- d) 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

The Institution of Eminence (IoE) scheme was launched by the Government of India in 2017 to identify and support Indian institutions of higher education that have the potential to become world-class universities. Under the scheme, 10 public and 10 private institutions are to be selected as IoEs and provided with financial assistance of up to Rs 1,000 crore over a period of five years.

Academic excellence, research output, financial sustainability, and governance are the criteria considered for the selection of institutions under the Institution of Eminence (IoE) Scheme in India.

Location in urban areas is not one of the criteria.

Knowledge Base:

The scheme expects the institutions to have highly qualified faculty, academic, administrative and financial autonomy, excellence in research, high quality of teaching, high levels of funding, transparent merit-based selection in admissions, and a significant proportion of international students, among other notable features.

Source: <https://indianexpress.com/article/express-exclusive/for-private-campus-institution-of-eminence-tag-gift-wrapped-in-red-tape-8522548/> <https://ioe.ugc.ac.in/Home/About>

Q.21) With reference to Lead poisoning, consider the following statements:

1. Children are much less vulnerable to Lead poisoning than adults due to their strong digestive mechanism.
2. Lead poisoning primarily affects the brain and nervous system.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Lead is a toxic metal found in the Earth's crust that has resulted in widespread environmental contamination and human exposure. It is used in various products, including lead-acid batteries, pigments, paints, ammunition, jewellery, and traditional medicines. Drinking water delivered through lead pipes may also contain lead. Recycling is now a major source of global lead consumption.

Statement 1 is incorrect: Young children are particularly vulnerable to lead poisoning because they absorb 4-5 times as much ingested lead as adults from a given source. They tend to inhale and ingest more lead than adults due to their hand-to-mouth behavior, and their developing bodies and brains are more susceptible to the toxic effects of lead. Hence, this statement is incorrect.

Statement 2 is correct: Lead primarily affects the brain and nervous system, and can cause developmental delays, decreased IQ, and behavioral problems in children. In adults, lead exposure can cause high blood pressure, kidney damage, and reproductive problems.

Source: <https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health>

Q.22) With reference to Bioremediation, consider the following statements:

1. Landfarming is an example of the ex-situ type of bioremediation.
2. Bioventing and Bio Sparging are examples of in-situ bioremediation techniques.
3. In general, ex-situ bioremediation techniques are costlier than the in-situ bioremediation techniques.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Utilizing microorganisms to transform environmental toxins into less harmful forms is known as bioremediation. The microorganisms might have been isolated elsewhere and brought to the contaminated location, or they might be indigenous to the contaminated area.

Statement 1 is correct. Ex-Situ bioremediation techniques involve the removal or excavation of contaminated soil from the ground. Landfarming is a simple technique in which contaminated soil is excavated and spread over a prepared bed, and periodically tilled until pollutants are degraded.

Statement 2 is correct. In-situ techniques are defined as those applied to soil and groundwater at the site with minimal disturbance. **Bioventing is the most common in situ treatment and involves supplying air and nutrients through wells to contaminated soil to stimulate the indigenous bacteria.** Bioventing employs low airflow rates and provides only the amount of oxygen necessary for biodegradation while minimizing volatilization and releasing contaminants to the atmosphere. Bio sparging is also an example of in-situ bioremediation technique that involves injecting air under pressure below the water table to increase groundwater oxygen concentrations and enhance the rate of biological degradation of contaminants by naturally occurring bacteria.

Statement 3 is correct: Ex-situ bioremediation techniques tend to be more costly due to excavation and transportation from polluted sites. In contrast, in-situ techniques have no extra cost for excavation; however, it also involves the cost of on-site installation of equipment but generally this cost is lesser compared to the cost incurred on transportation and treatment of waste in ex-situ bioremediation.

Source: <https://agriculturistmusa.com/types-of-bioremediation-strategies/>

Q.23) With reference to the Soil Pollution, consider the following statements:

1. Mercury contamination in the soil can suppress crop growth and can also affect human health through bioaccumulation.
2. Overuse of chemical fertilizers may increase the salt content of the soil.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Soil pollution refers to the "addition of substances to the soil, which adversely affects physical, chemical, and biological properties of soil and reduces its productivity.

It is the accumulation of persistent toxic substances, chemicals, salts, radioactive elements, or disease-causing agents in the soil that have a negative impact on the growth of plants as well as on the health of people and animals.

Statement 1 is correct. Mercury contamination in soil, water and air is associated with potential toxicity to humans and ecosystems. Industrial activities such as coal combustion have led to increased mercury (Hg) concentrations in different environmental media. **Mercury contamination in the soil can suppress crops growth or kill plants, eventually affecting human health through bioaccumulation.**

Statement 2 is correct. Excessive use of chemical fertilizers decreases the population of organisms that live in the soil and the spheroidal structure of the soil, productivity of the soil and **increases salt content of the soil.**

Source: <https://www.environmentalpollutioncenters.org/soil/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6862694/#:~:text=Mercury%20contamination%20in%20the%20soil%20can%20suppress%20crops%20growth%20or%20kill%20plants%2C%20eventually%20affecting%20human%20health%20through%20bioaccumulation>

Q.24) Which of the following can be considered as the impact of Noise Pollution?

1. It can adversely affect communication and navigation among the marine organisms.
2. In human beings, noise pollution can lead to the development of a disorder known as Albinism.
3. Noise pollution can affect dissemination and germination of seedlings.

Select the correct answer from the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. Increasing noise is not only affecting animals on land, it is also a growing problem for those that live in the ocean. Ships, oil drills, sonar devices, and seismic tests have made the once tranquil marine environment loud and chaotic. **Whales and dolphins are particularly impacted by noise pollution. These marine mammals rely on echolocation to communicate, navigate, feed, and find mates, and excess noise interferes with their ability to effectively echolocate.**

Statement 2 is incorrect. Albinism refers to a group of genetic conditions marked by little or none of the pigment melanin in the skin, hair, and/or eyes. People with albinism may have vision problems and white or yellow hair; reddish, violet, blue or brown eyes; and pale skin.

Noise pollution generally causes Noise Induced Hearing Loss (NIHL). Exposure to loud noise can also cause high blood pressure, heart disease, sleep disturbances, and stress.

Statement 3 is correct. In 2007, the researchers **found that noise pollution from the gas wells disrupted seedling dissemination and germination of the pinyon pine and the juniper.** This was most likely due to the noise driving away the scrub jay, which disperses the seeds of the former tree species, and small mammals that disperses the seeds of the latter. They also found 75% fewer pinyon pine seedlings in noisy sites than quiet ones.

Source: <https://education.nationalgeographic.org/resource/noise-pollution/>

www.thehindu.com/children/the-impact-of-noise-on-trees/article34803313.ece/amp/

<https://education.nationalgeographic.org/resource/air-pollution/>

Q.25) With reference to various initiatives launched by the Government of India, Consider the following pairs:

Initiative	Launched by
1. SWAYATT Initiative	Ministry of Commerce and Industry
2. SAMRIDH Scheme	Ministry of Electronics and Information Technology
3. Dhara Initiative	Ministry of Culture

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- All three pairs
- None of the pairs

Ans) c

Exp) Option c is the correct answer.

Pair 1 is correctly matched: SWAYATT (Start-ups, Women and Youth Advantage Through Transactions) is a program launched by the Ministry of Commerce and Industry to promote and support entrepreneurs, especially women and youth, by providing them with a platform to showcase their products and services and connect with potential buyers.

Pair 2 is correctly matched: SAMRIDH (Startup Accelerators of MeitY for Product Innovation, Development, and Growth) is a scheme launched by the Ministry of Electronics and Information Technology to support existing and upcoming accelerators in selecting and accelerating potential IT-based startups to scale for solving India's problems and creating positive social impact.

Pair 3 is correctly matched: Dhara is a series of programs powered by lecture demonstrations launched by the **Ministry of Culture** to celebrate and showcase India's contribution and achievements across diverse fields, with the first event dedicated to **'India's Contribution to Mathematics Through Ages.'**

Source: <https://dhara.amritmahotsav.nic.in/>

<https://www.meity.gov.in/writereaddata/files/SAMRIDH%20Scheme%20Document.pdf>

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1903442>

Q.26) Consider the following statements about National Air Quality Monitoring Programme (NAMP):

- It is being implemented by the Central Pollution Control Board.
- It does not include Carbon dioxide among air pollutants that are monitored under the programme.
- Wind speed, relative humidity and temperature are also monitored under NAMP.

Which of the statements given above are correct?

- 1 and 3 only
- 1 and 2 only
- 2 and 3 only
- 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct. The Central Pollution Control Board is executing a nationwide programme of ambient air quality monitoring known as National Air Quality Monitoring Programme (NAMP).

Statement 2 is correct. Under N.A.M.P. viz., Sulphur Dioxide (SO₂), Oxides of Nitrogen as NO₂, Respirable Suspended Particulate Matter (RSPM / PM₁₀) and Fine Particulate Matter (PM_{2.5}) have been identified for regular monitoring at all locations.

Statement 3 is correct. The monitoring of meteorological parameters such as wind speed and wind direction, relative humidity (RH) and temperature are also integrated with the monitoring of air quality. The monitoring of pollutants is carried out for 24 hours (4-hourly sampling for gaseous pollutants and 8-hourly sampling for particulate matter) with a frequency of twice a week, to have one hundred and four (104) observations in a year. The monitoring is being carried out with the help of Central Pollution Control Board; State Pollution Control Boards; Pollution Control Committees; National Environmental Engineering Research Institute (NEERI), Nagpur.

Source: <https://cpcb.nic.in/about-namp/>

Q.27) Consider the following statements about the Society of Integrated Coastal Management (SICOM):

1. It has been established under the aegis of the Union Ministry of Ports, Shipping and Waterways.
2. It acts as a technical Secretariat to the National Coastal Zone Management Authority (NCZMA).
3. India's eco-label programme BEAMS (Beach Environment & Aesthetic Management Services) has been prepared by SICOM.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 3 only
- c) 1, 2 and 3
- d) 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect. Society of Integrated Coastal Management (SICOM) has been established under the aegis of the Ministry of Environment, Forests and Climate change, Government of India. It has a vision for a vibrant, healthy and resilient Coastal and Marine Environment for continuous and enhanced outflow of benefits to the Country and the Coastal Community.

Statement 2 is correct. SCIOM is a Nodal agency for strategic planning, management, execution, monitoring and successful implementation of Integrated Coastal Zone Management (ICZM) practices in across the country and National Project Management Unit (NPMU) for the ICZM Project and ENCORE project in all the 13 Coastal States/UTs.

SICOM acts as a technical Secretariat to the National Coastal Zone Management Authority (NCZMA) related to regulatory provisions and CRZ classification of coastal stretches of the country.

Statement 3 is correct. In 2020, India has launched its own eco-label BEAMS (Beach Environment & Aesthetics Management Services) under ICZM (Integrated Coastal Zone Management) project.

BEAMS has been prepared by the Society of Integrated Coastal Management (SICOM) under MoEFCC.

Source: <https://sicom.nic.in/about-us/about-sicom>

Q.28) Consider the following initiatives under the Namami Gange Programme:

1. The project of "Forestry Interventions for Ganga" is being exclusively implemented by the World bank in collaboration with Zoological Survey of India.
2. The Ganga Gram programme was launched by the Ministry of Drinking Water and Sanitation for holistic sanitation development of identified villages.
3. Conservation steps of some iconic species such as Golden Mahseer, Dolphins and Gharials are taken.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect. Forestry Interventions for Ganga is a sub part of Namami Gange Programme. The main purpose of the forestry interventions is to contribute towards holistic conservation of river Ganga, including improving the flow in the river (Aviralta) by adopting a multi-pronged approach throughout the pre-defined Ganga riverscape. **The project of “Forestry Interventions for Ganga” is being implemented by State Forest Departments of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, and West Bengal (not by the World Bank)** since year 2016-17, for which NMCG is providing financial support to the respective State Forest Departments.

Statement 2 is correct. Ministry of Drinking Water and Sanitation launched the ‘Ganga Gram’ project as part of Namami Gange, for holistic sanitation development in 4,470 villages on the banks of the river. The ministry identified 1674 Gram Panchayats situated on the bank of River Ganga in 5 States (Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal).

Statement 3 is correct. Under Namami Gange, Conservation of key **iconic species such as Golden Mahseer, Dolphins, Gharials, Turtles, Otters, etc. have been already initiated.** Similarly, under ‘NamamiGange’ 30,000 hectares of land will be afforested for increased recharge of the aquifers, reduced erosion, and improved health of river ecosystem.

Source: <https://nmcg.nic.in/NamamiGanga.aspx>

<https://pib.gov.in/newsite/printrelease.aspx?relid=174802>

Q.29) In the context of National Air Quality Index (AQI), consider the following statements:

1. AQI is divided into six categories based on the level of pollution in the area.
2. Four pollutants are considered for calculating AQI including Methane and Carbon dioxide.
3. AQI is calculated only if data are available for a minimum of three pollutants out of which one should necessarily be either PM2.5 or PM10.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 3 only

Ans) a

Exp) Option a is the correct answer.

Air Quality Index is a tool for effective communication of air quality status to people in terms which are easy to understand. It transforms complex air quality data of various pollutants into a single number (index value), nomenclature and color.

Statement 1 is correct. There are **six AQI categories, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe.** Each of these categories is decided based on ambient concentration values of air pollutants and their likely health impacts (known as health breakpoints)

Table 3.11 Breakpoints for AQI Scale 0-500 (units: $\mu\text{g}/\text{m}^3$ unless mentioned otherwise)

AQI Category (Range)	PM ₁₀ 24-hr	PM _{2.5} 24-hr	NO ₂ 24-hr	O ₃ 8-hr	CO 8-hr (mg/m ³)	SO ₂ 24-hr	NH ₃ 24-hr	Pb 24-hr
Good (0-50)	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200	0-0.5
Satisfactory (51-100)	51-100	31-60	41-80	51-100	1.1-2.0	41-80	201-400	0.6-1.0
Moderate (101-200)	101-250	61-90	81-180	101-168	2.1-10	81-380	401-800	1.1-2.0
Poor (201-300)	251-350	91-120	181-280	169-208	10.1-17	381-800	801-1200	2.1-3.0
Very poor (301-400)	351-430	121-250	281-400	209-748*	17.1-34	801-1600	1201-1800	3.1-3.5
Severe (401-500)	430+	250+	400+	748+*	34+	1600+	1800+	3.5+

Statement 2 is incorrect. AQI monitors **eight pollutants that include Particulate Matter (PM₁₀), Particulate Matter (PM_{2.5}), Nitrogen Dioxide (NO₂), Sulphur Dioxide (SO₂), Carbon Monoxide (CO), Ozone (O₃), Ammonia (NH₃), and Lead (Pb).** For these pollutants short-term (upto 24-hours) National Ambient Air Quality Standards are prescribed.

Statement 3 is correct. All the eight pollutants may not be monitored at all the locations. Overall **AQI is calculated only if data are available for a minimum of three pollutants out of which one should necessarily be either PM_{2.5} or PM₁₀.** Else, data is considered insufficient for calculating AQI.

Source: <https://cpcb.nic.in/National-Air-Quality-Index/>

Q.30) Which of the following statements about Adenovirus are correct?

1. It is a common virus that can cause respiratory, gastrointestinal, and eye infections.
2. Antibiotics cannot treat Adenovirus infections.
3. Adenovirus vectors are used in gene therapy and vaccine development.

Select the correct code from the options given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Adenoviruses are a common group of viruses that can cause various infections in different parts of the body, including the eyes, airways and lungs, intestines, urinary tract, and nervous system. While they commonly cause fever, coughs, sore throats, diarrhea, and pink eye, these infections are usually mild and resolve on their own within a few days.

Children are more prone to adenovirus infections, and most will have at least one type of infection before the age of 10. However, infections can be more severe in people with weakened immune systems, particularly children.

Statement 1 is correct: Adenovirus is a common virus that can cause respiratory, gastrointestinal, and eye infections.

Statement 2 is correct: Adenovirus infections cannot be treated with antibiotics because antibiotics only target bacteria, not viruses. Most adenovirus infections in children resolve on their own within a few days, while infections such as pink eye or pneumonia may last for a week or more.

Statement 3 is correct: Adenovirus vectors are widely used in gene therapy and vaccine development due to their ability to efficiently deliver genetic material into cells. Adenovirus vectors are created by removing parts of the adenovirus genome that are not required for replication and replacing them with the therapeutic gene of interest.

Source: <https://www.webmd.com/children/adenovirus-infections#:~:text=Antibiotics%20won't%20help%20adenovirus,hospital%20to%20help%20them%20recover.> <https://www.ncbi.nlm.nih.gov/books/NBK8503/>

Q.31) Consider the following statements with reference to the Central Pollution Control Board (CPCB):

1. It is a statutory organization constituted under the Air (Prevention and Control of Pollution) Act, 1981.
2. It provides technical services to the Ministry of Environment, Forest and Climate Change in the implementation of the Environment (Protection) Act, 1986
3. CPCB doesn't involve in the resolution of disputes among the State Pollution Control Boards.

Which of the above given statements is/are incorrect?

- a) 2 and 3 Only
- b) 1 Only
- c) 2 Only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the Correct Answer.

Statement 1 is incorrect. The Central Pollution Control Board (CPCB), statutory organization, was constituted in September 1974 under the Water (Prevention and Control of Pollution) Act, 1974. Further, CPCB was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.

Statement 2 is correct. It serves as a field formation and provides technical services to the Ministry of Environment, Forest and Climate Change under the provisions of the Environment (Protection) Act, 1986.

Statement 3 is incorrect. Coordinating the activities of the State Boards and resolving disputes among them is one of the functions of CPCB.

Source:

<https://www.google.com/url?sa=t&source=web&rct=j&url=https://cpcb.nic.in/&ved=2ahUKEwiq5ovZr7j-AhVj6jgGHQCwCLsQFnoECA0QAQ&usg=AOvVawITvaJtUb7lgzsV0Gf1QL0D>

Q.32) Consider the following statements with reference to the new E-waste (management) Rules, 2022; recently notified by the Ministry of Environment, Forest and Climate Change:

1. The definition of the term 'e-waste' has been widened to include solar photo-voltaic modules or panels or cells.
2. The rules do not apply to the Waste batteries and radio-active waste.
3. The new rules provide for the annual e-waste recycling targets to the producers of notified electrical and electronic equipment.

Which of the above given statements is/ are correct?

- a) 1 and 2 Only
- b) 1 and 3 Only
- c) 2 and 3 Only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

In November 2022, the Ministry of Environment and Forests further notified a new set of e-waste rules.

Statement 1 is correct. The 2016 e-waste rules had a restricted definition of e-waste. However, in the e-waste (management) rules-2022, the definition of the term 'e-waste' has been widened to include solar photo-voltaic modules or panels or cells.

Statement 2 is correct. As per the new rules, it is the responsibility of the manufacturer to collect e-waste generated during manufacture and to ensure its recycling or disposal.

However, the **rules do not apply to waste batteries, packaging plastics, micro enterprises and radio-active waste.**

- 1) Waste batteries are covered under Battery Waste Management Rules, 2022
- 2) Packaging plastics are covered under Plastic Waste Management Rules, 2016
- 3) Micro enterprises are covered under MSME Act, 2006**
- 4) Radio-active waste is covered under Atomic Energy Act, 1962**

Statement 3 is Correct. The e-waste rules of 2016 focused more on the producer's responsibility to collect back the e-waste and provided collection targets. **The new e-waste (management) rules, 2022 provides annual e-waste recycling targets to the producers. Producers of notified electrical and electronic equipment (EEE), have been given annual E-Waste Recycling targets based on the generation from the previously sold EEE or based on sales of EEE as the case may be.** Target may be made stable for 2 years and starting from 60% for the year 2023-2024 and 2024-25; 70% for the year 2025-26 and 2026-27 and 80% for the year 2027-28 and 2028-29 and onwards.

Source:

https://www.google.com/url?sa=t&source=web&rct=j&url=https://pib.gov.in/PressReleasePage.aspx%3FPRID%3D1881761&ved=2ahUKEwiJrqrHwbr-AhVG9jgGHRCZCJAQFnoECFEQAQ&usq=AOvVaw0KV_5EKhCVeMReSzg4U_SO

Q.33) Consider the following statements regarding Blue Baby Syndrome:

1. It is the bluish discoloration of an infant's skin due to a lack of oxygen in the hemoglobin of their blood.
2. It is usually caused when drinking water gets contaminated with excessive sulphate.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Blue baby syndrome is a condition characterized by a change in skin colour in babies. The bluish tint is most evident in thin skin areas such as the lips, earlobes, and nail beds.

Statement 1 is correct: The blue baby syndrome is the bluish discoloration of an infant's skin due to a lack of oxygen in the hemoglobin of their blood. It is also called as Infant Methemoglobinemia.

Statement 2 is incorrect: The maximum limit of nitrate in drinking water is 50 ppm. Excess nitrate in drinking water can cause disease such as **methemoglobinemia ('blue baby' syndrome).**

Whereas, Excessive sulphate (>500 ppm) in drinking water causes laxative effect, otherwise at moderate levels it is harmless.

Source: <https://ncert.nic.in/textbook/pdf/kech207.pdf>

<https://www.narayanahealth.org/blog/what-is-blue-baby-syndrome/>

Q.34) Consider the following statements with reference to Perform Achieve and Trade (PAT) Scheme:

1. It is being implemented by the Union Ministry of New and Renewable Energy.
2. Under the scheme, excess power savings by the designated consumers can be converted into Energy Saving Certificates that can be traded on power exchanges.
3. As per the scheme, units which fail to meet the energy saving targets will be liable to pay financial penalty under the Energy Conservation Act, 2001.

Which of the above given statements is/are correct?

- a) 1, 2 and 3
- b) 2 and 3 only
- c) 2 only
- d) 1 and 3 only

Ans) b)

Exp) Option b is the correct answer.

Perform, Achieve and Trade (PAT) is a regulatory instrument to reduce Specific Energy Consumption in energy intensive industries.

Statement 1 is incorrect. The Perform Achieve and Trade (PAT) scheme is a flagship programme under National Mission for Enhanced Energy Efficiency (NMEEE). It is being implemented by the Bureau of Energy Efficiency (BEE) and Union Ministry of Power.

NMEEE consists of four initiatives to enhance energy efficiency in energy intensive industries:

- 1) Perform, Achieve and Trade (PAT)
- 2) Market Transformation for Energy Efficiency (MTEE)
- 3) Energy Efficiency Financing Platform (EEFP)
- 4) Framework for Energy Efficient Economic Development (FEEED)

Statement 2 is correct. The Energy Savings Certificates (ESCerts) were introduced in India in 2011 under the PAT by the Bureau of Energy Efficiency. As a part of the scheme, the excess energy savings achieved by the designated consumers (DCs) is converted into tradable instruments called Energy Saving Certificates (ESCerts). These ESCerts are tradable at the Power Exchanges in India.

Statement 3 is Correct. Energy Saving Certificates (ESCerts) are issued to those plants that have achieved excess energy savings over their targets. Units that are **unable to meet the targets either through their own actions or through purchase of ESCerts are liable to financial penalty under the Energy Conservation Act, 2001.**

Source: <https://saathee.beeindia.gov.in/Common/BEEContent?MID=2&SMID=26>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1747407#:~:text=PAT%20scheme%20as,Conservation%20Act%2C%202001.>

Q.35) Which of the following statements about Atmospheric Rivers (ARs) is/are correct?

1. Atmospheric Rivers are long and narrow corridors of water vapor in the atmosphere.
2. Atmospheric rivers typically form over tropical regions due to warm temperatures.
3. They can induce mudslides and cause catastrophic damage to life and property.

Select the correct answer from the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) d)

Exp) Option d is the correct answer.

Atmospheric rivers (ARs) are long, narrow bands of moisture in the atmosphere that can stretch for thousands of kilometers. ARs can have significant impacts on weather and precipitation patterns, and when they come back-to-back, they are called atmospheric river families. The frequency and intensity of ARs may be increasing due to climate change, and in cold climates, they are projected to grow longer, wider, and wetter, potentially leading to larger economic impacts.

Statement 1 is correct: Atmospheric rivers, stretching from the tropics to higher latitudes, are elongated and narrow corridors of moisture in the atmosphere. They can transport water vapor up to 15 times the volume of the Mississippi River.

Statement 2 is correct: Atmospheric rivers typically form over tropical regions due to warm temperatures causing ocean water to evaporate and rise into the atmosphere. Strong winds then carry the water vapour through the atmosphere. As atmospheric rivers move over land, the water vapour rises higher, cools into water droplets, and falls as precipitation.

Statement 3 is correct: Although atmospheric rivers come in many shapes and sizes, those that contain the largest amounts of water vapor and the strongest winds can create extreme rainfall and floods, often by stalling over watersheds vulnerable to flooding. These events can disrupt travel, induce mudslides and cause catastrophic damage to life and property. A well-known example is the "**Pineapple Express**," a strong atmospheric river that is capable of bringing moisture from the tropics near Hawaii over to the U.S. West Coast.

Source: <https://blog.forumias.com/atmospheric-rivers-californias-record-breaking-storm-what-is-the-pineapple-express-phenomenon-underlying-it/>

Q.36) Consider the following statements with reference to the National Green Tribunal (NGT):

1. The National Green Tribunal came into existence in 2010 under the Environmental Protection Act, 1986.
2. The members of the tribunal hold office for a maximum term of 3 years, but they are eligible for reappointment.
3. The Chairperson of the NGT is appointed by the Central Government in consultation with Chief Justice of India.
4. It adjudicates cases under the Biological Diversity Act, 2002 and the Forest (Conservation) Act, 1980.

Which of the above given statements are correct?

- a) 1, 2 and 3 Only
- b) 2, 3 and 4 Only
- c) 3 and 4 Only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect. National Green Tribunal (NGT) is a quasi-judicial body established on October 18, 2010. It was established under the National Green Tribunal Act, 2010 to handle environment-related disputes. The act provides for effective and quick disposal of cases relating to environmental protection and conservation of forests and other natural resources.

Statement 2 is incorrect. The Tribunal comprises the Chairperson, the Judicial Members, and Expert Members. They shall hold office for a term of 5 years and are not eligible for reappointment.

Statement 3 is correct. The Chairperson is appointed by the Central Government in consultation with Chief Justice of India (CJI).

Statement 4 is correct. The NGT deals with civil cases under the seven laws related to the environment, these include:

- 1) The Water (Prevention and Control of Pollution) Act, 1974,
- 2) The Water (Prevention and Control of Pollution) Cess Act, 1977,

- 3) The Forest (Conservation) Act, 1980,
- 4) The Air (Prevention and Control of Pollution) Act, 1981,
- 5) The Environment (Protection) Act, 1986,
- 6) The Public Liability Insurance Act, 1991 and
- 7) The Biological Diversity Act, 2002.

Two important acts – Wildlife (Protection) Act, 1972 and Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 have been kept out of NGT's jurisdiction.

Knowledge Base: Shankar Ias environment book

Source:

[https://www.indiacode.nic.in/show-](https://www.indiacode.nic.in/show-data?actid=AC_CEN_16_18_00009_201019_1517807326004§ionId=3989§ionno=7&orderno=7)

[data?actid=AC_CEN_16_18_00009_201019_1517807326004§ionId=3989§ionno=7&orderno=7](https://www.indiacode.nic.in/show-data?actid=AC_CEN_16_18_00009_201019_1517807326004§ionId=3989§ionno=7&orderno=7)

https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.greentribunal.gov.in/&ved=2ahUKEwiU88z22Lr-AhUO9zgGHV4yBSYQFnoECBgQAQ&usg=AOvVaw2j9eZLZi_dejPx00KNjVIS

Q.37) Consider the following statements regarding the National Building Code of India:

1. It was formulated by the Bureau of Indian Standards (BIS).
2. It provides guidelines for energy efficiency and fire safety of buildings.
3. It is aimed at ensuring uniformity and standardization in building construction practices across the country.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) d

Exp) Option d is the correct answer.

The National Building Code of India (NBC) is a comprehensive document that provides guidelines and standards for building construction and fire safety in India.

Statement 1 is correct: The National Building Code of India (NBC) was formulated by the **Bureau of Indian Standards (BIS)** and is widely recognized as the authoritative source of information on building regulations and standards in the country.

Statement 2 is correct: The National Building Code of India provides guidelines for **energy efficiency, fire safety**, and other aspects of building construction, such as plumbing, ventilation, and structural design.

Statement 3 is correct: While it is a recommendatory code, the Ministry of Home affairs has issued guidelines to the States to incorporate the recommendations of the National Building Code into their local building bylaws. It is aimed at **ensuring uniformity and standardization** in building construction practices across the country.

Source: <https://blog.forumias.com/guidelines-of-national-building-code-to-ensure-fire-safety-in-public-buildings/>

<https://www.bis.gov.in/standards/technical-department/national-building-code/>

<https://dgfscdhg.gov.in/national-building-code-india-fire-and-life-safety>

Q.38) With reference to Glacial Lake Outburst Floods (GLOF), consider the following statements:

1. It is usually difficult to predict their occurrence in advance.
2. Uttarakhand flash floods of 2021 are caused due to GLOF.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

GLOF can be contained by natural structures such as moraines, glacial ice, or bedrock. However, if these structures fail due to various reasons such as slope failure or overtopping, it can result in catastrophic events that endanger human life, regional infrastructure, and livelihoods in the high mountains.

Statement 1 is correct: GLOFs are **difficult to predict in advance due to their suddenness** and the many factors that can trigger them. However, scientists are working on developing models and monitoring systems to improve early warning and preparedness.

Statement 2 is correct: The 2021 Uttarakhand flash floods are believed to be caused by a GLOF triggered by a massive rock and ice avalanche from a hanging glacier. The avalanche fell into a lake called Rishiganga, causing a surge of water to rush downstream and leading to flash floods in the area.

Source: <https://indianexpress.com/article/explained/uttarakhand-glacier-flash-flood-rishiganga-death-toll-7180258/> <https://www.icimod.org/mountain/glacial-lake-outburst-flood/>

Q.39) With reference to Climate Vulnerability Index (CVI) for Indian states, consider the following statements:

1. It is released by the Ministry of Environment, Forests and Climate Change.
2. According to the index, Southern zone of India is least vulnerable to extreme climate events.
3. It is based on pillars like exposure, sensitivity, and adaptive capacity.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2, and 3

Ans) c

Exp) Option c is the correct answer.

The CVI provides insights into the vulnerability of different states to climate change and can help policymakers identify the most vulnerable areas and take steps to mitigate the impacts of climate change. It can also help identify areas where investments in climate resilience would be most effective. Assam, Andhra Pradesh, Maharashtra, Karnataka and Bihar are highly vulnerable to extreme climate events such as floods, droughts and cyclones, according to the Climate Vulnerability Index (CVI).

Statement 1 is incorrect: The Climate Vulnerability Index (CVI) is a tool designed and released by the **Council on Energy, Environment and Water (CEEW)** to assess the vulnerability of states in India to the impacts of climate change. The index assesses the impact of climate change on different sectors like agriculture, forests, health, and water.

Statement 2 is incorrect: The **southern zone of India is the most vulnerable to extreme climate events** and their compounding impacts, followed by the eastern, western, northern, north-eastern and central zones.

Statement 3 is correct: The CVI is based on three broad pillars: **exposure, sensitivity, and adaptive capacity**. Exposure measures the degree to which states are exposed to the impacts of climate change.

Sensitivity measures the extent to which a state is likely to be affected by the impacts of climate change. Adaptive capacity measures a state's ability to cope with and adapt to the impacts of climate change.

Source: <https://indianexpress.com/article/explained/climate-vulnerability-index-ceew-explained-7593385/>

<https://www.ceew.in/publications/mapping-climate-change-vulnerability-index-of-india-a-district-level-assessment>

Q.40) Consider the following statements about the Proton Beam Therapy, recently seen in news.

1. It is a type of a radiation therapy which uses Protons to treat cancerous tumours.
2. It has higher chances of affecting nearby tissues/cells than X-ray based radiation therapy.
3. The Proton beam therapy is usually more expensive than x-ray radiation therapy.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

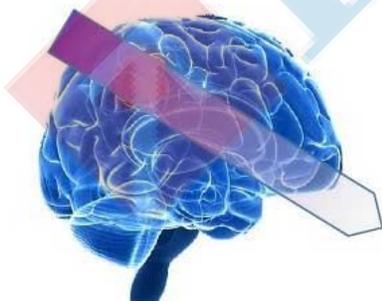
Proton therapy, also known as proton beam therapy, is a radiation treatment that precisely delivers a beam of protons to disrupt and destroy tumor cells.

Statement 1 is correct: Proton Beam Therapy is a type of radiation therapy for cancer treatment that uses a beam of high-energy protons to destroy cancer cells. A proton is a positively charged elementary particle that is a fundamental constituent of all atomic nuclei.

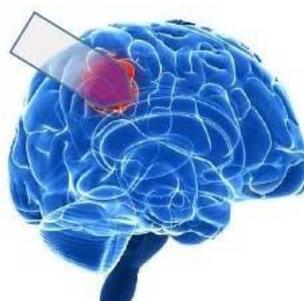
Statement 2 is incorrect: Traditional radiation therapies deliver x-rays, or beams of photons, to the tumour and beyond it. This can damage nearby healthy tissues and can cause significant side effects. By contrast, proton therapy delivers a beam of proton particles that stops at the tumour, so it's less likely to damage nearby healthy tissues.

COMPARING X-RAY THERAPY WITH PROTON BEAM THERAPY

The X-Ray radiation targeting the tumour is high dose at entry and reduces as it goes through the brain. This can affect healthy cells before and after the tumour.



Protons are accelerated to 70% of the speed of light. They slow down as the beam enters the target area and release their energy into the tumour, but do not go beyond the tumour.



Statement 3 is correct: A Proton Beam therapy machine is a huge contraption, up to three storeys tall and costs nearly ₹500 crore. Hence, Proton Beam therapy is much more expensive than the traditional radiation therapies. Setting up of the centre also poses several infrastructural and regulatory challenges.

Also, the Department of Atomic Energy has raised several safety concerns regarding this theory. Due to high costs, this therapy is available at only a few medical facilities in India.

Source:

<https://www.thehindu.com/sci-tech/health/demand-supply-gap-of-proton-beam-therapy-machines-leaves-cancer-patients-in-lurch/article66564195.ece#:~:text=The%20PBT%20is%20considered%20a,of%20cases%20are%20brain%20tumours.>

<https://timesofindia.indiatimes.com/city/mumbai/city-set-to-get-hi-tech-proton-machine-for-safer-cancer-therapy/articleshow/72431202.cms>

<https://www.cancer.net/navigating-cancer-care/how-cancer-treated/radiation-therapy/proton-therapy>

Q.41) With reference to the UN World Conferences on Disaster Risk Reduction (WCDRR), consider the following statements:

1. Till now, the United Nations has convened only three World Conferences on Disaster Risk Reduction (WCDRR).
2. India hosted the recent World Conference on Disaster Risk Reduction.
3. Sendai Framework was the outcome of the second World Conference on Disaster Risk Reduction.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

The United Nations World Conferences on Disaster Risk Reduction (WCDRR) are global forums organized by the United Nations International Strategy for Disaster Reduction (UNISDR) every decade to discuss issues related to disaster risk reduction, including the challenges and progress made in the field.

Statement 1 is correct: The UN has convened **three World Conferences on Disaster Risk Reduction (WCDRR)**. The 1st WCDRR in 1994 adopted the Yokohama Strategy and Plan of Action for a Safer World. The 2nd WCDRR in 2005 adopted the Hyogo Framework for Action 2005-2015: Building the Resilience of Countries and Communities to Disasters. The third WCDRR in 2015 adopted the Sendai Framework for Disaster Risk Reduction 2015-2030.

Statement 2 is incorrect: **Japan hosted all the three conferences**- the first conference in Yokohama in 1994, second conference in Kobe in 2005 and the third conference in Sendai in 2015.

Statement 3 is incorrect: The Sendai Framework for Disaster Risk Reduction 2015-2030 is the **outcome of the third World Conference on Disaster Risk Reduction (WCDRR) held in Sendai**, Japan in March 2015. The framework aims to reduce disaster risk and disaster losses in lives, livelihoods, and health, and to protect the environment by 2030.

Source: <https://enb.iisd.org/negotiations/un-world-conferences-disaster-risk-reduction-wcdrr>

https://www.mofa.go.jp/ic/gic/page22e_000637.html

Q.42) Which of the following statements is/are correct regarding the Coalition for Disaster Resilient Infrastructure (CDRI)?

1. It was launched by the Prime Minister of India at the UN Climate Action Summit.
2. It is a treaty-based intergovernmental organization.

3. The CDRI aims to promote the resilience of new and existing infrastructure systems to the impacts of natural hazards.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) c

Exp) Option c is the correct answer.

The Coalition for Disaster Resilient Infrastructure (CDRI) is a partnership of national governments, UN agencies and programmes, multilateral development banks and financing mechanisms, the private sector, and knowledge institutions that aims to promote the resilience of new and existing infrastructure systems to climate and disaster risks in support of sustainable development.

Statement 1 is correct: The **Prime Minister of India** launched the Coalition for Disaster Resilient Infrastructure (CDRI) during his **speech at the UN Climate Action Summit** in 2019. The CDRI is a voluntary international grouping aimed at promoting the resilience of new and existing infrastructure systems to the impacts of natural hazards.

Statement 2 is incorrect: The CDRI is **not an intergovernmental organization**, but rather a global partnership comprising national governments, UN agencies and programmes, multilateral development banks and financing mechanisms, the private sector, and academic and knowledge institutions.

Statement 3 is correct: The CDRI aims to **promote the resilience of new and existing infrastructure systems to the impacts of natural hazards**, and to mainstream disaster resilience into infrastructure systems.

Source: <https://www.cdri.world/frequently-asked-questions>

Q.43) With reference to the various ‘environmental clean-up techniques’, consider the following pairs:

Technique	Application
1. Rhizofiltration	Plants are used to absorb and precipitate contaminants from polluted aqueous sources in their roots.
2. Phytodegradation	Contaminants are taken up into the plant tissues where they are metabolized, or biotransformed.
3. Mycofiltration	A form of bioremediation in which a combination of bacteria is used to decontaminate the area.

Which of the pairs given above is/are correctly matched?

- a) 2 only
- b) 1 and 3 only

- c) 1 and 2 only
d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The pollution of environment, particularly that caused by various industrial activities, have been responsible for the organic and inorganic matter in the ecosphere. The utilization of organisms, primarily microbes, to clean up contaminated soils, aquifers, sludges, residues, and air known as 'Bioremediation', is a rapidly changing and expanding area of environmental cleanup technique than conventional physio-chemical methods.

Pair 1 is matched correctly: Rhizofiltration is defined as the use of plants, both terrestrial and aquatic; to absorb, concentrate, and precipitate contaminants from polluted aqueous sources with low contaminant concentration in their roots. Rhizofiltration can partially treat industrial discharge, agricultural runoff etc. The advantages of rhizofiltration include its ability to be used as in-situ or ex-situ applications.

Pair 2 is matched correctly: In Phytodegradation, contaminants are taken up into the plant tissues where they are metabolized, or biotransformed. Where the transformation takes place depends on the type of plant, and can occur in roots, stem or leaves.

Pair 3 is matched incorrectly: Mycoremediation is a form of bioremediation in which fungi are used to decontaminate the area. The term mycoremediation refers specifically to the use of fungal mycelia in bioremediation. The key to mycoremediation is determining the right fungal species to target a specific pollutant. **Mycofiltration is a similar process, using fungal mycelia to filter toxic waste and microorganisms from water in soil.**

Source:

<https://environmentaljournal.org/storage/models/article/C06UP15a6CpwbuqabWaLuvMhm0Uim6KSb6j1aQaFQhIkCOJES6zxr9M1WHrc/a-birds-eye-view-on-bioremediation-approaches-of-heavy-metals-contaminated-soil-regimes.pdf>

Q.44) Which of the following statements is/are correct regarding earthquake disaster preparedness in India?

1. The National Disaster Management Authority (NDMA) has formulated a National Earthquake Risk Mitigation Project (NERMP) to enhance earthquake preparedness in the country.
 2. The Bureau of Indian Standards (BIS) has formulated guidelines for construction of earthquake-resistant buildings in the country.
 3. The Indian Meteorological Department (IMD) can issue earthquake warnings to people in high-risk areas.
- Select the correct answer using the code given below:

- a) 1 and 2 only
b) 2 and 3 only
c) 1 and 3 only
d) 1, 2, and 3

Ans) d

Exp) Option d is the correct answer.

The risk of earthquakes in India is high, with over 59% of the country's land area under threat of moderate to severe seismic hazard. The entire Himalayan belt is considered prone to great earthquakes of magnitude exceeding 8.0, with the potential to affect millions of people.

Statement 1 is correct: The National Disaster Management Authority (NDMA) has formulated the National Earthquake Risk Mitigation Project (NERMP) to enhance earthquake preparedness in the country. The

project aims to strengthen the existing earthquake risk mitigation mechanisms in the country and create awareness among communities regarding earthquake safety measures.

Statement 2 is correct: The **Bureau of Indian Standards (BIS)** has formulated guidelines for construction of **earthquake-resistant buildings in the country**. These guidelines are known as the Indian Standard Code of Practice for Earthquake Resistant Design and Construction of Buildings.

Statement 3 is correct: The Indian Meteorological Department (**IMD**) can **issue earthquake warnings to people in high-risk areas**. The IMD has set up a network of seismological observatories to detect earthquakes and issue early warnings to the concerned authorities and people in high-risk areas.

Source: <https://www.iitk.ac.in/nicee/EQTips/EQTip11.pdf>

[https://ndma.gov.in/Mitigation_Preparedness/NERMP#:~:text=National%20Earthquake%20Risk%20Mitigation%20\(Preparatory,years%20\(2013%2D15\).](https://ndma.gov.in/Mitigation_Preparedness/NERMP#:~:text=National%20Earthquake%20Risk%20Mitigation%20(Preparatory,years%20(2013%2D15).)

