

ANSWERS & EXPLANATIONS

GENERAL STUDIES (P) TEST – 4150 (2024)

Q 1.A

- **Public debt is the total liabilities of the central government contracted against the Consolidated Fund of India.**
 - It is further classified into internal and external debt.
 - Internal debt is categorised into marketable and non-marketable securities.
- **Marketable securities are those that are freely traded in a secondary market.** Marketable government securities include G-secs and T-Bills issued through auction. Hence option 1 is correct.
 - Marketable securities have both a marketable value, one which is subject to potentially volatile fluctuation in accordance with the changing levels of demand for the security in the trading marketplace, and intrinsic value. Thus, marketable securities generally carry a higher level of risk than non-marketable securities.
- A Non-marketable security is an asset that is difficult to buy or sell due to the fact that they are not traded on any major secondary market exchanges. Non-marketable securities include intermediate treasury bills issued to state government's, special securities issued to national Small Savings Fund among others. Hence options 2 and 3 are not correct.
 - Non-marketable securities, however, are not subject to the demand changes in a secondary trading market and, therefore, have only their intrinsic value, but no market value. The intrinsic value of a non-marketable security, depending on the structure of the security, can be considered as either its face value, the amount payable upon maturity or its purchase price plus interest.

Q 2.A

- **Deepfakes are synthetic media that have been digitally manipulated to replace one person's likeness convincingly with that of another.** Deepfakes are the manipulation of facial appearance through deep generative methods.
- **Deepfakes have been around since 2017 and refer to videos, audios or images created using a form of artificial intelligence called deep learning.** The term became popular when a Reddit contributor used a publicly available AI-driven software to impose the faces of celebrities onto the bodies of people in pornographic videos. Morphing refers to the process of transforming one image or object into another through a series of gradual changes. It is often used in computer graphics and animation to create smooth transitions between two different shapes or appearances. Hence statement 1 is correct.
- While some deepfakes are easy to identify because of their poor quality, others can be much more difficult to distinguish from a real video. Several generative AI tools such as Midjourney, Deepfakes web and DALL-E are available to users for free or at a low fee.
- In India, the government issued an advisory to social media and internet platforms in December to guard against deepfakes that contravene India's IT rules. **Deepfakes themselves are not illegal** but, depending on the content, can violate some of India's information technology rules. India's IT Rules, 2021 require that all content reported to be fake or produced using deep fake be taken down by intermediary platforms within 36 hours. Since the deepfake videos of Rashmika Mandanna went viral, the Indian IT ministry has also issued notices to social media platforms stating that impersonating online was illegal under Section 66D of the Information Technology Act of 2000. Hence statement 2 is not correct.

Q 3.B

- The Table of Precedence is related to the rank and order of the officials of the Union and State Governments. The order of precedence is given below:
 - President
 - Vice-President
 - Prime Minister

- Governors of states within their respective states
- Former presidents
 - Deputy Prime Minister
- Chief Justice of India; **Speaker of Lok Sabha**
- Cabinet Ministers of the Union; Chief Ministers of States within their respective States; Vice-Chairperson, NITI Aayog; Former Prime Ministers; Leaders of Opposition in Rajya Sabha and Lok Sabha
 - Holders of Bharat Ratna decoration
- Ambassadors Extraordinary and Plenipotentiary and High Commissioners of Commonwealth countries accredited to India; Chief Ministers of States outside their respective States Governors of States outside their respective States
- **Judges of the Supreme Court**
 - Chairperson, Union Public Service Commission; Chief Election Commissioner; Comptroller & Auditor General of India
- **Hence option (b) is the correct answer.**

Q 4.B

- **Tiger reserves** in India are **declared** under Section 38 V of the **Wildlife Protection Act, 1972** by the **State Governments** in India, on the recommendation of the **National Tiger Conservation Authority (NTCA)**.
- The **largest tiger reserve in India** is the **Nagarjunsagar-Srisailem Tiger Reserve**. It is located in the **Nallamala forest reserve of Andhra Pradesh**, spreading across 3,728 sq. km. **Hence, statement 2 is correct.**
- The **Bor Tiger Reserve**, which is located near Hingani in the **Wardha District of Maharashtra**. It covers an area of only **138.12 sq. km.** and is thus India's **smallest tiger reserve**. **Hence, statement 1 is correct.**
- The **Veerangana Durgavati Tiger Reserve** has become the seventh tiger reserve of **Madhya Pradesh (and not Uttarakhand)**. **Hence, statement 3 is not correct.**