<https://weathershimla.nic.in/pdf/other/Seismological-Activities.pdf>

Q.45) Consider the following statements about the International Big Cat Alliance (IBCA), launched recently in India:

1. It is an international collaboration to protect and conserve the seven major big cats of the world.
2. The alliance aims to reach out to the range countries of the seven big cats to conserve their natural habitats.
3. Caracal and Clouded leopards have not been included in the list of wild cats to be protected under the IBCA.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

In the mega international event held on 9th April 2023, at Mysuru, Karnataka, to commemorate 50 years of Project Tiger, the Prime Minister Shri Narendra Modi launched the International Big Cat Alliance (IBCA).

Statement 1 is correct: IBCA will focus on the protection and conservation of seven major big cats of the world such as tiger, lion, leopard, snow leopard, puma, jaguar and cheetah in collaboration with countries harbouring these species. The IBCA will engage in advocacy, partnership, knowledge e-portal, capacity building, eco-tourism, partnerships between expert groups and finance tapping.

Statement 2 is correct: Membership to the alliance will be open to 97 “range” countries, which contain the natural habitat of these big cats, as well as other interested nations, international organizations, etc. IBCA would further strengthen global cooperation and efforts to conserve the wild denizens, especially the big cats.

Statement 3 is correct: The seven big cats to be protected under IBCA include Tiger, Lion, Leopard, Snow Leopard, Cheetah, Jaguar and Puma. **However, wild cat species like Caracal and clouded leopard are not included in the list.**

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1915372>

Q.46) With reference to the Global Facility for Disaster Reduction and Recovery (GFDRR), consider the following statements:

1. It is a grant-funding mechanism managed by the World Bank.
2. It aims to support low and middle-income countries to reduce their risks from climate change.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

The Global Facility for Disaster Reduction and Recovery (GFDRR) is a multi-donor partnership that supports low and middle-income countries to understand, manage, and reduce their risks from natural hazards and climate change. The Program Management Unit, located within the World Bank, manages grant resources to carry out GFDRR's mission.

Statement 1 is correct: GFDRR is a **grant-funding mechanism that is managed by the World Bank**. It provides technical assistance, analytics, and capacity-building support for disaster risk management and climate change adaptation to low and middle-income countries.

Statement 2 is correct: The GFDRR aims to **assist low and middle-income countries to manage and reduce risks from natural hazards and climate change**. It provides funding and policy advice on disaster risk management at national and local levels, and supports the development of policies related to various sectors such as land use, building codes, public health, transport etc.

Source: <https://www.gfdr.org/en/feature-story/about-us>

Q.47) Which of the following statements is/are correct about Ground-level Ozone?

1. It is a secondary pollutant formed by the reaction of nitrogen oxides (NO_x) and volatile organic compounds (VOCs).
2. Prolonged exposure to ground-level ozone can pose respiratory problems and exacerbate asthma symptoms.

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Ground-level ozone is a colorless and highly irritating gas that forms just above the earth's surface. It is called a "secondary" pollutant because it is produced when two primary pollutants react in sunlight and stagnant air. These two primary pollutants are nitrogen oxides (NO_x) and volatile organic compounds (VOCs).

Statement 1 is correct: Ground-level ozone is a **secondary pollutant** formed by the reaction of nitrogen oxides (NO_x) and volatile organic compounds (VOCs), which come from both human activities and natural sources.

Statement 2 is correct: Prolonged exposure to ground-level ozone has significant effects on human health, including premature mortality, hospital admissions, and asthma symptoms. It can also damage vegetation, decrease crop productivity, and harm synthetic materials such as rubber and textiles.

Source: <https://www.canada.ca/en/environment-climate-change/services/air-pollution/pollutants/common-contaminants/ground-level-ozone.html>

Q.48) With reference to Indoor Air Pollution, consider the following statements:

1. One of the primary causes of indoor air pollution in rural areas is the use of traditional fuels for cooking and heating.
2. In Urban areas, one of the primary causes of indoor air pollution is the use of synthetic materials for building and furnishing.
3. Indoor air pollution in developing countries is one of the four most critical global environmental problems, as identified by the World Bank in 1992.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Indoor air pollution refers to the physical, chemical, and biological characteristics of air in the indoor environment. In developed countries, energy efficiency improvements can make houses airtight, reducing ventilation and raising pollutant levels. Pollutants include volatile organic compounds, tobacco smoke, pesticides, biological pollutants, formaldehyde, asbestos, and radon. These pollutants can cause a range of health problems including irritation of the eyes, nose and throat, headaches, nausea, loss of coordination, and in severe cases, cancer.

Statement 1 is correct: Rural people continue to rely on traditional fuels such as firewood, charcoal, and cow dung for cooking and heating. The concentration of indoor pollutants in households that burn traditional fuels is alarming. Burning such fuels produces large amounts of smoke and other air pollutants in the confined space of the home, resulting in high exposure.

Statement 2 is correct: In urban areas, indoor air pollution is caused by a variety of factors, including reduced ventilation, use of synthetic materials for building and furnishing, and the use of chemical products like household care products.

Statement 3 is correct: Indoor air pollution in developing countries is one of the four most critical global environmental problems, as identified by the World Bank in 1992. The other three critical global environmental problems identified by the World Bank in 1992 were: Loss of biodiversity, Deforestation and desertification and Global warming and climate change.

Source: <https://edugreen.teri.res.in/explore/air/indoor.htm>

Q.49) With reference to plastic and plastic waste disposal, consider the following statements:

1. Plastic disposal poses environmental problems as many of them are chemically inert.
2. Oxo-degradable plastics do not fragment into microplastics.
3. Bioplastics can be manufactured from Lactic Acid.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Plastics are large carbon-containing compounds called polymers, which are composed of repeating units of shorter carbon-containing compounds called monomers.

Statement 1 is correct: Most plastic is chemically inert and will not react chemically with other substances. Because plastic doesn't react chemically with most other substances, it doesn't decay. Therefore, plastic disposal poses a difficult and significant environmental problem.

Statement 2 is incorrect: There have been significant efforts in recent decades toward developing and industrializing so-called "biodegradable" plastics that might have shorter residence times in the environment. **Oxo-degradable plastics are one class of plastic materials that are commonly promoted as biodegradable. In reality, they are conventional plastics (e.g., PE, PP, PET) containing additives that accelerate the oxidation process. The major issue with oxo-degradable plastics is that they rapidly fragment into huge quantities of microplastics** when exposed to a combination of sunlight and oxygen.

Statement 3 is correct: Polylactic acid (PLA) is a bioplastic made from lactic acid. It is biodegradable as well as recyclable polyester made from renewable feedstock. Lactic acid as the raw material is produced by fermentation of glucose or sucrose and is refined to a high purity. There are other polymers besides plastics. Naturally occurring polymers, such as starches, cellulose, soy protein, vegetable oil, triglycerides and bacterial polyesters, can be extracted from crops and bacteria.

Source: <https://pubs.acs.org/doi/10.1021/acs.est.7b04051>

<https://science.howstuffworks.com/plastic.htm>

Q.50) Consider the following statements about Japanese Encephalitis (JE), a disease often seen in news:

1. Japanese Encephalitis is a bacterial brain infection caused by mosquito bites.
2. Some of the patients may suffer from long-term neurological issues like paralysis and difficulty in speech.
3. There is no cure for this disease.
4. The vaccination for JE has been included under the Mission Indradhanush program of the Government of India.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

Japanese encephalitis virus (JE) is a flavivirus related to dengue, yellow fever and West Nile viruses. JE is the main cause of viral encephalitis in many countries of Asia with an estimated 68,000 clinical cases every year.

Statement 1 is incorrect: JE is a viral disease (not bacterial) caused by flavivirus. It is transmitted to humans through bites from infected mosquitoes of the *Culex* species (mainly *Culex tritaeniorhynchus*). The first case of Japanese encephalitis viral disease (JE) was documented in 1871 in Japan.

Statement 2 is correct: Most JE infections are mild (fever and headache) or without apparent symptoms, but approximately 1 in 250 infections results in severe clinical illness. The case-fatality rate can be as high as 30% among those with disease symptoms.

Of those who survive, 20%–30% suffer permanent intellectual, behavioural or neurological sequelae such as paralysis, recurrent seizures or the inability to speak.

Statement 3 is correct: There is no cure for the disease. Treatment is focused on relieving severe clinical signs and supporting the patient to overcome the infection.

Statement 4 is correct: The Universal Immunisation program/ Mission Indradhanush which provides vaccination against 12 Vaccine-Preventable Diseases (VPD) i.e., diphtheria, Whooping cough, tetanus, polio, tuberculosis, hepatitis B, meningitis and pneumonia, Hemophilus influenza type B infections,

Japanese encephalitis (JE), rotavirus vaccine, pneumococcal conjugate vaccine (PCV) and measles-rubella (MR). However, Vaccination against Japanese Encephalitis and Haemophilus influenzae type B is being provided in selected districts of the country.

Source: <https://www.who.int/news-room/fact-sheets/detail/japanese-encephalitis>

<https://vikaspedia.in/health/nrhm/national-health-programmes-1/mission-indhradhanush>

<https://www.thehindu.com/sci-tech/no-neutralising-antibodies-after-japanese-encephalitis-vaccination/article66606617.ece>



Q.1) Consider the following statements with reference to the effects of Ocean Acidification:

1. Increased Ocean Acidification depresses metabolic rates and immune responses in some marine organisms.
2. The growth and survival of calcareous phytoplankton may be adversely affected due to Ocean Acidification.
3. Few algae may benefit from increased ocean acidification.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Ocean acidification refers to a reduction in the pH of the ocean over an extended period of time, caused primarily by uptake of carbon dioxide (CO₂) from the atmosphere.

Statement 1 is correct. The uptake of atmospheric carbon dioxide is occurring at a rate exceeding the natural buffering capacity of the oceans. This increases the acidity in oceans which finally **depresses metabolic rates and immune responses in some organisms.**

Statement 2 is correct. Carbonate ions are essential to the calcification process that allows certain marine organisms to build their calcium carbonate shells and skeletons like phytoplankton.

However, increases in atmospheric CO₂ levels lead to decrease in pH level, increase in the concentration of carbonic acid and bicarbonate ions, causing a decrease in the concentration of carbonate ions. Thus, carbonate ions are less available, and calcification is therefore harder to achieve. This impact of ocean acidification may therefore have potentially catastrophic consequences for calcareous phytoplanktons.

Statement 3 is correct. Some algae and seagrass may benefit from higher acidification of oceans, as they may increase their photosynthetic and growth rates.

Knowledge Base: Shankar Ias environment book

Source: <https://www.google.com/url?sa=t&source=web&rct=j&url=https://blog.forumias.com/oceans-are-heating-up-at-a-quickening-pace-say-scientists/&ved=2ahUKEwjYhr3E-Lz-AhWw4DgGHfgJA1kQFnoECFQQAQ&usg=AOvVaw078f9maVJMVWzJCIYddyCr>

Q.2) Which of the following options can be responsible for Ozone Depletion?

1. Sunspots and stratospheric winds
2. Commercial usage of Chlorofluorocarbons (CFCs)
3. Using halons in fire extinguishers
4. Commercial usage of Methyl chloroform

Select the correct answer using the code given below.

- a) 1, 2, and 3 only
- b) 2, and 3 only
- c) 1, 3, and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Ozone layer depletion is the gradual thinning of the earth's ozone layer in the upper atmosphere caused due to the release of chemical compounds containing gaseous bromine or chlorine from industries or other human activities.

All the above given activities can lead to the depletion of the Ozone Layer.

Option 1 is correct. There are a few natural causes also which cause ozone depletion such as volcanic eruptions, **sunspots and stratospheric winds**. However, these do not cause more than 1 – 2% of the ozone depletion.

Option 2 is correct. The use of CFCs is one of the main reasons for the depletion of the layer. They are usually used as a **coolant in refrigerators and air conditioners** used in cars, etc. It is also used as an industrial solvent, in foam products and hospital sterilization equipment.

Option 3 is correct. Other chemicals that damage the ozone layer include methyl bromide (used as a pesticide) and halons (**used in fire extinguishers**). As methyl bromide and halons are broken apart, they release bromine atoms, which are 40 times more destructive to ozone molecules than chlorine atoms

Option 4 is correct. Methyl chloroform is used as a solvent and in many consumer products **and also in adhesives**.

Knowledge Base: Shankar Ias environment book

Source:

https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.unep.org/ozonaction/who-we-are/about-montreal-protocol&ved=2ahUKEwiSh_DE8Lz-AhUYSWwGHSYKDPAQFnoECCwQAQ&usg=AOvVaw0E0pb_hWpyt3VrdKEIM2iW

Q.3) Arrange the following gases as per their Global Warming Potential (GWP) in descending order?

1. Methane
2. Perfluorocarbons (PFCs)
3. Carbon Dioxide
4. Sulfur Hexafluoride (SF6)

Select the correct answer using the code given below.

- a) 4-2-1-3
- b) 2-4-1-3
- c) 3-2-4-1
- d) 4-1-2-3

Ans) a

Exp) Option a is the correct answer.

Global warming potential (GWP) is the heat absorbed by any greenhouse gas in the atmosphere expressed as a multiple of the heat absorbed by the same mass of carbon dioxide (CO₂). The global warming potential of each gas describes its impact on global warming. The Global Warming Potential (GWP) of a gas is a measure of how much energy a gas absorbs over a specific time period (usually 100 years) when compared to carbon dioxide. GWP is used to calculate carbon dioxide equivalent.

S. no.	Gas	GWP	Lifetime
1)	Carbon Dioxide	1	100
2)	Methane	21	12
3)	Nitrous Oxide	310	120
4)	Hydrofluorocarbons (HFC's)	140-11,700	1-270
5)	Perfluorocarbons (PFC's)	6,500-9,200	800-50,000

6)	Sulfur hexafluoride (SF6)	23,900	3,200
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Knowledge Base: Shankar Ias environment book

Source:

<https://www.google.com/url?sa=t&source=web&rct=j&url=https://blog.forumias.com/climate-change/&ved=2ahUKEwj98sLi-Lz-AhVZ1zgGHUvOBokQFnoECAOQAQ&usg=AOvVaw2BRiWcfku-EYO653q1M6lP>

Q.4) Glacial retreat is a natural phenomenon that has speed up due to climate change in recent decades. Consider the following statements with reference to the impacts of Glacial retreat:

1. Increased coastal erosion.
2. Occurrence of Glacial Lake Outburst Floods (GLOF)
3. Depletion of freshwater level
4. Enhanced productivity of Coral reefs

Which of the options given above are correct?

- a) 3 and 4 only
- b) 1, 2, 3 and 4
- c) 1, 2 and 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Glacial retreat refers to the process of a glacier shrinking or receding in size over time due to a decrease in ice accumulation or an increase in ice melt.

Option 1 is correct. Melting glaciers contribute to **rising sea levels**, which **increases coastal erosion and storm surge** as warming air and ocean temperatures produce more frequent and intense coastal storms such as hurricanes and typhoons.

Option 2 is correct. Warming is already causing faster snow and glacier melting, resulting in the formation of glacial lakes. **Glacial lake outburst floods (GLOF)** are becoming more common, resulting in massive casualties and damage to local infrastructure.

Option 3 is correct. The disappearance of glaciers also means freshwater depletion and **less water available for consumption** by the population, a lower hydroelectric energy generation capacity, and less water available for irrigation.

Option 4 is incorrect. To thrive through the process of photosynthesis, coral reefs need sunshine. Due to glaciers melting or retreating, rising sea levels prevent corals from receiving adequate sunlight. This could impact the growth of corals in oceans.

Source:

https://www.google.com/url?sa=t&source=web&rct=j&url=https://blog.forumias.com/increasing-temperature-and-low-winter-precipitation-are-causing-retreat-of-glaciers-in-zanskar-valley-ladakh/&ved=2ahUKEwia05jx-Lz-AhVXhGMGHXiOA9sQFnoECBEQAQ&usg=AOvVaw3dffZuYJcWCWoVcQfa_9s_

Q.5) With reference to Climate & Clean Air Coalition, consider the following statements:

1. It was launched by the United Nations Environment Programme (UNEP).
2. The Coalition is a global organization that is committed to reducing short-lived climate pollutants (SLCPs).
3. India is a member of this coalition.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Climate and Clean Air Coalition is a voluntary partnership of governments, intergovernmental organizations, businesses, scientific institutions and civil society organizations committed to protecting the climate and improving air quality through actions to reduce short-lived climate pollutants.

Statement 1 is correct: Climate & Clean Air Coalition (CCAC) is a voluntary partnership of governments, intergovernmental organizations, businesses, scientific institutions, and civil society organizations that aims to reduce short-lived climate pollutants (SLCPs). It was launched by the United Nations Environment Programme (UNEP) in 2012, along with six founding countries - Bangladesh, Canada, Ghana, Mexico, Sweden, and the United States.

Statement 2 is correct: The Coalition is a global organization that is committed to reducing short-lived climate pollutants (SLCPs), which include black carbon, methane, tropospheric ozone, and hydrofluorocarbons (HFCs).

Statement 3 is correct: India is a member of the coalition, along with over 78 other countries and many non-state actors.

Source: <https://www.ccacoalition.org/en/content/coalition>

<https://www.unep.org/explore-topics/climate-action/what-we-do/climate-and-clean-air-coalition-ccac>

Q.6) Which of the actions mentioned below can lead to Ocean Acidification?

1. Burning of fossil fuels
 2. Deforestation
 3. Improper Land Management
- Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Since the beginning of the Industrial Revolution, when humans began burning coal in large quantities, the world's ocean water has gradually become more acidic. Like global warming, this phenomenon, which is known as ocean acidification, is a direct consequence of increasing levels of carbon dioxide (CO₂) in Earth's atmosphere.

All the options given are correct reasons for Ocean Acidification.

Option 1 is correct. Main factor responsible for ocean acidification is the **burning of fossil fuels such as coal, oil and gas**. Burning increases the carbon dioxide in the atmosphere which eventually mixes with ocean water leading to ocean acidification.

Option 2 is correct. **Deforestation** results in fewer trees to absorb the gas. Also, when plants are cut down and burnt or left to rot, the carbon that makes up their organic tissue is released as carbon dioxide.

Option 3 is correct. Agriculture may also contribute to the problem of ocean acidity. It may happen especially when the methods that are employed by the farmers are not suitable.

These are methods that may be prone to soil erosion, and in the process, the **chemicals are washed downstream into the ocean.** In short, if the land is poorly managed, the water masses can be hit by the impact of acidifying soil mineral content and water pollution.

Knowledge Base: Shankar ias environment book

Source:

<https://www.google.com/url?sa=t&source=web&rct=j&url=https://blog.forumias.com/climate-change/&ved=2ahUKEwionpiOlb3-AhU0VmwGHSj4DSAQFnoECFYQAQ&usg=AOvVaw2BRiWcfku-EYO653q1M6lP>

Q.7) The Ozone Layer is vital to human well-being as well as agricultural and ecosystem sustainability. Consider the following statements with reference to the Ozone Layer:

1. Most of the Earth's ozone resides in the troposphere and a very small percentage is distributed throughout the stratosphere.
2. The Dobson unit is a unit of measurement of atmospheric ozone.
3. Ozone formed near the Earth's surface is considered "good" ozone.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 2 and 3 Only
- c) 2 Only
- d) 1 Only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect. Most of Earth's ozone layer resides in the stratosphere. About 90% of atmospheric ozone is contained in the stratospheric "ozone layer", which shields Earth's surface from harmful ultraviolet radiation emitted by the Sun.

Statement 2 is correct. The first instrument for **routinely monitoring total ozone** was developed by Gordon M.B. Dobson in the United Kingdom in the 1920s. Pioneering scientists have traditionally been honored by having units of measure named after them. Accordingly, the unit of measure for total ozone is called the "**Dobson unit**".

Statement 3 is incorrect. Ozone in the stratosphere absorbs a large part of the Sun's biologically harmful ultraviolet radiation. Stratospheric ozone is considered "good" ozone because of this beneficial role. In contrast, **ozone formed at Earth's surface** is considered "**bad**" ozone because it is harmful to humans, plants, and animals.

Source: <https://www.google.com/url?sa=t&source=web&rct=j&url=https://ozone.unep.org/20-questions-and-answers&ved=2ahUKEwiH16r4oL3-AhVp-jgGHQZLDZUQFnoECBAQAQ&usg=AOvVaw1rSpfxzRip-Hu9yyki0myS>

Q.8) Consider the following statements with reference to Carbon Credit and Carbon Offsetting:

1. Carbon credit is a kind of non-tradable permit that equals one Kilogram of carbon dioxide released into the atmosphere.
2. Unlike Carbon Credit, Carbon offsetting is a kind of right to emit carbon into the atmosphere.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect. Carbon credit is a kind of tradable permit that, as per United Nations standards, equals one tonne of carbon dioxide removed, reduced, or sequestered from the atmosphere.

Statement 2 is incorrect. Carbon credit is the right to emit carbon into the atmosphere. Carbon offsetting is the carbon sequestering against the carbon emissions. Carbon credits generally represent a reduction in greenhouse gas emissions, whereas carbon offsets can represent removal of greenhouse gas. Carbon credits are typically associated with cap-and-trade systems. Carbon offsets are traded on the voluntary market and include carbon sequestering efforts, renewable energy, and other projects that remove greenhouse gases from the atmosphere.

Knowledge Base: Shankar ias environment book

Source: <https://www.google.com/url?sa=t&source=web&rct=j&url=https://blog.forumias.com/carbon-markets-benefits-and-challenges/&ved=2ahUKEwj1qcjeoL3-AhWJ-DgGHVhNBvEQFnoECA4QAQ&usg=AOvVaw0hBcvuLl6uKrs136q-cd7c>

Q.9) Consider the following statements regarding “Blue Carbon”:

1. The term “blue carbon” refers to the carbon stored in coastal and marine ecosystems.
2. Healthy blue carbon ecosystems play a significant role in protecting coastlines from erosion and storm surges.
3. The Blue Carbon Initiative is an initiative of the United Nations Environment Program.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The term “blue carbon” refers to the carbon stored in coastal and marine ecosystems. The blue carbon ecosystems such as mangroves, tidal and salt marshes, and seagrasses – are highly productive coastal ecosystems that are particularly important for their capacity to store carbon within the plants and in the sediments below. Scientific assessments show that they can sequester two to four times more carbon than terrestrial forests and are thereby considered a key component of nature-based solutions to climate change.

Statement 2 is correct: Healthy blue carbon ecosystems perform following functions:

- 1) provide habitat for marine species,
- 2) support fish stocks and food security,
- 3) sustain coastal communities and livelihoods,
- 4) filter water flowing into our oceans and reef systems and
- 5) protect coastlines from erosion and storm surges.

They are found on every continent except Antarctica and cover approximately 49 million hectares.

Statement 3 is incorrect: The Blue Carbon Initiative (BCI) – co-organized by IOC, Conservation International (CI) and the International Union for Conservation of Nature (IUCN) – works to develop management approaches, financial incentives and policy mechanisms for ensuring the conservation, restoration and sustainable use of coastal blue carbon ecosystems. It engages local, national, and international governments to promote policies that support coastal blue carbon conservation, management and financing. **Thus, BCI is not the initiative of UNEP.**

Source: <https://kids.frontiersin.org/articles/10.3389/frym.2019.00154>
<https://ioc.unesco.org/our-work/blue-carbon>

Q.10) With reference to Global Methane Pledge (GMP), consider the following statements:

1. It is an initiative of the United States and the European Union.
2. It aims to reduce global methane emissions by at least 30% below 2020 levels by 2030
3. India has not yet signed the pledge.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

The Global Methane Pledge (GMP) is a joint initiative launched by the United States and the European Union at COP26 in November 2021. The Pledge has 111 country participants, responsible for 45% of global human-caused methane emissions. The goal is to work together to collectively reduce methane emissions by implementing policies and technologies that can reduce methane emissions across sectors such as agriculture, oil and gas, and waste management. India did not sign the pledge.

Statement 1 is correct: The Global Methane Pledge was launched at COP26 in November 2021 to catalyse action to reduce methane emissions. It is an initiative of the United States and the European Union.

Statement 2 is correct: The aim of the Global Methane Pledge is to reduce global methane emissions by at least 30% below 2020 levels by 2030.

Statement 3 is correct: India did not sign the pledge because of its concerns over the impact on trade, on the country's vast farm sector, and the role of livestock in the rural economy.

Source: <https://indianexpress.com/article/explained/global-methane-pledge-explained-7605172/>
<https://www.iea.org/reports/global-methane-tracker-2022/the-global-methane-pledge>

Q.11) Geoengineering is the deliberate large-scale intervention in the Earth's natural systems to tackle the issue of climate change. In this context, which among the following can be considered as examples of geoengineering?

1. Albedo enhancement
2. Space reflectors
3. Stratospheric aerosols
4. Ocean Fertilisation
5. Enhanced Weathering

Select the correct answer using the codes given below:

- a) 2 and 5 only
- b) 1, 3 and 4 only
- c) 1, 2, 3 and 4 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

Geoengineering is the deliberate large-scale intervention in the Earth's natural systems to counteract climate change. There is wide range of proposed geoengineering techniques. Generally, these can be grouped into two categories:

A) Solar Radiation Management (SRM) or Solar Geoengineering

SRM techniques aim to reflect a small proportion of the Sun's energy back into space, counteracting the temperature rise caused by increased levels of greenhouse gases in the atmosphere which absorb energy and raise temperatures. Some proposed techniques include:

Option 1 is correct: Albedo enhancement involves increasing the reflectiveness of clouds or the land surface so that more of the Sun's heat is reflected back into space.

Option 2 is correct: Space reflectors involve blocking a small proportion of sunlight before it reaches the Earth.

Option 3 is correct: Stratospheric aerosols refer to introducing small, reflective particles into the upper atmosphere to reflect some sunlight before it reaches the surface of the Earth.

B) Greenhouse Gas Removal (GGR) or Carbon Geoengineering

GGR techniques aim to remove carbon dioxide or other greenhouse gases from the atmosphere, directly countering the increased greenhouse effect and ocean acidification. These techniques would have to be implemented on a global scale to have a significant impact on greenhouse gas levels in the atmosphere. Some proposed techniques include:

Option 4 is correct: Ocean Fertilisation which involves adding nutrients to the ocean in selected locations to increase primary production which draws down carbon dioxide from the atmosphere.

Option 5 is correct: Enhanced Weathering means exposing large quantities of minerals that will react with carbon dioxide in the atmosphere and storing the resulting compound in the ocean or soil.

Source: <http://www.geoengineering.ox.ac.uk/www.geoengineering.ox.ac.uk/what-is-geoengineering/what-is-geoengineering/>

Q.12) Consider the following statements regarding Greenhouse Gas (GHG) Protocol:

1. It is a joint initiative of the Intergovernmental Panel on Climate Change and the United Nations Industrial Development Organization.
2. It establishes comprehensive global standardized frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations.
3. Joint Implementation and Emission Trading are important mechanisms of the GHG Protocol.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Greenhouse Gas Protocol is a joint initiative of World Resources Institute and the World Business Council for Sustainable Development (WBCSD). Thus, the Intergovernmental Panel on Climate Change and United Nations Industrial Development Organization are not associated with the GHG protocol.

Statement 2 is correct: GHG Protocol establishes comprehensive global standardized frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions. It works with governments, industry associations, NGOs, businesses and other organizations.

Statement 3 is incorrect: Under the Kyoto Protocol, countries bound to the Kyoto Targets can meet a part of their targets through three “market-based mechanisms”:

- 1) Clean Development Mechanism (CDM)
- 2) Emission Trading/Cap and Trade
- 3) Joint Implementation

Source: [https://ghgprotocol.org/about-](https://ghgprotocol.org/about-us#:~:text=What%20is%20GHG%20Protocol%3F,value%20chains%20and%20mitigation%20actions)

[us#:~:text=What%20is%20GHG%20Protocol%3F,value%20chains%20and%20mitigation%20actions](https://ghgprotocol.org/about-us#:~:text=What%20is%20GHG%20Protocol%3F,value%20chains%20and%20mitigation%20actions) .

Q.13) Consider the following statements regarding Global Environment Facility (GEF):

1. It was created at the UN Framework Convention on Climate Change Conference held at Bonn (Germany) in 1999.
2. It acts as a financial mechanism for the Minamata Convention on Mercury and the Stockholm Convention on Persistent Organic Pollutants (POPs).

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The Global Environment Facility (GEF) was established during the 1992 Rio Earth Summit which acts as a catalyst for action on the environment. Through its strategic investments, the GEF works with partners to tackle the planet's biggest environmental issues.

Statement 2 is correct: GEF is a financial mechanism for five major international environmental conventions: the Minamata Convention on Mercury, the Stockholm Convention on Persistent Organic Pollutants (POPs), the United Nations Convention on Biological Diversity (UNCBD), the United Nations Convention to Combat Desertification (UNCCD) and the United Nations Framework Convention on Climate Change (UNFCCC).

Source: <https://www.unep.org/about-un-environment/funding-and-partnerships/global-environment-facility>

<https://fiftrustee.worldbank.org/en/about/unit/dfi/fiftrustee/fund-detail/gef>

<https://www.unep.org/about-un-environment/funding-and-partnerships/global-environment-facility>

Q.14) Consider the following statements regarding the Intergovernmental Panel on Climate Change (IPCC):

1. It was created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP).
2. One of the functions of the IPCC is to conduct research in order to support governments at all levels to develop climate policies.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: IPCC was created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP). The IPCC provides regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation.

Statement 2 is incorrect: The objective of the IPCC is to provide governments at all levels with scientific information that they can use to develop climate policies. **The IPCC does not conduct its own research.**

For the assessment reports, experts volunteer their time as IPCC authors to assess the thousands of scientific papers published each year to provide a comprehensive summary of what is known about the drivers of climate change, its impacts and future risks, and how adaptation and mitigation can reduce those

risks. Through its assessments, the IPCC identifies the strength of scientific agreement in different areas and indicates where further research is needed.

Source: <https://www.ipcc.ch/about/>

Q.15) With reference to Arctic Amplification, consider the following statements:

1. It refers to the phenomenon where the Arctic region is warming at a faster rate than the rest of the world.
2. Ice-albedo feedback is a process that contributes to Arctic Amplification.
3. It helps to strengthen the Arctic polar Vortex.

Which of the statements given above is/are correct?

- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Arctic is experiencing a phenomenon called Arctic amplification, where it is warming at a faster rate of two to three times than the rest of the planet due to sea ice loss. The decline of sea ice causes further melting, making the ice younger and thinner, leading to a darker surface that can absorb more energy from the sun and cause additional heating.

Arctic amplification is causing ice sheet melt, sea level rise, intense Arctic fire seasons, and permafrost melt. Additionally, the rapid warming of the Arctic is also affecting mid-latitude climate and weather.

Statement 1 is correct: Arctic Amplification refers to the phenomenon where the Arctic region is warming at a faster rate than the rest of the world. This warming is characterized by a decrease in the extent and thickness of sea ice, melting of glaciers, and permafrost thawing, among other changes.

Statement 2 is correct: The ice-albedo feedback is a process that amplifies the warming of the Arctic region by causing more absorption of solar radiation. When the Arctic warms, ice and snow begin to melt, revealing darker surfaces that have a lower albedo and absorb more radiation, leading to further warming and melting. This feedback loop plays a critical role in the Arctic Amplification phenomenon, where the Arctic region is warming at a faster rate than the rest of the world.

Statement 3 is incorrect: Arctic Amplification does not strengthen the Arctic polar vortex; rather, it weakens it by allowing Arctic air to shift farther south, contributing to extreme weather events in other parts of the world.

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/explained-what-is-causing-arctic-warming-should-india-be-worried/article65778586.ece#:~:text=According%20to%20the%20World%20Meteorological,polar%20regions%2C%20especially%20the%20Arctic.>

<https://www.climatesignals.org/climate-signals/arctic-amplification>

<https://www.air-worldwide.com/blog/posts/2019/4/arctic-amplification-a-very-bad-positive-feedback-loop/>

Q.16) Which one of the following options correctly describes the term “carbon fertilisation”?

- a) The process of capturing and storing atmospheric carbon dioxide in Earth’s crust.
- b) Increase of carbon dioxide in the atmosphere leading to an increase in the rate of photosynthesis in plants.
- c) A method for removing dissolved organic substances from Ocean and other marine bodies.
- d) None of the above.

Ans) b

Exp) option b is the correct answer.

Option a is incorrect: Carbon sequestration is the process of capturing and storing atmospheric carbon dioxide. It is one method of reducing the amount of carbon dioxide in the atmosphere with the goal of reducing global climate change.

Option b is correct: The carbon dioxide fertilization or carbon fertilisation is responsible for plant growth, and it also contributes to the greening effect. **It refers to the increase of carbon dioxide in the atmosphere leading to an increase in the rate of photosynthesis in plants.**

Option c is incorrect: Carbon adsorption is an effective method for removing dissolved organic substances that cause tastes, odours, or colours is adsorption by activated carbon. Adsorption is the capacity of a solid particle to attract molecules to its surface. Powdered carbon mixed with water can adsorb and hold many different organic impurities. When the carbon is saturated with impurities, it is cleaned or reactivated by heating to a high temperature in a special furnace.

Source: <https://greenstories.co.in/carbon-fertilization-and-its-effects-on-crop/>

<https://www.usgs.gov/faqs/what-carbon-sequestration#:~:text=Carbon%20sequestration%20is%20the%20process,carbon%20sequestration%3A%20geologic%20and%20biologic.>

<https://www.britannica.com/technology/water-supply-system/Chlorination#ref1084833>

<https://www.britannica.com/technology/water-supply-system/Chlorination#ref1084833>

Q.17) Consider the following statements regarding National Mission on Strategic Knowledge for Climate Change:

1. It is one of the eight missions under the National Action Plan for Climate Change.
 2. It seeks to build a vibrant and dynamic knowledge system to fulfil ecologically sustainable development.
 3. The Council of Scientific & Industrial Research (CSIR) is the main implementing agency of this mission.
- Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: There are eight National Missions which form the core of the National Action Plan. They focus on promoting understanding of climate change, adaptation and mitigation, energy efficiency and natural resource conservation. Those are-

- 1) National Solar Mission
- 2) National Mission for Enhanced Energy Efficiency
- 3) National Mission on Sustainable Habitat
- 4) National Water Mission
- 5) National Mission for Sustaining the Himalayan Eco-system
- 6) National Mission for a Green India
- 7) National Mission for Sustainable Agriculture
- 8) **National Mission on Strategic Knowledge for Climate Change**

Statement 2 is correct: The National Mission on Strategic Knowledge for Climate Change (NMSKCC) seeks to build a vibrant and dynamic knowledge system that would inform and support national action for responding effectively to the objective of ecologically sustainable development.

Statement 3 is incorrect: NMSKCC is implemented by the Department of Science and Technology and not the CSIR.

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1883746#:~:text=The%20National%20Mission%20on%20Strategic,building%20relating%20to%20climate%20science.https://static.pib.gov.in/WriteReadData/specificdocs/documents/2021/dec/doc202112101.pdf>

Q.18) Consider the following statements regarding the Forest Carbon Partnership Facility (FCPF):

1. It is a specialized agency of the United Nations.
2. The FCPF assists countries in their REDD+ efforts by providing them with financial and technical assistance.
3. Activities of the FCPF are funded by the Green Climate Fund.

Which of the statements given above is/ are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 2 only
- d) 3 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect: The Forest Carbon Partnership Facility is a global partnership of governments, businesses, civil society, and Indigenous Peoples focused on reducing emissions from deforestation and forest degradation, forest carbon stock conservation, the sustainable management of forests, and the enhancement of forest carbon stocks in developing countries (activities commonly referred to as REDD+).

Statement 2 is correct: The four strategic objectives of the FCPF:

- 1) **To assist countries in their REDD+ efforts by providing them with financial and technical assistance in building their capacity to benefit from possible future systems of positive incentives for REDD+.**
- 2) To pilot a performance-based payment system for REDD+ activities, with a view to ensuring equitable benefit sharing and promoting future large-scale positive incentives for REDD+.
- 3) Within the approach to REDD+, to test ways to sustain or enhance livelihoods of local communities and to conserve biodiversity.
- 4) To disseminate broadly the knowledge gained in the development of the Facility and the implementation of Readiness Preparation Proposals (RPPs) and Emission Reductions Programs (ERPs).

Statement 3 is incorrect: The FCPF has two separate but complementary funding mechanisms, the Readiness Fund and the Carbon Fund, to achieve its strategic objectives. Both funds are underpinned by a multi-donor fund of governments and non-governmental entities, including private companies that make a minimum financial contribution of \$5 million.

- 1) Contributors to the Readiness Fund are known as Donor Participants.
- 2) Contributors to the Carbon Fund are known as Carbon Fund Participants.
- 3) Developing countries participating in the FCPF (both funds) are known as REDD Country Participants.

Whereas the Green Climate Fund was established by 194 countries that are party to the UN Framework Convention on Climate Change in 2010. It is designed as an operating entity of the UNFCCC's financial mechanism and is headquartered in the Republic of Korea.

Source: <https://www.forestcarbonpartnership.org/about-fcpf-0>

<https://www.unep.org/about-un-environment/funding-and-partnerships/green-climate-fund>

Q.19) Which of the following statements correctly describes the difference between Kyoto Protocol and Paris Agreement?

- a) While the Kyoto protocol exempted industrialized countries, Paris agreement required them to reduce greenhouse gases.
- b) While Kyoto protocol focused on 6 major greenhouse gases, Paris agreement focused on most major greenhouse gases.
- c) While Kyoto protocol aimed to reduce the temperature by 2°C, Paris agreement aimed to limit the increase to 2°C above pre-industrial levels.
- d) While the Kyoto protocol was legally non-binding, Paris agreement is a legally binding commitment.

Ans) b

Exp) Option b is the correct answer.

Kyoto Protocol and Paris Agreement were the two major milestones in the history of emission reduction for greenhouse gases. The differences between the two are:

Option a is incorrect – Kyoto Protocol, sets binding emission reduction targets for 37 industrialized countries and the European community in its first commitment period. It didn't exempt industrialized countries. Paris agreement on the other hand, **included both developed and developing countries** diluting the principle of Common but differentiated responsibility.

Option b is correct – The Kyoto Protocol focused only on major 6 Greenhouse gas emissions. They are Carbon dioxide methane, sulphur hexafluoride, HFCs, PFCs and nitrous oxide. While **the Paris agreement** rather focussed on reducing the emissions **of all the major anthropogenic greenhouse gases**. There was no specific GHGs taken and rather generally all the greenhouse gases were to be included in calculation as per the agreement.

Option c is incorrect - The specific goal of the Paris climate agreement was to reduce greenhouse gas emissions so that the global average temperature would not rise more than 2 degrees Celsius above pre-industrial levels with an earnest effort to not allow it to rise 1.5 degrees Celsius above pre-industrial levels.

The goal in Kyoto Protocol was to reduce greenhouse gas emissions to 5.2% below 1990 levels by 2012. There was no consideration to control specific amount of temperature rise in the Kyoto Protocol. Option d is incorrect – **Kyoto Protocol binds developed countries** because it recognizes that they are largely responsible for the current high levels of GHG emissions in the atmosphere, which are the result of more than 150 years of industrial activity. On the other hand, while Paris Agreement increased accountability through National Determined Contributions, it was voluntary and there was **no legally binding** provisions.

Source: <https://www.careaboutclimate.org/blog/paris-agreement-vs-kyoto-protocol-comparison-chart>

Q.20) With reference to Biodiversity Heritage Site (BHS) located in various states of India, Consider the following pairs:

Biodiversity Heritage Site	State
1. Arittapatti Biodiversity Heritage Site	Kerala
2. Hajong Tortoise Lake	Sikkim
3. Silachari Caves	Tripura

4. Mahendragiri hill Odisha
 Biodiversity Heritage
 Site

How many pairs given above are correctly matched?

- a) Only one pair
 b) Only two pairs
 c) Only three pairs
 d) All four pairs

Ans) b

Exp) Option b is the correct answer.

Biodiversity Heritage Sites (BHS) are areas that are unique, ecologically fragile ecosystems that have rich biodiversity, including wild and domesticated species, rare and threatened species, keystone species, and species of evolutionary significance. These areas may also contain fossil beds and have cultural, ethical or aesthetic values. BHS can be terrestrial, coastal, inland waters, or marine environments and are important for the maintenance of cultural diversity, with or without a long history of human association with them.

Pair 1 is incorrectly matched: Arittapatti Biodiversity Heritage Site is located in Madurai district of Tamil Nadu. This BHS has rich biological and historical significance with the presence of around 250 bird species including 3 flagship Raptor species - Laggar Falcon, Shaheen Falcon, Bonelli's Eagle and wildlife like Indan Pangolin, Python and Slender Loris.

Pair 2 is incorrectly matched: Hajong Tortoise Lake is located in the Maibang Taluk of the Dima Hasao district in Assam. This site is of significant importance as it serves as a natural habitat for the Critically Endangered freshwater 'Black Softshell turtle' Nilssonina nigricans and Endangered 'Indian Peacock Softshell turtle' Nilssonina hurum, along with other major species of flora and fauna.

Pair 3 is correctly matched: Silachari Caves is located in the Gomati district of Tripura and covers an area of 100 hectares. This site is unique as it is the only natural cave in Tripura. It serves as a habitat for several threatened cave bat species in Tripura and has a rich diversity of flora.

Pair 4 is correctly matched: Mahendragiri hill Biodiversity Heritage Site is situated in the Gajapati district of Odisha and covers an area of 4250 hectares. The site has rich floral diversity, representing 40% of the reported flora of Odisha, including 1,358 species of plants, such as angiosperms, pteridophytes, bryophytes, lichens, and macro-fungi, and 2 species of gymnosperms.

Source: <http://nbaindia.org/content/106/29/1/bhs.html>

http://www.wiienviis.nic.in/Database/bhs_8650.aspx

Q.21) Consider the following:

1. Global Climate Change Alliance
2. Forest Carbon Partnership Facility
3. Clean Technology Fund
4. Carbon Initiative for Development

Which of the above given initiatives are managed by the World Bank?

- a) 1, 2 and 3 only
 b) 1, 2 and 4 only
 c) 2, 3 and 4 only
 d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Option 1 is incorrect. The **Global Climate Change Alliance (GCCA)** is an initiative of the European Union. Its overall objective is to build a new alliance on climate change between the **European Union** and the poor developing countries that are most affected and that have the least capacity to deal with climate change.

Option 2 is correct. The **Forest Carbon Partnership Facility (FCPF)** and the **BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL)** focus on sustainable forest and land use. These funds guide readiness and implementation of reducing emissions from deforestation and forest degradation (REDD+), including the testing the purchase of REDD+ credits and incentivizing the development and implementation of sustainable land use activities. They are **managed by the World Bank's** Climate Change Fund Management Unit.

Option 3 is correct. The Clean Technology Fund (CTF) is administered by the World Bank in partnership with Regional Development Bank. It has begun financing clean technology deployment projects in fast growing developing countries. The objective of the CTF is to use the minimum level of concessional finance necessary to realize investment opportunities that will have transformative effects on the greenhouse gas (GHG) emissions.

Option 4 is correct. The **Carbon Initiative for Development** has a portfolio of programs that support similar emissions reduction projects, often small-scale at the household level. It has developed the Standardized Crediting Framework—a new approach to crediting emission reductions in the post-Kyoto era. It is managed **by the World Bank's** Climate Change Fund Management Unit.

Source: Forum IAS Red Book

<https://www.worldbank.org/en/topic/climatechange/brief/world-bank-carbon-funds-facilities>

Q.22) In the context of The Partnership for Action on Green Economy (PAGE) initiative, consider the following statements:

1. It was launched in 2013 as a direct response to the Rio+20 Declaration.
2. It is a joint initiative of the International Union for Conservation of Nature (IUCN) and World Resources Institute (WRI).
3. It helps the countries in achieving the Sustainable Development Goals.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct. PAGE was launched in 2013 as a response to the call at Rio+20 to support countries addressing one of the greatest challenges of our time: building economies that improve human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.

Statement 2 is incorrect. The **United Nations Partnership for Action on Green Economy (PAGE)** puts sustainability at the heart of economic policymaking. The partnership brings together five United Nations agencies; UNEP, UNDP, ILO, UNIDO, and UNITAR. Hence it is not a joint initiative of the Union for Conservation of Nature (IUCN) and the World Resources Institute (WRI).

Statement 3 is correct. PAGE offers a comprehensive and coordinated package of technical assistance and capacity-building services. PAGE represents a mechanism to coordinate UN action on green economy and **to assist countries in achieving and monitoring the emerging Sustainable Development Goals**, especially SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Source: <https://www.un-page.org/about-page/>

Q.23) With reference to the OzonAction, consider the following statements:

1. It is an intergovernmental organization launched by the BRICS.
2. It assists countries to sustain their compliance with the Montreal Protocol.
3. It is an outcome of the 2015 Paris Climate Conference.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. OzonAction is a branch of the United Nations Environment Programme (UNEP) which has its main office in Paris, and is part of UNEP's Division of Technology, Industry and Economics (DTIE). The UN Environment Programme (UNEP) became an Implementing Agency of the Montreal Protocol's Multilateral Fund on 19 June 1991, and it was given this clearinghouse mandate. Since that date, UNEP OzonAction, which is part of UNEP's Law Division has been strengthening the capacity of governments - particularly the operational focal points for the Montreal Protocol

Statements 2 is correct. OzonAction has three areas of work:-

- 1) Assisting developing countries in UNEP's capacity as an Implementing Agency of the Multilateral Fund for the **Implementation of the Montreal Protocol**, through a Compliance Assistance Programme (CAP).
- 2) Assisting countries with economies in transition (CEIT countries) in UNEP's capacity as an Implementing Agency of the Global Environment Facility.
- 3) Specific partnerships with bilateral agencies and Governments.

Statement 3 is incorrect: OzonAction's story begins with the Montreal Protocol that was signed and brought into force in 1989. **OzonAction was established in the early 1990s (not an outcome of Paris climate Conference).** OzonAction assists developing countries and countries with economies in transition (CEITs) to enable them to achieve and sustain compliance with the Montreal Protocol.

Source: <https://www.unep.org/ozonaction/who-we-are>

<https://sdgs.un.org/partnerships/unep-montreal-protocol-ozonaction-programme>

<http://terrepolicycentre.com/pdf/OzonAction-SM-Strategy.pdf>

Q.24) Clydebank Declaration, recently seen in news, is primarily aimed at

- a) addressing the issue of deforestation and forest degradation.
- b) ensuring gender equality in the fight against climate change.
- c) reducing emissions from the maritime sector by establishing green shipping corridors.
- d) eliminating the heavy metal pollution in river waters by 2030.

Ans) c

Exp) Option c is the correct answer.

The United Kingdom has announced the launch of the Clydebank Declaration on Green Shipping Corridors at the COP26 conference in Glasgow. It aims to reduce the emissions from the maritime sector. **The signatories of the Declaration are to support the establishment of green shipping corridors – zero-emission maritime routes between 2 (or more) ports.** The declaration aims to support the establishment of at least 6 green corridors by 2025, while aiming to scale activity up in the following years, by inter alia supporting the establishment of more routes, longer routes and/or having more ships on the same routes.

Since November 2021, two green corridors have been set in motion – one between Los Angeles and Shanghai, and one between Antwerp and Montreal. 22 countries including the US, Japan, Australia and Canada have signed the Clydebank Declaration and India has not signed the Declaration yet.

Source: <https://www.gov.uk/government/publications/cop-26-clydebank-declaration-for-green-shipping-corridors/cop-26-clydebank-declaration-for-green-shipping-corridors#:~:text=The%20signatories%20of%20the,number%20of%20green%20corridors.>

Q.25) With reference to Accelerating to Zero (A2Z) Coalition, consider the following statements:

1. It was launched during the Paris Climate Meet of 2015
2. It aims to phase out sale of new petrol and Diesel vehicles by 2040 globally.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

The A2Z Coalition is a partnership of various organizations working towards accelerating the transition to zero-emission vehicles. The coalition includes partners such as the UK Government's COP26 Presidency, The Climate Change High-Level Champions, the International Council on Clean Transportation, Climate Group, and the Drive Electric Campaign.

Statement 1 is incorrect: The United Nations Framework Convention on Climate Change (COP27) **launched the Accelerating to Zero (A2Z) Coalition**, the next step in securing more ambitious commitments to a zero-emission vehicles transition aligned with the Paris Agreement (COP 21).

Statement 2 is correct: The A2Z Coalition aims to accelerate the transition to zero-emission vehicles (ZEVs) and ultimately phase out the sale of new petrol and diesel vehicles by 2040 globally and by no later than 2035 in leading markets.

Source: <https://www.livemint.com/news/world/accelerating-to-zero-coalition-launches-at-cop27-to-speed-up-transition-to-zero-emission-vehicles-11668686662963.html> <https://acceleratingtozero.org/>

Q.26) With reference to the National Mission for Enhanced Energy Efficiency (NMEEE), consider the following statements:

1. It is one of eight national missions listed in the National Action Plan on Climate Change (NAPCC).
2. It is being implemented by the Ministry of New and Renewable Energy.
3. Energy Efficiency Financing Platform (EEFP) is one of the initiatives launched under the NMEEE.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. The National Mission for Enhanced Energy Efficiency (NMEEE) **is one of eight national missions listed in the National Action Plan on Climate Change (NAPCC)**. The mission's main objective is to boost the market for energy efficiency by establishing supportive laws and policies. It also plans to support new, environmentally friendly business models for the energy efficiency industry.

Statement 2 is incorrect. The National Mission for Enhanced Energy Efficiency (NMEEE) is implemented by the Bureau of Energy Efficiency (BEE). BEE is an organization of the Indian government, under the **Ministry of Power**.

Statement 3 is correct. Energy Efficiency Financing Platform (EEFP) was launched as one of the initiatives under National Mission for Enhanced Energy Efficiency to provide a platform to interact with Financial Institutions (FIs) and project developers for implementation of energy efficiency projects.

Other initiatives under NMEEE are:

- 1) **Framework for Energy Efficient Economic Development (FEEED)** - Developing fiscal instruments to leverage financing for Energy Efficiency through risk mitigation:
- 2) **Perform Achieve and Trade Scheme (PAT)** - Implementing a market-assisted compliance mechanism to accelerate the implementation of cost-effective improvements in energy efficiency in large energy-intensive industries.
- 3) **Market Transformation for Energy Efficiency (MTEE)** - Accelerating the shift to energy-efficient appliances in specific applications through innovative measures to make the products more affordable.

Source: <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1744431>

<https://vikaspedia.in/energy/policy-support/energy-efficiency/national-mission-for-enhanced-energy-efficiency>

Q.27) Consider the following statements about National Adaptation Fund for Climate Change (NAFCC):

1. It is a Centrally Sponsored Scheme launched in the year 2011-12.
2. National Bank for Agriculture and Rural Development (NABARD) is the National Implementing Entity of NAFCC.
3. No separate budget allocation is provided for this fund, instead the government utilizes the funds available under various other schemes.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 2 only
- d) 1 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect. The National Adaptation Fund for Climate Change (NAFCC) was established in 2015–16 as a **Central Sector Scheme**. NAFCC's primary goal is to encourage practical adaptation initiatives that lessen the harmful effects of climate change.

Statement 2 is correct. National Bank for Agriculture and Rural Development (**NABARD**) **has been chosen as the National Implementing Entity (NIE)** for carrying out adaptation projects under NAFCC. It is due to the fact that there is an existing arrangement with NABARD as National Implementing Entity (NIE) for Adaptation Fund (AF) under Kyoto Protocol and its presence throughout the country.

Statement 3 is incorrect. Government of India provides budgetary allocations to the NAFCC annually. In recent years there have been concerns about the declining amounts of the budgetary allocations to the NAFCC. The government allotted INR 350 crore in FY16, and INR 60 crore assigned in Budget 2022.

Source: <https://blog.forumias.com/national-adaptation-fund/orfonline.org>

<https://vikaspedia.in/energy/environment/climate-change/national-adaptation-fund-for-climate-change>

Q.28) With reference to the National Innovations on Climate Resilient Agriculture (NICRA), consider the following statements:

1. It was launched by the Indian Council of Agricultural Research (ICAR).
2. It aims to conduct research about climate change impacts on Indian agriculture.
3. It focusses only on the agricultural crops, and the fisheries and livestock fall outside its scope.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. Indian Council of Agricultural Research (ICAR), Ministry of Agriculture and Farmers Welfare launched a flagship network project 'National Innovations on Climate Resilient Agriculture' (NICRA) in 2011. The project aims at strategic research on adaptation and mitigation, demonstration of technologies on farmers' fields and creating awareness among farmers and other stakeholders to minimize the climatic change impacts on agriculture.

Statement 2 is correct and statement 3 is incorrect: The project aims to enhance resilience of Indian agriculture to climate change and climate vulnerability **through strategic research and technology demonstration. The research on adaptation and mitigation covers crops, livestock, fisheries and natural resource management. The project consists of four components viz. Strategic Research, Technology Demonstration, Capacity Building and Sponsored/Competitive Grants.**

Source: <http://www.nicra-icar.in/nicrarevised/index.php/home1>

<https://blog.forumias.com/national-innovations-in-climate-resilient-agriculture/nicra-2/>

<https://vikaspedia.in/agriculture/policies-and-schemes/crops-related/krishti-unnati-yojana/paramparagat-krishti-vikas-yojana>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1743354>

Q.29) Which of the following are part of India's Updated Nationally Determined Contributions (NDCs)?

1. To put forward and further propagate a healthy and sustainable way of living as a key to combating climate change.
2. To reduce Emissions Intensity of its GDP by 45% by 2030, compared to 2005 level.
3. To achieve about 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030.
4. To create an additional carbon sink of 2.5 to 3 billion Tonnes of CO₂ equivalent by 2030.
5. To achieve Net zero emissions by 2030.

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 5 only
- c) 1, 2, 4 and 5 only
- d) 1, 2, 3 and 4 only

Ans) d

Exp) Option d is the correct answer.

The United Nations Framework Convention on Climate Change (UNFCCC) received India's Intended Nationally Determined Contribution (NDC) on October 2, 2015. Each Party shall communicate a nationally determined contribution every five years, according to Article 4 of the Paris Agreement.

In conformity with the Paris Agreement, India communicated the following update to its first NDC recently:

Option 1 is correct: To combat climate change, it is important to promote a sustainable, healthy way of life that is based on traditions and values of moderation and conservation. One way to do this is through the "LIFE" movement, which refers to "Lifestyle for Environment."

Option 2 is correct: Compared to 2005 levels, the Emissions Intensity of its GDP to be reduced by 45% by 2030.

Option 3 is correct: With the help of technology transfer and low-cost international financing, especially from the Green Climate Fund (GCF), to attain around 50% of the total installed capacity of electric power from non-fossil fuel-based energy sources by 2030.

Option 4 is correct: To create an additional carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent through additional forest and tree cover by 2030.

Option 5 is incorrect: Achieving net zero emission by 2030 is not an INDC of India. India aims to become a net zero emitter by 2070.

Source: <https://unfccc.int/sites/default/files/NDC/2022-08/India%20Updated%20First%20Nationally%20Determined%20Contrib.pdf>

Q.30) With reference to Important Bird Areas (IBAs), consider the following statements:

1. It is a program of Bird Life International.
2. IBAs in India are declared by the Ministry of Environment, Forest and Climate Change (MoEFCC).
3. For an area to be designated as an IBA, it needs to have a substantial population of one or more bird species that are threatened on a global scale.
4. IBAs are exclusively found within national parks and wildlife sanctuaries only.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 3 and 4 only
- d) 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

The IBA program of Birdlife International aims to utilize birds as reliable indicators of ecosystem health by identifying, monitoring, and safeguarding a worldwide network of IBAs. These IBAs play a crucial role in the conservation of birds and associated biodiversity at the global, regional, or sub-regional levels by serving as protected areas.

Statement 1 is correct: Important Bird Areas (IBAs) is a program of Bird Life International, which is a global partnership of conservation organizations.

Statement 2 is incorrect: IBAs in India are identified by the Bombay Natural History Society (BNHS), which is the partner organization of Bird Life International in India.

Statement 3 is correct: According to Birdlife International, designation of IBAs is based on standardized criteria, namely (i) hold significant numbers of one or more globally threatened bird species, (ii) be one of a set of sites that together hold a suite of restricted-range species or biome-restricted species and (iii) have exceptionally large numbers of migratory or congregatory birds.

Statement 4 is incorrect: IBAs can be located in a variety of habitats, including protected areas, but can also be found in non-protected areas such as agricultural lands and urban areas.

Source: http://www.wiienviis.nic.in/Database/IBA_8463.aspx

Q.31) With reference to the Global Climate Change Alliance (GCCA), consider the following statements:

1. It is an initiative of the United Nations Environment Programme.
2. It provides only technical support to the countries and does not provide any financial support.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect. The European Union launched the Global Climate Change Alliance (GCCA) in 2007. The overall objective is to create a new climate change alliance between the European Union and the poor countries that are most affected and lack the resources to deal with the issue.

Statement 2 is incorrect. The GCCA provides technical as well as financial support to partner countries to integrate climate change into their development policies and budgets, and to implement projects that address climate change on the ground, promoting climate-resilient, low-emission development. Technical and financial cooperation, in turn, informs political dialogue and exchange of experience at regional and global levels.

Source: <https://climatefundsupdate.org/the-funds/global-climate-change-alliance/#:~:text=The%20Global%20Climate%20Change%20Alliance,to%20deal%20with%20climate%20change>.

Q.32) Which of the following ministries has launched Eco Niwas Samhita?

- a) The Ministry of Housing and Urban Affairs
- b) The Ministry of New and Renewable Energy
- c) The Ministry of Power
- d) The Ministry of Rural Development

Ans) c

Exp) Option c is the correct answer.

Eco-Niwas Samhita: It is an Energy Conservation Building Code for Residential Buildings (ECBC-R) and was launched by the **Ministry of Power** of the Indian government. This code was launched on the **National Energy Conservation Day 2018**.

- 1) Its goal is to encourage the design and construction of houses, apartments, and townhouses so that their occupants can benefit from energy efficiency.
- 2) This Code was prepared following extensive discussions with all stakeholders, including building-material suppliers, developers, and architects.
- 3) The initial objective of Part-I of the Code, which establishes a minimum standard for building envelope designs, was to create energy-efficient residential buildings.
- 4) By 2030, the implementation of this Code might result in energy savings of 125 billion units of electricity, or roughly 100 million tonnes of CO2 emissions.

Source: <https://www.econiwass.com/news-details-13.html>

Q.33) Which among the following can be considered as the source of Bio-energy?

1. Wood residue
2. Agricultural crops
3. Municipal solid waste
4. Algae
5. Landfills

Select the correct answer using the code given below:

- a) 1, 4 and 5 only
- b) 1, 2 and 3 only
- c) 2, 3, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

Bioenergy is a type of renewable energy that is derived from biomass, which is organic material such as plants and animals.

Option 1 is correct: Wood is a commonly used source of bioenergy, especially in the form of residues from timber harvesting, sawmills, and other wood processing industries. This material can be used to produce heat and electricity through combustion, gasification, and other conversion technologies.

Option 2 is correct: Agricultural crops and residues such as corn, sugarcane, and soybeans are also important sources of bioenergy. These materials **can be converted into biofuels such as ethanol and biodiesel**, which can be used as transportation fuels.

Option 3 is correct: Municipal solid waste, or garbage, can also be a source of bioenergy. Waste-to-energy facilities use incineration or other technologies to convert waste into heat and electricity.

Option 4 is correct: Algae are a promising source of bioenergy because they can grow quickly and contain high levels of oils that can be converted into biodiesel. Algae can also be used to produce biogas through anaerobic digestion.

Option 5 is correct: Landfills are another source of bio-energy, which is produced when organic material decomposes in the absence of oxygen. This **can be captured and used to generate heat and electricity.**

Source: <https://www.irena.org/bioenergy>

<https://www.energy.gov/eere/bioenergy/bioenergy-basics>

<http://www.fao.org/bioenergy/en/>

Q.34) “Green Economy Initiative”, recently seen in news, is led by which of the following organizations/agencies?

- a) Greenpeace International
- b) World Economic Forum
- c) United Nations Environment Programme
- d) World Wide Fund for Nature

Ans) c

Exp) option c is the correct answer.

The Green Economy Initiative was launched in 2008. It is led by the UN Environment Programme. It is made up of several components whose overall objective is to provide analysis and policy support for investing in green sectors.

Three categories of activities are included in the Green Economy Initiative:

- 1) Producing a Green Economy Report and related research materials that analyze the macroeconomic, sustainability, and poverty reduction implications of green investment across a range of sectors.
- 2) Providing assistance on how to help certain countries shift to a green economy.
- 3) Involving a wide range of research, non-governmental organizations, business, and UN partners in the Green Economy Initiative's implementation.

Source: <https://www.unep.org/explore-topics/resource-efficiency/what-we-do/policy-and-strategy/green-economy>

Q.35) Recently, Joshimath, a small town in Uttarakhand is declared as a landslide-subsidence zone. In this context, which of the following factors make Joshimath highly vulnerable to sinking?

1. Presence of Mantle plumes below Joshimath
2. Lack of proper drainage
3. Situated in middle slopes of a hill
4. Presence of Snow in upper reaches

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

Joshimath, a town in Uttarakhand, India, has been declared a landslide and subsidence-hit zone after satellite images released by the National Remote Sensing Centre of the Indian Space Research Organisation (ISRO) showed it sinking rapidly at a rate of 5.4 cm in just 12 days, possibly due to a subsidence event on January 2. More than 600 houses in Joshimath have developed huge cracks, rendering them unfit for habitation, while roads and fields have also been affected.

Option 1 is incorrect: A mantle plume is a column of hot material that rises up from deep within the Earth's mantle. While mantle plumes can cause volcanic activity, there is no evidence to suggest that Joshimath is located on or near a mantle plume.

Option 2 is correct: According to the experts, lack of a proper drainage system might have also contributed to the sinking of Joshimath. Unplanned and unauthorised construction led to the blocking of the natural flow of water, which eventually resulted in frequent landslides.

Option 3 is correct: Joshimath is situated in middle slopes of a hill bounded by **Karmanasa and Dhaknala streams on west and east and Dhauliganga and Alaknanda rivers on south and north**. The area around town is covered with thick layer of overburden material which makes it highly vulnerable to sinking.

Option 4 is correct: Study by Uttarakhand State Disaster Management Authority (USDMA) highlighted that perennial stream, snow in upper reaches, and highly weathered rocks with low cohesive characteristics makes Joshimath prone to landslides.

Source: https://www.business-standard.com/article/current-affairs/why-is-joshimath-declared-landslide-subsidence-hit-zone-explained-123010901218_1.html

<https://www.hindustantimes.com/india-news/geology-to-unplanned-construction-decoding-why-joshimath-is-sinking-101673028772987.html>

Q.36) With reference to the Small Grants Programme (SGP), consider the following statements:

1. It is an initiative of the Global Environment Facility (GEF).
2. It provides financial support to local civil society and community-based organizations for environmental actions.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. The Small Grants Programme is an initiative of the Global Environment Facility. Through community-based initiatives, the GEF's Small Grants Programme (SGP) has been an effective tool for promoting global environmental and sustainable development.

Statement 2 is correct. The GEF Small Grants Programme (SGP) is a corporate program of the Global Environment Facility that provides financial and technical support to local civil society and community-based organizations to develop and implement innovative local actions that address global environmental issues, while also improving livelihoods and reducing poverty.

Source: <https://www.undp.org/georgia/projects/gef-small-grants-programme>

Q.37) Unlocking NATIONAL Energy Efficiency Potential (UNNATEE), a national strategy document for accelerating energy efficiency in India, is developed by which of the following agencies/organizations?

- a) NITI Aayog
- b) Energy Efficiency Services Limited (EESL)
- c) Bureau of Energy Efficiency (BEE)
- d) Alliance for an Energy Efficient Economy (AEEE)

Ans) c

Exp) Option c is the correct answer.

Bureau of Energy Efficiency (BEE) has developed a national strategy document titled UNNATEE (Unlocking NATIONAL Energy Efficiency potential). It describes a plain framework and implementation strategy to establish a clear linkage between energy supply-demand scenarios and energy efficiency opportunities.

- 1) The document offers a comprehensive roadmap to address India's environmental and climate change mitigation action through energy efficiency measures.
- 2) The document provides a comprehensive strategy for India's environmental and climate change mitigation efforts through energy saving initiatives. The document has now been made available for broader public participation and is looking for comments and valuable suggestions from all the stakeholders.

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1568321#:~:text=The%20strategy%20document%20titled%20UNNATEE,scenarios%20and%20energy%20efficiency%20opportunities.>

Q.38) With reference to the Carbon Pricing Leadership Coalition (CPLC), consider the following statements:

1. It is a voluntary initiative that catalyzes action towards the successful implementation of carbon pricing around the world.
2. The CPLC Secretariat is administered by the World Bank Group
3. It has been established in 1997 as a part of the Kyoto Protocol.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statements 1 and 2 are correct. The Carbon Pricing Leadership Coalition (CPLC) is a voluntary initiative that catalyzes action towards the successful implementation of carbon pricing around the world. The CPLC brings together leaders from government, business, civil society and academia to support carbon pricing, share experiences and enhance the global, regional, national and sub-national understanding of carbon pricing implementation. **The CPLC Secretariat is administered by The World Bank Group.**

Statement 3 is incorrect. **The Coalition was founded on the first day of the Paris Climate Conference (COP21) in 2015** to ensure the inclusion of carbon pricing on the global agenda. The Coalition promotes action through sharing knowledge, targeted technical analysis, and public-private dialogue that facilitates and accelerates the adoption of successful carbon pricing policies.

Source: <https://www.carbonpricingleadership.org/who-we-are>

Q.39) Consider the following statements with reference to the National Mission on Sustainable Habitat:

1. It is one of the eight climate missions under the National Action Plan on Climate Change in India.
2. The mission is governed by the Ministry of Environment, Forest, and Climate Change.
3. Swachh Bharat Mission is part of the National Mission on Sustainable Habitat.
4. The mission also focuses on the development of technologies for producing power from waste.

Which of the above-given statements are correct?

- a) 2, and 3 only
- b) 1, 3, and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

The National Mission on Sustainable Habitat is an umbrella program to reduce energy consumption and hence the risk of climate change due to the urban settlement pattern.

Statement 1 is correct: The **National Mission on Sustainable Habitat is one of the eight climate missions of the Indian government under the NAPCC** (National Action Plan on Climate Change) mitigation strategy.

Statement 2 is incorrect: **National Mission on Sustainable Habitat** was launched in the year 2010 and is **governed by the Ministry of Urban Development**. It was intended to make cities more sustainable

Statement 3 is correct: The Mission on Sustainable Habitat, which is being carried out through the Ministry of Urban Development's 4 flagship missions/ programs, The four flagship missions include:

- 1) Atal Mission on Rejuvenation and Urban Transformation (AMRUT)
- 2) **Swachh Bharat Mission**
- 3) Smart Cities Mission
- 4) Urban Transport Program

Statement 4 is correct: Among the functional areas of the Mission come Energy Conservation Building Code, Growth of Medium and Small Cities, Waste to Energy and R&D Programme. **The development of**

technologies for producing power from waste will be a particular area of focus when it comes to recycling materials and managing urban waste.

Source: <https://mohua.gov.in/upload/uploadfiles/files/NMSH-2021.pdf>

Q.40) Consider the following statements regarding Community Reserves.

1. Once a forest land has been declared a Community Reserve, its governance comes under the local village councils.
2. After a forest has been made into a Community Reserve, people can hunt and practice Jhum cultivation without hindrance.
3. Community Reserves are protected under the Forest Conservation Act, 1980.

Which of the above given statements is / are **incorrect**?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

All the statements are incorrect.

A community reserve is usually formed by the local village council and the forest department signing a memorandum of understanding (MoU).

Option 1 is Incorrect. Once a forest land has been declared a community reserve, its governance comes under the forest department instead of being governed by the local village councils.

Option 2 is also Incorrect. After a forest has been made into a community reserve, people cannot hunt there, nor can they use it for agricultural practices, let alone jhum cultivation.

Option 3 is also Incorrect. Community reserves fall under the protected areas, along with marine protected areas, national parks, wildlife sanctuaries and conservation reserves, according to the Wildlife (Protection) Act (WLP), 1972.

Source:

https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.downtoearth.org.in/news/forests/amp/community-reserves-are-they-forest-department-s-backdoor-entry-into-north-east-india-85242&ved=2ahUKEwju8Jie_bL-AhUk8zgGH4C8AQFnoECDsQAQ&usq=AOvVaw2-tZNdRP-UpLq_q29rG8wL

Q.41) With reference to the Energy Conservation Building Code (ECBC), consider the following statements:

1. It was launched by the Bureau of Energy Efficiency.
2. It provides mandatory requirements for water conservation in buildings.
3. It is applicable for both Government and private buildings.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct. In order to promote energy efficiency in the building sector, the **Bureau of Energy Efficiency (BEE) under the Ministry of Power** launched the Energy Conservation Building Code (ECBC) in May 2007.

Statement 2 is incorrect. ECBC addresses only energy efficiency of buildings. Water and other aspects are generally covered in the green building rating systems.

Statement 3 is correct. The ECBC is applicable to all buildings or building complexes that have a connected load of 100 kW or greater, or a contract demand of 120 kVA or greater and used for commercial purposes. **It is applicable for both Government and private buildings.** The code is not applicable to Equipment and portions of building systems that use energy primarily for manufacturing processes.

Source: <http://upsavesenergy.com/SDAActivitiesECBC.aspx>

https://beeindia.gov.in/sites/default/files/ECBC_FAQs_0.pdf

Q.42) Consider the following statements with reference to the Global Alliance for Climate Smart Agriculture (GACSA):

1. Its membership is open to both businesses and international organizations.
2. The Facilitation Unit of GACSA is hosted by the Food and Agriculture Organization.
3. It was launched at the Earth Summit of 2002.

Which of the above-given statements is/are correct?

- a) 2 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

GACSA is an inclusive, voluntary and action-oriented multi-stakeholder platform on Climate-Smart Agriculture (CSA).

Statement 1 is correct: GACSA is a voluntary coalition **open to governments, international and regional organizations, institutions, civil society, farmers' organizations and businesses** who subscribe to the vision and objectives of the Alliance.

Statement 2 is correct: The Facilitation Unit (FU) serves as the secretariat for the Alliance and helps Alliance members take action to deliver the Alliance's aspirational outcomes. For guidance and programmatic and budget planning purposes, the FU reports to the co-Chairs of the Strategic Committee (SC) of the Alliance.

The Facilitation Unit is hosted by Food and Agriculture Organization.

Statement 3 is incorrect: The concept of Climate-Smart Agriculture (CSA) was originally developed by FAO and officially presented at the Hague Conference on Agriculture, Food Security and Climate Change in 2010, through the paper "Climate-Smart Agriculture: Policies, Practices and Financing for Food Security, Adaptation and Mitigation". **GACSA was launched in 2014 at the UN Climate Summit.**

Source: <https://www.fao.org/gacsa/en/>

Q.43) Which of the following Gases are targeted under the Kyoto Protocol?

1. Nitrous oxide
2. Sulfur hexafluoride
3. Water Vapor
4. Ozone
5. Methane

Select the correct answer using the code given below:

- a) 1, 2, and 5 only
- b) 2, 3, and 4 only
- c) 1, 4 and 5 only
- d) 1, 2, 4 and 5 only

Ans) a

Exp) Option a is the correct answer.

The **Kyoto Protocol is an international agreement adopted in 1997** that aimed to **reduce greenhouse gas emissions** in response to climate change. The protocol **targets six primary greenhouse gases:**

Carbon dioxide (CO₂) - Primarily produced from the burning of fossil fuels like coal, oil, and natural gas, as well as deforestation and other industrial processes.

Methane (CH₄) - Produced by natural sources like wetlands, as well as human activities such as livestock farming, rice cultivation, landfills, and fossil fuel production. **Hence option 5 is correct.**

Nitrous oxide (N₂O) - Emitted from agricultural and industrial activities, as well as the burning of fossil fuels. **Hence option 1 is correct.**

Hydrofluorocarbons (HFCs) - Synthetic gases used in refrigeration, air conditioning, foam blowing, and other industrial processes. They were introduced as replacements for ozone-depleting substances like chlorofluorocarbons (CFCs).

Perfluorocarbons (PFCs) - A group of synthetic chemicals used in various industrial applications, including aluminum production, semiconductor manufacturing, and refrigeration.

Sulfur hexafluoride (SF₆) - A synthetic gas used primarily in electrical transmission and distribution equipment, as well as in magnesium and aluminum production. **Hence option 2 is correct.**

These gases are known to contribute to global warming by trapping heat in the Earth's atmosphere, and the Kyoto Protocol aimed to reduce their emissions in participating countries.

Option 3 and 4 are incorrect: Water Vapor and ozone are not part of **Kyoto Protocol**.

Source: http://unfccc.int/kyoto_protocol/items/2830.php

Q.44) Consider the following statements with reference to the Business Responsibility and Sustainability Report:

1. It is an initiative of the Securities and Exchange Board of India (SEBI).
2. Recently, it has been made mandatory for all the public listed companies in India.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The Securities and Exchange Board of India (SEBI) has decided to introduce new requirements for business sustainability reporting by listed entities. This new report will be called the Business Responsibility and Sustainability Report (BRSR) and will replace the existing Business Responsibility Report (BRR).

Earlier the SEBI in 2015 mandated that listed entities report on ESG (Environment, Social, and Governance) parameters in the Business Responsibility Report (BRR) format.

Statement 2 is incorrect: Business Responsibility and Sustainability Report (BRSR) is more granular with quantifiable metrics in line with the principles enshrined in the ‘National Guidelines on Responsible Business Conduct’. **The BRSR was made mandatory for the top 1000 listed entities (by market capitalization).**

Source: Economic Survey 2022-23 Chapter 7 Page no. 234

https://www.sebi.gov.in/legal/circulars/may-2021/business-responsibility-and-sustainability-reporting-by-listed-entities_50096.html

Q.45) In a first in the country, a state government notified Slender Loris Sanctuary. Consider the following statements with reference to this Sanctuary and Slender Loris:

1. The sanctuary is recently notified by the Karnataka government.
2. Slender Loris is arboreal in nature as it spends most of its life on trees.
3. The species is categorized as “Endangered” as per the IUCN Red list of threatened species.
4. The predatory activities of Slender Loris are very detrimental to the interests of farmers.

Which of the above statements are correct?

- a) 1, 2 and 3 Only
- b) 2 and 3 Only
- c) 2, 3 and 4 Only
- d) 1 and 4 Only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. In a first in the country, Tamil Nadu government notified Kadavur Slender Loris sanctuary under Section 26 (A)(1)(b) of Wildlife (Protection) Act, 1972. The Kadavur Slender Loris sanctuary is to cover 11,806 hectares in Karur and Dindigul districts.

Statement 2 is correct. Slender Loris are small nocturnal mammals, and they are arboreal in nature as they spend most of their life on trees.

Statement 3 is correct. Its IUCN status is Endangered. The survival of the species depends on its habitat improvement, conservation efforts and mitigation of threats.

Statement 4 is incorrect. The species acts as a biological predator of pests in agricultural crops and benefits farmers. Slender Loris has a wide range of ecological roles to play in the terrestrial ecosystem.

Source:

<https://www.google.com/url?sa=t&source=web&rct=j&url=https://newsonair.com/2022/10/14/indias-first-slender-loris-sanctuary-to-be-established-in-tamil-nadu/&ved=2ahUKEwiGtqvBg7P-AhVKSwwGHUWzD0EQFnoECA4QAQ&usq=A0vVaw1DI70JFDuxOGmGYj1ddvr9>

Q.46) Which of the following was/were among the major decisions taken at the Sharm-el-Sheikh Climate Change Conference?

1. To establish a Loss and Damage fund to compensate the most vulnerable countries for their losses due to climate-related disasters.
2. Launch of African Carbon Market Initiative to support climate change initiatives in Africa.
3. Launch of Global Renewables Alliance to promote energy transition toward renewables.

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

There were several key outcomes of the Sharm-el-Sheikh Climate Change Conference i.e., 2022 Conference of Parties 27 of the United Nations Framework Convention on Climate Change.

Statement 1 is correct: The COP27 reached a breakthrough agreement on a new “Loss and Damage” Fund for Vulnerable Countries. 'Loss and Damage' refers to impacts of climate change that cannot be avoided either by mitigation (cutting greenhouse gas emissions) or adaptation (modifying practices to buffer against climate change impacts). The delegates from the United Nations at COP 27 agreed to create a 'Loss and Damages' fund which will compensate the most vulnerable countries for their losses due to climate-related disasters.

Statement 2 is correct: African Carbon Market Initiative (ACMI) was launched in COP 27 to support the climate change initiatives, growth of carbon credit production and create jobs in Africa. The Africa Carbon Markets Initiative (ACMI) seeks to unlock the potential of voluntary carbon markets for financing Africa's energy, climate and development goals.

Statement 3 is correct: The Global Renewables Alliance was launched at COP27 and combines industry bodies and organisations for wind, solar, hydropower, green hydrogen, energy storage and geothermal sectors. The Alliance will also act as a unified voice that represents renewables industries and technologies.

Source: <https://www.unep.org/news-and-stories/story/what-you-need-know-about-cop27-loss-and-damage-fund>

<https://www.seforall.org/ACMI>

<https://unfccc.int/cop27/auv>

<https://www.edie.net/clean-energy-sectors-unite-to-form-global-renewables-alliance-at-co27/>

Q.47) Consider the following statements:

Statement 1: Koalas are examples of specialist species.

Statement 2: They can eat variety of food and thrive in a varied range of habitats.

Which one of the following is correct in respect of the above statements?

- Both the Statement 1 and Statement 2 are correct and Statement 2 is the correct explanation for statement 1
- Both statement 1 and Statement 2 are correct but Statement 2 is not the correct explanation for Statement 1
- Statement 1 is correct but Statement 2 is not correct
- Statement 1 is not correct but Statement 2 is correct

Ans) c

Exp) Option c is the correct answer.

In the field of ecology, classifying a species as a generalist or a specialist is a way to identify what kinds of food and habitat resources it relies on to survive.

Statement 1 is correct. Koala (*Phascolarctos cinereus*) is an **example of specialist species**. Specialist species **eat a limited diet and occupy a much narrower niche**. Native to Australia, koalas are herbivorous marsupials that feed only on the leaves of the eucalyptus tree. Therefore, their range is **restricted to habitats that support eucalyptus trees**. Within this diet, some koalas specialize even further and eat leaves from only one or two specific trees. This can pose a problem when **environmental disruptions**, like effects from climate change or habitat loss, occur. Such disturbances **have a strong effect on specialists** because they cannot adapt to use other food sources or habitats as quickly as generalist species.

Statement 2 is incorrect. Specialist **species evolved to fit a very specific niche**. **Example:** Canada lynx (*Lynx canadensis*) is a carnivorous specialist which preys upon snowshoe hare. It inhabits the forested,

mountainous areas favoured by their prey. In contrast, **generalist species can feed on a wide variety of things and thrive in various environments**. Raccoons (*Procyon lotor*) are an example of a generalist species. They can live in a wide variety of environments, including forests, mountains, and large cities, which they do throughout North America. Raccoons are omnivores and can feast on everything from fruit and nuts to insects, frogs, eggs, and human trash. Other examples of generalist species include bobcats and coyotes.

Source: <https://www.nationalgeographic.org/encyclopedia/generalist-and-specialist-species/#:~:text=Koala%20are%20a%20specialist%20species,leaves%20of%20the%20eucalyptus%20tree.&text=Generalists%20can%20eat%20a%20variety,example%20of%20a%20generalist%20species.>

Q.48) Which among the following are the expected outcomes of National Green Hydrogen Mission of India?

1. Development of green hydrogen production capacity of at least 5 million metric tonne (MMT) per annum.
2. Reduction in India's dependence on fossil fuel imports
3. Abatement of nearly 50 MMT of annual greenhouse gas emissions.
4. Renewable energy capacity addition of about 125 GW in the country

Select the correct answer using the code given below:

- a) 2 and 3 only
- b) 1 and 2 only
- c) 1, 3 and 4 only
- d) 1, 2, 3, and 4

Ans) d

Exp) Option d is the correct answer.

The **National Green Hydrogen Mission, approved by the Union Cabinet on January 4, 2022**, set ambitious goals to position India as a global leader in green hydrogen production and supply. This mission aimed to foster export opportunities for green hydrogen and its derivatives, reduce the country's reliance on imported fossil fuels and feedstock, and stimulate domestic manufacturing capabilities. Additionally, it sought to attract investment and create new business opportunities for the industry, generate employment, drive economic development, and support cutting-edge research and development projects in the field. **By 2030, the National Green Hydrogen Mission envisions significant achievements in the sustainable energy sector.**

Option 1 and 4 are correct: The mission **targets the development of a green hydrogen production capacity of at least 5 million metric tons (MMT) per annum**, supported by the **addition of approximately 125 GW of renewable energy capacity** in India. This **effort is expected to attract over Rs. Eight lakh crore in total investments and generate more than six lakh jobs.**

Option 2 and 3 are correct: Moreover, the **mission aims to reduce India's dependence on fossil fuel imports by a cumulative amount of over Rs. One lakh crore and abate nearly 50 MMT of annual greenhouse gas emissions**, further contributing to global climate change mitigation efforts.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1888547>

<https://www.india.gov.in/spotlight/national-green-hydrogen-mission>

Q.49) With reference to the Environmental Protection Act of 1986, which of the following statements is/are correct?

1. The Environment Impact Assessment in India is statutorily backed under this act.
2. The act defines Critical Wildlife Habitat for forest dwellers.
3. The Coastal Regulation Zones are notified under the Act.

Choose the correct answer using the options given below:

- a) 1 only
- b) 1 and 3 only
- c) 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Government of India has enacted the comprehensive Environmental Protection Act, 1986 to deal with the environmental degradation and pollution. Some details are as follows:

Statement 1 is correct - The environmental impact assessment in India was started in 1976-77 when the Planning Commission asked the then Department of Science and Technology to examine the river-valley projects from environmental angle. The Government of India enacted the Environment (Protection) Act in 1986. To achieve the objectives of the Act, one of the decisions that were taken is to make environmental impact assessment statutory.

Statement 2 is incorrect - The Critical Wildlife Habitats have been envisaged in Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006. The power to notify the rules to designate a CWH rests with Ministry of Environment and Forests.

Statement 3 is correct - In India, the Coastal Regulation Zone (CRZ) Rules govern human and industrial activity close to the coastline, in order to protect the fragile ecosystems near the sea. The coastal regulation zones have been declared by the **Ministry of Environment, Forest and Climate change** under the **Environment Protection Act 1986**. While the CRZ Rules are made by the Union environment ministry, implementation is to be ensured by state governments through their Coastal Zone Management Authorities.

Source: Forum IAS Red book on Environment

<https://www.downtoearth.org.in/news/forests/community-forest-rights-in-critical-habitats-face-hurdle-due-to-lack-of-legal-roadmap-57602>

<https://blog.ipleaders.in/environmental-impact-assessment-in-india/>

Q.50) The “Global Alliance for Industry Decarbonization” aims to accelerate net-zero ambitions and the decarbonization of industrial value chains. Consider the following statements with reference to this Alliance:

1. It was formed under the Nairobi Declaration adopted by the United Nations Development Programme.
2. JSW steel and Tata Steel are the founding members of the alliance from India.
3. The membership of the Alliance is open to private firms only.

Which of the above given statements are **incorrect**?