Q 5.B

- Before the formation of INC educated Indians were politically active and began to fight for civil liberties and organised country-wide agitations on various national issues.
- **Lex loci Act of 1850:**
 - Designed to safeguard the civil rights of religious converts.
 - Addressed a growing concern among Christian Missionaries regarding the hindrance to conversion due to the loss of inheritance rights.
 - Specifically granted the right to inherit ancestral property to Hindu converts to Christianity.
- **Lord Lytton's Afghan Adventure(1877-1880):**
 - The Second Anglo-Afghan War was initiated in 1878 by Lytton whose expenses had to be met from the Indian revenues. Educated Indians expressed concerns about the misuse of power and resources for imperialistic ambitions.
- **Other Significant events during the tenure of lord Lytton are:**
 - Royal Titles Act 1876
 - Delhi Darbar Of 1877
 - Great Famine Of 1876
 - Delhi Darbar Of 1877
 - Reduction of maximum age to enter civil services from 21 to 19 in the year 1877.
 - Vernacular Press Act 1878
- **The Ilbert Bill Agitation 1883**
 - In 1883, Ilbert, the law member of the viceroy's council, tried to abolish inequality in judicial matters. It sought to bring Englishman under the jurisdiction of Indian Magistrate.
 - The Europeans in India opposed this move by all means. The Government yielded to the pressure and bill was modified.
 - **The Indian Association** supported the Ilbert Bill and protested against the imprisonment of S.N. Banerjee. Consequently, S.N. Banerjee was released on 4 July 1883.
 - Despite the remarkable achievements of the Indian Association, it was called a provincial association. Therefore, the Association determined to call the All – India National Conference which came into existence in 1883.
- **Thus, the correct order is 2-3-1. Hence option (b) is the correct answer.**

Q 6.C

- The Ad Dharm movement was founded by Babu Mangu Ram Mugowali in 1926, it stands as a significant chapter in the history of social revolutions in India. The movement aimed to liberate the Untouchables from the shackles of social oppression and injustice prevalent in pre-Partition Punjab. Hence, statement 1 is not correct.
- Mangu Ram was part of the Ghadar Lehar, actively involved in planning an armed rebellion against British rule. His ship was caught en route, leading to 12 years of incognito life in the Philippines. Hence, statement 2 is correct.
- The movement gained prominence with the establishment of "Ad Dharm Mandal" in Jalandhar, and Mangu Ram emerged as a cult figure among the Untouchables.
- The Ad Dharm was based on the teachings of the saint-poets of the Bhakti movement, particularly Ravidas, Valmiki, Kabir and Namdev. The leaders of the Ad Dharm movement placed Guru Ravidas at the centre of their discourse around which the entire socio-political and spiritual paraphernalia of the movement and separate religion was woven. Hence, statement 3 is correct.
- The movement secured the status of a separate religion (Ad Dharm) during the 1931 Census, and in the 1937 and 1946 elections, Ad Dharm candidates won reserved provincial assembly seats, becoming significant stakeholders in the legislature. Hence, statement 4 is correct.
- This Ad Dharm movement, under Babu Mangu Ram's leadership, played a crucial role in raising social and political consciousness, challenging the caste system, and establishing a vision of an egalitarian socio-political order.

Q 7.C

- Recently, the Bar Council of India (BCI) notified Rules for Registration and Regulation of Foreign Lawyers and Foreign Law Firms in India, 2022.
- **Key Highlights of the rules**
 - Allows foreign lawyers and law firms to
 - Register with BCI to practice in India. Hence statement 1 is correct.
 - Practice in non-litigious matters, which would be laid down by BCI in consultation with the Ministry of Law.
 - Advise Indian clients on international legal issues, including international arbitration.
 - However, they will not be allowed to appear before any courts, tribunals or any other regulatory authorities. Hence statement 2 is correct.



Bar Council of India

New Delhi

Genesis: It was established by Parliament under Advocates Act, 1961 to regulate and represent Indian bar.

Statutory functions:

- To lay down standards of professional conduct and etiquette for advocates.
- To safeguard rights, privileges and interests of advocates.
- To recognize Universities whose degree in law shall be a qualification for enrolment as an advocate.

Key members: The BCI consists of members elected from each State Bar Council (SBC), and the Attorney General of India and the Solicitor General of India who are ex-officio members.

- The members from SBCs are elected for a period of five years and Chairman and Vice-Chairman are elected by the council for a period of two years from amongst its members.

Q 8.C

- The governor is neither directly elected by the people nor indirectly elected by a specially constituted electoral college as is the case with the president. He is appointed by the president by warrant under his hand and seal. Hence, statement 1 is correct.
- The Draft Constitution provided for the direct election of the governor on the basis of universal adult suffrage.

- But the Constituent Assembly opted for the present system of appointment of governor by the president because of the following reasons :
 - The direct election of the governor is incompatible with the parliamentary system established in the states.
 - The mode of direct election is more likely to create conflicts between the governor and the chief minister.
 - The governor being only a constitutional (nominal) head, there is no point in making elaborate arrangements for his election and spending huge amount of money.
 - The election of a governor would be entirely on personal issues. Hence, it is not in the national interest to involve a large number of voters in such an election.
 - An elected governor would naturally belong to a party and would not be a neutral person and an impartial head.
 - The election of a governor would create separatist tendencies and thus affect the political stability and unity of the country.
 - The system of presidential nomination enables the Centre to maintain its control over the states.
 - The direct election of the governor creates a serious problem of leadership at the time of a general election in the state.
 - The chief minister would like his nominee to contest for governorship. Hence, a second rate man of the ruling party is elected as governor.
- Therefore, the American model, where the Governor of a state is directly elected, was dropped and the Canadian model, where the governor of a province (state) is appointed by the Governor-General (Centre), was accepted in the Constituent Assembly. **Hence statement 2 is correct.**

Q 9.C

- The Harappan Civilization, also known as the Indus Valley Civilization, flourished from approximately 3000 BCE to 1500 BCE in the vast region that now encompasses parts of modern-day India and Pakistan. **Agriculture was a fundamental component of the Harappan Civilization, sustaining its urban centres** and contributing to the prosperity of this ancient society.
 - **Cultivation Techniques:** Harappan farmers cultivated a variety of crops, including wheat, barley, rice, rai etc. The fertile plains of the Indus River provided an ideal environment for agriculture. A good quantity of barley has been discovered in Banawali. **The Indus people were the earliest people to produce cotton.**
 - **Domestication of Animals:** Livestock played a crucial role in Harappan agriculture. They domesticated animals, such as cattle, sheep, and goats.
 - **Use of Ploughs:** Archaeological findings, such as a terracotta model of a plough discovered in Banawali, indicate the use of ploughing tools. Additionally, evidence of ploughed fields at sites like Kalibangan suggests a systematic approach to agriculture. However, no hoe or ploughshare has been discovered. The Harappans probably used the wooden ploughshare. Also, we do not know whether the plough was drawn by Men or oxen. **Hence statements 1 and 2 are correct.**
 - **Irrigation:** Gabarbands or nalas enclosed by dams for storing water were a feature in the part of Baluchistan and Afghanistan, **but channel or canal irrigation seems to have been absent.**
 - **Storage Facilities:** The construction of large granaries in Harappan cities points to a well-organized system for storing surplus agricultural produce. These granaries were likely essential for maintaining food reserves and supporting the population during lean periods.
 - **Harvesting and Processing:** The discovery of sickle blades and grinding stones suggests that **Harappans were adept at harvesting** and processing crops. These tools were crucial for ensuring a reliable food supply.
 - **Connection to Trade:** Agricultural surplus likely played a significant role in the Harappan economy, supporting trade networks with other regions. The standardized weights and measures found at Harappan sites further indicate the importance of agricultural produce in economic transactions.

Q 10.B

- The Green Climate Fund (GCF) was established under the **Cancún Agreements in 2010. Hence statement 1 is not correct.**
- It acts as a dedicated financing vehicle for developing countries within the global climate architecture, serving the Financial Mechanism of the UNFCCC and the Paris Agreement. **Hence statement 2 is correct.**
- The Green Climate Fund is mandated to support developing countries in raising and realizing their Nationally Determined Contributions (NDC) ambitions. **Hence statement 3 is correct.**