- a) 1 and 3 Only
- b) 1 and 2 Only
- c) 2 and 3 Only
- d) 1, 2 and 3

Ans) a

Exp) option a is the correct answer.

The International Renewable Energy Agency (IRENA) and 13 companies across industry sectors have launched the Global Alliance for Industry Decarbonization.

Statement 1 is incorrect. It was formed under the Bali Declaration adopted during The International Renewable Energy Agency’s (IRENA) Investment Forum on Energy Transitions held in Bali, Indonesia.

Statement 2 is correct. The Founding members of the alliance include Siemens Energy Enel Green Power, TAQA Arabia, JSW (India), Tata Steel (India), Sable Chemicals, Repsol, Equinor among others.

Statement 3 is incorrect. Membership of the Alliance is open to public and private firms and for the stakeholders operating in energy-intensive sectors that have the ambition to decarbonize their activities along their value chains.

Source:

<https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.irena.org/news/pressreleases/2022/Sep/IRENA-and-Industry-Leaders-Launch-the-Alliance-for-Industry-Decarbonization&ved=2ahUKEwjit6-3iLP-AhUOS2wGHe1ACXMQFnoECCcQAQ&usg=AOvVaw23vFmr2sP8j-2JKG-wxgc6>

Q.1) With reference to different types of biodiversity, consider the following pairs:

Type of Biodiversity	Description
1. Genetic diversity	It refers to the variety of genes present within a particular species.
2. Species diversity	It refers to the variety of living organisms within a region.
3. Ecosystem diversity	It refers to the variety of different species and their interactions within a particular ecosystem.

How many pairs given above are correctly matched?

- Only one pair
- Only two pairs
- All three pairs
- None of the pairs

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correctly matched: The term "genetic diversity" pertains to the diversity and variation in genes found within a particular species. It is vital for the species to be able to adapt to changing environmental conditions and withstand drastic changes in order to ensure the survival and continuation of the population.

Pair 2 is correctly matched: The species diversity refers to the assortment of different species present in a particular habitat or geographic area. Habitats such as rainforests and coral reefs are known to have a high number of species, while regions such as polluted streams or salt flats have a lower number of species.

Pair 3 is incorrectly matched: Ecosystem diversity refers to the range of different ecosystems within a specific location. It refers to the different types of habitats. An ecosystem is comprised of a community of living organisms and their physical environment that interact with one another. The size of an ecosystem can vary greatly, ranging from a small pond to an entire forest or even larger.

Source: <https://australian.museum/learn/science/biodiversity/what-is-biodiversity/#:~:text=Biodiversity%20is%20usually%20explored%20at,complexity%20of%20life%20on%20Earth.>

Q.2) If you observe Hoolock Gibbon, Golden Langur, and Lion-Tailed Macaque while travelling through a region, which type of region are you most likely in?

- Tropical rainforest
- Arctic tundra
- Temperate deciduous forest
- Hot Desert

Ans) a

Exp) Option a is the correct answer.

Option a is correct: Hoolock gibbons, golden langurs, and lion-tailed macaques are all primates that are typically found in tropical rainforests. Other animals commonly found in tropical rainforests include jaguars, orangutans, and toucans.

Option b is incorrect: The Arctic tundra is a cold and dry biome characterized by low-growing vegetation and animals such as polar bears, arctic foxes, and caribou.

Option c is incorrect: Temperate deciduous forests are characterized by trees that lose their leaves in the fall and include species such as oak, maple, and beech. The animals found in this biome include deer, bears, and birds such as woodpeckers and owls.

Option d is incorrect: Deserts are characterized by low precipitation and sparse vegetation, and the animals found here have adaptations to conserve water, such as camels, snakes, and lizards.

Source:

https://d43fweuh3sg51.cloudfront.net/media/assets/wgbh/tdc02/tdc02_doc_biomesummary/tdc02_doc_biomesummary.pdf

Q.3) Which of the following statements about medicines obtained from plants are correct?

1. Quinine, obtained from the bark of the Cinchona tree, is used to treat malaria.
2. Taxol, a chemotherapy drug used to treat cancer, is obtained from the bark of the Himalayan Yew.
3. Aspirin, a popular pain reliever, is extracted from the Willow tree.
4. Ladies Slipper Orchid is used to treat anxiety.

Select the correct answer using the code given below:

- a) 1 and 4 only
- b) 1, 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: Quinine is a medicine used to treat malaria, and it is obtained from the bark of the Cinchona tree, which is native to South America. Quinine has been used for centuries to treat malaria, and it remains an important drug in the treatment of the disease today.

Statement 2 is correct: Taxol is a chemotherapy drug used to treat cancer, and it is obtained from the bark of the Himalayan Yew. Taxol was first isolated in the 1960s, and it has since become an important drug in the treatment of several types of cancer.

Statement 3 is correct: Aspirin is derived from salicylic acid, which is found in the bark of the Willow tree. Aspirin is a popular pain reliever.

Statement 4 is correct: The Ladies Slipper Orchid is used in some traditional medicine systems to treat insomnia and anxiety.

Source: <https://blog.forumias.com/wp-content/uploads/2021/12/FORUM-IAS-RED-BOOK-ENVIRONMENT-2021.pdf>

<https://www.downtoearth.org.in/news/himalayan-yew-to-fight-cancer-29559>

<https://nsdl.niscpr.res.in/xmlui/bitstream/handle/123456789/161/Medicinal%20Plants.pdf?sequence=1&isAllowed=y>

[https://www.mountsinai.org/health-library/herb/willow-](https://www.mountsinai.org/health-library/herb/willow-bark#:~:text=The%20bark%20of%20white%20willow,inflammatory%20effects%20of%20the%20herb.)

[bark#:~:text=The%20bark%20of%20white%20willow,inflammatory%20effects%20of%20the%20herb.](https://www.mountsinai.org/health-library/herb/willow-bark#:~:text=The%20bark%20of%20white%20willow,inflammatory%20effects%20of%20the%20herb.)

Q.4) With reference to the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, consider the following statements:

1. The Pink pages represent species which are critically endangered.
2. The Green pages represent species that are no longer threatened.
3. Recently, the IUCN status of the Long-tailed Macaque has been changed from endangered to vulnerable.
4. A species accorded 'Green Status' by the IUCN does not require any conservation efforts.

Which of the statements given above are correct?

- a) 2 and 4 only
- b) 3 and 4 only
- c) 1, 3 and 4 only
- d) 1 and 2 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: The Pink pages in the IUCN Red List represent species that are critically endangered and facing an extremely high risk of extinction.

Statement 2 is correct: The Green pages are used for species that were formerly endangered but have now recovered to a point where they are no longer threatened.

Statement 3 is incorrect: Recently the conservation status of the Long-tailed Macaque has been changed by the IUCN from **vulnerable (2021) to endangered (2022)**. In India it is found in the three southernmost islands (viz. Great Nicobar, Little Nicobar and Katchal) of the Andaman and Nicobar archipelago.

Statement 4 is incorrect: A species accorded Green Status by the IUCN means that it has met specific criteria for recovery, but it does not mean that it does not require conservation efforts anymore. Conservation efforts may still be necessary to maintain the species in its recovered state.

Source: <https://www.iucnredlist.org/about/green-status-species>

<https://www.iucnredlist.org/fr/species/12551/221666136>

<https://blog.forumias.com/wp-content/uploads/2021/12/FORUM-IAS-RED-BOOK-ENVIRONMENT-2021.pdf>

Q.5) Consider the following statement with regard to the 'Karakoram Anomaly', recently seen in the news:

1. It refers to the abnormal melting of glaciers in the central Karakoram as compared to the other Himalayan region.
2. According to the recent studies, revival of Western Disturbance has been instrumental in triggering the Karakoram Anomaly.

Which of the above-given statement is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect- The Karakoram Anomaly refers to the **stability or abnormal growth of glaciers in the Central Karakoram**, in contrast to the retreat of glaciers in nearby mountainous ranges of the Himalayas and other mountainous ranges of the world.

Statement 2 is correct- Recently for the first time a study brought forth the importance that enhanced western Disturbance (WD)-precipitation during the accumulation period plays important role in Karakoram anomalies. According to the study Western Disturbance is the primary feeder for snowfall in the

Karakoram which originate in the Caspian Sea or Mediterranean Sea and brings non-monsoonal rainfall to North-west India.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1842366>

Q.6) “It is a critically endangered nocturnal burrowing species that is endemic to the Western ghats. Its natural habitats include dry forests, grasslands, and urban areas. The major threats to it include habitat loss, overgrazing, and disturbance from tourism and recreational activities.”

The paragraph above best describes which of the following species?

- Malabar civet
- Kondana soft-furred rat
- Lion-tailed macaque
- Malabar giant squirrel

Ans) b

Exp) Option b is the correct answer.

The Kondana soft-furred rat, also known as the Kondana rat or large metad, is a critically endangered species of rodent in the family Muridae. It is a nocturnal, burrowing rat that is endemic to the Sinhgad plateau near Pune, Maharashtra, India. Its natural habitats include subtropical or tropical dry forests, subtropical or tropical dry lowland grassland, and urban areas.



The major threats to this species are habitat loss, overgrazing of vegetation, and disturbance from tourism and recreational activities. The taxonomic status of the Kondana rat was uncertain for a long time due to its close resemblance to the widely distributed soft-furred field rat *Millardia meltada*, but recent studies have confirmed that it is a distinct species.

Source: <https://inaturalist.nz/taxa/45319-Millardia-kondana>

<https://ptes.org/project-update-protecting-the-critically-endangered-kondana-soft-furred-rat/>

Q.7) Which of the following mammals in India are listed as Critically Endangered by the International Union for Conservation of Nature (IUCN)?

- Nicobar Shrew
- Large Rock-rat
- Malabar Civet
- Namdapha Flying Squirrel

Select the correct answer using the code given below:

- 1 and 3 only
- 2, 3 and 4 only
- 1, 3 and 4 only
- 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Option 1 is correct: The Nicobar shrew or Nicobar white-tailed shrew (*Crocidura nicobarica*) is a **critically endangered species of mammal** in the family Soricidae. It is endemic to the Great Nicobar Island of India.

Option 2 is correct: The **Large Rock Rat** or **Elvira Rat** is a medium-sized, nocturnal, burrowing rodent endemic to India. It is found in rocky areas of tropical dry deciduous shrub land forests, specifically in the Eastern Ghats of Tamil Nadu at an elevation of around 600 meters above sea level. Its major threats are habitat loss, conversion of forests, and fuel wood collection. It is listed as **Critically Endangered** by the IUCN.

Option 3 is correct: The **Malabar Civet** (*Viverra civettina*) is a nocturnal carnivorous **mammal** endemic to India, found exclusively in the Western Ghats. It inhabits the wooded plains and hill slopes of evergreen rainforests in the region. Deforestation and commercial plantations are major threats to the species. The Malabar Civet was first reported from Travancore, Kerala and is listed as **Critically Endangered** by the IUCN.

Option 4 is correct: The **Namdapha Flying Squirrel**, also known as *Biswamoyopterus biswasi*, is a unique species of flying squirrel that is found only in Namdapha Tiger Reserve in Arunachal Pradesh, India. It inhabits tropical forests and is threatened by hunting for food. It is listed as **Critically Endangered** by the IUCN.

Source: <https://animalia.bio/nicobar-shrew>

<http://www.indiaenvironmentportal.org.in/files/critically%20endangered%20species.pdf>

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Q.8) Which of the following statements is correct regarding the effect of light intensity and frost on plant growth?

1. Low light intensity retards growth, flowering and fruiting in plants.
2. Out of the 7 colors in the visible spectrum, red is the most effective in photosynthesis.
3. Frost can cause Dieback phenomenon in trees.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: High light intensity is beneficial for plant growth, while **low light intensity can retard growth, delay flowering and fruiting**. However, it is important to note that plants have specific light requirements, and exposure to excessive light can be detrimental to their growth.

Statement 2 is correct: Out of the 7 colors in the visible spectrum, **red light is most effective in photosynthesis**, while blue light can cause plants to be small and stunted. Additionally, UV and violet light can cause dwarfism in plants.

Statement 3 is correct: Frost is one of the reasons that can **lead to the dieback phenomenon** in trees. Frost can cause damage to the plant's cells, leading to the formation of canker, which can result in the death of young plants.

Forest dieback refers to the phenomenon of a stand of trees losing health and dying.

Source: <https://blog.forumias.com/wp-content/uploads/2021/12/FORUM-IAS-RED-BOOK-ENVIRONMENT-2021.pdf>

Q.9) With reference to White bellied Musk deer, consider the following statements:

1. It is a well-adapted species of deer for high altitudes.
2. It is primarily hunted for its musk, which is used in traditional medicines and perfumes.
3. It is listed as Critically Endangered on the IUCN Red List.
4. It is geography distributed to almost every continent of the world.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1, 2, and 4 only
- c) 2, 3, and 4 only
- d) 1, 2, and 3 only

Ans) a

Exp) Option a is the correct answer.

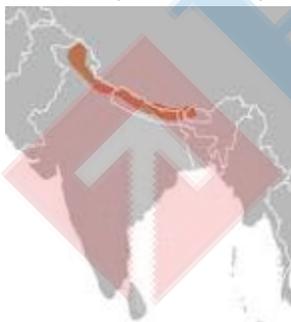
Statement 1 is correct: White-bellied musk deer are very well adapted for high altitudes. They demonstrate such adaptations as well-developed dew claws, broad toes that provide increased stability on steep slopes, and a dense coat of coarse hairs with air-filled cells to insulate against the extreme temperature.



Statement 2 is correct: The primary threat to the survival of the White-bellied Musk deer is the hunting and trading of the species. The musk produced by these animals is in high demand for use in traditional medicines and perfumes, which makes them extremely valuable

Statement 3 is incorrect: The species is currently categorized as Endangered (EN) due to a declining population trend.

Statement 4 is incorrect: White-bellied musk deer are distributed across the Himalayas in countries such as **Nepal, Bhutan, India, Pakistan, and China**. They prefer high-altitude habitats characterized by meadows, shrublands, and fir forests.



Source: <https://animalia.bio/white-bellied-musk-deer>

Q.10) Consider the following statement with respect to the Green Methanol, recently seen in the news:

1. It is obtained by synthesis reaction from methane present in natural gas.
2. It can be used as transportation fuel or in maritime fuel application.

Which of the above-given statement is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect–It is **grey methanol** which is obtained by synthesis reaction from methane present in natural gas (or in some cases, as in China, still from coal).

Green Methanol is a methanol that is produced renewably without polluting emissions, with one of its variant being generated from Green Hydrogen.

Statement 2 is correct– Green Methanol can be used as a **low-carbon liquid fuel** and is a promising alternative to fossil fuels in areas where decarbonisation is a major challenge, such as maritime transport. Some of the applications of Green Methanol includes - Transportation fuel, Substitute fuel for maritime fuel application, storing renewable electricity. Green Methanol also forms a base for the Chemical Industry.

Source: <https://www.iberdrola.com/about-us/what-we-do/green-hydrogen/green-methanol#:~:text=Green%20methanol%20is%20methanol%20that,being%20generated%20from%20green%20hydrogen.>

Q.11) With reference to the classification of organisms, which of the following animals belongs to the Class 'Arachnida'?

- a) Lobster
- b) Crab
- c) Spider
- d) Clam

Ans) c

Exp) Option c is the correct answer.

Arachnids are a class of joint-legged invertebrate animals, which include **spiders**, scorpions, ticks, mites, and other related species. They do not have an antenna.

Source: <https://blog.forumias.com/wp-content/uploads/2021/12/FORUM-IAS-RED-BOOK-ENVIRONMENT-2021.pdf>

Q.12) With reference to the National Agroforestry Policy, consider the following statements:

1. The policy aims to integrate trees, crops and livestock on the same plot of land to improve productivity of land.
2. The policy aims to achieve a target of 33% tree cover in the country.
3. India was the first country in the world to adopt a National level Agroforestry policy.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The National Agroforestry policy was approved by the Indian government in February 2014 and was launched in May of the same year. It recognizes the important role that agroforestry can play in promoting sustainable agriculture, reducing land degradation, and improving rural livelihoods. The policy aims to increase the area under agroforestry from the current 10 million hectares to 25 million hectares by 2025.

Statement 1 is correct: The National Agroforestry Policy deals with the practice of integrating trees, crops, and livestock on the same plot of land to increase the productivity of the land. It also recognizes that agroforestry can contribute to the development of sustainable value chains for forest products, such as timber and non-timber forest products.

Statement 2 is incorrect: Though the policy aims to increase the country's forest cover, it does not aim to achieve a target of 33% tree cover in the country. This is the target set by the National Forest Policy of 1988, which is a separate policy.

Statement 3 is correct: India was the first country in the world to adopt a National Agroforestry Policy in May 2014.

Source: <https://www.downtoearth.org.in/news/india-becomes-first-country-to-adopt-an-agroforestry-policy-43518>

<https://xn--i2brn5cg8b.xn--11by0av0at5becfj.xn--h2brj9c/agriculture/policies-and-schemes/crops-related/national-agroforestry-policy>

Q.13) With reference to the Shola Forest, consider the following statements:

1. They can be classified as Southern Montane Wet Temperate Forests.
2. Shola trees are commercially exploited for their valuable timber.
3. Rhododendron Nilagiricum is the only Shola tree that can tolerate fire.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Shola forests in South India are named after the Tamil word for tropical rainforest and are found in valleys with sufficient moisture and proper drainage, at altitudes over 1,500 meters. The vegetation is evergreen with stunted, multi-branched trees and small, leathery leaves. They play an important role in conserving water supply and protecting the source of water supply in the Nilgiris. **The forests act as overhead water tanks. Sholas are found in the upper reaches of the Nilgiris, Anamalais, Palni hills, Kalakadu, Mundanthurai and Kanyakumari in the states of Tamil Nadu and Kerala.**

Statement 1 is correct: Shola forests are a type of high-altitude stunted tropical montane forest ecosystem in the Southern Western Ghats of South India. They are classified as 'Southern Montane Wet Temperate Forests'.

Statement 2 is incorrect: Sholas are not of great commercial value as they produce slow-growing trees that produce timber of little or no value and take at least a century to mature.

Statement 3 is correct: Pastoral communities in grasslands have periodically burned grass, which has prevented the advance of Shola forests. However, as Shola trees are flammable, the regeneration of any Shola tree species is prevented except for **Rhododendron nilagiricum, which is the only Shola tree that can tolerate fire.**

Source: <https://www.downtoearth.org.in/blog/forests/why-south-india-needs-the-shola-forests-of-the-nilgiris-68948>

Q.14) This animal is the only mountain ungulate in southern India amongst the 12 species present in India. It inhabits the open montane grassland habitats at elevations from 1200 to 2600 m of the Southern Western Ghats. It is listed as Endangered in the IUCN Red List of Threatened Species. The Eravikulam National Park is home to the largest population of this animal.

Which one of the following species of fauna is described in the above passage?

- Nilgiri Langur
- Gaur
- Sloth Bear
- Nilgiri Tahr

Ans) d

Exp) Option d is the correct answer.

- The Nilgiri tahr is the only mountain ungulate in southern India amongst the 12 species present in India. It is also the state animal of Tamil Nadu. This endemic species of the Western Ghats is listed as Endangered in the IUCN Red List of Threatened Species.
- The Nilgiri tahr inhabits the open montane grassland habitats at elevations from 1200 to 2600 m of the South Western Ghats. Currently, Nilgiri tahr distribution is along a narrow stretch of 400 km in the Western Ghats between Nilgiris in the north and Kanyakumari hills in the south of the region.
- The Eravikulam National Park in Anamalai hills, Kerala, is home to the largest population of the Nilgiri tahr, with more than 700 individuals.
- The Nilgiri tahr, which used to be found along the entire stretch of Western Ghats, is presently found only in fragmented pockets. A large part of its population has been wiped out from its historical range. The existing populations are under severe stress due to habitat loss and hunting.

Option a is incorrect: The Nilgiri langur is classified as **Vulnerable on the IUCN Red List** and it is endemic to Western Ghats. It inhabits tropical wet evergreen, semi-evergreen and riparian forests as well as teak plantations, at altitudes of between 300 – 2,000 m above sea level.

Option b is incorrect: The Indian Bison or Gaur (*Bos gaurus*) is the tallest species of wild cattle found in India and largest extant bovine. **Vulnerable in IUCN Red List.** It is native to South and Southeast Asia. In India, they are very much prevalent in the Western Ghats.

Option c is incorrect: Sloth Bears inhabit tropical or subtropical regions of India and Sri Lanka. They are categorized as Vulnerable under IUCN Red List.

Knowledge Base: Wildlife Population in the Eravikulam National Park

29 Species of mammals are found here of which 5 are endemic to the Western Ghat's. The Nilgiri Tahr, Gaur, Sloth Bear, Nilgiri Langur, Tiger, Leopard, Giant Squirrel and wild dog are common. Half the world population of the endangered Nilgiri Tahr lives here. Panthers are usually sighted in the open grasslands while Civet cats and Jungle cats live in the Sholas.

Source: <https://forest.kerala.gov.in/index.php/about-us/wildlife/2015-03-16-09-50-24/national-parks/eravikulam-national-park#:~:text=Wildlife%20Population&text=The%20Nilgiri%20Tahr%2C%20Gaur%2C%20Sloth,cats%20live%20in%20the%20Sholas.>

https://www.wfindia.org/about_wwf/priority_species/threatened_species/nilgiri_tahr/

Q.15) Consider the following statement with reference to the PM-KUSUM Scheme:

- It aims to enable farmers to set up solar power generation capacity on their land.
- The Scheme will incentivise the farmers to sell surplus solar energy to the states.
- Under the scheme, solar power plants cannot be installed on cultivable land.

Which of the above-given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The Pradhan Mantri Urja Suraksha Evam Utthaan Mahabhiyaan (PM-KUSUM) was launched in 2019 by Ministry of New and Renewable Energy with an aim to ensure energy security for farmers through harvesting of Solar energy. Also, this scheme aims to increase the share of non-fossil fuel based energy upto 40% by 2030 as a part of Intentionally Nationally Determined Contribution (INDC).

Statement 1 is correct- KUSUM Scheme aims to enable farmers to set up solar power generation capacity on their arid lands and to sell it to the grid. It also seeks to increase the income of farmers by allowing them to sell surplus solar power to the grid.

Statement 2 is correct- KUSUM Scheme **incentivises the farmers to sell surplus solar energy to the states**, which in turn will augment their income. The scheme is expected to increase access to electricity in rural areas and provide a reliable source of energy for agriculture and other rural activities.

Statement 3 is incorrect- Under the scheme, solar **power plants can also be installed on cultivable land on stilts where crops can also be grown** below the solar panels. The renewable energy power project will be installed within five km radius of the sub-stations in order to avoid high cost of sub-transmission lines and to reduce transmission losses.

Source: <https://www.india.gov.in/spotlight/pm-kusum-pradhan-mantri-kisan-urja-suraksha-evam-utthaan-mahabhiyan-scheme>

Q.16) Fine quality wool used to make Shahtoosh shawls is primarily obtained from which one of the following animals?

- a) Gaddi sheep
- b) Chennai Red Sheep
- c) Chiru
- d) Mandya Sheep

Ans) c

Exp) Option c is the correct answer.

Option c is correct: **Shahtoosh** is a Persian word which means the ‘King of the wool’. It is an incredibly light, soft and warm wool made from the hair of **the wild antelope called Chiru**, found in the plateaus of Tibet and eastern Ladakh at an altitude of over 4,000 metres in the Himalayas.

Option a is incorrect: **Gaddi Sheep** is also known as Bhadarwah. It is native to Kishtwar and Bhadarwah tehsils of Jammu and it is widely distributed in Himachal Pradesh and Uttarakhand. The wool of this sheep breed is used to manufacture **Kullu shawls & blankets**.

Option b is incorrect: Chennai Red Sheep is mainly found in various parts of Tamil Nadu. This breed is mainly reared for **meat purposes**.

Option d is incorrect: Mandya Sheep is mostly found in the Mandya district of Karnataka. Mandya sheep are white-coloured small animals. **Among other Indian varieties, this sheep breed is known for producing the best meat.**

Source: <https://www.masterclass.com/articles/vicuna-wool-guide>
<https://www.apnikheti.com/en/pn/livestock/sheep/gaddi>

<https://www.bandhej.com/blog/post/shahtoosh-shawls>

https://omcashmeres.com/cashmere-goat-origin-type-and-wool/#What_are_the_Cashmere_Goats

<https://krishijagran.com/animal-husbandry/best-sheep-breeds-in-india-for-highest-wool-meat/>

Q.17) Consider the following pairs regarding the state animals of different states in India:

State Animals	Corresponding states
---------------	----------------------

- | | |
|--------------|-------------------|
| 1. Hangul | Jammu and Kashmir |
| 2. Red Panda | Manipur |
| 3. Sangai | Sikkim |
| 4. Gaur | Goa |

How many of the above given pairs are correctly matched?

- Only one pair
- Only two pairs
- Only three pairs
- All four pairs

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correct: Kashmir Stag, commonly known as Hangul is a state animal of Jammu and Kashmir. Kashmir stag can be found in dense riverine forests in Jammu and Kashmir's high valleys and mountains, as well as northern Himachal Pradesh. Kashmir stag is found mostly in the Dachigam National Park in Kashmir, where it is protected, and elsewhere it is more vulnerable.

Pair 2 is incorrect: The red panda is a small arboreal mammal found in the forests of India, Nepal, Bhutan, and the northern mountains of Myanmar and southern China. In India, this elusive species is found in Sikkim, Arunachal Pradesh, Darjeeling and Kalimpong districts of West Bengal. **It is the state animal of Sikkim.** Listed as Endangered in the IUCN red list of Threatened Species and under Schedule I of the Indian Wildlife (Protection) Act, 1972, the red panda has the highest legal protection.

Pair 3 is incorrect: The State animal of Manipur is the Sangai. It is listed in Schedule-1 of Wildlife (Protection) Act, 1972. The brow-antlered deer is found in Keibul Lamjao National Park in Manipur. It is largely seen over the floating biomass of the Keibul Lamjao National Park, Manipur.

Pair 4 is correct: Gaur is the strong, resilient, and majestic Indian Bison, which also happens to be the State animal of Goa. Since 1986, the Indian Bison or Gaur has been listed as 'vulnerable' on the IUCN (International Union for Conservation of Nature) Red List. In India, the Gaur is a Schedule-1 animal according to the Wildlife Protection Act, 1972.

Source: <https://animalia.bio/kashmir-stag>

https://www.wwfindia.org/about_wwf/priority_species/red_panda/about_red_panda/#:~:text=It%20is%20the%20state%20animal,has%20the%20highest%20legal%20protection.

<https://itsgoa.com/indian-bison/>

Q.18) A newly discovered species called 'Caltoris bromus sadasiva' was recently seen in the news. It is a subspecies of which one of the following?

- Butterfly
- Lizard
- Frog
- Fish

Ans) a

Exp) Option a is the correct answer.

Recently, a group of lepidopterists discovered a **butterfly subspecies** from the fringes of Akkulam and Vembanad lakes in Kerala. **It is named Caltoris bromus sadasiva**. It is the first Bromus swift butterfly to be documented in the Western Ghats. The species Bromus swift (Caltoris Bromus), is a skipper butterfly belonging to the HesperIIDae family of Lepidoptera (moths and butterflies), from the Western Ghats and Peninsular India.



Source: <https://www.thehindu.com/news/national/kerala/new-butterfly-species-discovered-in-kerala/article66691743.ece>

Q.19) Consider the following statements regarding Gharial:

1. They are listed as Critically Endangered in the IUCN Red List.
2. Gharials cannot live in freshwater ecosystems.
3. Gharial is one of the species identified under the Recovery Programme for Critically Endangered Species of Integrated Development of Wildlife Habitats initiative.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 3 only

Ans) a

Exp) option a is the correct answer.

Statement 1 is correct: Gharials are listed as Critically Endangered by the IUCN Red List. This is one step from the species becoming extinct in the wild. They are easily distinguished from other crocodiles, because of the long, slender snout it shares only with the tomistoma (previously called the false gharial).

Statement 2 is incorrect: Gharials live in clear freshwater river systems, congregating at river bends where the water is deeper. Gharial prefers deep fast flowing rivers; however adult gharial have also been observed in still water branches of rivers and in comparatively velocity-free aquatic environments of deep holes at river bends and confluences. **The surviving population can be found within the tributaries of the Ganges River system:** Girwa (Uttar Pradesh), Son (Madhya Pradesh), Ramganga (Uttarakhand), Gandak (Bihar), Chambal (Uttar Pradesh, Madhya Pradesh and Rajasthan) and Mahanadi (Orissa).

Statement 3 is incorrect: 22 species have been identified under the Recovery Programme for Critically Endangered Species of Integrated Development of Wildlife Habitats. **Gharial is not one of the species identified under the Recovery Programme for Critically Endangered Species.** The species identified under the programme include: 1. Snow Leopard, 2. Bustard (including Floricans), 3. Dolphin, 4. Hangul, 5. Nilgiri Tahr, 6. Marine Turtles, 7. Dugongs, 8. Edible Nest Swiftlet, 9. Asian Wild Buffalo, 10. Nicobar Megapode, 11. Manipur Brow-antlered Deer, 12. Vultures, 13. Indian Rhinoceros, 14. Asiatic Lion, 15. Swamp Deer, 16. Jerdon's Courser, 17. Northern River Terrapin, 18. Clouded Leopard, 19. Arabian Sea Humpback Whale, 20. Red Panda, 21. Malabar Civet and 22. Caracal.

Source: <https://nationalzoo.si.edu/animals/gharial>

<https://www.discoverwildlife.com/animal-facts/reptiles/facts-about-gharials/>
https://www.wwfindia.org/about_wwf/priority_species/threatened_species/gharial/
http://www.wiienvi.nic.in/Database/SRP_8555.aspx

Q.20) Consider the following statements about the National Bioenergy Programme, that has been notified recently:

1. It was recently notified by the Union Ministry of New and Renewable Energy.
2. It aims to support establishment of waste to energy projects for generation of Biogas.
3. It encourages setting up of biogas plants for the purpose of cooking fuel.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: The Ministry of New and Renewable Energy has notified the National Bioenergy Programme in November 2022. MNRE has continued the National Bioenergy Programme for the period from FY 2021-22 to 2025-26. The Programme mainly consist of three components, namely Waste to Energy Programme, Biomass Programme and Biogas Programme.

Statement 2 is correct: One of the objective of this programme is to support setting up of waste to energy projects for generation of Biogas/BioCNG/Power/producer or syngas from urban, industrial and agricultural wastes/residues.

Statement 3 is correct: Under Biogas Programme, the objective is to support setting up of biogas plants for clean cooking fuel, lighting, meeting thermal and small power needs of users which ultimately results in GHG reduction, improved sanitation, women empowerment and creation of rural employment.

Biomass Programme: The objective of this programme is to support setting up of Biomass Briquette/Pellet manufacturing plants and Biomass (non-bagasse) based cogeneration projects in the country.

Source: <https://pib.gov.in/PressReleseDetail.aspx?PRID=1885073>

Q.21) Consider the following statements regarding Asian Elephants:

1. India hosts more than half of the world's wild Asian elephant population.
2. They are protected under Schedule I of the Wildlife (Protection) Act, 1972.
3. According to the elephant census of 2017, Kerala has the highest number of elephants in India.

Which of the statements given above is/are correct?

- a) 2 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: Asian elephants once roamed across most of Asia, now they're restricted to just 15% of their original range. There are now only about 48,000-50,000 Asian Elephants found in 13 range states.

More than 60% of the wild population exists in India alone.

Statement 2 is correct: The Asian Elephant has been given the highest level of protection in India by its inclusion in Schedule 1 of the Indian Wildlife (Protection) Act 1972. They are also included in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Statement 3 is incorrect: India has about 27,000 Asian Elephants, which is the world's largest population of the species. As per latest available census i.e., Elephant Census (2017), Karnataka has the highest number of elephants (6,049), followed by Assam (5,719) and Kerala (3,054)

Source: <https://www.iucn.org/news/species-survival-commission/202108>

<https://www.arocho.in/work/conservation/#:~:text=The%20Asian%20Elephant%20has%20been,of%20Wild%20Fauna%20and%20Flora.>

https://www.wwfindia.org/about_wwf/priority_species/indian_elephant/about_asian_elephant/

Q.22) Which among the following birds migrate from the foreign territories to India regularly?

1. Demoiselle Crane
2. Bluethroat
3. White-cheeked Barbet
4. Ruddy Shelduck

Select the correct answer using the codes given below:

- a) 1 and 3 only
- b) 2, 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Migratory birds fly hundreds and thousands of kilometers to find the best ecological conditions and habitats for feeding, breeding and raising their young. Some of the migratory birds that flock to India every year are discussed below:

Option 1 is correct: Demoiselle Cranes from colder regions of Eurasia fly to India in October and roost at various places in Rajasthan till March.

Option 2 is correct: Bluethroat is a beautiful bird that looks like a sparrow belongs to the thrush family and these migratory birds can be spotted in India during the winter season in Rajasthan. The Bluethroat prefers to breed in very cold climates across the world such as Alaska.

Option 3 is incorrect: White-cheeked Barbet (Small Green Barbet) is found only in southern India. Thus, it is not a migratory bird.

Option 4 is correct: The Ruddy Shelduck is a common winter visitor in India where it arrives by October and departs by April. It is found in large numbers of lakes and reservoirs. It breeds in high altitude lakes and swamps in Jammu and Kashmir.

Source: https://ebird.org/species/whcbar1?siteLanguage=en_IN

<https://www.indiatimes.com/trending/environment/migratory-birds-india-pictures-524891.html>

Q.23) Consider the following statements regarding the Insectivorous plants:

1. They are usually found in nutrient poor soils.
 2. Insectivorous plants cannot perform photosynthesis.
 3. Nepenthes Khasiana and Butterworts are examples of insectivorous plants that can be found in India.
- Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: Insectivorous plants specialize in trapping insects. They have several attractions to lure insects like bright colours and sweet secretions. They hunt for insects despite having normal roots as they are usually found in nutrient poor soils. As a result, they have to hunt in order to replenish themselves.

Statement 2 is incorrect: Insectivorous plants may contain chloroplast and are hence green in colour. **They are capable of performing photosynthesis.** They devour insects to obtain nutrients (especially nitrogen) needed for their growth and development as they grow in soil which is not rich in nutrients.

Statement 3 is correct: Some of the insectivorous plants found in India are Drosera/Sundew, Aldrovanda/Pitcher plants, **Nepenthes khasiana**, Utricularia/Bladderworts and Pinguicula/**Butterworts**.

Source: <https://blog.forumias.com/wp-content/uploads/2021/12/FORUM-IAS-RED-BOOK-ENVIRONMENT-2021.pdf>

<https://owlcation.com/stem/Plants-That-Have-No-Chlorophyll>

[https://www.ortobotanicopd.it/en/insectivorous-plants#:~:text=Insectivorous%20plants%20\(often%20called%20carnivorous,with%20other%20plants%20is%20minimal.](https://www.ortobotanicopd.it/en/insectivorous-plants#:~:text=Insectivorous%20plants%20(often%20called%20carnivorous,with%20other%20plants%20is%20minimal.)

Q.24) Consider the following statements regarding the United Nations Convention to Combat Desertification (UNCCD):

1. It is the sole legally binding international agreement linking environment and development to sustainable land management.
2. UNCCD is an outcome of the Rio Earth Summit 1992
3. UNCCD launched Bonn Challenge in 2001 for the restoration of degraded and deforested landscapes.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: Established in 1994, the United Nations Convention to Combat Desertification (UNCCD) is the sole legally binding international agreement linking environment and development to sustainable land management. It is the driving force behind Sustainable Development Goal 15 and Land Degradation Neutrality (LDN).

Statement 2 is correct: The 1992 Rio Earth Summit gave rise to the three Rio Conventions: the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC), and the United Nations Convention to Combat Desertification (UNCCD).

Statement 3 is incorrect: The Bonn Challenge is a global goal to bring 150 million hectares of degraded and deforested landscapes into restoration by 2020 and 350 million hectares by 2030. Launched by the Government of Germany and IUCN in 2011, the Challenge surpassed the 150-million-hectare milestone for pledges in 2017.

Source: <https://www.unccd.int/convention/history-unccd>

<https://enb.iisd.org/negotiations/un-convention-combat-desertification-unccd>

<https://www.bonnchallenge.org/about#:~:text=Launched%20by%20the%20Government%20of%20Germany%20and%20IUCN%20in%202011>

Q.25) Consider the following statement about the Coal Gasification:

1. The sulphur present in the coal is converted into Hydrogen Sulphide during the coal gasification process.
2. Syngas produced through the coal gasification can be used in the production of synthetic natural gas.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Coal Gasification is the process of converting Coal into Syngas (Synthesis Gas) with byproducts including Hydrogen Sulphide, Carbon Dioxide, and Slag (Minerals from Coal). The syngas is further cleaned.

Statement 1 is correct- The sulphur present in the coal is converted into Hydrogen Sulphide(H_2S) and very small amount of Carbonyl Sulphide (COS).

Statement 2 is correct. Gasification facilitates utilization of the chemical properties of coal. Syn Gas produced from Coal gasification can be used in producing Synthetic Natural Gas (SNG), energy fuel (methanol & ethanol), ammonia for fertilizers and Petro-chemicals.

Source: <https://netl.doe.gov/research/Coal/energy-systems/gasification/gasifipedia/intro-to-gasification>

Q.26) Consider the following statements regarding Seagrass and Seaweeds:

1. Almost all seaweed are flowering plants whereas most of the seagrass are non-flowering plants.
2. Seaweed contains vascular tissues whereas seagrass is characterized by the absence of vascular tissues.
3. While seagrass has a differentiated structure with true stem, roots and leaves; seaweed generally lacks such a differentiated structure.

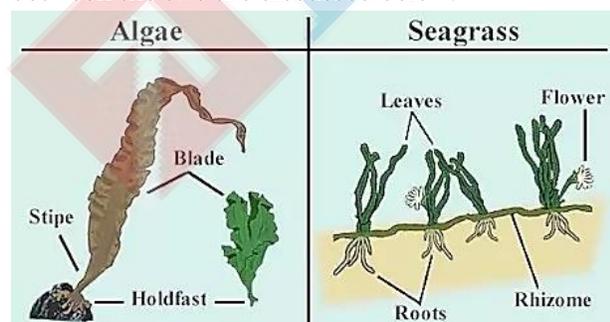
Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) 2 and 3 only

Ans) c

Exp) Option c is the correct answer.

Seaweed and seagrass are two marine eukaryotic photosynthetic organisms. Major points of differences between the two are discussed below:



Statement 1 is incorrect: Seagrass is a flowering plant which grows in the marine environment. Seagrasses have long green grass-like leaves. In fact, they are monocotyledons. Seagrass produces seeds.

Generally, seaweed are non-flowering plants but like land plants they do contain chlorophyll and rely on photosynthesis to produce the food they need to survive.

Statement 2 is incorrect: While **seagrasses are considered vascular plants** and have roots, stems and leaves, seaweed are multi-cellular algae and have little or no vascular tissues.

Statement 3 is correct: Seaweed is not differentiated into true stem, roots and leaves while seagrass has a differentiated structure with true stem, roots and leaves.

Source: <https://pacificharvest.co/blogs/learn/are-seaweeds-plants>

<https://www.differencebetween.com/difference-between-seaweed-and-seagrass/#Seaweed%20vs%20Seagrass%20in%20Tabular%20Form>

<https://myfwc.com/research/habitat/seagrasses/information/seagrass-vs-seaweed/#:~:text=While%20seagrasses%20are%20considered%20vascular,transport%20nutrients%20and%20dissolved%20gases.>

Q.27) Consider the following statements regarding the National Parks in India:

1. No alteration of boundaries of a national park can be made except on the recommendation of the National Board of Wildlife (NBWL).
2. Generally, livestock grazing is prohibited in a National Park.
3. Assam has the highest number of national parks in India.

Which of the statements given above is/are correct?

- a) 2 and 3 only
- b) 1 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Wildlife Protection Act, 1972 provides for the declaration of National Parks by the State Governments in addition to the declaration of WLS. Territorial waters can be included in areas to be declared as WLS or NPs for the protection of offshore marine flora and fauna.

Statement 1 is correct: As per the Wildlife Protection Act of 1972, no alteration of boundaries of a WLS or NP can be made except on the recommendation of the National Board of Wildlife (NBWL)

Statement 2 is correct: Difference between National Parks (NPs) and Wildlife Sanctuaries (WLS):

- 1) NPs enjoy a greater degree of protection than WLS.
- 2) **Livestock grazing is prohibited in a National Park but can be allowed in a regulated manner in Sanctuaries;**
- 3) WLS can be created for a particular species while a NP is not primarily focused on a particular species.
- 4) NPs cannot be downgraded to the status of WLS but WLS can be upgraded to the status of NP.

Statement 3 is incorrect: **As per the latest available data, Madhya Pradesh is the state with highest number of National Parks in India.** It has in total 11 National Parks. Whereas, Assam has 7 National Parks.

Source: http://www.wiienvi.nic.in/Database/npa_8231.aspx

<https://blog.forumias.com/wp-content/uploads/2021/12/FORUM-IAS-RED-BOOK-ENVIRONMENT-2021.pdf>

Q.28) Consider the following statements regarding the Chief Wildlife Warden in India:

1. The Chief Wildlife Warden is a statutory authority established under the Indian Forest Act,1927.
2. Chief Wildlife Warden in a state is appointed by the Government of the respective state.
3. He/she can grant permission to a person to enter in a sanctuary for conducting scientific research.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) b

Exp) option b is the correct answer.

Statement 1 is incorrect: The Chief Wildlife Warden (CWLW) is the statutory authority, under the Wildlife Protection Act, 1972 (not under Indian Forest Act, 1927). He is responsible for the implementation of Wildlife (Protection) Act, 1972 in the State. He shall perform his duties and exercise his powers by or under this Act subject to such general or special directions, as the State Government may give, from time to time.