Q 11.D

- **Marco Polo, an Italian merchant, embarked on a significant journey to India in 1271 A.D.** During his travels, he explored the Kingdom of **Pandya** and the **Kakatiyas of Warangal**. Notably, he also made a stop at the Prominent Kakatiya port of Mottupalli, during the reign of the **Rani Rudramadevi**(1263-1289).
- **Ibn Battuta, a Moroccan traveller, arrived in the royal court of Delhi in 1332-33 AD.** **Mohammad Bin Tughlaq**, the ruler of Delhi appointed him to the post of Qadi (Judge) in the royal court, where he lived for around seven years. **His book Rihla written in Arabic Provides** a detailed account of social and cultural life in Indian during the Delhi Sultanate period in the 14th Century.
- **Domingo Paes was a Portuguese traveller who visited the Vijayanagara Empire around 1520 during the rule of King Krishna Deva Raya.** He had extensively recorded his views on the Vijayanagara state in "Chronicle of the Vijayanagar kings" (Chronica dos Reis de Bisnaga). He was particularly impressed by the advanced irrigation technology of that time.
- **Francois Bernier was a French doctor and historian who visited India in 1656 AD.** He was a personal physician of Mughal prince Dara Shikoh and later Bernier spent 12 years in Aurangzeb's court and wrote a book called 'Travels in the Mogul Empire' on his experiences. His writings offered a comparative account of the Social and economic life of Mughal India and contemporary Europe.
- **The correct sequence is 1-4-2-3. Hence, option (d) is the correct answer.**

Q 12.D

- The gradual and fairly predictable change in the species composition of a given area is called **ecological succession**.
- These ecological successions are of various types. Depending on the **pioneer species**, there are two kinds of successions:
 - **Autogenic succession:** It is driven by **biotic components** of the ecosystem, like lichens.
 - **Allogenic succession:** It is driven by the **abiotic components** of the ecosystem. **Hence, statement 1 is not correct.**
- Further,
 - **Primary succession:** It is the succession that starts in **lifeless areas** as deserts.
 - **Secondary succession:** It is the succession that starts on a **previously destructed habitat**, E.g., Forest destructed due to forest fires. In this regard, **secondary succession is faster** compared to primary succession. **Hence, statement 2 is not correct.**

Q 13.A

- **The Edicts of Ashoka, also known as the Ashokan inscriptions or Ashoka Rock Edicts, are a collection of inscriptions carved on rocks, pillars, and other surfaces throughout the Indian subcontinent during the reign of Emperor Ashoka (268-232 BCE). There are 7 major pillar edicts of Ashoka which are found in seven locations.**
 - These are Kandahar, Delhi-Topra(Originally from Topra, Haryana), Delhi-Meerut(Originally from Meerut, U.P), Allahabad-kaushambi(Originally from Kaushambi, U.P), Lauriya-Araraj, Lauriya-Nandagarh and Rampurva(Bihar).
- **The 14th century Tarikh-i-Firuz Shahi by Shams Siraj Afif gives an account of the columns today known as the Delhi–Topra and Delhi–Meerut pillars.** Afif tells us that Sultan Firuz Shah Tughluq noticed the pillars at Topra (in modern Haryana) and Meerut (in modern UP) in the course of his military campaigns and that he was so impressed by them that he decided to transport them to Delhi.
- **The Delhi-Topra pillar installed in the Sultan's palace at Firuzabad (modern Firoz Shah Kotla) came to be known as the Minar-i-Zarin or the Golden Column. It is the only pillar where all seven major pillar edicts are inscribed on it. Hence, option (a) is the correct answer.**
- The Allahabad–Kosam pillar refers to the mahamatas of Kaushambi suggesting it was brought to Allahabad from that place at some point in time. Apart from the schism edict of Ashoka, it has the famous Allahabad prashasti of the Gupta emperor Samudragupta.

Q 14.A

- The Micro Small and Medium Enterprises (MSMEs) sector is a major contributor to the socio-economic development of the country. In India, the sector has gained significant importance due to its contribution to Gross Domestic Product (GDP) of the country and exports.

- A revision in Micro Small and Medium Enterprises (MSME) definition was announced under the Aatmanirbhar Bharat Abhiyaan Scheme on May 13, 2020. **Therefore, according to the new classification of Micro, Small and Medium Enterprises (MSME) under the Aatmanirbhar Bharat Abhiyaan Scheme, enterprises are defined based on the investment criteria in plant and machinery and turnover. Hence statement 1 is correct.**
- **MSMEs have a lower capital-output ratio, meaning that even a small investment offers a good growth rate.** They manufacture thousands of products, which means that you have plenty of options as a budding entrepreneur. **Hence statement 2 is not correct.**
 - Capital Output Ratio (COR) is the amount of capital required to produce one unit of output. A lower capital-output ratio indicates that a lower level of investment is required to produce a given growth rate in the economy. This is considered to be a desirable situation. A lower capital-output ratio also shows that capital is very productive or efficient.
- **The Micro Small and Medium Enterprises (MSMEs) sector is a major contributor to the socio-economic development of the country.** In India, the sector has gained significant importance due to its contribution to the Gross Domestic Product (GDP) of the country and exports.
 - As per the **latest information** received from the Ministry of Statistics & Programme Implementation, **the share of MSME Gross Value Added (GVA) in all India Gross Domestic Product (GDP) during the year 2019-20, 2020-21 and 2021-22 was 30.5%, 27.2% and 29.2%.**
 - The share of MSME manufacturing output in all India Manufacturing output during the year 2019-20, 2020-21 and 2021-22 was 36.6%, 36.9% and 36.2% respectively.
 - As per the information received from the Directorate General of Commercial Intelligence and Statistics (DGCIS), **the share of export of MSME specified products in all India exports during the year 2020-21, 2021-22 and 2022-23 was 49.4%, 45.0% and 43.6% respectively.**

Q 15.A

- **The Rajah-Moonje Pact was the first-ever agreement on reservations and a joint electorate between caste Hindus and the Depressed Classes.** This pact was signed between B. S. Moonje (President of Hindu Mahasabha) and M. C Rajah (All India Depressed Class Association). **Hence, statement 1 is not correct.**
- **According to it, there was an agreement between Rajah & Moonje. Dalits will get special representation but not a separate electorate in the 1935 constitutional reforms. Hence, statement 2 is correct.**
- **This agreement was signed before the communal award and Poona pact. Hence, statement 3 is not correct.**
- The 'Rajah-Moonje Pact' was signed in early 1932 and the Communal Award was proposed in September 1932. According to the Communal award, Muslims, Europeans, Sikhs, Indian Christians, Anglo- Indians, depressed classes, women, and even the Marathas were to get separate electorates. Such an arrangement for the depressed classes was to be made for 20 years. The Communal Award was based on the findings of the Indian Franchise Committee, called the Lothian Committee.
- Gandhi saw this as an attack on the unity of India and a sinister motive to divide Hindu society as he considered the untouchables to be an integral part of Hindu society and he went on a fast unto death in Yerwada Jail (Pune).
- After a series of negotiations both Gandhiji and Ambedkar agreed to a solution called the Poona Pact. Instead of separate electorates, the Poona Pact established a system of reserved seats for the Scheduled Castes within the general electorate. Dr. Babasaheb Ambedkar, on behalf of the depressed classes, and Madan Mohan Malviya, on behalf of Gandhi, signed the Poona Pact.

Q 16.C

- 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. Hence, statement 1 is correct.**
- It is vested with the power to interpret the Constitution. Besides, it has supervisory and consultative roles.
- **However, the Constitution does not contain detailed provisions with regard to the jurisdiction and powers of a high court. Hence, statement 2 is correct.**
- **It only lays down that the jurisdiction and powers of a high court are to be the same as immediately before the commencement of the Constitution. But, there is one addition, that is, the Constitution gives a high court jurisdiction over revenue matters (which it did not enjoy in the pre-constitution era).**

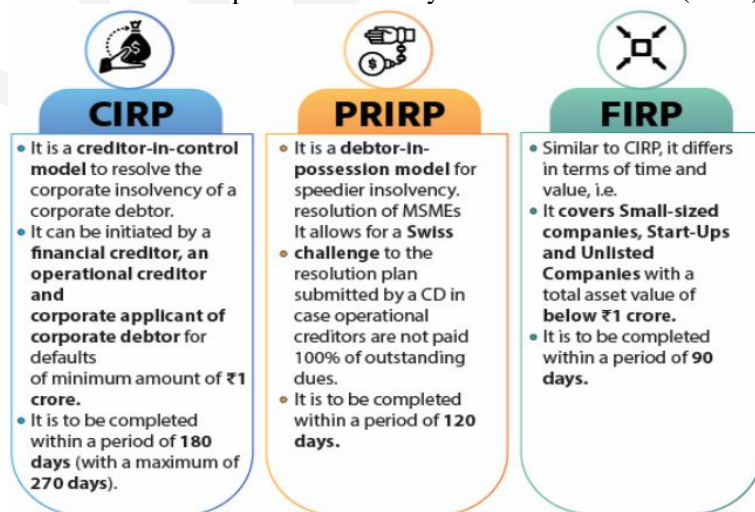
- The Constitution also confers (by other provisions) some additional powers on a high court like writ jurisdiction, power of superintendence, consultative power, etc. Moreover, it empowers the Parliament and the state legislature to change the jurisdiction and powers of a high court.
- At present, a high court enjoys the following jurisdiction and powers:
 - Original jurisdiction.
 - Writ jurisdiction.
 - Appellate jurisdiction.
 - Supervisory jurisdiction.
 - Control over subordinate courts.
 - A court of record.
 - Power of judicial review.
- The present jurisdiction and powers of a high court are governed by (a) the constitutional provisions, (b) the Letters Patent, (c) the Acts of Parliament, (d) the Acts of State Legislature, (e) the Indian Penal Code, 1860, (f) Criminal Procedure Code, 1973, and (g) Civil Procedure Code, 1908.