Statement 2 is correct: Section 4 of the Wildlife (Protection) Act, 1972 empowers the State Government to appoint (a) a Chief Wildlife Warden (b) Wildlife Wardens; and (c) such other officers and employees as may be necessary for the purposes of the Act.

Statement 3 is correct: The Chief Wildlife Warden may, on application, grant to any person a permit to enter or reside in a sanctuary for all or any of the following purposes, namely:–

- a. investigation or study of wildlife and purposes ancillary or incidental thereto;
- b. photography;
- c. scientific research;**
- d. tourism;
- e. transaction of lawful business with any person residing in the sanctuary.

Source: <https://www.conservationindia.org/resources/the-institutional-framework-for-wildlife-conservation-in-india/2>

http://wildlife.punjab.gov.in/act_rulepdf/1623651699.pdf#19.pdf

<https://blog.forumias.com/wp-content/uploads/2021/12/FORUM-IAS-RED-BOOK-ENVIRONMENT-2021.pdf>

Q.29) Consider the following statements regarding the ‘Conservation Reserves’ in India:

1. The conservation reserves are declared under the Wildlife Protection Act, 1972.
2. Only central government can declare an area as a Conservation Reserve.
3. Among the Indian states/UTs, Gujarat has highest number of conservation reserves.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Conservation reserves and community reserves in India are terms denoting protected areas of India which typically act as buffer zones to or connectors and migration corridors between established national parks, wildlife sanctuaries and reserved and protected forests of India.

Statement 1 is correct: Areas are designated as conservation areas if they are uninhabited and owned by the Government of India but used for subsistence by communities. **These protected area categories were introduced in the Wildlife (Protection) Act, 1972 through an amendment in 2002.** These categories were

added because of reduced protection in and around existing or proposed protected areas due to private ownership of land, and land use.

Statement 2 is incorrect: According to the Wildlife Protection Act of 1972, the **State Government may, after having consultations with the local communities, declare any area owned by the Government as a conservation reserve.** If the conservation reserve includes any land owned by the Central Government, its prior concurrence shall be obtained before making such declaration.

Statement 3 is incorrect: Gujarat has only one conservation reserve. As per the Wildlife Institute of India, among Indian states/UTs Jammu and Kashmir has highest number of conservation reserves (33) followed by Rajasthan (18) and Karnataka (14).

Source: https://wii.gov.in/nwdc_conservation_reserves

http://www.wiienviis.nic.in/Database/cr_8229.aspx#:~:text=Conservation%20reserves%20and%20community%20reserves,and%20protected%20forests%20of%20India.

<https://blog.forumias.com/wp-content/uploads/2021/12/FORUM-IAS-RED-BOOK-ENVIRONMENT-2021.pdf>

<https://indiankanoon.org/doc/90915258/>

Q.30) Consider the following statements with regard to the Sustainable Cities Integrated Approach Pilot (SCIAP) Project:

1. The aim of the project is to include sustainable strategies into urban planning and management at city levels.
2. Union Ministry of Environment, Forest and Climate change is identified as the implementing agency of the project.
3. The project is funded by Global Environment Facility.

Which of the above given statement are correct?

- a) 2 and 3 only
- b) 1 and 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

SCIAP Project is launched to infuse sustainable strategies into urban planning and management at city levels and create an enabling climate for investment in green infrastructure.

Statement 1 is correct- The aim of the project is to infuse sustainable strategies into urban planning and management at city levels thereby creating an atmosphere for investment into green infrastructure so that Green House Gas emission is reduced, service delivery is improved, and quality of lives can be improved.

Statement 2 is incorrect- The implementing agency includes UNIDO, UN-Habitat, in collaboration with Ministry of Housing and Urban Affairs (MoHUA).

Statement 3 is correct- The project is funded by Global Environment Facility. The Global Environment Facility is a multilateral environmental fund that provides grants and blended finance for projects related to biodiversity, climate change, international waters, land degradation.

Source: [https://www.unhabitat.org.in/projects/Sustainable-Cities-Integrated-Approach-Pilot-\(SCIAP\)](https://www.unhabitat.org.in/projects/Sustainable-Cities-Integrated-Approach-Pilot-(SCIAP))

Q.31) Consider the following statements regarding the types of forests in India:

1. For the first time, forests in India were classified into Reserved Forests and Protected Forests under the Wildlife Protection Act, 1972.
2. Presently, Reserved Forests constitute less than 5 per cent of the total forest area of India.
3. Activities like hunting, grazing and timber collection are completely prohibited in the Protected forests.

Which of the statements given above is/are **incorrect**?

- a) 1, 2 and 3
- b) 3 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect: Indian Forest Act, 1927 was enacted to consolidate all the previous laws regarding forests and extend state's control over forests as well as diminishing the status of people's right to forest use. It also defined forest offences. **Indian Forest Act, 1927 (Not Wildlife (Protection) Act, 1972) classified forests into Reserved Forest, Protected Forest and Village Forest.**

Statement 2 is incorrect: Reserved forests constitute more than half of the total forest area of India. They are protected by the respective state governments unlike wildlife sanctuaries and national parks which are supervised by the Government of India. Rights to activities like collecting timber or grazing cattle or hunting are banned in these forests.

Statement 3 is incorrect: Protected forests have a limited amount of protection. **These are looked after by the government but certain activities like hunting, grazing or timber collecting are allowed to people** who live on the boundaries of forests and are partially or wholly dependent on the forest resources for livelihood, provided they don't cause severe damage to the forests.

Knowledge Base: Village forests are protected and managed by village communities which are assigned by the state governments. The local communities may use it for timber or other forest produce, pasture, recreation, plantation and so on under prescribed conditions by state governments.

Source: <https://blog.ipleaders.in/an-understanding-of-the-laws-relating-to-reserved-forests-village-forests-and-protected-forests/>

<https://blog.forumias.com/wp-content/uploads/2021/12/FORUM-IAS-RED-BOOK-ENVIRONMENT-2021.pdf>

<https://ncert.nic.in/textbook/pdf/jess102.pdf>

Q.32) With respect to various zones in the Biosphere Reserve, consider the following statements:

1. The Core Zone is mostly kept free from the interference of humans.
2. The Transition Zone adjoins or surrounds the core zone, and research and educational activities are allowed here.
3. The Buffer Zone is the outermost part of a biosphere reserve which includes human settlements and croplands.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 3 only
- d) 1 and 2 only

Ans) a

Exp) Option a is the correct answer.

Biosphere Reserves involve local communities and all interested stakeholders in planning and management. They integrate three main "functions":

- 1) Conservation of biodiversity and cultural diversity
- 2) Economic development that is socio-culturally and environmentally sustainable
- 3) Logistic support, underpinning development through research, monitoring, education and training

These three functions are pursued through the Biosphere Reserves' three main zones i.e Core, buffer and transition Zones.

Statement 1 is correct. Core Zone: It is the most protected area of a Biosphere Reserve and may contain endemic plants and animals. A Core Zone is mostly kept free from human interference.

Statement 2 is incorrect. It is the Buffer Zone (not the Transition Zone) that surrounds the Core Zone and activities in this zone are managed in a way that the Core Zone is protected in its natural conditions. Research and Educational activities are allowed in this zone.

Statement 3 is incorrect. It is the Transition Zone (not the Buffer Zone) which is the outermost part of the Biosphere Reserve where human ventures and conservation are done in harmony. This area includes human settlements, croplands and other areas for intensive recreation.

Source: Forum IAS Red Book on Environment

Q.33) In the context of recently conducted Tiger Census 2022, consider the following statements:

1. The national tiger census is conducted after every ten years.
2. The current tiger population in India has slightly decreased from the previous tiger census.
3. As per the census, out of five tiger-bearing habitats, Central Indian Highlands & Eastern Ghats Landscape has largest tiger population in India.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 3 only
- c) 2 only
- d) 1 and 2 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. The national tiger census is conducted once **every four years**. The Nationwide tiger census was earlier held in **2006, 2010, 2014, 2018, 2022**. The National Tiger Conservation Authority (NTCA) conducts tiger censuses in partnership with state forest departments, conservation NGOs, and the Wildlife Institute of India (WII)

Elephant Census is conducted every 5 years and Rhino Census every 3 years.

Statement 2 is incorrect. According to the **fifth cycle of the All India Tiger Estimation (2022)** released April 9, 2023. The tiger population in **India grew by 200 from 2018 to 2022**. The number of tigers in India was 3,167 in 2022, up from 2,967 in 2018.

Statement 3 is correct. As tigers inhabit diverse habitats across a vast geographical expanse in India, census have categorized the tiger-bearing habitats into five major landscapes based on biogeography and interconnectivity of the habitats: 1) Shivalik-Gangetic plains, 2) Central India and Eastern Ghats, 3) Western Ghats, 4) North Eastern Hills and Brahmaputra Flood Plains, and 5) the Sundarbans.

The highest number (1,161) of tigers were photographed in the Central Indian Highlands and Eastern Ghats in 2022.

The big cat was found to occupy several territorial areas of Madhya Pradesh and Maharashtra, which were not occupied in 2018.

Knowledge Base:

Highlights of Tiger Census 2022

- 1) Tiger occupancy in Jharkhand, Odisha, Chhattisgarh and Telangana showed a decline.
- 2) Tiger occupancy in the Western Ghats has declined.
- 3) the population inside the region's protected areas remained stable (Mudumalai, Periyar) or have increased (Bandipur, Nagarahole), and occupancy outside the PAs has declined.

4) A major decline in tiger occupancy was observed in Mookambika-Sharavathi-Sirsi; the population remained stable in the Bhadra landscape

Source: <https://www.downtoearth.org.in/news/wildlife-biodiversity/tiger-census-2022-india-s-tiger-population-increased-by-200-in-last-four-years-88673>

Q.34) With reference to the National Tiger Conservation Authority (NTCA), consider the following statements:

1. It is a non-statutory body.
2. The Prime Minister is the ex-officio Chairperson of the NTCA.
3. It prepares an annual report which is laid before the Parliament.
4. Tiger Reserves are notified by State Governments on the advice of the National Tiger Conservation Authority.
5. It is not required to obtain the NTCA's approval before altering a Tiger Reserve's boundaries.

Which of the statements given above are correct?

- a) 1, 2 and 5 only
- b) 2, 3 and 4 only
- c) 1 and 5 only
- d) 3 and 4 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect. National Tiger Conservation Authority (NTCA) is a statutory body under the MoEFCC. It was established in 2005 following the recommendation of the Tiger Task Force.

Statement 2 is incorrect. The authority consists of the Minister in charge of the Ministry of Environment and Forests (as Chairperson), the Minister of State in the Ministry of Environment and Forests (as Vice-Chairperson), three members of Parliament, Secretary of Ministry of Environment and Forests and other members.

Statement 3 is correct. The Tiger Conservation Authority is required to prepare an Annual Report, which would be laid out in Parliament along with the Audit Report.

Statement 4 is correct. Under Project Tiger, Tiger Reserves are constituted on a 'core-buffer' strategy. The State Governments shall, on the recommendation of the National Tiger Conservation Authority (NTCA), notify an area as a tiger reserve.

Statement 5 is incorrect. Modification in the boundaries of a Tiger Reserve can be done only on a recommendation of the NTCA and it should also be approved by the National Board of Wildlife (NBWL).

Source: <https://ntca.gov.in/faqs/#faq-new> + Forum IAS Red Book on Environment

Q.35) Which of the following statements about the National Coastal Zone Management Authority (NCZMA) is/are correct?

1. The NCZMA was constituted under the provisions of the Environment (Protection) Act, 1986.
2. It is a permanent body for regulating activities in the Coastal Regulation Zone.
3. The NCZMA is chaired by the Union Minister of Environment, Forest and Climate Change.

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) a

Exp) Option a is the correct answer.

The National Coastal Zone Management Authority (NCZMA) was constituted by the Ministry of Environment Forests and Climate Change (MoEF&CC) to protect and improve the quality of the coastal environment and prevent, abate, and control environmental pollution in coastal areas. The authority was empowered to coordinate the actions of the State Coastal Zone Management Authorities (SCZMAs) and Union Territory Coastal Zone Management Authorities (UTCZMAs) under the Environment Protection (EP) Act 1986.

Statement 1 is correct: The National Coastal Zone Management Authority (NCZMA) was constituted under the provisions of Section 3 of the Environment Protection Act 1986.

Statement 2 is incorrect: The NCZMA is not a permanent body but was constituted as an ad-hoc body for protecting coastal environment. As per the Comptroller and Auditor General (CAG) audit report 2022, the role of NCZMA has shrunk to mere deliberations or decision making on reclassification of Coastal Regulation Zone due to its ad-hoc status and manpower constraints.

Statement 3 is incorrect: The Chairperson of the NCZMA is not the Union Minister of Environment, Forest and Climate Change, rather it is the Secretary of the Ministry of Environment, Forests, and Climate Change who serves as the head of the committee.

Knowledge Base:

Functions of NCZMA:

- 1) Coordination of actions of the SCZMAs and UTCZMAs under the EP Act
- 2) Examination of proposal for change in classification of CRZ areas and in Coastal Zone Management Plans received from SCZMAs and UTCZMAs and make specific recommendations to the Central Government
- 3) Review of cases involving violation under EP Act 1986 for coastal areas and issuing directions for compliance
- 4) File complaints in case of non-compliance to the directions issued for cases involving violation.

Source: <https://prsindia.org/policy/report-summaries/conservation-of-coastal-ecosystems>

https://cag.gov.in/uploads/download_audit_report/2022/Chapter%20-062f1f1d0a6f573.14543971.pdf

Q.36) Consider the following statements regarding conservation measures of various species.

1. "Operation Clean Art" was the first pan-India operation to crack down on the smuggling of Mongoose Hair.
2. "Operation Save Kurma" was conducted to combat the illegal trade of turtles.
3. "Operation Thunderbird" was launched to tackle the illegal trade in Tiger and other wild cats.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct. The government launched Operation Clean Art across India. The operation aimed to crack down on illegal trade in mongoose hair. This is the first time such an operation is happening in India. It was initiated by the Wildlife Crime Control Bureau (WCCB). It was launched in the year 2019.

Statement 2 is correct. WCCB envisaged a species-specific operation code-named "OPERATION SAVE KURMA" to focus specifically on the poaching, transportation and illegal trade of live turtles and tortoises. It was launched in Dec 2016 and continued till Jan 2017

Statement 3 is correct. “Operation Thunderbird’ was conducted to prevent illegal trade in species such as Tigers and other Asian big cats. It was conducted in 2017.

Source: <http://wccb.gov.in/Content/SpecialOperations.aspx>

Q.37) With reference to the Biological Diversity Act, of 2002, consider the following statements:

1. The act aims to safeguard traditional knowledge and prevents biopiracy.
2. Any person in India involved in research related to biological resources, requires prior approval of the National Biodiversity Authority (NBA).
3. There is a provision for the appeal to the National Green Tribunal (NGT) against the orders of National Biodiversity Authority (NBA).
4. The act establishes a statutory body called Genetic Engineering Appraisal Committee to oversee research related to biological resources.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 1, 2 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. The Biological Diversity Act, of 2002 was born out of India’s attempt to realize the objectives enshrined in the United Nations Convention on Biological Diversity (CBD).

The Act in general aims in conserving the Biological Diversity, maintaining and controlling the proper use of its components, ensuring equitable distribution of benefits derived from such utilization. The **mentioned objectives of the Act provide for a safeguard of traditional knowledge, prevent biopiracy, prohibit people from claiming patents without the government’s permission.**

Statement 2 is correct. As per the Act, any person or organization (either based in India or not) obtaining any biological resource occurring in India for its research or commercial utilization.

Statement 3 is correct. Any grievances relating to the determination of benefit sharing or order of the NBA or SBB under this Act shall be taken to the National Green Tribunal (NGT).

Statement 4 is incorrect. Genetic Engineering Appraisal Committee (GEAC) functions as a **statutory body under the Environment Protection Act 1986** of the Ministry of Environment & Forests (MoEF). It was earlier known as Genetic Engineering Approval Committee. GEAC is responsible for granting permits to conduct experimental and large-scale open field trials and also grant approval for commercial release of biotech crops.

Source: Forum IAS Red Book on Environment

Q.38) With reference to the Wetland (Conservation and Management) Rules, 2017, consider the following statements:

1. As per the rules, river channels and paddy fields do not fall under the category of wetlands.
2. The rules have no provision for appeal to the National Green Tribunal (NGT).
3. Areas falling within the purview of the Coastal Regulation Zone are exempt from the rules.
4. The rules abolished the National Wetlands Committee.

Which of the statements given above are correct?

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2 and 4 only

Ans) a

Exp) Option a is the correct answer.

Wetland (Conservation and Management) Rules, 2017 have been made for the effective conservation and management of wetlands in our country.

Statement 1 is correct. The definition of wetland **does not include river channels, paddy fields, man-made water bodies/tanks specifically** for drinking water purposes and structures specifically constructed for aquaculture, salt production, recreation and irrigation purposes.

Statement 2 is correct. There is **no provision of appeal to the National Green Tribunal (NGT).**

Statement 3 is correct. Protected Areas and areas **falling within the purview of the Coastal Regulation Zone have been excluded from the Wetland Rules.**

Statement 4 is incorrect. Under the Wetland (Conservation and Management) Rules, 2017, Central Wetlands Regulatory Authority (CWRA) has **been replaced with the National Wetlands Committee, which will be led by the secretary of Ministry of Environment, Forest and Climate Change.**

Source: Forum IAS Red Book on Environment

Q.39) Consider the following statements about the Wildlife Trust of India (WTI):

1. It is an autonomous body established under the Wildlife Protection Act, 1972
2. It runs various projects across India with communities and governments to achieve its mission of conserving wildlife and their habitat.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. The Wildlife Trust of India (WTI) is a non-profit conservation organisation dedicated to safeguarding India's natural heritage. WTI was founded in November 1998 in New Delhi, India, in response to the rapidly deteriorating state of wildlife in India. Wildlife Trust of India is a registered charity in India (under Section 12A of the Income Tax Act, 1961).

Statement 2 is correct. The Wildlife Trust of India (WTI) is a leading Indian nature conservation organisation dedicated to the service of nature. It runs nearly 44 projects across India with communities and governments to achieve its mission of conserving individual wildlife and their habitat.

Source: <https://www.wti.org.in/our-projects/>

<https://www.wii.gov.in/>

Q.40) With reference to Wuhan Declaration, consider the following statements:

1. It was adopted at 14th Conference of the Parties (COP14) to Ramsar Convention
2. It calls for practical actions to promote conservation, restoration, management and sustainable use of wetlands worldwide.
3. Preserving peatlands is a key priority of the declaration.
4. The declaration acknowledges the accomplishment of member states in increasing the area of natural wetlands by 35%

Which of the above given statements are correct?

- a) 1 and 3 only
- b) 2 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2 and 3 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: The 14th Conference of the Parties (COP14) to the Ramsar Convention on Wetlands was held in Wuhan, China in 2019. During the conference, the Wuhan Declaration was adopted.

Statement 2 is correct: The Wuhan Declaration, recognizes the importance of wetlands as critical ecosystems and calls for practical actions to promote their conservation, restoration, management and sustainable use worldwide.

Statement 3 is correct: The Wuhan Declaration encourages priority conservation and management of vulnerable ecosystems such as **peatlands**, coral reefs, seagrass beds, mangroves, highland wetlands, and subterranean wetlands, where applicable.

Statement 4 is incorrect: The declaration expresses concern over the decline of natural wetlands despite efforts made at all levels to conserve them. It notes that despite designating 2,466 wetlands of international importance, accrediting 43 wetland cities, launching 19 Ramsar Regional Initiatives, and other efforts, the area of natural wetlands has declined by 35%.

Source:

https://www.ramsar.org/sites/default/files/documents/library/wuhan_declaration_final_e.pdf

<https://news.cgtn.com/news/2022-11-08/VHJhbnNjcmlwdDY5MzE3/index.html>

Q.41) Consider the following pairs:

Protocols	Feature
1. Cartagena Protocol	to protect biological diversity from the potential risks posed by Living Modified Organisms (LMO)
2. Nagoya Protocol	Fair and Equitable Sharing of Benefit arising from genetic resources
3. Nagoya – Kuala Lumpur Supplementary Protocol	response measures which must be taken in the case of damage to biodiversity resulting from Living Modified Organisms

How many pairs given above are correctly matched?

- Only one pair
- Only two pairs
- All three pairs
- None of the pairs

Ans) c

Exp) Option c is the correct answer.

CBD is an international legally binding convention which recognized for the first time, the need for conservation of biological diversity for the welfare of humankind. The agreement covers all ecosystems and species as well as genetic resources.

Objectives of the Convention include:

- Conservation of biological diversity

- 2) Sustainable use of its components
- 3) Fair and equitable sharing of benefits

Pair 1 is correct. Cartagena Protocol on Biosafety: CBD covers the rapidly expanding field of biotechnology through its “Cartagena Protocol on Biosafety”. It addresses technology development and transfer, benefit-sharing and biosafety issues. The biosafety protocol seeks to protect biological diversity from the potential risks posed by “Living Modified Organisms (LMOs)” resulting from modern biotechnology

Pair 2 is correct. Nagoya Protocol is a 2010 supplementary agreement to the 1992 Convention on Biological Diversity (CBD). The Nagoya Protocol is about “Access to Genetic Resources” and the “**Fair and Equitable Sharing of Benefit**” arising from their utilization.

Pair 3 is correct. Nagoya Kuala Lumpur Supplementary Protocol on Liability and Redress: It reinforces the Cartagena Protocol. The Supplementary Protocol specifies **response measures which must be taken in the case of damage to biodiversity resulting from Living Modified Organisms**

Source: Forum IAS Red Book on Environment

Q.42) Consider the following statements about the Convention on Migratory Species (CMS):

1. The Convention was adopted in 1992 at the Earth Summit in Rio De Janeiro.
2. It is the only global Convention specializing in the conservation of migratory species.
3. India signed the “Raptor MOU” on Conservation of Migratory Birds of Prey in Africa and Eurasia with the CMS.
4. Gandhinagar Declaration, related to CMS, calls for the concept of ‘ecological connectivity’.

Which of the following statements given above are correct?

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 3 and 4 only
- d) 2 and 4 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. Convention on the Conservation of Migratory Species or Convention on Migratory Species (CMS) is an environmental treaty under the aegis of the **United Nations Environment Programme** that provides a global platform for the conservation and sustainable use of migratory animals and their habitats.

The Convention came into **force on November 1, 1983**. The Secretariat that administers the Convention was established in 1984.

Statement 2 is correct. CMS is the only global Convention specializing in the conservation of migratory species, their habitats and migration routes.

Statement 3 is correct. India had non-legally binding MoUs with the CMS on the conservation and management of Siberian Cranes (1998), Marine Turtles (2007), Dugongs (2008), and Raptors (2016). Indian Government signed the “Raptor MOU” on Conservation of Migratory Birds of Prey in Africa and Eurasia with the CMS

Statement 4 is correct. CMS COP 13 was held in India in 2020 and adopted the Gandhinagar Declaration.

The declaration calls for the integration of migratory species and gave the concept of ‘**ecological connectivity**’ and prioritizes it in the new framework, which is expected to be adopted at the UN Biodiversity Conference's

Source: Forum IAS Red Book on Environment

Q.43) With reference to the Rotterdam Convention, consider the following statements:

1. It is a Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.
2. The Convention is jointly administered by the United Nation Environment Program and the Food and Agriculture Organization.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. Rotterdam Convention is the name for the Convention that was adopted by the Conference of Plenipotentiaries (COP) in 1998 in Rotterdam (Netherlands) that aims to promote shared responsibilities in relation to the international trade of hazardous chemicals.

The **Basel Convention on the Control of Transboundary Movements of Hazardous Wastes** and their Disposal was adopted in 1989 and came into force in 1992. The objective of the Convention is to protect human health and the environment against the adverse effects of hazardous waste.

Statement 2 is correct. It was adopted in September 1998 and came into force in 2004. The Convention is jointly administered by **UNEP and FAO**. It creates a legally binding obligation for the implementation of the Prior Informed Consent (PIC) procedure.

Source: <https://www.downtoearth.org.in/news/agriculture/rotterdam-convention-international-trade-of-2-hazardous-pesticides-recommended-for-prior-informed-consent--85130> + Forum IAS Red Book on Environment

Q.44) Consider the following statements with reference to Global initiatives on Forest conservation:

1. The United Nations Forum on Forests was launched by the United Nations Environment Programme.
2. International Day of Forests (IDF) is celebrated by the United Nations Forum on Forests and the Food and Agriculture Organization.
3. REDD+ is created by the UNFCCC for enhancement of forest carbon stocks in developing countries.

Which of the above statements is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect. In October 2000, the **Economic and Social Council of the United Nations (ECOSOC)**, in its Resolution 2000/35 established the **United Nations Forum on Forests (UNFF)**, a subsidiary body with the main objective to promote the management, conservation and sustainable development of all types of forests based on the Rio Declaration.

Statement 2 is correct. The United Nations observes **March 21 as the International Day of Forests**, commemorating the **green cover around the world** and reiterating its importance.

The Day is celebrated by **the United Nations Forum on Forests and the Food and Agriculture Organization of the United Nations (FAO)**, in collaboration with governments and the Collaborative Partnership on Forests.

The theme for 2022 is "Forests and sustainable production and consumption."

Themes of the International Day of Forests are aimed to fit into **the UN Decade on Ecosystem Restoration (2021-2030)**, which calls for the protection and revival of ecosystems around the world.

Statement 3 is correct. REDD+ is a framework created by the UNFCCC Conference of the Parties (COP) to guide activities in the forest sector that reduces emissions from deforestation and forest degradation. It aims for sustainable management of forests and the conservation and **enhancement of forest carbon stocks in developing countries.**

Source: <https://www.un.org/esa/forests/forum/about-unff/index.html>

<https://blog.forumias.com/un-observes-international-day-of-forests/>

<https://www.unescap.org/sites/default/d8files/51.%20FS-REDD-and-REDD.pdf>

<https://indianexpress.com/article/explained/explained-the-importance-of-the-international-day-of-forests-and-why-it-is-celebrated-7238743/>

Q.45) Which of the following options correctly identifies the ecological classification and habitat of the Indian Skimmer?

- A freshwater turtle found in the Ganges River basin
- A migratory bird species that breeds in the Himalayas
- A critically endangered species of dolphin found in the Brahmaputra River
- A bird species found in the riverine habitats of the Chambal River

Ans) d

Exp) Option d is the correct answer.

The Indian Skimmer is a bird species that feeds by skimming the surface of the water with its lower beak. The Chambal River provides a suitable habitat for the bird due to its clean and unpolluted water, which supports a thriving fish population.



Indian Skimmer is a vulnerable species, and its population is declining due to habitat loss and human interference in its breeding areas. The Chambal River sanctuary has been set up to protect the bird's habitat and breeding areas.

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/indian-skimmer-chambal-river-environment-janaki-lenin/article65902383.ece>

Q.46) Consider the following statements with reference to Crocodiles found in India:

- Project Crocodile was started in 1975 in India with the help of UNDP and FAO.
- Katerniaghat Wildlife Sanctuary is the only protected area in India to be the home for all three species of crocodilians found in the country.
- Mugger Crocodile is considered to be the Earth's largest living crocodile species.

Which of the above statements is/are correct?

- 1 only
- 2 only
- 1 and 3 only
- 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

The Indian Crocodile Conservation Project is one of the most successful conservation initiatives in the world. It has pulled back the once threatened crocodilians from the brink of extinction and placed them on a good path of recovery. The Crocodile Conservation Project was launched in 1975 in different States. The Gharial and Saltwater crocodile conservation programme was **first implemented in Odisha** in early 1975 and subsequently, the Mugger conservation programme was initiated.

Statement 1 is correct. In 1975 the Government of India set up Project Crocodile with the support of the **United Nations Development Programme (UNDP)** and the **Food and Agriculture Organization (FAO)** of the United Nations.

Statement 2 is incorrect. Odisha's **Kendrapara** became the only district in India to be home to all three species of crocodilians found in the country. In Kendrapara, the Bhitarkanika river systems are home to salt water crocodiles, while the Mahanadi and Brahmani rivers and their tributaries that pass through the district are inhabited by muggers and gharials.

The Katarniaghat Wildlife Sanctuary is a protected area and part of crocodile conservation project in the Upper Gangetic plain in Uttar Pradesh, India and covers an area of 400.6 km² in the Terai of the Bahraich district.

Statement 3 is incorrect.

Saltwater Crocodile is considered the Earth's **largest living crocodile** species native to **saltwater habitats and brackish wetlands**. Bhitarkanika National Park in Odisha houses 70% of India's estuarine crocodiles or saltwater crocodiles. **IUCN Status:** Least Concern, **Indian Wildlife Protection Act, 1972:** Schedule 1

While, Mugger Crocodile is also called marsh crocodile or broad-snouted crocodile. It is an egg-laying and hole-nesting species. It is native to **freshwater habitats** from southern Iran and Pakistan to the Indian subcontinent and Sri Lanka. **IUCN Status:** Vulnerable, **Indian Wildlife Protection Act, 1972:** Schedule 1, **CITES:** Appendix I.

Knowledge Base: The crocodilian family consists of 27 different species that are subdivided into three families: True crocodiles, alligators and caimans and gharials.

Source: <https://www.downtoearth.org.in/news/wildlife-biodiversity/odisha-s-kendrapara-now-india-s-only-district-to-have-all-3-species-of-crocodilians-78740>

<https://blog.forumias.com/odishas-kendrapara-now-indias-only-district-to-have-all-3-species-of-crocodilians/>

<http://www.bwcindia.org/web/awareness/learnabout/Crocodiles.html>

<https://www.livemint.com/news/india/odisha-district-only-place-in-india-to-have-all-three-crocodile-species-11630385129180.html>

Q.47) Consider the following statements with reference to Biodiversity of India:

1. According to Conservation International, hotspot is a region that has lost at least 30% of its original habitat.
2. Sundaland Biodiversity Hotspot includes Nicobar group of Islands in India.
3. Andaman and Nicobar & Lakshadweep Islands have been named as the new “hope spots” by IUCN and Mission Blue.

Which of the above statements is/are correct?

- a) 3 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Biodiversity is referred to as the variation of plant and animal species in a particular habitat. Species evenness and species richness form the major components of biodiversity. India is known for its rich biodiversity and has around 24.46% of the geographical area covered by forests and trees.

Coined by Norman Myers, the term “Biodiversity hotspots” can be defined as the regions which are known for their high species richness and endemism.

Statement 1 is incorrect. According to **Conservation International**, a region must fulfill the following two criteria to qualify as a hotspot:

- 1) It must have **30% or less of its original natural vegetation (It has to have lost at least 70% of its original habitat)**. In other words, **it must be threatened**.
- 2) It must have at least **1,500 vascular plants** as endemics which are to say, **it must have a high percentage of plant life found nowhere else on the planet**. A hotspot, in other words, is irreplaceable.

Statement 2 is correct. There are **major four biodiversity hotspots** in India:

Himalaya: Includes the **entire Indian Himalayan region** (and that falling in Pakistan, Tibet, Nepal, Bhutan, China, and Myanmar).

Indo-Burma: Includes entire **North-eastern India, except Assam and Andaman group of Islands** (and Myanmar, Thailand, Vietnam, Laos, Cambodia, and southern China)

Western Ghats and Sri Lanka: Includes entire Western Ghats (and Sri Lanka).

Sundalands: Includes **Nicobar group of Islands** (and Indonesia, Malaysia, Singapore, Brunei, Philippines). The part of India that falls in the Sundaland Hotspot is the **Nicobar Islands**. Interestingly, it extends to the tectonic plates under the Indian Ocean. Sundaland also has the distinction of being home to the world's largest flowers, the **rafflesia**, which measure one metre across.



Statement 3 is correct. A **Hope Spot** is an **area of the ocean that merits special protection** because of its wildlife and significant underwater habitats.

Andaman and Nicobar & Lakshadweep Islands have been named as the **new “hope spots”** by IUCN and **Mission Blue**, an organization involved in the study of oceans.

Andamans & Nicobar Island has some of the **world’s unique species of birds and plants**.

Source: <https://www.thehindu.com/children/wild-wonderlands/article34686553.ece>

<https://www.downtoearth.org.in/news/andamans-lakshwadeep-declared-hope-spots-by-iucn-42556#:~:text=By%20Kumar%20Sambhav%20Shrivastava&text=Andaman%20and%20Nicobar%20Islands%20and,in%20the%20study%20of%20oceans.>

<https://www.conservation.org/priorities/biodiversity-hotspots>

https://blog.forumias.com/conservation-efforts-in-india/#610_Biodiversity_Hotspots

Q.48) Consider the following pairs:

Sacred Groves	States
1. Orans	Jharkhand
2. Sarana	Rajasthan
3. Pavithra Vana	Andhra Pradesh

Which of the above-mentioned pairs is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Sacred groves comprise of patches of forests or natural vegetation – from a few trees to forests of several acres – that are usually dedicated to local folk deities. Some of important sacred groves in the country are:

Pair 1 is incorrect – Orans are the sacred woodland situated in Rajasthan. They have been a source of natural wealth like fodder, fuel, berries, timber, roots and herbs. These are also important source of water for traditional irrigation in Aravallis. The main water source for their livestock population in Johad which exists in the Oran.

Pair 2 is incorrect - Jharkhand's sacred groves, generally referred to as sarnas, are central to the tribal communities' culture and heritage. These patches of forests with sal trees and a cluster of other tree species are places of worship for the tribals in the state. Felling of trees, harming animals and plucking leaves are usually forbidden in these sacred spaces.

Pair 3 is correct - Sacred groves in Andhra Pradesh are known as Pavithravana. These are declared in various forest ranges to increase protection. Several communities feel the forest ranges as sacred and worship the trees there. It is not the name of a specific tree rather several forest patches in the state. These spaces are protected by local communities because of their religious beliefs and traditional rituals that run through several generations.

Source: <https://blog.forumias.com/appendix/>

<https://www.iccaconsortium.org/index.php/2021/02/27/orans-rajasthan-india/#:~:text=Orans%20are%20sacred%20spaces%2C%20which,intricately%20linked%20around%20these%20spaces.>

<https://india.mongabay.com/2019/12/protecting-sarna-jharkhands-groves-of-faith/#:~:text=Jharkhand's%20sacred%20groves%2C%20generally%20referred,the%20tribals%20in%20the%20state.>

<https://www.thehindu.com/features/friday-review/museum-of-biodiversity/article6570739.ece>

Q.49) With reference to difference between National Park and Wildlife Sanctuaries, which of the following statements is correct?

- a) Unlike National Parks that are declared by Union government the Wildlife Sanctuaries are declared by respective state governments.
- b) The boundaries of the National Parks are fixed and defined, which it is not so with wildlife sanctuaries.
- c) National Parks enjoy greater accessibility compared to Wildlife Sanctuaries.
- d) National Parks can be part of Biosphere reserves, but Wildlife sanctuaries are entirely separate from biosphere reserves.

Ans) b

Exp) Option b is the correct answer.

There are 104 existing NPs covering 1.23% of the geographical area in the country. There are 551 existing WLS covering 3.64% of the geographical area of the country. Difference between the two are:

Option a is incorrect - The State Government may, by notification, declare its intention to constitute any area within or outside any reserve forest as a sanctuary/National Park. Even the Central Government can do so. The notification shall specify, as nearly as possible, the situation and limits of such area. **Both Central and State Government can notify either of wildlife sanctuaries and national parks. It is done under the Wildlife Protection Act, 1972.**

Option b is correct - **The boundaries of the National Parks are fixed and defined, it is not so with wildlife sanctuaries.** The fixed boundary of a National Park is described in the Wildlife Protection Act, 1972. The legislation states the actual area of the national park which is notified by the State Government.

Option c is incorrect - **Wildlife sanctuaries are more accessible than National Park.** National Parks enjoys higher protection and even the collection of NFP under FRA, 2006 has been prohibited here. Wildlife Sanctuary is natural area which is reserve by a governmental or private agency for the protection of particular species. Human activities like tilling of land, collection of minor forest produce, harvesting of timber and private ownership rights are allowed in wildlife sanctuary. Unlike a Sanctuary, where certain rights can be allowed, in a National Park, no rights are allowed.

Option d is incorrect - **Both National Park and Wildlife sanctuaries can be the part of biosphere reserves.** Existing legally protected areas (National Parks, Wildlife Sanctuary, Tiger Reserve and reserve/protected forests) may become part of the BR without any change in their legal status. Biosphere Reserves is not intended to replace existing protected areas but it widens the scope of conventional approach of protection and further strengthens the Protected Area Network.

Source: Red Book on Environment by Forum IAS.

Q.50) With reference to Organic Photovoltaic (OPV) cells, consider the following statements:

1. OPV is a third-generation solar cell technology.
2. OPV cells have the potential to store much larger amounts of solar energy than other solar technologies.
3. OPV have a much longer operational life than their silicone based counter parts.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2, and 3

Ans) a

Exp) Option a is the correct answer.

Organic solar cells, also known as OPV, are a type of polymer solar cell that uses organic electrons to convert solar energy into electrical energy. They are lightweight, have low manufacturing costs, and can cover a larger area than other solar technologies.

Statement 1 is correct: OPV cells are a third-generation solar cell technology, which means they are more advanced than the first-generation silicon-based solar cells and second-generation thin-film solar cells.

Statement 2 is correct: OPV are thinly filmed solar cells that have the potential to store much larger amounts of solar energies than other solar technologies.

Statement 3 is incorrect: The key limitation of organic solar cells is their shorter operational lifetime compared to silicon-based solar cells, despite having higher efficiency. However, ongoing research and development involving new materials, processing methods, and device architectures are being explored to address this limitation.

Source: <https://renewableenergyhub.co.uk/main/solar-panels/organic-solar-cells/>

Q.1) Which of the following statements are the advantages of Zero tillage farming?

1. Reduction in the crop duration and higher yields
2. Zero cost of inputs used for land preparation.
3. Helpful in carbon sequestration
4. Reduces compaction of the soil

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) c

Exp) Option c is the correct answer.

Zero tillage is the process where the crop seed will be sown through drillers without prior land preparation and disturbing the soil where previous crop stubbles are present.

Zero tillage not only reduces the cost of cultivation but also reduces the soil erosion, crop duration and irrigation requirement and weed effect which is better than tillage. Zero Tillage (ZT) also called No Tillage or Nil Tillage. The No Till approach was started in 1960s by the farmers in India.

Advantages of zero tillage : -

- 1) Reduction in the crop duration and thereby early cropping can be obtained to get higher yields. **Hence option 1 is correct.**
- 2) Reduction in the cost of inputs for land preparation and therefore a saving of around 80%. **Hence option 2 is incorrect.**
- 3) Residual moisture can be effectively utilized and the number of irrigations can be reduced.
- 4) Dry matter and organic matter get added to the soil.
- 5) Environmentally safe - Greenhouse effect will get reduced due to carbon sequestration. **Hence option 3 is correct.**
- 6) No tillage **reduces the compaction of the soil** and reduces the water loss by runoff and prevents soil erosion. **Hence option 4 is correct.**
- 7) As the soil is intact and no disturbance is done, No Till lands have more useful flora and fauna.

Source: <https://vikaspedia.in/agriculture/best-practices/sustainable-agriculture/crop-management/201czero-tillage201d-zero-worries>

Q.2) Consider the following statements with reference to the Edible Oil sector of India.

1. India imports more than 50% of its edible oil requirement.
2. Sunflower oil accounts for more than 90% of all edible oil imports.
3. Rajasthan is the largest mustard oil producing state in India.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only
- d) 1 and 3 only

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct. More than half of India's edible oil consumption is imported, India's dependence on edible **oil imports is to the tune of 55-60%**. India is the world's second-largest consumer and number one

importer of vegetable oil, and it meets 55-60 per cent of its need through imports. Although the oilseed production in India has grown over the years, the production has lagged its consumption, resulting in continuous dependence on imports.

Statement 2 is incorrect. Sunflower oil accounts for **14% of all edible oil imports India** imports 25 lakh tonnes of sunflower oil annually, of which 70% comes from Ukraine and 20% from Russia.

Statement 3 is correct. Rajasthan is the largest mustard oil producing state in the country. Currently, Rajasthan (41%), Madhya Pradesh (15%) and Haryana (8%), have a combined share of 64% in the mustard seed sown area in the country.

Source : <https://dfpd.gov.in/oil-division.htm>

Q.3) Consider the following pairs with reference to various crops and their largest producing States (As per 2022-23):

Crop	Largest Producer
1. Cotton	Telangana
2. Coffee	Karnataka
3. Jute	West Bengal
4. Maize	Rajasthan

How many pairs given above are correctly matched?

- Only One pair
- Only Two pairs
- Only three pairs
- All four pairs

Ans) b

Exp) Option b is the correct answer.

Pair 1 is matched incorrectly. During the current cotton season 2022-23, Gujarat, Maharashtra and Telangana are the major cotton producing states which produce about 65% of cotton production in the country. Gujarat with 91.83 lakh bales is followed by Maharashtra and Telangana with 80.25 lakh bales and 53.25 bales respectively.

Pair 2 is matched correctly. In fiscal year 2023, Karnataka had the largest share of coffee production in India, with 72.5 percent. Kerala followed, with Tamil Nadu ranking third during the same time period.

Pair 3 is matched correctly. India is the world's biggest producer of jute, followed by Bangladesh. In India, more than 80% of total production of Jute happens in West Bengal. West Bengal has the highest concentration of jute mills.