Q 17.B

- This herbaceous plant, abundant with medicinal virtues, thrives in diverse regions, stretching from the foothills of the Himalayas to the landscapes of Southeast Asia, China, Korea, and Japan. It is referred to by various names in different regions, it is known as "ja mardoh" in Meghalaya, "tokning-khok" in Manipur, and **"masunduri" in Assam. Hence statement 1 is correct.**
- Distinguished by its distinctive fish-like taste and aroma, it aptly earns the moniker "fish mint." Despite its therapeutic properties, **this plant exhibits invasive tendencies, swiftly regenerating from underground rhizomes and forming new plants when disturbed. Hence statement 2 is not correct.**
- Revered for its healing attributes, it finds application in traditional medicine, treating a spectrum of ailments including digestive issues, insect bites, fevers, and coughs. **The plant's efficacy is not a recent discovery; its benefits have been meticulously documented in ancient texts of Ayurveda and Siddha, attesting to its enduring significance in herbal medicine. Hence statement 3 is correct.**

Q 18.A

- **Insolvency and Bankruptcy Code (IBC), 2016**, is India's comprehensive law for a time-bound, market mechanism to address the insolvency of corporate persons, partnership firms and individuals. IBC code has classified creditors into 2 categories:
 - **Financial creditors** are those who have purely monetary relation with a company like bank, NBFC etc.
 - **Operational creditors** are those who provide the goods and services to a company in their common course of business like salaried employee, suppliers etc.
- Based on the assets value and debtor type, IBC provides for different corporate insolvency resolution processes as:
 - Corporate Insolvency Resolution Process (CIRP)
 - Pre-Packaged Insolvency Resolution Process (PPIRP)
 - Fast Track Corporate Insolvency Resolution Process (FIRP)



- **Hence statement 1 is not correct; statement 2 is correct and statement 3 is not correct.**

Q 19.D

- Distribution of essential commodities to a larger section of society, mostly vulnerable people, through a network of fair Price Shops on a recurring basis is done by the Public Distribution System (PDS). This system is jointly operated by the Central and State Governments.
- **Food Corporation of India is responsible for the bulk allocation of food grains to the State Governments, which in turn deliver the same to recipients. This is done at the Central Issue Price (CIP).**
- Minimum Support Price (MSP) is the price at which the central government procures food grains from farmers. **Central Issue Price (CIP) is the price at which the government makes these food grains available to states. Hence option (d) is the correct answer.**
- Foodgrains under NFSA were to be made available at subsidized prices of Rs. 3/2/1 per kg for Rice, Wheat and Coarse-grains (Nutria-cereals) respectively. The issue price for wheat and rice has not been revised since the introduction of the National Food Security Act in 2013.

Q 20.D

- **Lake Poopó** - This lake in west-central Bolivia occupies a shallow depression in the Altiplano, or “High Plateau,” at 12,090 feet (3,686 meters) above sea level. Lake Poopó is an endorheic lake, meaning that it has no outflows of water other than evaporation and ground seepage, and it receives the majority of its water from precipitation during the rainy season and from the Desaguadero River. Irrigation for local agricultural industries and water demands from mining diverted much of the Desaguadero from flowing into the lake, creating a significant decline in lake level. **The effects of global warming also contributed to the lake’s decline, causing the lake’s evaporation rate to triple since the 1990s and shortening the rainy season.**
- **Lake Mead** - One of the largest artificial lakes in the world, Lake Mead is the reservoir of Hoover Dam, on the Arizona-Nevada border 25 miles (40 km) east of Las Vegas. Formed by the damming of the Colorado River, Lake Mead stretches 115 miles (185 km) upstream, ranges from 1 to 10 miles (1.6 to 16 km) wide, and has a capacity of 31,047,000 acre-feet (38,296,200,000 cubic meters). **As a result of a multiyear drought in the American Southwest during the early 21st century, satellites revealed that the lake level dropped by some 120 feet (37 meters) between 2000 and 2015.**
- Iran’s **Lake Urmia**, or Daryācheh-ye Orūmīyeh, is located in the northwestern corner of the country. It is one of the largest lakes in the Middle East, and it historically covered an area that varied from 2,000 to 2,300 square miles (5,200 to 6,000 square km). The lake lies at the bottom of the large central depression of the Azerbaijan region in northwestern Iran, at an elevation of 4,183 feet (1,275 meters) above sea level. **Lake Urmia’s surface area has declined by some 90 percent since 1995, to roughly 230 square miles (600 square km)—that is, to about 5 percent of its historical volume. This loss in the area stems from the damming of the rivers that flow into the lake, increased withdrawals from irrigation, and water mismanagement.**
- **Lake Chad** is a freshwater lake in the Sahelian zone of west-central Africa at the conjunction of Chad, Cameroon, Nigeria, and Niger. It is located in an interior basin that was once occupied by a much larger ancient sea. Historically, the lake ranked among the largest lakes in Africa, though its surface area varies greatly by season as well as from year to year. **Since the 1960s, however, Lake Chad has shrunk approximately 90 percent, because of variations in climate and water withdrawals from irrigation.**
- **Hence option (d) is the correct answer.**

Q 21.B

- Gross domestic product (GDP) is the total valuation of final goods and services produced within the geographical borders of a country during a specified period (usually a year).
- **GDP can be calculated based on three approaches:**
 - **Income method:** The income approach for determining GDP is a summation of all incomes that companies pay to hire the workforce.
 - **Expenditure method:** The expenditure approach or spending approach calculates GDP by adding all expenditures made by all individuals in an economy.
 - **Production or Value added method:** The production output for determining GDP takes into account the total output produced by a country minus the goods consumed in the process
- **Limitations of GDP calculation:**
 - **Non-market transactions** like voluntary, domestic, or other work that have a positive impact on the productivity of workers **are excluded from GDP. Hence statement 1 is not correct.**

- Additionally, **goods that are produced for private consumption are also not included when GDP is calculated. Hence statement 2 is correct.**
- **GDP does not consider the impact of industries on the environment and social welfare. Environmental experts have argued for the inclusion of such damage to the GDP. Hence statement 3 is correct.**
- The standard of living of a country cannot be determined by considering its GDP. India is one of the best examples of a country with a high GDP but a relatively low standard of living. Similar to standards of living, GDP is not also a determinant of income inequality. India is also a prime example here owing to high unequal income distribution.

Q 22.B

- **Special provisions with respect to state of Manipur:** Article 371c makes the following special provisions for Manipur :
 - **The President is authorized** to provide for the creation of a committee of the Manipur Legislative Assembly consisting of the members elected from the Hill Areas of the state. **Hence statement 1 is not correct.**
 - The President can also direct that the Governor shall have special responsibility to secure the proper functioning of that committee.
 - **The Governor should submit** an annual report to the President regarding the administration of the Hill Areas. **Hence statement 2 is correct.**
 - **The Central Government can give directions** to the State Government as to the administration of the Hill Areas. **Hence statement 3 is correct.**

Q 23.C

- **India, which joined Interpol in 1949, recently, hosted the 90th Interpol General Assembly in Delhi in October 2022. Hence, statement 3 is correct.**
- Criminal data is at the heart of our member countries' crime-fighting activities. INTERPOL offers a platform for police around the world to share information easily and securely.
- **I-CORE is a 10-year programme to reinforce INTERPOL's function as a global police information hub. Hence, statement 2 is correct.**
- **The CBI is the National Central Bureau for Interpol in India** and coordinates all international police cooperation requirements of Indian law enforcement agencies via Interpol channels. **Hence, statement 1 is correct.**