Pair 4 is matched incorrectly. Production of Maize in the country during 2022-23 is estimated at (record) 346.13 lakh tonnes which is higher by 8.83 lakh tonnes than the previous year production. The State of Karnataka with 5.22 million Tonnes is the largest producer followed by Madhya Pradesh (4.57 MT) and Maharashtra (3.53 MT)

Source:

https://www.google.com/url?sa=t&source=web&rct=j&url=https://pib.gov.in/PressReleaseDetail.aspx%3FPRID%3D1899193&ved=2ahUKEwjxkLq5tcD-AhU_yqACHbluCGoQFnoECA4QAQ&usq=AOvVaw2Rik9NA1LCllysjMllo384

Q.4) Dhara Mustard Hybrid (DMH-11) is an indigenously developed transgenic mustard. Consider the following statements with reference to DMH-11:

- Recently the Genetic Engineering Appraisal Committee (GEAC) has approved the commercial production of hybrid mustard DMH-11.
- It is a genetically modified variant of Herbicide Tolerant (HT) mustard.

3. It is a result of a cross between Indian mustard variety 'Varuna' and East European 'Early Heera-2' mustard.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. Recently, the Genetic Engineering Appraisal Committee (GEAC) that functions under the Union Ministry of Environment, Forest and Climate Change have approved seed production prior to commercial release of genetically modified (GM) mustard. GEAC has **not given approval for commercial production of GM Mustard yet.**

Statements 2 and 3 are correct. DMH-11 is an indigenously developed transgenic mustard. It is a genetically modified variant of **Herbicide Tolerant (HT) mustard**. DMH-11 is a result of a cross between Indian mustard variety '**Varuna**' and East European '**Early Heera-2**' mustard.

It contains two alien genes ('barnase' and 'barstar') isolated from a soil bacterium called *Bacillus amyloliquefaciens* that enable breeding of high-yielding commercial mustard hybrids.

Source: <https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.thehindu.com/sci-tech/agriculture/explained-the-new-hybrid-variant-of-mustard/article66088166.ece&ved=2ahUKEwiS0-KevcD-AhXyU2wGHdGOAyQQFnoECAEQAQ&usg=AOvVaw0GsfEipI56QhONL766V8kY>

Q.5) Consider the following statements with reference to Reversative agriculture:

- 1. It is a low-cost farming technique to reduce greenhouse gas emissions from agriculture.
- 2. Organic farming and Natural farming are the examples of reversative agriculture.

Which of the above given Statements is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) c

Exp) Option c is the correct answer.

Statements 1 and 2 are correct. Reversative agriculture (organic or natural farming) – a low-cost approach to reducing greenhouse gas emissions.

Organic matter increase can help with carbon sequestration, while also improving the soil's microbial population.

Source: <https://www.un.org/en/observances/world-soil-day>

Q.6) Soil health is critical for healthy food production. Which of the following practices can help in reducing soil erosion?

- 1. Terrace farming
- 2. Contour farming
- 3. Crop rotation
- 4. Permaculture
- 5. Biodynamic farming

Which of the options given above are correct?

- a) 1, 2, 3 and 4 only
- b) 2, 3, 4 and 5 only
- c) 1, 3, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

Soil erosion is a gradual process that occurs when the impact of water or wind detaches and removes soil particles, causing the soil to deteriorate.

All the given techniques of farming help in reducing soil erosion.

Option 1 is correct. In terrace farming, a terrace is a piece of the sloped plane that is cut into a series of successively receding platforms, that resemble steps. This prevents rain from washing away soil, hence preventing soil erosion.

Option 2 is correct. Contour farming is the practice of tilling sloped land along lines of consistent elevation in order to conserve rainwater and to reduce soil losses from surface erosion.

Option 3 is correct. Crop rotation can improve soil structure and fertility by alternating deep-rooted and shallow-rooted plants. In turn this can reduce soil erosion and increase infiltration capacity, thereby reducing downstream flood risk.

Option 4 is correct. Trees grown on permaculture farms accomplish the purpose of **holding the topsoil layer together and preventing soil erosion.** The goal of permaculture is to maximize the use of land so that it can be used productively for food production or personal subsistence by future generations. It incorporates techniques from a variety of fields, including organic farming, agroforestry, composting, mulching, integrated farming, sustainable development, and applied ecology.

Option 5 is correct. Biodynamic farming is a **nature-based farming technique** which relies on locally-sourced materials and living soil for crop production which **helps in controlling soil erosion.** It helps maintain the balance between plants and microbial life on earth as both are essential for each other's survival. Thus, it is helpful in tackling the growing problem of soil erosion.

Source:

<https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.biodynamics.com/biodynamic-principles-and-practices%23~:text=3DBiodynamic%2520plants%2520are%2520grown%2520in,cover%2520cropping%252C%2520and%2520crop%2520rotation.&ved=2ahUKEwj72tHlxMD-AhX07DgGHY3-DxIQFnoECEkQBQ&usq=AOvVaw1FkovNWM5bztpUzG50blUQ>

Q.7) Consider the following statements with reference to SMART-PDS (Scheme for Modernisation and Reforms through Technology in Public Distribution System):

1. It is a system where smart ration cards are issued to beneficiaries of the Public Distribution System (PDS).
2. Fingerprints of the beneficiaries are recorded to ensure transparency in transactions.
3. It takes leverage of the usage of Cloud and new-age technology.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct. SMART-PDS is a system where **smart ration cards are issued** to beneficiaries of the public distribution system, and ration is given through fair price shops on the production of the smart ration card by any member of the beneficiary family.

Statement 2 is correct. Fingerprint template of the beneficiary is recorded in these smart ration cards, which record all transactions. The SMART-PDS is an initiative of the Department of Food and Public Distribution (DFPD) under the Ministry of Consumer Affairs, Food and Public Distribution.

Statement 3 is correct. This scheme aims to transform the entire PDS IT ecosystem by **leveraging the usage of Cloud and new-age technology.**

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1903594>

Q.8) Which of the following best explains the Cobweb cycle / phenomenon which was in the news recently?

- It refers to a phenomenon where the prices of certain goods witness fluctuations that are cyclical in nature.
- It refers to the periodic rise of some agricultural commodities due to their scarce production.
- It is a phenomenon where the price of certain agricultural commodities rises more rapidly than the prices of other goods and services.
- It refers to a cycle of price rise of all agriculture commodities during Stagflation.

Ans) a

Exp) option a is the correct answer.

Statement a is correct. Cobweb cycle / phenomenon refers to a phenomenon where the **prices of certain goods witness fluctuations that are cyclical in nature.** It happens due to faulty producer expectations.

- The producers of agricultural goods, for instance, might decide to increase their output one year because their product commanded a very high price the previous year. This, however, might lead to overproduction and cause prices to slump that year, thus leading to losses.
- Such cyclical price fluctuations are more severe in markets where speculators are banned from hoarding goods to sell them later at a higher price.

Statement b is incorrect. Cobweb cycle / phenomenon **do not** refer to the periodic rise and fall of some agricultural commodities due to their scarce production.

Statement c is incorrect. Agflation describes the phenomenon when food prices rise more rapidly than the prices of other goods and services, due to the growing demand for crops as both food and for use in biofuels.

Statement d is incorrect. Cobweb cycle / phenomenon **do not** refer to a cycle of price rise of all agriculture commodities during Stagflation.

Source:

https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.thehindu.com/opinion/op-ed/what-is-cobweb-cycle-in-economics/article22744641.ece/amp/&ved=2ahUKEwiX_sX_usH-AhXXcGwGHQFxDJoQFnoECFoQAQ&usq=AOvVaw2fZ9HMUExnnHD7nSB-QSRn

Q.9) Agriculture infrastructure Fund (AIF) aims to provide all-around financial support to the farmers. Consider the following statements with reference to AIF:

- It is a Central Sector Scheme.
- Its aim is to provide a medium-long term debt financing facility for the farming sector.
- Only individual farmers are the intended beneficiaries of this scheme.

Which of the statements given above are correct?

- a) 2 and 3 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. Agriculture infrastructure Fund (AIF) is a pan India Central Sector Scheme launched in the year 2020. The duration of the Scheme shall be from FY2020 to FY2032.

Statement 2 is correct. Agriculture infrastructure Fund (AIF) aims to provide a medium – long term debt financing facility for investment in viable projects. The projects include for post-harvest management Infrastructure and community farming assets through interest subvention and financial support.

Statement 3 is incorrect. Intended beneficiaries under this scheme include Primary Agricultural Credit Societies (PACS), Marketing Cooperative Societies, Farmer Producers Organizations (FPOs), Self Help Group (SHG), Farmers, Multipurpose Cooperative Societies, Agri-entrepreneurs, Startups, Aggregation Infrastructure Providers and Central/State agency or Local Body sponsored PPP Project.

Source:

<https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.pib.gov.in/PressReleasePage.aspx%3FPRID%3D1892987&ved=2ahUKEwj05fwvH-AhWbUGwGHbI0CQMqFnoECBAQAQ&usq=AOvVaw0Cg1m4ne4s87G9AycIRAFW>

Q.10) Consider the following statements about Krishi Decision Support System (Krishi DSS), that has been often mentioned in the media:

1. It helps to enhance the evidence based decision making ability of all the stakeholders in the agriculture sector
2. It is being jointly developed by the Ministry of Agriculture and Farmers Welfare and the Department of Space.
3. It utilizes the services of BHUVAN and MOSDAC platforms of the Indian Space Research Organization (ISRO).

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statements 1 and 2 are correct. A Memorandum of Understanding (MoU) was signed between the **Ministry of Agriculture and the Department of Space** to develop the Krishi-Decision Support System (Krishi-DSS) using satellite data. **This will enhance the evidence-based decision-making capability of all the stakeholders in the agriculture sector.**

Statement 3 is correct. It provides information to the stakeholder **by way of integration with MOSDAC and BHUVAN (Geo-platform)** and ICAR systems.

- 1) **BHUVAN:** The Indian Space Research Organisation (ISRO) developed the Geoportal platform known as BHUVAN, which in Sanskrit means "earth," and it was launched in 2009. It is widely known for its collaboration with the Indian government to facilitate the the use of geospatial technology.

2) **MOSDAC (Meteorological and Oceanographic Satellite Data Archival Centre):** It serves as a data repository for ISRO and Indian government missions that deal with meteorology, oceanography, and tropical water cycles. Through the MOSDAC website, the Space Applications Centre (SAC), Ahmedabad disseminates mission data in close to real-time.

Source: <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1883182>

<https://bhuvan.nrsc.gov.in/>

<https://www.mosdac.gov.in/>

Q.11) The concept of green manuring is quickly gaining popularity in organic farming. In this context which of the following can be considered as advantages of “Green manuring.”:

1. It increases water holding capacity of soil
2. It helps in reclamation of alkaline soils.
3. It can be helpful in reducing weed growth.

Which of the options given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Green undecomposed material used as manure is called green manure. It is obtained in two ways: by growing green manure crops or by collecting green leaf (along with twigs) from plants grown in wastelands, field bunds and forest.

Option 1 is correct. Green manuring improves soil structure, increases water holding capacity and decreases soil loss by erosion.

Option 2 is correct. Green manuring helps in reclamation of alkaline soils. Root knot nematodes can be controlled by green manuring. Green manure acts mainly as soil-acidifying matter to decrease the alkalinity/pH of alkali soils by generating humic acid and acetic acid.

Option 3 is correct. Growing of green manure crops in the off season reduces weed proliferation and weed growth. A well-established over-wintering green manure will smother weed seedlings and some, notably grazing rye, will prevent weed seed germination as they decompose after incorporation into the soil.

Q.12) With reference to the Policy Framework for Genetically Modified (GM) Crops, consider the following statements:

1. The Genetic Engineering Appraisal Committee (GEAC) is the highest authority in India that authorises the release of GM crops for commercial use.
2. In India, the Food Safety and Standards Authority of India (FSSAI) is empowered to regulate food from genetically modified (GM) crops.
3. The GM food imports in India require approvals under the Biological Diversity Act, 2002.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. The Genetic Engineering Appraisal Committee (**GEAC**) is the apex body in India that **approves the commercial release of GM crops**. The "Rules for the Manufacture/Use/Import/ Export and Storage of Hazardous Microorganisms, Genetically Engineered Organisms or Cells, 1989" (commonly referred to as the "Rules, 1989") are administered by the Ministry of Environment and Forests (MoEF) in accordance with the Environment (Protection) Act, 1986, and govern all GMO-related activities and products derived from GMOs in India. The Rules, 1989 cover a wide range of activities, products, and processes, including food derived from biotechnology.

Statement 2 is correct. Food Safety and Standards Act, 2006 empowers the Food Safety and Standards Authority of India (FSSAI) to **regulate genetically modified (GM) foods**. This notification exempted food stuffs, ingredients in foodstuffs and additives including processing aids derived from Living Modified Organisms where the end product is not a Living Modified Organism.

Statement 3 is incorrect. The import of genetically modified foods in India requires approvals under the **Environment Protection Act of 1986 and the Food Safety and Standards Act of 2006 (and not Biological Diversity Act 2002)**. While the former analyses how the food products impacts the environment, the latter evaluates how the food affects the health of the people.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1844666>

http://www.indiaenvironmentportal.org.in/files/fssa_interim%20regulation%20on%20Operatonalising%20GM%20Food%20regulation%20in%20India.pdf

<https://www.downtoearth.org.in/news/food/india-is-consuming-banned-gm-food-owing-to-lack-of-regulations-59931>

Q.13) With reference to Fisheries sector, consider the following statements:

1. India is the largest fish producer in the world.
2. More than 10% of the world's shellfish and fish species are known to be found in India.
3. Tamil Nadu is the largest fish producing state in India.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect. India is the world's second-largest aquaculture country and, after China, the world's third-largest fish producer. The fisheries and aquaculture industries have significantly improved as a result of the Indian Blue Revolution.

Statement 2 is correct. The rich and diverse fisheries of India, which include deep seas, lakes, ponds, and rivers, are home to more than 10% of the world's fish and shellfish species. The country's extensive coastline, exclusive economic zone (EEZ), and sizable continental shelf region are the home to marine fisheries resources.

Statement 3 is incorrect. Andhra Pradesh is the largest fish producing state in India. It produces over 42L tonnes of fish per year and accounts for over 30 percent of total fish produced in the country.

Source: <https://www.ibef.org/blogs/the-fisheries-aquaculture-sector-of-india#:~:text=India%20is%20the%20world's%20second,largest%20fish%20producer%20after%20China.>

<https://timesofindia.indiatimes.com/city/vijayawada/state-tops-in-fishery-lags-in-consumption/articleshow/87144847.cms>

Q.14) Which of the following are the applications of Genome sequencing in Agriculture and allied sector?

1. Improve and design crops with enhanced resistance to pests and diseases.
2. To produce large quantities food on the limited amount of land
3. To produce superior quality livestock
4. To enhance stress tolerance in aquatic organisms

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 1, 3 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

The study of genes and gene functioning is the area of genomics. Genomics targets to recognize the configuration of the genome together with gene mapping and DNA sequencing. In agriculture, genomics aids to: -

- 1) Improve and design crops with enhanced resistance to factors that influence their growth such as pests, diseases, drought, frost, floods and so on. **Hence option 1 is correct.**
- 2) To produce large quantities food on the limited amount of land and to cultivate more nutrient-rich foods. **Hence option 2 is correct.**
- 3) To breed disease resistant, **superior quality livestock** and to **produce healthy herds**. Genomics helps to accurately predict the genetic merit, to sharpen selective breeding, enhance desirable traits and increase animal health and welfare. **Hence option 3 is correct.**
- 4) Genomics helps to **improve aquaculture**, quicker growth rates, improve disease resistance and enhance **stress tolerance in aquatic organisms**. As aquaculture produces vital high-quality protein that feeds the population of the world. **Hence option 4 is correct.**

Source: <https://biotecharticles.com/Biotech-Research-Article/Genomics-and-Its-Applications-in-Agriculture-2164.html>

<https://www.mybiosource.com/learn/genome-sequencing-in-agriculture-and-food-security/>

Q.15) Consider the following pairs about the agricultural products that has got GI tag recently and their respective states:

GI Product	State
1. Adamchini Rice	Uttar Pradesh
2. Mushk Budji Rice	Telangana
3. Marcha Rice	Bihar

Which of the above given pairs are correctly matched?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Geographical Indications (GI) is a form of Intellectual Property right that identifies goods originating from a specific geographical location and having distinct nature, quality and characteristics linked to that location. The GI tags are typically applied to industrial products, foodstuffs, agricultural products, spirit

drinks, and handicrafts. GI Tag guarantees that only the registered authorized user is permitted to use the name of the popular Product.

Pair 1 is correctly matched: Adamchini Chawal belongs to the Uttar Pradesh. Banarasi Paan has received the geographical indication (GI) tag. Along with the Banarasi Paan, three other Varanasi-based products Banarasi Langda Mango, Ramnagar Bhanta (Brinjal) and **Adamchini Rice** have also received the GI tag,

Pair 2 is incorrectly marked: Mushk Budji Rice belongs to Jammu and Kashmir (not Telangana).

Pair 3 is correctly matched: Bihar's famous 'Marcha Rice' which is known for its aroma and palatability was awarded the Geographical Indication tag, according to the GI registry. Marcha is a short indigenous cultivar of rice found in West Champaran district of Bihar. By its size and shape, its grain appears like black pepper, so it is known as 'Mircha'

Source: <https://economictimes.indiatimes.com/news/india/bihars-aromatic-marcha-rice-gets-gi-tag/articleshow/99274910.cms>

<https://www.zeebiz.com/trending/news-banarasi-paan-gi-tag-geographical-indication-langda-mango-ramnagar-bhanta-228986>

Q.16) Which of the following are the advantages of cultivating millets over conventional cereals?

1. They can grow across wide latitudinal range.
2. They requires less water than wheat and rice.
3. They can withstand heat, flood and drought.
4. They are highly resistant to pests and diseases.
5. They are free of gluten.

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 1, 2, 3 and 5 only
- c) 2, 3, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Ans) d

Exp) Option d is the correct answer.

Millets are resilient cereals that can offer a cost-effective and nutrient-rich alternative and help ensure food security. **At its 75th session in March 2021, the United Nations General Assembly declared 2023 the International Year of Millets (IYM 2023)** with the Food and Agriculture Organization of the United Nations (FAO) as the lead agency. Some of the advantages of millets over conventional cereals like wheat and rice are given below:

- 1) Millets can grow on arid soils, non-irrigated land, in very low rainfall regimes, and over a wide latitudinal range. **Hence, option 1 is correct.**
- 2) Compared to rice and wheat, millets require less water. They also have a low water footprint. **Hence, option 2 is correct.**
- 3) In an era of climate change and declining natural resources, the millet crop is an obvious choice for farmers due to its high tolerance for heat (up to 64 degrees Celsius), drought, and flood. **Hence, option 3 is correct.**
- 4) They require less input, have higher disease and pest resistance, and require lesser synthetic fertilisers and pesticides. **Hence, option 4 is correct.**
- 5) They are gluten-free. **Hence, option 5 is correct.**
- 6) Additionally, compared to other cereals, they are more resilient to climate change.

Source: <https://unric.org/en/millets-good-for-people-the-environment-and-farmers/>

Q.17) Which of the following are the conditions best suited for Tea cultivation?

1. Tropical climate
2. Soil rich in humus
3. Cold and dry conditions
4. Annual Rainfall less than 100 cm
5. Temperature between 21 to 29°C

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 5 only
- c) 2 and 4 only
- d) 1, 2 and 5 only

Ans) d

Exp) Option d is the correct answer.

The climate not only determines the suitable place to grow tea plants but also affects the quality of tea grown in that area.

Ideal Conditions for Tea Cultivation are:

Statement 1 is correct. Tropical and Sub-tropical climates are optimal for tea cultivation.

Statement 2 is correct. Well-drained soil, rich in humus is required for tea cultivation.

Statement 3 is incorrect. Warm and moist climatic condition are needed for cultivation of tea. Humidity required is generally between 75 to 90%.

Statement 4 is incorrect. Annual Rainfall for tea cultivation is generally between 150-700 cm

Statement 5 is correct. Temperature must be in the range 21°C to 29°C.

Source: <https://vihaba.global/2022/02/17/what-is-the-ideal-climate-condition-for-tea-cultivation/>
<https://www.yourarticlelibrary.com/essay/growth-of-tea-suitable-conditions-required-for-the-growth-of-tea/25570>

Q.18) In the context of India which of the following statements represents possible negative impacts of Agricultural Subsidies given by the government?

1. Decrease in plantation of monoculture crops
2. Soil degradation
3. Overuse of fertilizers and pesticides
4. Increased Greenhouse Gas (GHG) emission
5. Increase in symbiotic efficiency of Nitrogen-fixing rhizobia with soil.

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 1, 3, 4 and 5 only
- c) 2, 3 and 4 only
- d) 1, 2, 3, 4 and 5

Ans) c

Exp) Option c is the correct answer.

Option 1 is incorrect. According to a recent report by the Food and Agriculture Organisation of the United Nations (FAO), the United Nations Development Programme (UNDP), and the United Nations Environment Programme (UNEP), subsidies can have a negative impact on the environment by encouraging monoculture and the overuse of agrochemicals and natural resources.

Option 2 is correct. Subsidies are particularly problematic in the case of nitrogen-based fertilisers as, overusing them, release nitrous oxide, a gas that is around 300 times more harmful than carbon dioxide. Additionally, the use of these fertilisers is linked to soil degradation and surface water pollution.

Option 3 is correct. Farmers are urged to use inputs like fertilisers more often when their cost are subsidised through government policies.

Option 4 is correct and 5 is incorrect. Subsidies affects trade and production decisions and distorts agricultural markets. By creating strong incentives for increased production, which in turn leads to greater usage of inputs like agrochemicals, pesticides, and water, it has a **negative impact on the environment by increasing GHG emissions and nitrogen runoff from agriculture. Excessive use of Pesticides reduce symbiotic efficiency of nitrogen-fixing rhizobia and host plants.**

Source: <https://www.iisd.org/articles/policy-analysis/wto-agricultural-subsidies-trade-offs#:~:text=It%20also%20generates%20environmentally%20harmful,and%20nitrogen%20runoff%20from%20agriculture.>

Q.19) With reference to the land reforms in India, consider the following statements:

1. Bhoodan movement aimed at redistribution of the lands willingly given up by the large landowners among the landless.
2. The Gramdan led to the donation of the entire village to the society for carrying out cooperative farming.
3. The Land Satyagraha in Chhattisgarh ensured a scientific survey of land to weed out the false land records.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Acharya Vinoba Bhave started Bhoodan for providing land to the landless and Gramdan to create a new social order based on cooperative farming.

Statement 1 is correct: Bhoodan movement was initiated for the landowners to willingly give up some acres of their land to landless people. Bhoodan Movement had two components (i) the **collection of land gifts**, and (ii) **redistributing that land among the landless.**

It is also known as the land gift movement.

There were two major philosophical objectives of the movement:

- 1) To keep away from power and to create Jan Shakti, a self-reliant strength of the people.
- 2) Vinoba called for a change in land ownership from the hands of individual to that of village or society, declaring that "All land belong to Him". Society is the virtual owner of what is with us and we can only act as trustees on its behalf.

Statement 2 is correct: The **Gramdan** (Donation of the Entire Village) led to the donation of the entire village to the society for carrying out **cooperative farming**. In an ideal gramdan, all the land was to be collectively owned and managed by the Gram Sabha. The labourers will give all their earnings to the village community, which will then distribute it according to needs. Thus, gramdan acts as the ideal unit for putting the principles in the practice, "From each according to his ability, to each according to his needs".

Statement 3 is correct: The **Land Satyagraha** was launched in 1988 in about 700 villages of Raipur district of **Chhattisgarh**.

The land Satyagraha strengthened Land Reforms in India - by the support of a **scientific survey of land** in the region. Thus, parallel land records by Non-Governmental Initiatives were created **challenging the fraudulent and false land records** maintained by the revenue officials and made available to the people.

Source: <https://egyankosh.ac.in/bitstream/123456789/32684/1/Unit-4.pdf>

Q.20) With reference to the differences between the direct seeded rice (DSR) system and the traditional transplanted rice (TPR) system of cultivation, consider the following statements:

1. Unlike the TPR system, pre-germinated seeds are directly drilled into the field in the DSR system.
2. DSR is more water efficient approach than the TPR system.
3. Rice grown under the DSR system is susceptible to higher weed infestation than under the TPR system.

Which of the above given statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Statement 1 is correct: As opposed to the traditional method of growing seedlings in a nursery before transplanting them into flooded fields, direct seeding is a crop establishment system in which rice seeds are sown directly into the field. In DSR, the pre-germinated seeds are directly drilled into the field by a tractor-powered machine. **There is no nursery preparation or transplantation involved in DSR method.**

Statement 2 is correct: DSR can be a more water-efficient approach: water diversion to the paddy field is significantly reduced before seeding, and it does not require ponding. Generally, under the DSR system, a minimum water saving of 18% can be achieved relative to TPR without compromising yield.

Statement 3 is correct: There are nonetheless disadvantages to DSR. For example, rice grown under the DSR system is susceptible to higher weed infestation than under the TPR system.

Source: <https://dsrc.irri.org/our-work/what-is-dsr>

<https://www.cgiar.org/news-events/news/direct-seeded-rice-what-are-the-benefits-potential-and-suitability-in-haryana-india/>

<https://dsrc.irri.org/our-work/issues-opportunities>

Q.21) Consider the following statements:

1. The Indian Seeds programme recognizes two generations of seeds, namely, foundation and certified seeds.
2. Under the automatic route, FDI is allowed up to 75% in production and development of seeds.
3. In India, import of planting materials and seeds are governed by New Policy on Seed Development, 1988.

Which of the statements given above is/are **not** correct?

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) 1, 2 and 3

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect. Breeder, foundation, and certified seeds are the three generations of seeds recognised by the Indian Seeds Programme.

Statement 2 is incorrect. According to the current policy, FDI is allowed up to 100% through the automatic route in the development and production of seeds and planting material. The approval of FDI up to 100% would promote the infusion of foreign investment into the seed sector and would also make it easier for domestic seed companies to expand their R&D efforts in order to produce better varieties of seeds.

Statement 3 is correct. The New Policy on Seed Development, 1988 was formulated to provide Indian farmers access to the best planting materials available worldwide while also increasing productivity, farm incomes, and earnings from exports. The New Policy on Seed Development, 1988, governs the import of seeds and other planting materials.

Source: <https://agricoop.nic.in/en/SeedsDiv#gsc.tab=0>

Q.22) Which among the following is the biggest cause of concern for the terminator seed technology?

- Consumption of food grown of them may lead to sterility in animals and humans
- Increased dependence on government
- Increased usage of chemical pesticides
- Threat to food security and farmer livelihoods

Ans) d

Exp) Option d is the correct answer.

Terminator seed technology refers to genetically engineered seeds that produce sterile plants after one generation. This means that farmers cannot save seeds from their harvest and need to purchase new seeds every year. **This method poses an environmental concern being that it significantly reduces crop diversity and introduces many GMOs into the earth.** Terminator seeds contain a repressor gene that kills the embryo in any seed that a genetically modified plant protected by Terminator technology produces. Even though the seeds produced by the plants look normal, they are not viable and cannot be used to plant more crops, which forces the farmer to buy new seeds from the biotechnology firm selling the genetically modified plant. **The biggest cause of concern for this technology is the threat it poses to food security and farmer livelihoods.**

Source: <https://cases.open.ubc.ca/monsanto-and-terminator-seeds/>
<https://borgenproject.org/terminator-seeds-threaten-sustainable-farming/>

Q.23) Consider the following statements with reference to the Minimum Support Prices (MSP) in India:

- MSP rates in India are fixed by the Commission for Agricultural Costs and Prices (CACP).
- Commission for Agricultural Costs and Prices (CACP) takes into account the effect of MSP on the cost of living while calculating their prices.
- Inter-crop price parity is also considered while determining MSPs
- The government is mandated to provide MSP under the Essential Commodities Act (ECA), 1955

Which of the above-given statements are correct?

- 2 and 3 only
- 1 and 4 only
- 1, 3 and 4 only
- 1 and 3 only

Ans) a

Exp) Option a is the correct answer.

Minimum Support Price (MSP) is a form of market intervention by the Government of India to insure agricultural producers against any sharp fall in farm prices.

Statement 1 is incorrect: The **minimum support prices are announced by the Government of India at the beginning of the sowing season** for certain crops on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP). **MSP price is fixed by Government of India** to protect the producer - farmers - against excessive fall in price during bumper production years

Statements 2 and 3 are correct: In formulating the recommendations in respect of the level of minimum support prices and other non-price measures, the CACP takes into account, apart from a comprehensive view of the entire structure of the economy of a particular commodity or group of commodities, the following factors:-

- 1) Cost of production
- 2) Changes in input prices
- 3) Input-output price parity
- 4) Trends in market prices
- 5) Demand and supply
- 6) Inter-crop price parity**
- 7) Effect on industrial cost structure
- 8) Effect on cost of living**
- 9) Effect on general price level
- 10) International price situation
- 11) Parity between prices paid and prices received by the farmers.
- 12) Effect on issue prices and implications for subsidy

Statement 4 is incorrect: The **government is not mandated to provide MSP under the Essential Commodities Act (ECA), 1955**. There is no legislation behind the MSPs even though it has existed as policy for several decades.

Source: <https://timesofindia.indiatimes.com/business/india-business/repeal-of-agri-laws-why-some-farmers-are-now-insisting-on-msp/articleshow/87975570.cms>

<https://vikaspedia.in/agriculture/market-information/minimum-support-price>

Q.24) Consider the following statements with reference to the Nutrient Based Subsidy (NBS) Scheme:

1. Nutrient Based Subsidy (NBS) Scheme is implemented by Ministry of Agriculture and Farmers Welfare.
2. All Non-Urea based fertilizers are regulated under NBS Scheme.
3. The scheme takes into account the international and domestic prices of fertilizers while determining the Subsidy.

Which of the above given statements is/are correct?

- a) 3 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1 and 2 only

Ans) c

Exp) Option c is the correct answer.

Under the Nutrition Based Subsidy (NBS) regime – fertilizers are provided to the farmers at the subsidized rates based on the nutrients (N, P, K & S) contained in these fertilizers.

Statement 1 is incorrect: NBS policy intends to increase the consumption of P&K fertilizers so that optimum balance (N:P:K= 4:2:1) of NPK fertilization is achieved. **It is being implemented from April 2010 by the Department of Fertilizers, Ministry of Chemicals & Fertilizers.**

Statement 2 is correct: Under the current system of subsidy on fertilizers, the MRP of Urea is fixed but the subsidy can vary while MRP of DAP (Di-ammonium Phosphate) is decontrolled (i.e. subsidy is fixed but the MRP can vary). **All Non-Urea based fertilizers are regulated under Nutrient Based Subsidy Scheme.**

Statement 3 is correct: The subsidy on fertilizers under the NBS scheme is announced by the Government on an annual basis for each nutrient on a per kg basis – which are **determined taking into account the international and domestic prices of fertilizers, exchange rate, inventory level in the country etc.**

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1873019>

<https://www.fert.nic.in/phosphatic-and-potassic-pk-policy>

Q.25) With reference the National Mission on Natural Farming (NMNF), consider the following statements:

1. It is a sub scheme of Paramparagat Krishi Vikas Yojna (PKVY)
2. Under the mission, Farmer Field Schools (FFS) helps to create awareness about the natural farming.
3. The NMNF provides financial assistance to farmers for adopting natural farming.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Natural Farming-Bhartiya Prakratik Krishi Paddhati (BPKP) is a chemical-free farming system based on locally available resources and traditional practices. It promotes the use of on-farm resources for nutrient and soil fertility management.

Statement 1 is incorrect: To motivate farmers to adopt chemical free farming and enhance the reach of natural farming, the Government has formulated National Mission on Natural Farming (NMNF) **as a separate and independent scheme from 2023-24 by up scaling the Bhartiya Prakritik Krishi Paddati (BPKP).** The scheme is for a duration of 2023–2026.

Statement 2 is correct: First year of the natural farming mission will be devoted to the awareness creation through Farmer Field School (FFS).

Statement 3 is correct: The National Mission on Natural Farming (NMNF) provides several incentives to farmers for adopting natural farming practices. These include a financial assistance of Rs. 15,000 per hectare for one-time on-farm manure production infrastructure, training of farmers by Champion farmer and CRP through six one-day training sessions for a batch of 50 farmers at a cost of Rs. 30,000 per batch etc.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1911558>

http://agriculture.up.gov.in/nmnf/natural_farming/guid/NMNFGuidelines.pdf

<http://naturalfarming.dac.gov.in/Initiative/BPKP>

Q.26) Consider the following statements with reference to the Bio-pesticides:

1. Biopesticides are pesticides derived from natural sources.
2. Bio-pesticides are not harmful to humans.
3. Virus, bacteria, and protozoa, all three can be used as biopesticides.

Which of the above given statements is/are correct?

- a) 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Recently, due to high toxicity of conventional pesticides, biopesticides have attracted lot of attention.

Statement 1 is correct: Biopesticides are certain types of pesticides derived from such natural materials as animals, plants, bacteria, and certain minerals. For example, canola oil and baking soda have pesticidal applications and are considered biopesticides.

Statement 2 is incorrect: While biopesticides are generally considered to be safer and more environmentally friendly than synthetic pesticides, they can still have harmful effects under certain circumstances, and some biopesticides can cause health effects in humans if they are not handled or used properly.

Statement 3 is correct: Viruses, bacteria, and protozoa can be used as biopesticides. These microorganisms can be used to control pests in agricultural crops, forests, and public health settings. However, the use of microorganisms such as biopesticides requires careful evaluation to ensure their safety and effectiveness. For example, some bacteria, such as **Bacillus thuringiensis (Bt)**, produce proteins that are toxic to certain insect pests but are harmless to humans and other non-target organisms. Similarly, some viruses, such as **nucleopolyhedroviruses**, can infect and kill specific insect pests while being safe for humans and the environment. **Protozoa, such as the microsporidian Nosema locustae, have been used to control locusts and grasshoppers**, as they can infect and reduce the population of these pests.

Source: <https://www.igb-berlin.de/en/news/biopesticides-more-toxic-expected>

<https://www.epa.gov/ingredients-used-pesticide-products/what-are-biopesticides>

Q.27) Arrange the following in decreasing order of their share in the total agricultural credit in India:

1. Scheduled commercial banks
2. Regional rural banks
3. Cooperatives

Select the correct answer using the codes given below:

- a) 1>2>3
- b) 3>2>1
- c) 1>3>2
- d) 2>1>3

Ans) c

Exp) Option c is the correct answer.

In India, agricultural credit is mainly provided by scheduled commercial banks, regional rural banks, and cooperatives. The share of each in the total agricultural credit in India is as follows:

- 1) **Scheduled commercial banks:** They have the **highest share in agricultural credit** in India. As per the data available, their share is more than 60% of the total agricultural credit.
- 2) **Cooperatives:** They have the **second-highest share in agricultural credit** in India. As per the data available, their share is around 15% of the total agricultural credit.
- 3) **Regional rural banks:** They have a significant share in agricultural credit in India. As per the data available, their share is around 5% of the total agricultural credit.

Source: <https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=942#CP13>

Q.28) Consider the following statements regarding Protection of Plant Varieties and Farmers' Rights Act, 2001:

1. Breeders have exclusive rights to produce, sell, market, distribute, import or export the protected variety.
2. Researchers can use any of the registered varieties under the Act for conducting experiments or research.
3. The act consists of a provision for compensation to the farmers for non-performance of protected variety.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

In order to provide for the establishment of an effective system for the protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants it has been considered necessary to recognize and to protect the rights of the farmers in respect of their contributions made at any time in conserving, improving and making available plant genetic resources for the development of new plant varieties. The Govt. of India enacted "The Protection of Plant Varieties and Farmers' Rights (PPV&FR) Act, 2001" adopting sui generis system.

Statement 1 is correct:

Breeders' Rights: Breeders will have exclusive rights to produce, sell, market, distribute, import or export the protected variety. Breeders may exercise civil remedy in case of infringement of rights.

Statement 2 is correct:

Researchers' Rights: Researcher can use any of the registered variety under the Act for conducting experiment or research. This includes the use of a variety as an initial source of variety for the purpose of developing another variety, but repeated use needs prior permission of the registered breeder.

Statement 3 is correct:

Farmers' Rights under PPV&FR act:

- 1) A farmer who has evolved or developed a new variety is entitled for registration and protection in like manner as a breeder of a variety;
- 2) Farmers variety can also be registered as an extant variety;
- 3) A farmer can save, use, sow, re-sow, exchange, share or sell his farm produce including seed of a variety protected under the PPV&FR Act, 2001 in the same manner as he was entitled before the coming into force of this Act provided farmer shall not be entitled to sell branded seed of a variety protected under the PPV&FR Act, 2001;
- 4) Farmers are eligible for recognition and rewards for the conservation of Plant Genetic Resources of land races and wild relatives of economic plants;
- 5) **There is also a provision for compensation to the farmers for non-performance of variety under Section 39 (2) of the Act, 2001 and**
- 6) Farmer shall not be liable to pay any fee in any proceeding before the Authority or Registrar or the Tribunal or the High Court under the Act.

Source: <https://www.vikaspedia.in/agriculture/policies-and-schemes/crops-related/protection-of-plant-varieties-and-rights-of-farmers/protection-of-plant-varieties-and-farmers-rights-act-2001>

Q.29) Which of the following options best describe the meaning of the term “Herbigation”?

It is an/a-

- effective method of applying herbicides through irrigation systems.
- method for production of natural drugs obtained from organisms such as plants, microbes, and animals.
- process of application of volatile chemicals to confined spaces or soil to produce gas that will destroy weed seeds.
- process aimed at destroying the aggregates of soil by agricultural operations on it when it is too wet.

Ans) a

Exp) Option a is the correct answer.

Option a is correct: Herbigation is an effective method of applying herbicides through irrigation systems. Weed control has been equal or better with herbigation than applications with ground or aerial sprayers. More herbicide registrations and better injection equipment has given the growers greater flexibility in herbigation programs.

Option b is incorrect: Pharmacognosy deals with the natural drugs obtained from organisms such as most plants, microbes, and animals. Up to date, many important drugs including morphine, atropine, galanthamine, etc. have originated from natural sources which continue to be good model molecules in drug discovery.

Option c is incorrect: Application of volatile chemicals in confined spaces or to soil to produce gas that will destroy weed seeds is called **fumigation**. Herbicides used for fumigation are called fumigants. These are good for killing perennial weeds and as well for eliminating weed seeds. e.g. Methyl bromide, Metham etc.

Option d is incorrect: Puddling is destroying the aggregates of soil by agricultural operations on it when it is too wet. Puddling can be defined as the process of breaking down soil aggregates into uniform mud, accomplished by applying mechanical force to the soil at high moisture content. It may also be defined as the mechanical reduction of the apparent specific volume of soil. To a farmer, puddling is mixing soil with water to make it soft for transplanting and impervious to water. To put it simply, it is an act or method of making a puddle.

Source:

<https://ucanr.edu/repository/fileaccess.cfm?article=161112&p=KWHFMO#:~:text=Herbigation%20is%20an%20effective%20method%20of%20applying%20herbicides%20through%20irrigation,greater%20flexibility%20in%20herbigation%20programs.>

<https://en.banglapedia.org/index.php/Puddling>

<https://cropforlife.com/harrowing/>

<https://www.conservationevidence.com/actions/3410#:~:text=Seed%2Ddrilling%20is%20the%20sowing,seed%20predators%2C%20such%20as%20birds.>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4204033/#:~:text=Pharmacognosy%20deals%20with%20the%20natural,model%20molecules%20in%20drug%20discovery.>

Q.30) With reference to Agreement on Fisheries Subsidies (AFS), consider the following statements:

- The agreement was recently concluded under the aegis of United Nations Conference on Trade and Development (UNCTAD).
- Under the agreement a special transition period of 25 years is provided to the developing countries.
- The Agreement prohibits providing subsidies for fishing on high seas, if they result in Illegal, Unreported and Unregulated (IUU) fishing.

Which of the statements given above is/are correct?

- 1 and 2 only
- 3 only
- 2 and 3 only
- 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. The Agreement on Fisheries Subsidies (Agreement) agreed at the recently concluded World Trade Organization (WTO) Ministerial meeting will prohibit subsidies from being provided for Illegal, Unreported and Unregulated (IUU) fishing and overfished stocks.

Statement 2 is incorrect: Under the Special and Differential Treatment (S&DT), Developing Countries and Least Developed Countries (LDCs) have been allowed a transition period of two years (not 25 years) from the date of entry into force of this Agreement.

Statement 3 is correct: The Agreement also prohibits providing subsidies for fishing on high seas, which are outside the jurisdiction of coastal countries and Regional Fisheries Management Organizations/ Arrangements (RFMO/As).

As per the Agreement, no prohibition has been imposed on a WTO Member regarding granting or maintaining subsidy to its vessel or operator as long as it is not carrying out IUU. Similarly, no prohibition on providing subsidies has been imposed for fishing regarding overfished stocks as long as such subsidies are implemented to rebuild the stock to a biologically sustainable level.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1843952>

Q.31) Consider the following statements regarding methods of cropping in agriculture:

1. Relay cropping is a method of multiple cropping where one crop is seeded into a standing second crop well before harvesting of second crop.
2. Strip intercropping strategy is most widely used in growing tomatoes, eggplants and potatoes together.
3. Intercropping mechanism requires that different types of plants are grown in the same space at the same time.

Which of the statement/s given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Climate change, soil degradation, and depletion of natural resources are becoming the most prominent challenges for crop productivity and environmental sustainability in modern agriculture. In the scenario of conventional farming system, limited chances are available to cope with these issues which are discussed below:

Statement 1 is correct: Relay cropping is a method of multiple cropping where one crop is seeded into standing second crop well before harvesting of second crop. Relay cropping may solve a number of conflicts such as inefficient use of available resources, controversies in sowing time, fertilizer application, and soil degradation. Relay cropping is a complex suite of different resource-efficient technologies, which possesses the capability to improve soil quality, to increase net return, to increase land equivalent ratio, and to control the weeds and pest infestation.

Statement 2 is incorrect: Strip intercropping is a more industrialized version of intercropping with rows of individual crops big enough to be harvested with machinery.

Tomatoes, eggplants and potatoes are all from the nightshade family, so they don't work well for intercropping. For one, they use similar nutrients. As well, they attract similar pests and are susceptible to similar diseases. Intercropping with things from the same family is asking for nutrient depletion while promoting troublesome insects and illnesses through a lesser version of, though not far off from, mono-cropping.

Statement 3 is correct: Intercropping requires that different types of plants are grown in the same space at the same time while crop rotation is the concept of growing different types of plants in the same space at different times.

Source:

<https://pubmed.ncbi.nlm.nih.gov/28083744/#:~:text=Relay%20cropping%20is%20a%20method,before%20harvesting%20of%20second%20crop.>

<https://www.permaculturenews.org/2016/08/12/intercropping-what-it-is-what-it-isnt-and-why-we-do-it/>

Q.32) Which among the following can be considered as advantages of drip irrigation?

1. It directly targets the root zone as a result of which water isn't wasted on areas that won't benefit the plant.
2. Drip irrigation allows the rows between plants to remain dry and thereby reducing weed growth.
3. It prevents clogging of soil particles in the pipelines which otherwise would prevent the smooth flow of water.
4. Drip irrigation is aimed at reducing the amount of runoff which in turn reduces soil erosion.

Which of the statements given above are correct?

- a) 2 and 3 only
- b) 1, 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Ans) b

Exp) Option b is the correct answer.

Drip irrigation is an irrigation system that emits small drops of water directly to the root zone of the plant. Advantages of drip irrigation are discussed below:

Statement 1 is correct: Reduced Water Usage – By directly targeting the root zone, water isn't wasted on areas that won't benefit the plant.

Statement 2 is correct: Reduces Weeds – Allows the rows between plants to remain dry, improving access and reducing weed growth.

Statement 3 is incorrect: Perhaps the biggest disadvantage of drip irrigation is that the small holes along the drip lines can get clogged. Clogging is extra likely if water contains iron. If not properly maintained, drip line holes can clog and prevent the flow of water.

Statement 4 is correct: Prevents Soil Erosion – Drip irrigation is a gentle, steady drip and reduces the amount of runoff, therefore reducing soil erosion.

Source: <https://plantforsuccess.com/advantages-drip-irrigation/>

<https://web.uri.edu/safewater/protecting-water-quality-at-home/sustainable-landscaping/drip-irrigation/>

Q.33) Consider the following statements regarding e-National Agriculture Market (e-NAM) Scheme:

1. e-NAM is a flagship initiative of the NITI Aayog to create a unified national market for agricultural commodities.
2. It aims to provide quality testing infrastructure in every market to enable informed bidding by buyers.
3. Under e- NAM, a single license is issued by the State governments for traders which is valid across all markets in a state.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect: National Agriculture Market (eNAM) is a pan-India electronic trading portal which networks the existing APMC mandis to create a unified national market for agricultural commodities. **Small Farmers Agribusiness Consortium (SFAC) is the lead agency for implementing eNAM under the aegis of Ministry of Agriculture and Farmers' Welfare, Government of India.** Its vision is to promote uniformity in agriculture marketing by streamlining of procedures across the integrated markets, removing information asymmetry between buyers and sellers and promoting real time price discovery based on actual demand and supply.

Statement 2 is correct: One of the objectives of the e-NAM is **–Harmonisation of quality standards of agricultural produce and provision for assaying (quality testing) infrastructure in every market to enable informed bidding by buyers.** Common tradable parameters have so far been developed for 69 commodities.

Statement 3 is correct: e- NAM includes–

- 1) Liberal licensing of traders / buyers and commission agents by State authorities without any pre-condition of physical presence or possession of shop /premises in the market yard.
- 2) **Single license issued by state governments for traders valid is across all markets in the State.**

Source: https://enam.gov.in/NAMV2/home/about_nam.html#

Q.34) With reference to Peace Clause in the WTO Agreement on Agriculture, consider the following statements:

1. The Peace Clause was introduced in 2014 as part of the Bali Package
2. The Peace Clause permits developing nations to maintain subsidies for their agricultural sector, even if such subsidies are deemed to be trade-distorting.
3. So far India has not invoked the peace clause.

Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 2 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

The Peace Clause in the WTO Agreement on Agriculture allows developing countries to provide domestic agricultural subsidies that exceed the limits set by the Agreement. The Clause was introduced in 2014 as part of the Bali Package, which included commitments to eliminate export subsidies and improve market access for least developed countries.

Statement 1 is correct: The Peace Clause was indeed introduced in 2014 as part of the Bali Package, which was a set of decisions made at the 9th WTO Ministerial Conference in Bali, Indonesia. The Peace Clause provides protection to developing countries against any legal challenge to their food security programmes, which may breach the WTO's limits on agricultural subsidies, until a permanent solution to this issue is found.

Statement 2 is correct: The Peace clause allows developing countries to continue to provide subsidies to their agricultural sectors, even if they are trade-distorting, without facing legal challenges under WTO dispute settlement. The Peace Clause is in effect until a permanent solution is found for the issue of public stockholding for food security purposes.

Statement 3 is incorrect: India has invoked the Peace Clause for the third time in 2022, due to its subsidies for rice farmers exceeding the ceiling of 10% allowed under WTO rules. The first invocation was in 2020 for the year 2018-19 when the support offered to rice farmers was above the allowed limit. The second invocation was in 2021 when the support exceeded the ceiling again.

Source: <https://www.thehindubusinessline.com/opinion/all-you-wanted-to-know-about-peace-clause/article64539923.ece>

https://www.wto.org/english/thewto_e/minist_e/mc11_e/briefing_notes_e/bfagric_e.htm

Q.35) With reference the PM KUSUM Scheme, consider the following statements:

1. It is a flagship scheme of Ministry of New and Renewable Energy
2. One of its aims is to install 20 lakh standalone Solar Powered Agriculture Pumps.
3. Under this scheme, a subsidy of up to 90% of the cost of installing a solar pump is provided by the central government to the farmer.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

PM-KUSUM (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan) Scheme is aimed at ensuring energy security for farmers in India, along with honoring India's commitment to increase the share of installed capacity of electric power from non-fossil-fuel sources to 40% by 2030 as part of Intended Nationally Determined Contributions (INDCs).

Statement 1 is correct: PM KUSUM Scheme is a flagship scheme of the Ministry of New and Renewable Energy (MNRE). The scheme was launched in 2019 to promote the use of solar power among farmers.

Statement 2 is correct: The PM KUSUM Scheme aims to install 20 lakh standalone solar-powered agriculture pumps. The scheme also encourages the use of barren and uncultivable land for setting up solar power plants.

Statement 3 is incorrect: The central government provides financial assistance of 30% of the benchmark cost or the tender cost, whichever is lower, for the installation of solar pumps. The state government provides a subsidy of 30%. **The remaining 40% of the cost is borne by the farmer.** Northeastern States, Sikkim, Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Lakshadweep, and Andaman & Nicobar Islands, a higher financial assistance of 50% of the benchmark cost or the tender cost, whichever is lower, is provided for the installation of solar pumps. The state government provides a subsidy of 30%. The remaining 20% of the cost is borne by the farmer.

Source: <https://pmkusum.mnre.gov.in/landing-about.html>

Q.36) With reference to National Fisheries Development Board (NFDB), consider the following statements:

1. It is an autonomous organization under the Ministry of Agriculture.
2. NFDB focuses on training and empowering women in the fisheries sector to generate substantial employment.
3. NFDB is the implementing agency of Fisheries and Aquaculture Infrastructural Development Fund (FIDF)

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

National Fisheries Development Board (NFDB) was established in 2006 to enhance fish production and productivity in the country and coordinate fishery development in an integrated and holistic manner.

Statement 1 is incorrect: The National Fisheries Development Board (NFDB) is an autonomous organization under the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India.

Statement 2 is correct: NFDB aims to provide technical guidance, marketing assistance, and financial support to fisheries-related activities. It also focuses on promoting women's participation in the fisheries sector to generate substantial employment opportunities.

Statement 3 is correct: NFDB is the implementing agency of the Fisheries and Aquaculture Infrastructural Development Fund (FIDF). The fund aims to create fisheries infrastructure facilities in both the marine and inland fisheries sectors to achieve a target of 15 million tonnes of fish production by 2020 under the Blue Revolution. Additionally, the FIDF seeks to achieve a sustainable growth rate of 8-9% to increase the country's fish production to around 20 million tonnes by 2022-23.

Source: <https://nfdb.gov.in/welcome/about> <https://www.fidf.in/>

Q.37) Recently, the Scientists from the Chinese Academy of Agricultural Sciences have shown how a Gene Modulation can boost grain yields and shorten the growth duration of rice. In this context, which of the following options best describes 'Gene Modulation'?

- a) The process of transferring genes from one organism to another
- b) The process of altering gene expression or activity within an organism
- c) The process of permanently modifying the genetic code of an organism
- d) The process of controlling the physical location of genes within an organism.

Ans) b

Exp) Option b is the correct answer.

Gene modulation is the process of temporarily altering gene expression levels without making heritable changes to the underlying cellular DNA. This can be achieved through silencing or increasing gene expression levels using techniques such as RNAi, CRISPRi, cDNA, ORF or CRISPRa. It is not a genetic modification (GM) and neither the result of a transgenic plant, carrying elements from another donor.

Source: <https://www.thehindu.com/sci-tech/science/improving-rice-yield-with-an-additional-gene/article65779699.ece> <https://horizondiscovery.com/en/gene-modulation#:~:text=Gene%20modulation%20refers%20to%20the,to%20the%20underlying%20cellular%20DNA.>

Q.38) Consider the following statements regarding conditions required for rubber cultivation in India:

1. Tropical climate with annual rainfall of 2000 – 4500 mm is suited for cultivation.
2. Minimum and maximum temperature ideal for rubber cultivation ranges from 25 to 34°C with high relative humidity.
3. Rubber cultivation needs high elaborated flat land where there is no possibility of water stagnation.

Which of the statements given above is/ are correct?

- a) 2 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

More than 36,000 articles ranging from giant Truck tyres to small bushes are manufactured from rubber. The commercial source of natural rubber is *Hevea brasiliensis*, which is introduced in India in the year 1902 and planted in Kerala. Even though it is a tropical tree, it grows well in the soils of N.E. states.

Statement 1 is correct: Rubber requires deep and lateritic fertile soil with an acidic pH of 4.5 to 6.0 and rich in phosphorus. **Tropical climate with annual rainfall of 2000 – 4500 mm is suited for rubber cultivation.**

Statement 2 is correct: Minimum and maximum temperature for rubber cultivation should be ranged from 25 to 34°C with **80 % relative humidity is ideal for cultivation.** Regions prone to heavy winds should be avoided. **High humidity is suitable and required in the rubber cultivation.**

Statement 3 is correct: Rubber is grown in **literate or loamy soil, mostly in slope and undulated land or slightly high elaborated flat land** where there is no possibility of water stagnation, and having well drainage facilities. Rubber plants can be successfully grown up to the elevation of 450 meters from mean sea level.

Source:

<https://megsoil.gov.in/mccdb/rubbergrowing.html#:~:text=Rubber%20is%20grown%20in%20literate,and%20having%20well%20drainage%20facilities.>

https://agritech.tnau.ac.in/horticulture/horti_plantation%20crops_rubber.html#:~:text=Tropical%20climate%20with%20annual%20rainfall,heavy%20winds%20should%20be%20avoided.

Q.39) Consider the following statements regarding fair and remunerative price (FRP):

1. It is the price declared by the government and paid by mill owners to farmers for the sugarcane procured from them.
2. The FRP is directly proportional to the sugar recovery ratio.
3. The payment of FRP across the country is governed by Essential Commodities Act, 1955.

Which of the statement/s given above is/ are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Fair and remunerative price (FRP) is the price declared by the government, which mills are legally bound to pay to farmers for the cane procured from them.

Statement 2 is correct: **The FRP is based on the recovery of sugar from the cane.** Sugar recovery is the ratio between sugar produced versus cane crushed, expressed as a percentage. The higher the recovery, the higher is the FRP, and higher is the sugar produced. The FRP is directly proportional to the sugar recovery ratio.

Statement 3 is incorrect: **The payment of FRP across the country is governed by The Sugarcane Control order, 1966 (and not the Essential Commodities Act, 1955)** which mandates payment within 14 days of the

date of delivery of the cane. Mills have the option of signing an agreement with farmers, which would allow them to pay the FRP in installments.

Delays in payment can attract an interest up to 15 per cent per annum, and the sugar commissioner can recover unpaid FRP as dues in revenue recovery by attaching properties of the mills. Assured payment is one of the major reasons why cane is a popular crop with farmers.

Source: <https://indianexpress.com/article/explained/explained-maharashtras-sugarcane-frp-changes-farmers-7787466//>

Q.40) With reference the Lumpy Skin Disease, consider the following statements:

1. The disease is caused by protozoa belonging to the Leishmania family.
2. This disease can spread from animals to humans.
3. Currently, there is no specific treatment to completely cure the Lumpy Skin Disease.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1 and 3 only

Ans) c

Exp) Option c is the correct answer.

Lumpy Skin Disease is caused by a contagious virus called the lumpy skin disease virus, which is spread by vectors like mosquitoes, biting flies, and ticks. It affects animals like cows and water buffaloes and is not spread to humans.

Statement 1 is incorrect: Lumpy Skin Disease is a viral infection caused by the Lumpy Skin Disease Virus (LSDV), which belongs to the family Poxviridae.

Statement 2 is incorrect: Lumpy Skin Disease is not a zoonotic virus, meaning it does not spread to humans. It is primarily a disease of cattle, water buffalo, and other ruminants.

Statement 3 is correct: Currently, there is no specific treatment for Lumpy Skin Disease. Treatment is generally supportive, and affected animals are typically quarantined and given symptomatic care to relieve their symptoms.

Source: <https://www.thehindu.com/news/national/explained-what-is-the-lumpy-skin-disease-affecting-cattle-in-india-what-are-its-economic-implications-and-does-it-affect-milk-for-consumption/article65911590.ece>

<https://www.nadis.org.uk/disease-a-z/cattle/lumpy-skin-disease/#:~:text=Treatment,most%20effective%20means%20of%20control.>

Q.41) Which of the following principles/practices are followed in Conservation Agriculture?

1. Direct seeding.
2. Crop rotation.
3. Covering soil with crop residues.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Conservation Agriculture (CA) is a farming system that can prevent losses of arable land while regenerating degraded lands. It promotes maintenance of a permanent soil cover, minimum soil disturbance, and diversification of plant species.

Statement 1 is correct: Direct seeding involves growing crops without mechanical seedbed preparation and with minimal soil disturbance since the harvest of the previous crop. The term direct seeding is understood in CA systems as synonymous with no-till farming, zero tillage, no-tillage, direct drilling, etc.

Statement 2 is correct: Crop rotation is an important practice followed in the conservation agriculture. A well-designed crop rotation promotes good soil structure, fosters a diverse range of soil flora and fauna that contributes to nutrient cycling and improved plant nutrition, and helps to prevent pests and diseases.

Statement 3 is correct: Keeping the soil covered is a fundamental principle of CA. Crop residues are left on the soil surface, but cover crops may be needed if the gap is too long between harvesting one crop and establishing the next. Cover crops improve the stability of the CA system, not only on the improvement of soil properties but also for their capacity to promote an increased biodiversity in the agro-ecosystem.

Source: <https://www.fao.org/conservation-agriculture/en/>

<https://www.frontiersin.org/articles/10.3389/fsufs.2020.00031/full>

Q.42) Which of the following loans provided by the banks can be considered as part of Priority sector lending?

1. Loans provided under Kisan Credit Card scheme.
2. Loans to small and marginal farmers for purchase of land for agricultural purposes.
3. Loans to farmers for installation of stand-alone Solar Agriculture Pumps
4. Loans to distressed farmers indebted to non-institutional lenders.

Select the correct answer using the code given below:

- a) 2 and 4 only
- b) 1, 3, and 4 only
- c) 1 and 3 only
- d) 1, 2, 3, and 4

Ans) d

Exp) Option d is the correct answer.

Priority Sector means those sectors which the Government of India and Reserve Bank of India consider as important for the development of the basic needs of the country and are to be given priority over other sectors. The banks are mandated to encourage the growth of such sectors with adequate and timely credit. Under the farm credit, the lending by banks which comes under Priority sector lending are as follows:

- 1) **Loans to farmers under the Kisan Credit Card Scheme. Hence Option 1 is correct.**
- 2) Crop loans to farmers, which will include traditional/non-traditional plantations and horticulture, and loans for allied activities.
- 3) **Loans to small and marginal farmers for purchase of land for agricultural purposes. Hence Option 2 is correct.**
- 4) Medium and long-term loans to farmers for agriculture and allied activities.
- 5) Loans to farmers for pre and post-harvest activities, viz., spraying, weeding, harvesting, sorting, grading and transporting of their own farm produce
- 6) **Loans to farmers for installation of stand-alone Solar Agriculture Pumps and for solarisation of grid connected Agriculture Pumps. Hence Option 3 is correct.**
- 7) **Loans to distressed farmers indebted to non-institutional lenders. Hence Option 4 is correct.**
- 8) Loans to farmers for installation of solar power plants on barren/fallow land or in stilt fashion on agriculture land owned by farmer, etc.

Source: <https://vikaspedia.in/agriculture/agri-credit/credit-institutions/priority-sector-lending>

https://www.rbi.org.in/Scripts/BS_ViewMasDirections.aspx?id=11959

Q.43) Consider the following statements about the Pradhan Mantri Fasal Bima Yojana (PMFBY):

1. It is mandatory for the farmers, who avail loans from the institutional sources, to subscribe PMFBY.
2. If an insured area is prevented from sowing due to adverse weather conditions, the policy will be terminated without paying any insured amount to the farmer.
3. It provides insurance coverage against crop loss due to identified localized risks like hailstorms and landslides.

Which of the above given statements is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 3 only
- d) 2, and 3 only

Ans) c

Exp) Option c is the correct answer.

Pradhan Mantri Fasal Bima Yojana was launched in 2016 and is being administered by the Ministry of Agriculture and Farmers Welfare. The scheme provides for financial support to farmers suffering crop loss/damage arising out of unforeseen events. It Stabilizes the income of farmers to ensure their continuance in farming. It encourages farmers to adopt innovative and modern agricultural practices.

Statement 1 is incorrect: The Pradhan Mantri Fasal Bima Yojana was mandatory for loanee farmers till 2020, but the Central Government made it optional for all farmers from 2020.

Statement 2 is incorrect: If an insured area is prevented from sowing / planting / germination due to deficit rainfall or adverse seasonal/weather conditions. **25% of the sum insured will be paid and the Policy will be terminated.**

Statement 3 is correct: The scheme covers loss/damage to notified insured crops resulting from occurrence of identified localized risks of Hailstorm, Landslide, Inundation, Cloud burst and Natural fire due to lightening affecting isolated farms in the notified area. The States may consider providing add-on coverage for crop loss due to attack by wild animals wherever the risk is perceived to be substantial and is identifiable.

Source: <https://nationalinsurance.nic.co.in/en/pradhan-mantri-fasal-bima-yojana-pmfby>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1738233>

https://pmfby.gov.in/pdf/Revamped%20Operational%20Guidelines_17th%20August%202020.pdf

<https://nationalinsurance.nic.co.in/en/pradhan-mantri-fasal-bima-yojana-pmfby>

Q.44) Which of the following are the applications of Nano technology in Agriculture?

1. Identification of diseases in Plants.
2. Applying pesticides and herbicides in Field.
3. To treat wastewater in agricultural fields.
4. Facilitating gene sequencing of plants.

Select the correct answer using the code given below:

- a) 1 and 4
- b) 2, 3, and 4 only
- c) 1, 2, and 3 only
- d) 1, 2, 3 and 4

Ans) d

Exp) Option d is the correct answer.

Nanotechnology refers to the branch of science and engineering devoted to designing, producing, and using structures, devices, and systems by manipulating atoms and molecules at nanoscale, i.e. having one or more dimensions of the order of 100 nanometres (100 millionth of a millimetre) or less.

Statement 1 is correct: Nanotechnology like **nano sensors can be used in crop protection for the identification of diseases** and residues of agrochemicals in the fields.

Statement 2 is correct: Nanoparticles can be used as a delivery mechanism for pesticides and herbicides, increasing their effectiveness while reducing the amount needed. This can result in reduced environmental impact and lower costs for farmers.

Statement 3 is correct: **Nanotechnology applications can be used for filtering wastewaters in agricultural fields.** This will remove salts and other micropollutants from these waters. This provides sustainability of agricultural production using irrigation with treated wastewater.

Statement 4 is correct: Nanotechnologies can be applied in a variety of contexts, including genome sequencing, targeted resequencing and discovery of transcription factor binding sites, noncoding RNA expression profiling, and molecular diagnostics **The use of nanotechnology facilitated gene sequencing in plants that contributed to the improved identification and use of plant trait means.**

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8661015/>

<https://www.sciencedirect.com/science/article/pii/S2405844021026426>

<https://www.sciencedirect.com/science/article/abs/pii/S0043135416309113>

<https://www.frontiersin.org/articles/10.3389/fenvs.2016.00020/full>

<https://www.intechopen.com/chapters/68970>

Q.45) Consider the following statements about the Primary Agricultural Credit Societies (PACS):

1. PACS in a state are registered under the Co-operative Societies Act of the respective state.
2. Only one Primary Agricultural Credit Society is allowed per village.
3. PACS may also provide marketing facilities that could enhance the sales of farmer's agricultural products.

Which of the above given Statements is/are correct?

- a) 2 and 3 only
- b) 1 and 3 only
- c) 1 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

The Union Budget has announced Rs 2,516 crore for computerization of 63,000 Primary Agricultural Credit Societies (PACS) over the next five years, with the aim of bringing greater transparency and accountability in their operations and enabling them to diversify their business and undertaking more activities.

Statement 1 is correct. PACS are registered under the Co-operative Societies Act of the respective state.

PACS serve as the last link in a three-tier cooperative credit structure. Credit from the SCBs is transferred to the district central cooperative banks (DCCBs), that operate at the district level. The DCCBs work with PACS, which deal directly with farmers.

Statement 2 is incorrect. **A village can have multiple PACS.** In India there are about 99000 PACS and they have a member base of 13 crore. Since these are cooperative bodies, individual farmers are members of the PACS, and office-bearers are elected from within them.

Statement 3 is correct. PACS helps its members by providing marketing facilities that could enhance the sale of their agricultural products in the market at reasonable prices.

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Source: [https://www.google.com/url?sa=t&source=web&rct=j&url=https://vikaspedia.in/schemesall/schemes-for-farmers/primary-agricultural-credit-societies-\(pacs\)&ved=2ahUKEwj9qO6WicP-AhVgmlYBHU3wCIUQFnoECA8QAQ&usg=AOvVaw2Tcrp6HzRhplIEKDccnzjP](https://www.google.com/url?sa=t&source=web&rct=j&url=https://vikaspedia.in/schemesall/schemes-for-farmers/primary-agricultural-credit-societies-(pacs)&ved=2ahUKEwj9qO6WicP-AhVgmlYBHU3wCIUQFnoECA8QAQ&usg=AOvVaw2Tcrp6HzRhplIEKDccnzjP)

Q.46) Agriculture Census forms part of a broader system of collection of Agricultural Statistics in India. Consider the following statements with reference to the Agriculture Census in India.

1. Agriculture Census in India is conducted by the National Sample Survey Office (NSSO).
2. They are based on the broad guidelines of the World Census of Agriculture.
3. The agriculture census is conducted every ten years along with the population census.

Which of the above given Statements is/are correct?

- a) 1 and 2 Only
- b) 2 Only
- c) 1 Only
- d) 2 and 3 only

Ans) b

Exp) Option b is the correct answer.

Recognizing the importance of agriculture sector in the economy, the Department of Agriculture & Farmers Welfare has been implementing the Agriculture Census Scheme since 1970-71.

Statement 1 is incorrect. The **Department of Agriculture and Farmers Welfare**, Ministry of Agriculture & Farmers Welfare, Government of India conducts Agriculture Censuses in collaboration with the States and Union Territories.

Statement 2 is correct and statement 3 is incorrect. **Agriculture Census in India is conducted at an interval of five years following broad guidelines of decennial World Census of Agriculture (WCA) evolved by Food and Agriculture Organization (FAO) of the United Nations.** So far, ten Agriculture Censuses have been conducted in the country since 1970-71 and the current Agriculture Census with reference year 2021-22 is eleventh in the series. The Eleventh Agriculture Census (2021-22) was launched by the Hon'ble Union Minister of Agriculture and Farmers Welfare on 28th July 2022 in New Delhi.

Source: <https://agricoop.nic.in/en/Agri#gsc.tab=0>

Q.47) With reference the Essential Commodities Act, consider the following statements:

1. Commodities are considered as essential commodities only if their price has been doubled within a period of three months.
2. Stock limits shall be imposed on all the commodities identified as essential commodities.
3. Only central government can impose stock limits on specified commodities.

Which of the statements given above are **incorrect**?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

Due to the increased Tur dal prices, the Centre has recently invoked the Essential Commodities Act of 1955.

Statement 1 is incorrect: There is no specific definition of essential commodities in the Essential Commodities Act, 1955. Section 2(A) states that an “essential commodity” means a commodity specified in

the Schedule of the Act. The Centre, if it is satisfied that it is necessary to do so in the public interest, can notify an item as essential, in consultation with state governments.

Statement 2 is incorrect: Not all essential commodities are covered under the stock limits and hoarding.

For the purpose of terming a stock as hoarding the State Government has to issue stock limits orders under the EC Act. Any quantity of a commodity covered in the order kept in violation of that order is termed as hoarding. **If no stock limits are imposed**, there is no question of hoarding in that commodity.

Statement 3 is incorrect: The Essential Commodities Act 1955 enabled the state governments to impose stock limits and restrict movement of essential commodities. Whenever there are pressing reasons to arrest unfair price rise of any essential commodity, the Union Government empowers State Governments and Union Territories, by way of notifying orders under the EC Act, to decide stock limits and notify after approval of the Union Government.

Source: <https://consumeraffairs.nic.in/organisation-and-units/division/essential-commodity-regulation-and-enforcement-ecr-and-e/faqs>

<https://theprint.in/opinion/of-the-three-farm-laws-essential-commodities-act>

Q.48) Consider the following statements about the e-National warehouse receipts (e-NWR), that is often seen in the news:

1. e-NWRs do not have time validity.
2. e-NWRs can be traded through off-market or on-market in Commodity Exchange platforms.
3. An e-NWR can be transferred to another party either fully or in part.
4. An e-NWR can be auctioned under certain conditions like spoilage of the commodity in the warehouse.

Which of the above given Statements are correct?

- a) 1, 2 and 3 Only
- b) 1 and 2 Only
- c) 2, 3 and 4 Only
- d) 2 and 3 Only

Ans) c

Exp) Option c is the correct answer.

The negotiable warehouse receipt (NWR) system was launched in 2011 allowing the transfer of ownership of a commodity stored in a warehouse without having to deliver it physically.

These receipts are issued in negotiable form, making them eligible as collateral.

The eNWR was launched in 2018.

Salient features of e-NWR:

- 1) An e-NWR is available only in electronic form.
- 2) An **e-NWR has a time validity that is co-terminus with the shelf-life of the commodity** or withdrawal of the commodity fully from the warehouse, after which it expires; **Hence Statement 1 is incorrect**
- 3) The single source of information for the e-NWR is the repository system where e-NWR is issued by registered warehouses. Confidentiality, integrity and availability of the e-NWR information is provided by the Repository system.
- 4) All e-NWRs can be traded through off-market or on-market in Commodity Exchanges platforms. **Hence Statement 2 is correct.**
- 5) e-NWR can be transferred fully or in part. **Hence Statement 3 is correct.**
- 6) An e-NWR can be auctioned under certain conditions such as loan not repaid, on expiry and delivery not taken, and on likely damage or spoilage of the commodity in the warehouse. **Hence Statement 4 is correct.**

Source: <https://www.google.com/url?sa=t&source=web&rct=j&url=https://vikaspedia.in/agriculture/ic-t-applications-in-agriculture/electronic-negotiable-warehouse-receipt&ved=2ahUKEwiLgY2ugMP-AhXksFYBHdvcAPwQFnoECFkQAQ&usg=AOvVaw3zb6EY7cMZRvF22pM8gS-t>

Q.49) With reference to the land reforms in India, consider the following statements:

1. In some states Land Ceiling Acts imposed an upper limit on the amount of land that can be owned by an individual.
2. More productive land has a low ceiling limit whereas unproductive land has a higher ceiling limit.
3. In some states, the Land Ceiling Acts allowed a separate share for unmarried women.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is the correct answer.

According to the Land Ceilings Acts, the state was supposed to identify and take possession of surplus land (above the ceiling limit) held by each household, and redistributes it to landless families and households in other specified categories, such as SCs and STs.

Statement 1 is correct: In most states initially, the ceilings were imposed on individual and not family holdings, enabling landowners to divide up their holdings 'notionally' in the names of relatives merely to avoid the ceiling. Following the CM conference 1972 (which recommended family as the unit for ceiling) most of the states implemented family as the unit for land ceiling.

Statement 2 is correct: The land ceiling varies from region to region, depending on the kind of land, its productivity, and other such factors. **Very productive land has a low ceiling** while unproductive **dry land has a higher ceiling limit.**

Statement 3 is correct: There were many loopholes in the Land Ceilings Act through which most landowners were able to escape from having their surplus land taken over by the state.

- 1) Landowners managed to divide the land among relatives and others, including servants, in so-called 'benami transfers'.
- 2) Some rich farmers actually divorced their wives in order to avoid the provisions of the **Land Ceiling Act**, which **allowed a separate share for unmarried women but not for wives.**

Source: NCERT Class 12 – Social Change and Development in India – Chapter 4 Change and Development in Rural Society – P 61.

Q.50) In India, concerns are arising about the use of chemicals fipronil and atrazine. In this context, these chemicals are used as:

- a) pesticides
- b) food preservatives
- c) artificial fruit-ripening agents
- d) moisturizing agents in cosmetics

Ans) a

Exp) Option a is the correct answer.

According to a recent report by the Pesticide Action Network (PAN) safety of agricultural produce and environmental contamination is at risk due to the **rampant use of four highly hazardous pesticides (HHP)**. Unapproved and unauthorised use of the agrochemicals – chlorpyrifos, **fipronil**, **atrazine** and paraquat – was found across the country.

Central Insecticides Board and Registration Committee, India's pesticides regulator, has approved specific uses of agrochemicals. But according to the report, state agriculture departments and industries recommended the four chemicals for more crops than their approved use.

Source: <https://www.downtoearth.org.in/news/governance/unauthorised-use-of-4-highly-hazardous-pesticides-claims-report-84326>



Direction for the following six (6) items:

Read the following **five passages** and answer the items that follow the passages. Your answers to these items should be based on the passages only:

Passage-1

Time and space are not things-in-themselves, but rather the very forms of our intuition, within which all objects of experience necessarily appear. Time and space are therefore a priori conditions of all possible experience, and are independent of any particular objects that may be presented to us. They are also universally and necessarily valid since they are the necessary conditions of all possible judgments about objects. While we cannot know things in themselves, we can know that they must necessarily conform to the a priori forms of our intuition and that all knowledge of objects is therefore dependent on the structure of our own minds.

Q.1) What is the *most logical corollary* of the above-given passage?

- a) Knowledge of objects is inherently objective and independent of human intuition.
- b) Time and space are fundamental aspects of the external world, separate from our perception.
- c) Our understanding of objects is limited by the a priori forms of our intuition and the structure of our minds.
- d) We can gain direct knowledge of things in themselves without considering the role of our intuition.

Ans) c

Exp) Option c is the correct answer.

The passage argues that time and space are not things in themselves but are instead the forms of our intuition, within which all objects of experience necessarily appear. These forms are a priori conditions of all possible experiences and are independent of any specific objects presented to us. The passage also states that we cannot know things in themselves, but we can know that they must conform to the a priori forms of our intuition.

Passage-2

South-South economic relations are characterized by a complex interplay of power asymmetries, institutional constraints, and diverse interests and values, which shape the patterns and outcomes of cooperation and competition among developing countries. These dynamics are influenced by a range of global and domestic factors, including the changing balance of power in the international system, the emergence of new economic actors and institutions, and the diversity of political, social, and cultural contexts in the Global South. At the same time, South-South economic relations are also characterized by a high degree of resilience and adaptability, as countries seek to navigate and respond to the challenges and opportunities of globalization and regional integration. This resilience is reflected in the growing diversity and sophistication of South-South economic cooperation, which encompasses a range of sectors and modalities, including trade, investment, finance, technology transfer, and knowledge sharing. However, the realization of the full potential of South-South economic cooperation is contingent on the development of more effective institutional frameworks and mechanisms for managing and regulating these relations, as well as on the promotion of greater inclusivity, transparency, and accountability in decision-making processes. This requires a deeper understanding of the underlying power dynamics and interests at play, as well as a commitment to promoting a more equitable and sustainable form of economic development that benefits all members of the Global South.

Q.2) Consider the following assumptions:

1. South-South cooperation is able to withstand various dynamic challenges.
2. South-South economic relations are always positive and beneficial for all countries involved.

Which of the above-given assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The first assumption is valid based on the statement "South-South economic relations are also characterized by a high degree of resilience and adaptability." The passage states that South-South cooperation is able to withstand various dynamic challenges.

Statement 2 is incorrect: The passage does not state that South-South economic relations are always positive and beneficial for all countries involved. On the contrary, the passage mentions power asymmetries and institutional constraints that can influence the outcomes of cooperation and competition among developing countries.

Q.3) South-South economic cooperation can be improved by:

1. Removing the balance of power in the international system
2. Including more members in the decision-making process
3. Signing Free Trade Agreements with developed countries

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 2 only
- d) 1 and 3 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The passage states that South-South economic relations are influenced by the changing in the international system. Thus, it needs to be more equitable. The passage does not argue for removing balance of power in the international system.

Statement 2 is correct: The passage states that the realization of the full potential of South-South economic cooperation is contingent on the development of more effective institutional frameworks and mechanisms for managing and regulating these relations, as well as on the promotion of greater inclusivity, transparency, and accountability in decision-making processes.

Statement 3 is incorrect: The passage does not mention that signing Free Trade Agreements with Developed Countries would improve South-South economic cooperation. Instead, the passage emphasizes the growing diversity and sophistication of South-South economic cooperation, which encompasses a range of sectors and modalities, including trade, investment, finance, technology transfer, and knowledge sharing.

Passage-3

The problem of the theory of distinction is to account for the fact that the social world, and particularly the cultural universe, presents itself as a hierarchically organized system of distinctive signs, invested with properties of difference and with a relation of opposition between the poles that they mark. The

cultural arbitrariness of the distinctions which inform the social structures of perception and appreciation is not a reason for denying their efficacy; on the contrary, it is precise because the classification principles that inform the distribution of cultural capital are arbitrary that they can function as a basis of domination, by securing recognition and submission, and as a means of symbolic violence, by legitimating and naturalizing the social order.

Q.4) What is the *key idea* of the author as given in the above passage?

- The efficacy of social hierarchies depends on the inherent differences between individuals.
- Cultural distinctions and hierarchies are arbitrary, which allows them to serve as a basis for domination.
- The cultural universe is inherently egalitarian, but social structures impose artificial distinctions.
- Social structures of perception and appreciation are based on meritocracy and natural differences.

Ans) b

Exp) Option b is the correct answer.

The passage discusses the theory of distinction and its role in understanding the social world, particularly the cultural universe. It states that the cultural universe presents itself as a hierarchically organized system of distinctive signs, which are invested with properties of difference and opposition between poles. The passage emphasizes that the cultural arbitrariness of these distinctions does not deny their efficacy; instead, it's precisely because these classification principles are arbitrary that they can function as a basis of domination.

Passage-4

The state, in modern liberal democracy, is no longer an enemy to be contained but an instrument to be used. This implies a degree of trust between citizens and their government that does not exist in many parts of the world today. The problem of trust, however, is not just a matter of a government's being perceived as honest or effective; it is also a matter of that government being perceived as legitimate. Legitimacy is a function of the rightfulness of the political order itself, not just the effectiveness of the state. This is why democratization can have such a profound impact on political legitimacy. By allowing citizens to participate in the selection of their rulers, democracy confers legitimacy to a political order that had not previously existed.

Q.5) What is the most logical and rational inference that can be drawn from the passage?

- Trust between citizens and their government is solely dependent on the effectiveness of the state.
- Democracy is a necessary condition for political legitimacy.
- Political legitimacy can be enhanced through democratization.
- Trust between citizens and their government is primarily based on the state's honesty.

Ans) c

Exp) Option c is the correct answer.

The passage discusses the role of trust and legitimacy in modern liberal democracies. It states that trust between citizens and their government is not only about the government being perceived as honest or effective, but also about the legitimacy of the political order. The passage highlights that legitimacy is a function of the rightfulness of the political order itself, not just the effectiveness of the state. The passage then explains that democratization can have a profound impact on political legitimacy. By allowing citizens to participate in the selection of their rulers, democracy confers legitimacy on a political order that had not previously existed.

Passage-5

The press has always been a reflection of the national mood, and as the mood becomes increasingly apocalyptic, the press looks for ways to exploit that anxiety while simultaneously reinforcing it. The result is that we have created a news media that is sensation-driven, shallow, and prone to exaggeration, a media that focuses on celebrity gossip, scandals, and melodrama, rather than the critical issues of our time. In such a media environment, it is no surprise that we are unable to have meaningful discussions about the challenges facing our society. Instead, we are bombarded with trivialities, false controversies, and outright lies, leaving us ill-informed, distracted, and unable to make informed decisions about the future of our nation.

Q.6) Consider the following assumptions:

1. A sensation-driven media hinders meaningful discussions.
 2. The public is entirely passive and uncritical in its consumption of news.
- Which of the above given assumptions is/are valid as per the given passage?
- a) 1 only
 - b) 2 only
 - c) Both 1 and 2
 - d) Neither 1 nor 2

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct: The author suggests that the media's focus on sensationalism, gossip, and scandals prevents meaningful discussions about critical societal issues. This assumption is based on the idea that the media environment shapes the public discourse.

Statement 2 is incorrect: The author critiques the media environment and its impact on public discourse, but the passage does not assume that the public is entirely passive and uncritical in its consumption of news, nor does it mention whether they seek alternative sources of information. This assumption is not explicitly made, and it could be an oversimplification of the public's role in media consumption.

Q.7) Vikas walks 10 km towards south and then turns to the right. After walking 5 km he turns to the left and walks 5 km. Now in which direction is he from the starting place?

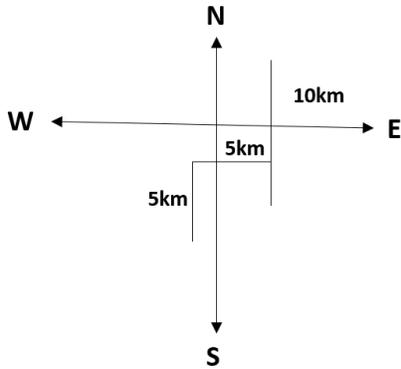
- a) West
- b) North-East
- c) South West
- d) North West

Ans) c

Exp) Option c is the correct answer.

We can draw following diagram:

We can see Vikas direction would be S-W



Q.8) In the following question, select the missing number from the given series,

34, 69, 140, 283, ?, 1145

- a) 430
- b) 525
- c) 320
- d) 570

Ans) d

Exp) Option d is the correct answer.

The series follows the following pattern:

The previous number $\times 2 + 1$

The previous number $\times 2 + 2$

The previous number $\times 2 + 3$ and so on

thus, we can see:

$$34 \times 2 + 1 = 69$$

$$69 \times 2 + 2 = 140$$

$$140 \times 2 + 3 = 283$$

$$283 \times 2 + 4 = 570$$

Q.9) Six persons Aman, Danish, Soniya, Sujit, Ranjan and Yashika are sitting around a circular table (facing away from the centre). Danish sits fourth to the right of Soniya. Yashika sits to the immediate right of Soniya. Two persons sit between Aman and Ranjan. If Ranjan is an immediate neighbour of Yashika then who sits to the immediate left of Aman?

- a) Ranjan
- b) Sujit
- c) Danish
- d) Soniya

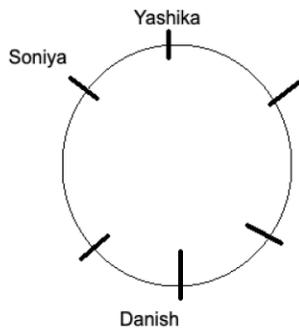
Ans) c

Exp) Option c is the correct answer.

Six persons: Aman, Danish, Soniya, Suit, Ranjan and Yashika

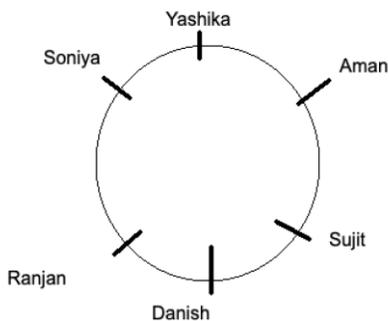
1) Danish sits fourth to the right of Soniya.

2) Yashika sits to the immediate right of Soniya.

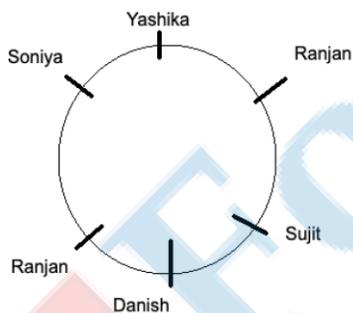


1) Two persons sits between Aman and Ranjan

Case 1:



Case 2:



The above two cases will be the final arrangement.

Now, If Ranjan is an immediate neighbour of Yashika we will consider case 2. And in that case Danish sits to the immediate left of Aman.

Hence, if Ranjan is an immediate neighbour of Yashika Danish sits to the immediate left of Aman.

Q.10) Find out the value of ? in the given matrix.

58	116	29
66	132	33
94	188	?

- a) 54
- b) 47
- c) 52
- d) 39

Ans) b

Exp) option b is the correct answer.

The logic follows here is :

From the first row:

58, 116, 29 so we can see that

$$116 : 2 = 58$$

$$58 : 2 = 29$$

From second row:

66, 132, 33 so we can see that:

$$132 : 2 = 66$$

$$66 : 2 = 33$$

From Third row:

94, 188, ?

$$188 : 2 = 94$$

$$94 : 2 = 47$$

Thus 47 is correct answer.

Q.11) Consider the following statements and conclusions:

Statements:

1. Some strawberries are bananas.
2. All bananas are avocados.
3. Some avocados are grapes.

Conclusion:

- I. Some grapes are bananas.
- II. Some avocados are strawberries.

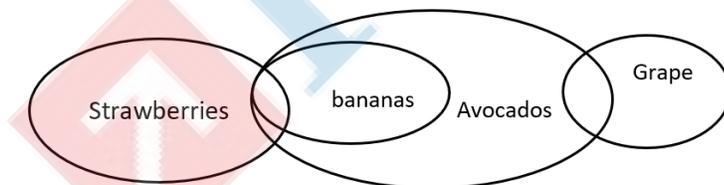
Select the correct answer using the code given below:

- a) Both Conclusion I and II follow
- b) Neither Conclusion I nor II follow
- c) Only Conclusion I follows
- d) Only Conclusion II follows

Ans) d

Exp) Option d is the correct answer.

We can draw the following diagram from the given info:



- 1) Some grapes are bananas - Does not follow - (As they have not mentioned the relationship between grapes and bananas. This is not true)
- 2) Some avocados are strawberries - Follow - (As some strawberries are bananas and all bananas are avocados. So, some avocados can be strawberries. This is true)

Direction for the following eight (8) items:

Read the following **six passages** and answer the items that follow the passages. Your answers to these items should be based on the passages only:

Passage-1

There's a new chapter in the saga of over-enthusiastic researchers trying to make the Matrix a reality. Scientists at Kyoto University are training an AI-powered robot to laugh. This is, of course, a difficult project – one that could take decades to become a true success. Yet, if a machine can mimic the myriad ways in which human beings laugh, it may finally be able to cross the Uncanny Valley – that eerie feeling of uneasiness when an AI-enabled creature can copy human behaviour, but somehow feels unnatural and alien in interactions. The questions which arise from this desire to play God's understudy. First, can the changing contextual nuances of what makes people chuckle, giggle and guffaw be programmed? And is it worth the effort?

Q.12) Which one of the following statements best reflects the most critical inference that can be made from the passage given above?

- The scientists at Kyoto University are attempting to create an AI-powered robot that can mimic human laughter, a project that may take decades to achieve.
- The ability for an AI-powered robot to accurately replicate human laughter may help it to overcome the Uncanny Valley and appear more natural in interactions.
- It is uncertain whether or not the contextual nuances of human laughter can be programmed into an AI-powered robot, and whether the effort involved in doing so is worthwhile.
- The pursuit of creating an AI-powered robot that can laugh like a human may raise ethical concerns about the desire to play God and the worthiness of such an endeavor.

Ans) d

Exp) Option d is the correct answer.

Option d is the best option as it reflects the central theme of the passage, which is the ethical questions raised by the pursuit of creating an AI-powered robot that can laugh like a human, and the desire to play God's understudy.

Option a is incorrect. It accurately describes the difficult project of creating an AI-powered robot that can mimic human laughter and the possible length of time required for this project. However, it does not address the ethical questions that arise from this pursuit.

Option b is incorrect. It correctly identifies the Uncanny Valley effect, which refers to the discomfort people feel when interacting with machines that appear too human-like but are not quite human. The option suggests that creating an AI-powered robot that can accurately replicate human laughter may help to overcome this issue. However, this option does not address the ethical concerns raised in the passage.

Option c is incorrect. It suggests that there is uncertainty about whether it is possible to program the contextual nuances of human laughter into an AI-powered robot and whether the effort is worthwhile. This option does not specifically address the ethical concerns raised in the passage, which are the main focus of the text.

Passage-2

Repetition and difference are the twin concepts that underlie all of existence, shaping and reshaping reality at every moment. Repetition creates patterns and structures, while difference introduces variation and unpredictability. Together, they create a dynamic system in which the past is constantly being transformed by the present and the future. But this system is not without its dangers. Repetition can lead to stagnation and inertia, while difference can bring chaos and disorder. The challenge, then, is to find the right balance between repetition and difference, to use them in a way that allows for growth and creativity without sacrificing stability and continuity.

Q.13) What is the *most crucial inference* that can be drawn from the passage?

- Repetition and difference are inherently contradictory concepts that cannot coexist.
- Repetition is superior to difference for maintaining a stable reality.
- The optimal balance between repetition and difference is necessary for growth and creativity,
- Existence is a static system dominated by repetition and difference.

Ans) c

Exp) Option c is the correct answer.

The passage discusses the concepts of repetition and difference, which underlie all of existence, shaping and reshaping reality. It explains that repetition creates patterns and structures, while difference introduces variation and unpredictability, together forming a dynamic system. The passage also identifies the dangers of each concept: repetition can lead to stagnation and inertia, while difference can bring chaos and disorder. The most crucial inference drawn from the passage is that finding the right balance between repetition and difference is essential for growth and creativity without sacrificing stability and continuity.

Passage-3

Each TV program was like a small world that would spin around once or twice, then stop. And there was always a person, ideally a good-looking one, who would enter and begin to speak. And it was our job as citizens to listen to that person, as they were wiser and better than we were, and had devoted their entire lives to thinking about things that we had spent only a few seconds. And so, we listened, and we learned, and we were made wiser by the people on the TV, who were so good at their jobs that sometimes they would cry, and sometimes they would even laugh, but mostly they would just talk, and talk, and talk.

Q.14) What is the *most logical corollary* of the above-given passage?

- Television programs provide valuable insights and wisdom from experts who are more knowledgeable than the average citizen.
- The emotional reactions of TV personalities are what make the content truly educational.
- Television programs are an ineffective source of learning due to the lack of diversity in topics.
- The majority of TV programs are focused on entertainment rather than education.

Ans) a

Exp) option a is the correct answer.

The passage presents a description of TV programs, where ideally good-looking people enter and begin to speak. It suggests that these individuals are wiser and better than the average citizen because they have devoted their lives to thinking about things that the average person may have only considered briefly. The passage implies that the viewers listen, learn, and become wiser by watching these TV programs. Thus, the most logical corollary, based on the passage, is that television programs provide valuable insights and wisdom from experts who are more knowledgeable than the average citizen.

Passage-4

To meet the challenging situation of widening economic and social disparity, inclusive growth is the best tool, but it is a dream without improvement in agricultural growth, employment generation, poverty reduction, and involvement of the social sector (health, education, and women empowerment). We must learn from China in this regard. Elements of the successful experience of the Chinese such as, high and labour-releasing agricultural growth, favourable income distribution through broad-based agricultural growth, availability of infrastructure, higher levels of literacy and skills, inducements for the location of enterprises in rural areas, and easy access to credit and inputs for the poor section of society, are

extremely relevant for developing countries. Women empowerment through replacing the “Life-Cycle Approach” of the girl child, which has a prime objective of marriage and motherhood, by a “Capability Approach” – as propagated by Amartya Sen, where the girl child's contributions both in economic and social terms are given due recognition. All Acts and Schemes related to the girl child, therefore, need to be thoroughly reviewed to raise the status of the girl child as an asset rather than burden, for example, conditional cash and non-cash transfer scheme, and so on.

Q.15) Based on the above passage, following assumptions have been made:

1. Life-Cycle approach has failed to ensure women empowerment in India.
2. Promoting farming techniques which require less labour is an effective way for increasing agricultural productivity.
3. Promoting stakeholder mentality through Self-Help groups is an important approach to ensure inclusive growth.

Which of the above assumptions is/are valid?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The passage does not make any explicit statement about the success or failure of the Life-Cycle approach in ensuring women empowerment in India. It only suggests that the Capability Approach, which recognizes the economic and social contributions of girls beyond marriage and motherhood, should be promoted instead. Therefore, the first assumption cannot be considered valid based on the passage.

Statement 2 is correct: The passage explicitly states that high and labour-releasing agricultural growth is an element of the successful experience of China, which can be relevant for developing countries. This implies that promoting farming techniques which require less labor can be an effective way for increasing agricultural productivity. Therefore, the second assumption can be considered valid based on the passage.

Statement 3 is incorrect: The passage does not mention Self-Help groups or stakeholder mentality as an approach to ensure inclusive growth. It only mentions the importance of elements such as availability of infrastructure, higher levels of literacy and skills, inducements for the location of enterprises in rural areas, and easy access to credit and inputs for the poor section of society. Therefore, the third assumption cannot be considered valid based on the passage.

Passage-5

Many moments in our daily life are imbued with Kantian philosophy. Sitting at the bar, drinking a beer, thinking about the bartender who just carded you, are all perfect illustrations of Immanuel Kant's ‘transcendental idealism’. For example, the bartender examining the correlation between you and your driver's license photo was wondering if the appearances laid before her – concerning both you and your ID – are an informative portrayal of reality. In other words, does either the appearance of you being over twenty-one, or your ID saying that you are, genuinely reflect whether you are actually over twenty-one? In The Critique of Pure Reason (1781), Kant was challenged with a similar question: ‘Is appearance a reasonable reflection of reality?’ He asked this on the way to answering the further question, ‘Can we know what things are like beyond their appearance to us, that is, in and of themselves?’ Kant is famous for

concluding ‘No’ – that despite what we might think, there’s very little we can know about what reality is like in and of itself, either from its appearance to us, or from any other source.

Q.16) Which one of the following statements best reflects the most critical inference that can be made from the passage given above?

- a) Our sensory experiences don’t provide us with a direct and accurate representation of reality as it is.
- b) We can never truly know the nature of reality beyond its appearance to us, as it exists independently of our perception.
- c) Appearance is always a reasonable reflection of reality.
- d) Our knowledge of reality beyond its appearance to us is limited.

Ans) b

Exp) Option b is the correct answer.

Option b is correct because it accurately reflects Kant's conclusion that we cannot truly know the nature of reality beyond its appearance to us.

Option a is incorrect, as Kant believed that our sensory experiences provide us with appearances of things rather than things as they are in themselves. However, this option doesn't fully capture Kant's conclusion that we can never truly know the nature of reality beyond its appearance to us.

Option c is incorrect. Kant raises a question: ‘Is appearance a reasonable reflection of reality?’ Though he nowhere concluded in the passage that Appearance is always a reflection of reality.

Option d is incorrect, as Kant believed that our knowledge of things beyond their appearances is limited due to the limitations of our cognitive faculties. However, this option doesn't fully capture Kant's conclusion that we can never truly know the nature of reality beyond its appearance to us.

Passage-6

The jolting cry of a cockerel, the comforting smell of manure and the rumbling of tractors – the idyllic sensory landscape of rural France has been the source of much civil strife in recent years. An increasing number of city slickers have vacation homes in rural areas, to enjoy peace and serenity. As it turns out, rural life is full of activity, and at least in France, not amenable to change for the comfort of strangers. There have been several complaints about the noise and smells from animals and churches in the last few years. Maurice, the rooster, became a symbol for this conflict when his neighbours went to court against his owners in 2019, chagrined at being woken up by the cockerel’s cry at dawn. French legislators have finally put the matter to rest by passing a law to protect the countryside’s “sensory heritage”.

To be fair, there is something gnawing about being woken up when it’s still dark outside by the shrill crowing of a rooster. But the entitlement to comforts the wealthy thought money can buy at their weekend chalets, are at odds with the choices of empowered rural residents. Unlike the luxury stores at the Champs-Élysées, rural France has refused to serve the interests of tourists. France – both culturally and economically – is still strongly agricultural. The campaign for the law was based on the principle that the countryside is more than a scenic landscape, and living there means accepting that fact. Their “sensory heritage” safeguarded, French country folk must not get complacent. Soundscapes are fragile things, as Indians are well aware. A loudspeaker and an upcoming election can drown out the sounds of a homestead a lot faster than the complaints of bratty neighbours. But in the meanwhile, at least, the Maurices of France are free to make a morning racket.

Q.17) Which of the following statements best reflects the central idea of the passage on protecting rural France's heritage?

- The increasing number of vacation homes in rural France has resulted in conflicts over noise and smells, particularly regarding animals and churches. Legislation has been passed to protect the "sensory heritage" of the countryside.
- Rural life in France is full of activity and not amenable to change for the comfort of city dwellers with vacation homes. Legislation has been passed to protect the "sensory heritage" of the countryside.
- The passing of the law to protect the sensory heritage of rural France is a positive development that reflects the need for balance between the needs of different groups of people.
- The campaign for legislation to protect rural France's "sensory heritage" was based on the recognition that the countryside is more than just a scenic landscape and that living there requires accepting its sensory characteristics.

Ans) d

Exp) Option d is the correct answer.

Option d is the most appropriate answer because it accurately reflects the main idea of the passage on protecting rural France's heritage. The passage highlights the conflict between city dwellers with vacation homes in rural areas and the empowered rural residents who are not willing to compromise the sensory characteristics of their environment for the comfort of outsiders. The campaign for the law was based on the recognition that the countryside is more than just a scenic landscape, and living there requires accepting its sensory characteristics. The passing of the law is seen as a means to protect rural France's sensory heritage, which is fragile and can easily be lost due to external influences.

Option a is incorrect because although it mentions the passing of legislation to protect the "sensory heritage" of the countryside, it focuses more on conflicts over noise and smells, and does not accurately capture the main idea of the passage.

Option b is incorrect because although it mentions that rural life in France is not amenable to change for the comfort of city dwellers with vacation homes, it does not accurately capture the main idea of the passage, which is about the need to protect the sensory heritage of rural France.

Option c is incorrect because it does not accurately capture the main idea of the passage. While it acknowledges the need for balance between the needs of different groups of people, it does not accurately capture the focus of the passage, which is on the need to protect rural France's sensory heritage.

Q.18) Which of the following assumptions best justifies the reason for rural France's continued protection of its sensory heritage?

- To ensure that tourism does not compromise the natural environment.
- To preserve the longstanding agricultural way of life in these areas.
- Protecting sensory heritage is a crucial responsibility of both the French people and government.
- The sounds and smells of rural life are integral to French culture and history.

Ans) d

Exp) Option d is the correct answer.

Option (d) best justifies the reason for rural France's continued protection of its sensory heritage. This statement is supported by the article, which emphasizes that the campaign for the law was based on the principle that the countryside is more than a scenic landscape, and living there means accepting that fact. The law was passed to protect the sensory heritage of the countryside, which includes the sounds and smells of rural life, and acknowledges that these elements are an important part of French culture and history.

Option (a) is not the best justification for the law as it implies that the protection of the sensory heritage is solely for the benefit of the natural environment. While this may be a factor, the article indicates that the law was passed to protect the sensory heritage of the countryside, which includes more than just the natural environment.

Option (b) is not the best justification for the law as it focuses on preserving the agricultural way of life rather than the sensory heritage of the countryside. While agriculture is an important part of rural France, the law was passed to protect the sensory heritage, which includes more than just agriculture.

Option (c) is not the best justification for the law as it implies that protecting the sensory heritage is a general responsibility, rather than a specific reason for passing the law in question. While protecting the sensory heritage may be a crucial responsibility, it does not specifically justify the need for this particular law.

Q.19) Based on the passage following assumptions have been made about the possible features of the legislation protecting sensory heritage:

1. Limiting the number of tourists in rural areas.
2. Prevent legal action against farmers for the noises and smells of their animals.
3. Promoting the cultural and economic value of rural landscapes.
4. Giving priority to the needs of rural residents over city dwellers.
5. Prohibiting the use of loudspeakers during elections.

Which of the assumptions given above are valid?

- a) 1, 2 and 3 only
- b) 2, 3 and 5 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 5 only

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect. While the passage notes that rural France has refused to serve the interests of tourists, but there is not enough evidence to suggest limiting number of tourists. In addition limiting the number of tourist is an extreme step in general.

Statement 2 is correct. The legislation is based on the principle that rural life is more than just a picturesque landscape, and that those who choose to live there must accept the sensory heritage that comes with it.

Statement 3 is correct. The term sensory heritage itself implies promoting the cultural and economic value of rural landscape.

Statement 4 is incorrect. Though the passage provides priority to rural way of life by protection to traditional sounds and smell but use of the term “needs” is too broad and can include many things and hence is incorrect.

Statement 5 is correct. It is indicated in the passage that the use of loudspeakers threatens soundscapes and hence it is possible that use of loudspeakers could be prohibited under the law.

Hence Option (b) 2, 3 and 5 only is the correct option.

Q.20) In a parking area, the total number of wheels of all the trucks (six-wheelers) and cars (four-wheelers) is 50 more than four times the number of parked vehicles. The number of trucks parked is:

- a) 15
- b) 20
- c) 25
- d) 30

Ans) c**Exp) Option c is the correct answer.**

Let the number of trucks parked are T and the numbers of cars parked is C. Then, total number of wheelers,

$$6T + 4C \text{ ----- (i)}$$

$$\text{Total number of vehicles parked} = T + C \text{ -----(ii)}$$

According to the question, $6T + 4C = 4(T+C) + 50$

$$\Rightarrow 6T + 4C = 4T + 4C + 50$$

$$\Rightarrow 6T - 4T = 50$$

$$\Rightarrow 2T = 50$$

$$\Rightarrow T = 25$$

Hence, the total number of trucks parked = 25. The correct answer is option c)

Q.21) A contractor is hired to complete a construction project in 50 days engaging 50 men at work. After working for 25 days, he realizes that he has completed only 1/3rd of the work. How many total number of workers he needs to complete the given work on time?

- a) 100 workers
- b) 75 workers
- c) 50 workers
- d) 150 workers

Ans) a**Exp) Option a is the correct answer.**

We know, Work = N * E * D (where N = number of men involved, E= Efficiency, and D = number of days required for work)

Given, that 50 men were working for 50 days,

$$\Rightarrow \text{Work done by them} = 50 * E * 50$$

According to question, 25 days, 50 men, and 1/3rd work completed.

$$\Rightarrow 1/3\text{rd of the work} = 25 * E * 50$$

$$\Rightarrow \text{Efficiency} = 3/1$$

Remaining work = $1 - 1/3 = 2/3$ rd work still needs to be done in 25 days.

$$\Rightarrow \text{Efficiency} = 3/2$$

$$\Rightarrow \text{Using formula, Work} = N * E * D$$

$$50 * 3/1 * 25 = M * 3/2 * 25$$

$$\Rightarrow M = 100$$

50 extra workers are needed to complete the work in time. Therefore, the total number of workers he needs = 50 + 50 = 100. Hence, Option a is correct.

Q.22) A retailer sells a product for Rs. 320, making a profit of 25% on the cost price. If the cost price of the product is increased by 20%, what should be the new selling price to maintain the same profit margin?

- a) Rs. 400
- b) Rs. 384
- c) Rs. 432
- d) Rs. 307.2

Ans) b**Exp) Option b is the correct answer.**

Let the cost price of the product be x . The selling price of the product is Rs. 320, which gives a profit of 25% on the cost price.

Profit = Selling price - Cost price

25% of cost price = Rs. 320 - x

$0.25x = \text{Rs. } 320 - x$

$1.25x = \text{Rs. } 320$

$x = \text{Rs. } 256$

So, the cost price of the product is Rs. 256.

If the cost price is increased by 20%, the new cost price will be:

New cost price = Rs. 256 + $0.2(\text{Rs. } 256) = \text{Rs. } 307.20$

To maintain the same profit margin of 25%, the new selling price should be:

New selling price = Cost price + Profit

= Rs. 307.20 + $0.25(\text{Rs. } 307.20)$

= Rs. 307.20 + Rs. 76.80

= Rs. 384

So, the new selling price to maintain the same profit percentage on the new cost price is: Rs. 384. So option b is the correct answer.

Q.23) The speed of a motorboat is 30 km/h. It starts from Mumbai at 6:00 am and reaches Goa at 8:00 am. Same day, it starts from Goa at 12:00 pm and reaches Mumbai at 4:00 pm. Find the speed of stream.

a) 8.5 Km/h

b) 12 Km/h

c) 10 Km/h

d) 11.5 Km/h

Ans) c

Exp) Option c is the correct answer.

Clearly, motorboat takes 2 h to go from Mumbai to Goa and 4h to go from Goa to Mumbai.

i.e Time taken to row upstream = 2 x Time taken to row downstream

Therefore, $n=2$

Let the speed of stream be x km/h.

Then, according to the formula,

Speed of the boat = $x * (n + 1) / (n-1)$

$\Rightarrow 30 = x * (2+1) / (2-1)$

$\Rightarrow x = 30 / 3 = 10$

Hence, the speed of stream is 10 km/h. Option c is the correct answer.

Q.24) What is the value of X in the sequence?

9, 17, 48, 187, 928, X,

a) 1298

b) 5559

c) 6814

d) 7661

Ans) b

Exp) Option b is the correct answer.

Upon close observation, each series is going by the order addition of +1 and subtraction of previous odd number i.e $(n+1) - \text{previous odd number}$.

$$17 = 9 * 2 - 1$$

$$48 = 17 * 3 - 3$$

$$187 = 48 * 4 - 5$$

$$928 = 187 * 5 - 7$$

$$5559 = 928 * 6 - 9.$$

Hence, option b is the correct answer.

Q.25) What is the smallest positive integer greater than 500 that when divided by any one of the numbers 7, 14, 21, 28, or 35 leaves a remainder of 4?

- a) 644
- b) 984
- c) 844
- d) 1034

Ans) c

Exp) Option c is the correct answer.

To solve this problem, we need to find the smallest multiple of the given numbers and add 4 to it to get the desired result. The smallest multiple of 7, 14, 21, 28, and 35 is their LCM, which is 420. Adding 4 to 420 gives us 424. Since, 424 is smaller than 500, we have to check another number.

The equation is $420k + 4$ ----- (1)

1) Putting $k = 1$ in equation (1), it is 484.

2) Lets put $k = 2$ in equation (2), it is 844.

Therefore, the answer is 844.

Alternatively, you can choose each of the options and check the answer.

Q.26) 12 men and 16 boys can do a piece of work in 5 days while 13 men and 24 boys finish it in 4 days. 5 men and 10 boys will finish it in?

- a) 10 days
- b) 12 days
- c) 15 days
- d) 9 days

Ans) a

Exp) Option a is the correct answer.

(12 men + 16 boys) can do a work in 5 days.

(60 men + 80 boys) can do a work in 1 day. -----(1)

(13 men + 24 boys) can do a work in 4 days. -----(2)

(52 men + 96 boys) can do a work in 1 day.

Equating Eqs. (1) and (2)

=> 60 men + 80 boys = 52 men + 96 boys

=> 8 men = 16 boys and 1 man = 2 boys

Now, 12 men + 16 boys = (12 x 2 + 16) boys = 40 boys can do the work in 5 days

Therefore, 5 men + 10 boys = [5 (2) + 10] boys = 20 boys

Therefore, required time = $40 \times 5 / 20 = 10$ days.

Hence, the correct answer is option a i.e 10 days.

Q.27) A clock is set right at 10:00 am. The clock gains 10 min in a day. What will be the true time when the watch indicates 3:00 pm the next day?

- a) 12 min past 2 pm
- b) 45 min past 2 pm
- c) 48 min past 2 pm
- d) 30 min past 2 pm

Ans) c

Exp) Option c is the correct answer.

Since, Time from 10 : 00 am to 3 : 00 pm of the next day = 29 h

Now, 24 h 10 min of the clock in the question = 24 h of the correct clock.

i.e. $(145/6)$ h of the clock in question = 24 h of the correct clock 29 h of the clock in the question.

= $(24 * 6/145 * 29)$ h of the correct clock.

= 28 h 48 min of correct clock

So, the correct time is 28 h 48 min after 10 : 00 am i.e. 48 min past 2 : 00 pm.

Q.28) The average speed of a train in the onward journey is 25% more than that of the return journey. The train halts for one hour on reaching the destination. The total time taken for the complete to and fro journey is 17h covering a distance of 800 km. The speed of the train in the onward journey, is:

- a) 45 km/h
- b) 47.06 km/h
- c) 50.00 km/h
- d) 56.25 km/h

Ans) d

Exp) Option d is the correct answer.

Let the speed of the train during returning journey be x Km/h.

Then speed during onward journey = $x + 25*x/100 = 5x/4$ Km/h

=> Distance covered in onward journey = $800/2 = 400$ Km

Since, total time taken = Covered Distance / Speed.

Therefore, time taken by train in onward journey = $400 / (5x/4)$

and time taken during returning journey = $400/x$

According to the question,

$$400/(5x/4) + 400/x = 16$$

$$\Rightarrow 320/x + 400/x = 16$$

$$\Rightarrow 16x = 720$$

Therefore, $x = 45$ Km/h

So, the speed of train in onward journey = $5 * 45 / 4 = 56.25$ Km/h

Hence, option d is the correct answer.

Q.29) Eight friends, namely P, Q, R, S, T, U, V and W are sitting around a circular table facing towards the centre. Q is sitting between V and S. W is third to the left of Q and second to the right of P. R is sitting between P and V. Q and T are not sitting opposite to each other.

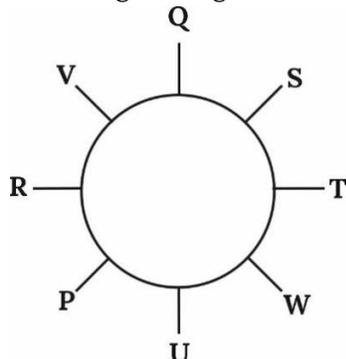
Which of the statements based on the above paragraph is correct?

- a) U is sitting third to the left of S
- b) T sits adjacent to R
- c) Q is sitting left of W.
- d) T and U sitting opposite to each other.

Ans) a

Exp) Option a is the correct answer.

According to the given information, the correct representation is given below:



From the above diagram, clearly U is sitting third to the left of S. Hence, option a is the correct answer.

Direction for the following seven (7) items:

Read the following **six passages** and answer the items that follow the passages. Your answers to these items should be based on the passages only:

Passage-1

The British administration in India was characterized by a complex interplay of power relations, institutional structures, and cultural assumptions that shaped the patterns and outcomes of colonial rule. The colonial project was premised on a dual logic of difference and superiority, which sought to justify and legitimize the imposition of British authority over Indian society. This logic was expressed in a range of discursive practices, including the construction of racial hierarchies, the cultivation of Orientalist knowledge, and the promotion of missionary activity. At the same time, colonial rule was also marked by a degree of ambivalence and contestation, as different groups and individuals sought to navigate and negotiate the constraints and opportunities of the colonial context. The legacy of British rule in India continues to be contested and debated, with some arguing that it represented a form of economic and social modernization, while others point to the devastating impact of colonialism on Indian society, culture, and politics. It is imperative to consider a range of historical and theoretical perspectives, and to recognize the diverse voices and experiences of those who lived under British rule.

Q.30) Consider the following assumptions:

1. The impact of British rule in India is conclusive and clear to the scholars of history.
2. The British rule in India was based on the logic of segregation and elitism.

Which of the above-given assumptions is/are valid?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: The passage states that the legacy of British rule in India continues to be contested and debated, with some arguing that it represented a form of economic and social modernization, while others point to the devastating impact of colonialism on Indian society, culture, and

politics. This implies that the impact of British rule in India is not conclusive and clear but remains a subject of ongoing discussions and differing opinions.

Statement 2 is correct: The passage discusses the dual logic of difference and superiority, which was used to justify and legitimize the imposition of British authority over Indian society. Thus, it was based in elitism, being superior and maintain segregation from Indian society. This assumption is supported by the mention of racial hierarchies, Orientalist knowledge, and missionary activity.

Q.31) What is the *most logical, rational, and crucial inference* of the above given passage?

- British rule in India was uniformly oppressive and universally resisted.
- The imposition of British authority in India was exclusively based on economic interests.
- The legacy of British rule in India is complex and multifaceted.
- British colonial rule had no lasting impact on Indian society, culture, and politics.

Ans) c

Exp) Option c is the correct answer.

The passage highlights the complexity of British rule in India, discussing the dual logic of difference and superiority, as well as the ambivalence and contestation that characterized the colonial context. It also emphasizes the ongoing debate about the legacy of British rule, with differing opinions on its impact on Indian society, culture, and politics. Therefore, the most logical, rational, and crucial inference of the passage is that the legacy of British rule in India is complex and multifaceted, with ongoing debates about its impacts.

Passage-2

The increasing demand for energy has resulted in the overuse of non-renewable sources of energy, which has led to a host of environmental issues. One of the most critical environmental issues is global warming, which is primarily caused by the release of greenhouse gasses like carbon dioxide into the atmosphere. The burning of fossil fuels like coal, oil, and gas is one of the main contributors to this problem. The rise in global temperatures has led to a variety of consequences such as melting of glaciers and ice caps, sea-level rise, and more frequent and severe weather events like hurricanes and droughts.

Another significant environmental issue is air pollution, which is caused by the release of harmful pollutants into the air. The combustion of fossil fuels for energy generation is one of the major sources of air pollution. Exposure to high levels of air pollution can cause respiratory and cardiovascular problems and can even lead to premature death.

Moreover, plastic pollution is another growing environmental issue. The increased use of single-use plastics like straws, bags, and water bottles has led to plastic pollution in our oceans and on land. Plastic waste is harmful to marine life and can even enter the food chain, posing a threat to human health.

Q.32) Which one of the following statements best reflects the central idea of the passage given above?

- The overuse of non-renewable sources of energy has led to environmental issues such as global warming
- The environmental issues related to Global Warming includes melting of glaciers, increase in insects diversity, and sea level rise.
- Deforestation is one of the reason for Global Warming
- Plastic pollution is the most critical environmental issue caused by the increased use of single-use plastics like straws, bags, and water bottles.

Ans) a

Exp) Option a is the correct answer.

Option a is correct- The passage discusses three significant environmental issues: global warming, air pollution, and plastic pollution, all of which are caused by the overuse of non-renewable sources of energy. Option a summarizes the central idea of the passage by stating that the overuse of non-renewable sources of energy has resulted in environmental issues such as global warming, air pollution, and plastic pollution. Therefore, option a is the correct answer.

Option b is incorrect- There is no mention of the word increase in insects diversity in the given passage. The passage mentions “The rise in global temperatures has led to a variety of consequences such as melting of glaciers and ice caps, sea-level rise, and more frequent and severe weather events like hurricanes and droughts.”

Option c is incorrect- Even though deforestation can be the reason for Global Warming but since there is no mention of the word ‘Deforestation’ in the given passage, we would assume option c as incorrect one.

Option d is incorrect- The passage does not describe Plastic pollution as the current most critical environmental issue. It mentions the word ‘growing’ and not critical so, Option d would also be incorrect one.

Passage-3

The martyrs, who laid down their lives for the freedom of the country, had a lofty vision of the future. They owe the nation to be free from all the slavery and bondage. They wanted the India in which all the communities would live in perfect harmony and in which there would be no high class and no low class of people, the curse of untouchability having been wiped out completely. Women would enjoy equal rights with men and contribute their fullest to the making of a great nation. Such a vision was in keeping with the ancient glory of the country owed for its splendid achievements in literature art and culture. We must now revitalise this ancient culture of ours with tolerance as its masthead. If we forget to take pride in our noble heritage, we shall have to face severe indictment in the court of history which is a ruthless judge and seldom spares the erring people.

Q.33) Which of the following inferences can be made from the passage?

1. Martyr wanted that there should be reservation in the jobs for the backward section.
2. Martyr wanted that there should be perfect communal love and peace in the country.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect- There is no mention of the word reservation in the jobs in the given passage. Hence, statement 1 is incorrect.

Statement 2 is correct- Martyr wanted our country to be a place where people of all community would live peacefully and in harmony. Apart from that, they also favored untouchability and were against the concept of high class and low class. Hence, Statement 2 is correct.

Passage-4

Gender discrimination: The bias against females in India is grounded in cultural, economic and religious roots. Sons are expected to work in the fields, provide greater Income and look after parents in old age. In this way, sons are looked upon as a type of insurance. In addition, in a patriarchal society, sons are responsible for preservation of the family name. Also, as per Hindu belief, lighting the funeral pyre by a

son is considered necessary for salvation of the spirit. This strong preference for sons which results in a life-endangering deprivation of daughters, is not considered abhorrent culturally and socially. In North India, girls currently constitute about 60% of the unwanted births and the elimination of unwanted fertility in this manner has the potential to raise the sex ratio at birth to 130 boys per 100 girls.

Q.34) Which among the following is the most logical corollary to the above passage?

- In India, only sons can work in the fields and provide greater income and look after parents in old age.
- Deep rooted bias towards sons has resulted in abortion and female foeticide in India.
- Daughters should be educated and allowed to do jobs in order to end discrimination.
- The strong preference for sons resulting in criminal discrimination against daughters should be condemned and people should be made aware of the importance of girls or females in the society. Laws should be stricter to punish the guilty of aborting the female child.

Ans) d

Exp) Option d is the correct answer.

Option a is incorrect- According to the given passage, the Sons are expected to work in the fields, provide greater Income and look after parents in old age. But nowhere it is mentioned that only sons can do that. So, option a is incorrect.

Option b is incorrect- There is no mention of the term abortion and female foeticide in the given passage. Hence, option b is also incorrect.

Option c is incorrect. The given passage does not talk about education and employment of women and daughters for their empowerment. Hence, option c is also incorrect.

Option d is correct- The conservative and orthodox beliefs of the people have to be condemned and punished by law, if society has to change and discrimination against female child has to come to an end. Hence, option d is correct.

Passage-5

India has experienced a decline in its apparel and textile exports in recent years, which has raised concerns about the competitiveness of the sector. According to industry experts, factors such as a lack of modernization in production processes, high input costs, and a lack of access to modern technology have contributed to this decline. Additionally, the COVID-19 pandemic has further exacerbated the situation, with disruptions in global supply chains and a decline in demand for non-essential goods. To reverse this trend, there is a need for the Indian government to implement policy measures that encourage investment in modernizing production processes, promoting innovation, and improving access to technology. Furthermore, there is a need to strengthen trade ties with key markets and diversify export destinations to reduce dependence on a single market. The textile and apparel sector has the potential to contribute significantly to India's economic growth and job creation, and it is essential to address the challenges it currently faces to unlock this potential.

Q.35) Based on the passage above following assumptions have been made :

- There is a dearth of contemporary technology in the textile sector.
- Textile export has declined due to non competitiveness of this sector.
- Conventional production process is the reason for decline in overall export.
- Textiles or apparel are non essential goods.

Which of the above are valid assumptions?

- 1 and 2 only
- 1 and 4 only
- 2 and 3 only
- 2, 3 and 4 only

Ans) b

Exp) Option b is the correct answer.

The passage mentions that there is a lack of access to modern technology, which assumes that there is a dearth of contemporary technology in the textile sector. Hence statement 1 is a valid assumption.

The passage states that due to decline in export, concerns have been raised about competitiveness of this sector. But then it mentions the factors which have led to decline. And raising concern does it mean that it is the reason, hence statement 2 is invalid assumption.

The passage states that lack of modernisation in the production process is the reason for decline in export, but in statement 3, it just writes export, which implies General export. Hence statement 3 is an invalid assumption.

The passage mentions that the COVID-19 pandemic has further exacerbated the situation, with disruptions in global supply chains and a decline in demand for non-essential goods. So, this assumes that textile is a non-essential good. Hence statement 4 is a valid assumption.

Passage-6

Counterinsurgency in North East India is a complex and challenging phenomenon that has defied easy solutions for decades. These groups have engaged in a range of violent activities, including bombings, assassinations, extortion, and kidnappings, that have destabilized the region and created a climate of fear and uncertainty. The counterinsurgency operations in North East India have been characterized by a range of challenges, including terrain, ethnic and linguistic diversity, porous borders, and limited resources. The rugged and forested terrain of the region has made it difficult for security forces to track down and apprehend insurgent groups as they are inept to deal with it. Moreover, the ethnic and linguistic diversity of the region has made it challenging for security forces to build trust with local communities and gather intelligence. The counterinsurgency operations have also been complicated by the porous borders of the region, which allow insurgent groups to seek sanctuary in neighboring countries such as Myanmar, Bangladesh, and Bhutan. This has made it difficult for security forces to completely eliminate the insurgent threat in the region.

Q.36) Based on the passage following assumptions have been made:

1. Training in Jungle war tactics is needed to defeat the insurgents.
2. Homogeneity in language and ethnicity is pre-requisite to gain trust.
3. Myanmar, Bangladesh and Bhutan provide safe sanctuary to insurgents.
4. Insurgents use violence to threaten the government.

Which of the above are valid assumptions?

- a) 1 and 2 only
- b) 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 2, 3 and 4

Ans) a

Exp) Option a is the correct answer.

The passage states that ‘The rugged and forested terrain of the region has made it difficult for security forces to track down and apprehend insurgent groups as they are inept to deal with it’, so this assumes that training in jungle war tactics is needed to defeat the insurgents. Hence statement 1 is a valid assumption.

The passage mentions that ‘the ethnic and linguistic diversity of the region has made it challenging for security forces to build trust with local communities and gather intelligence’, so this assumes that if there is homogenous language and ethnicity, trust can be gained. Hence statement 2 is a valid assumption.

The passage states that 'porous borders of the region allow insurgent groups to seek sanctuary in neighboring countries such as Myanmar, Bangladesh, and Bhutan', but this does not imply that these countries provide them safe sanctuaries, it's due to Porous borders that they end up being used like that. Hence statement 3 is an invalid assumption.

The passage does mention about the violence being used by the insurgents and they are creating a sense of fear, but they don't state that whether it's to threaten the government. Hence statement 4 is an invalid assumption.

Q.37) A child goes to Disneyland for a toy train ride. The cost of the ride was Rs 75 for the first three minutes and Rs 20 for each additional minute after the first three minutes.

Consider the two statements are given followed by a Question:

Statement-1 : The child paid less than Rs 416.

Statement-2: The child paid more than Rs335.

Question: Did the child enjoy the toy train ride for more than 15 minutes?

Which one of the following is correct in respect of Statement and Question?

- Statement-1 alone is sufficient to answer the Question.
- Statement-2 alone is sufficient to answer the Question.
- Either Statement-1 alone or Statement-2 alone is sufficient to answer the Question.
- Neither Statement-1 alone nor Statement-2 alone is sufficient to answer the Question.

Ans) b

Exp) Option b is the correct answer.

We need to find the amount to be paid for 15 minutes, then we can conclude whether the child enjoyed the ride for more than 15 minutes or not.

Given: The cost of the ride was Rs 75 for the first three minutes and Rs 20 for each additional minute after the first three minutes.

Amount to be paid for 15 minutes = Rs 75 (for first three minutes) + Rs (20x12) [for next 12 minutes] = Rs 315

Statement-1 : The child paid less than Rs 416.

But from this we don't know how much exactly he paid, so there are chances that he paid less than Rs315. So, statement 1 alone is not sufficient to answer the question.

Statement-2: The child paid more than Rs335.

From this we know that the child certainly enjoyed the ride for more than 15 minutes.

Hence Statement-2 alone is sufficient to answer the Question.

Q.38) A company's net worth is Rs 525,000. The three shareholders Ram, Shyam and Mohan have their share in this in the ratio of (1/15):(1/21):(1/35). How much was the share of the person who received the highest amount ?

- 175,000
- 245,000
- 105,000
- 132,500

Ans) b

Exp) Option b is the correct answer.

The ratio are (1/15):(1/21):(1/35)

Multiplying this by LCM of 15,21,35 (735) to simplify the ratio.

$(1/15) \times 735 : (1/21) \times 735 : (1/35) \times 735 = 49:35:21$

So, Ram received the highest share, his share is $\{49 / (49+35+21)\} \times 525,000 = 245,000$

Q.39) Consider the following statements and conclusions, and choose the correct option:

Statements:

1. If a person owns a car, they must have a driver's license.
2. If a person has a driver's license, they must be at least 18 years old.
3. Rajesh owns a car.

Conclusions:

- I. Rajesh is at least 18 years old.
- II. Rajesh does not have a driver's license.
- III. Rajesh has a driver's license.

Select the correct answer using the code given below:

- a) Only conclusion I follows.
- b) Only conclusion II follows.
- c) Conclusions I and III follow.
- d) None of the conclusions follow.

Ans) c

Exp) Option c is the correct answer.

Statements:

- 1) If a person owns a car, they must have a driver's license.
- 2) If a person has a driver's license, they must be at least 18 years old.
- 3) Rajesh owns a car.

From statement 3, we know that Rajesh owns a car. According to statement 1, if a person owns a car, they must have a driver's license.

Therefore, we can conclude that Rajesh has a driver's license.

Now that we know Rajesh has a driver's license,

we can refer to statement 2, which says that if a person has a driver's license, they must be at least 18 years old.

Since Rajesh has a driver's license, we can conclude that Rajesh is at least 18 years old.

Conclusions:

- 1) Rajesh is at least 18 years old. (True)
- 2) Rajesh does not have a driver's license. (False)
- 3) Rajesh has a driver's license. (True)

Q.40) Nine cricket fans are watching a match in a stadium. Seated in one row, they are J, K, L, M, N, O, P, Q and R. L is at the right of M and at third place at the right of N. K is at one end of the row. Q is seated adjacent to both O and P. O is at the third place at the left of K. J is right next to left of O.

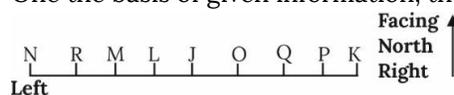
Which of the following statement is correct?

- a) N is two seats away from J.
- b) M is at one extreme end.
- c) R and P are neighbors.
- d) There is one person between L and O.

Ans) d

Exp) Option d is the correct answer.

On the basis of given information, the sitting arrangement of nine cricket fans are as below.



From the given figure, clearly J sits between L and O. Hence option d is the correct answer.