Q 24.D

- **The Global Financial Stability Report by IMF provides an assessment of the global financial system and markets and addresses emerging market financing in a global context.** It focuses on current market conditions, highlighting systemic issues that could pose a risk to financial stability and sustained market access by emerging market borrowers. **Hence, pair 1 is not correctly matched.**
- **The World Bank's World Development Report, published annually since 1978, is an invaluable guide to the economic, social, and environmental state of the world today.** Each report provides in-depth analysis and policy recommendations on a specific and important aspect of development—from agriculture, the role of the state, transition economies, and labour to infrastructure, health, the environment, and poverty. **Hence, pair 2 is not correctly matched.**
- **Created in 2006, the GHI was initially published by the US-based International Food Policy Research Institute (IFPRI) and Germany-based Welthungerhilfe. In 2007, the Irish NGO Concern Worldwide also became a co-publisher. In 2018, IFPRI withdrew from the project and the GHI became a joint project of Welthungerhilfe and Concern Worldwide.** The Global Hunger Index presents a multidimensional measure of national, regional, and global hunger by assigning a numerical score based on several aspects of hunger. Countries are then ranked by GHI score and compared to previous scores from three reference years (e.g., the 2022 GHI scores can be directly compared to 2000, 2007 and 2014 GHI scores) to provide an assessment of progress over time. **Hence, pair 3 is not correctly matched.**
- **The Global Innovation Index (GII) released by Cornell University INSEAD and the World Intellectual Property** takes the pulse of innovation against a background of an economic and geopolitical environment fraught with uncertainty. It reveals the most innovative economies in the world, ranking the innovation performance of around 132 economies while highlighting innovation strengths and weaknesses. **Hence, pair 4 is not correctly matched.**

Q 25.A

- Population is the basis of the allocation of seats of the Lok Sabha. As far as possible, every State gets representation in the Lok Sabha in proportion to its population as per census figures. In Lok Sabha, there is the reservation of seats for Scheduled Castes and Scheduled Tribes.
- **Allocation of seats for Scheduled Castes and Tribes in the Lok Sabha is made on the basis of the proportion of Scheduled Castes and Tribes in the State concerned to that of the total population, vide provision contained in Article 330 of the Constitution of India read with Section 3 of the Representation of People (RPA) Act, 1950.**
- For Scheduled Castes, **84 seats are reserved in Lok Sabha.** For Scheduled Tribes, 47 seats are reserved in Lok Sabha. The 1st schedule to the RPA Act, 1950 as amended vide **Representation of People (Amendment) Act, 2008** gives the Statewise break up (and not the Indian Constitution). **Hence statement 1 is correct and statement 3 is not correct.**
- The following States and Union Territories have one seat each in the Lok Sabha - **Mizoram, Nagaland, Sikkim**, Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Lakshadweep, Pondicherry. **Hence statement 2 is correct.**
- In total eight members are elected from the Union territories (3 from Delhi, 1 from Puducherry and 4 from Jammu & Kashmir). Other Union territories including **Ladakh and Chandigarh are not represented in Rajya Sabha.**

Q 26.C

- **As a part of the Aatmanirbhar Bharat (ANB) stimulus package, the Animal Husbandry Infrastructure Development Fund (AHIDF) worth ₹15,000 crore was launched in 2020. Hence statement 1 is correct.**
- **The Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying, is the implementing agency for the Animal Husbandry Infrastructure Development Fund (AHIDF). Hence statement 3 is not correct.**
- The Animal Husbandry Infrastructure Development (AHIDF) has been approved for incentivizing investments by individual entrepreneurs, private companies, MSME, Farmers Producers Organizations (FPOs) and Section 8 companies to establish
 - **the dairy processing and value addition infrastructure. Hence statement 2 is correct.**
 - meat processing and value addition infrastructure and
 - Animal Feed Plant.
- Under this scheme, the Central Government provides a 3 per cent interest subvention to the borrower and credit guarantees up to 25 per cent of total borrowing.

Q 27.B

- **Gangani is widely known as “Grand Canyon of Bengal” is a famous tourist spot situated by the town of Garhbeta of Paschim Medinipur district.**
- **It comprises of natural hills around the River Shilabati, locally known as “Shilai River”.**
 - Shilabati River originates in the terrain of the Chota Nagpur Plateau in the Purulia district of the state of West Bengal in eastern India.
 - Shilabati River flows in an almost southeasterly direction through the districts of Bankura District and West Midnapore District.
 - Shilabati River joins the Dwarakeswar River near Ghatal and afterwards is known as Rupnarayan River.
 - It at last joins the Hooghly River and drains into the Bay of Bengal.
- The rains and seasonal variations, over time, have resulted in the formation of spectacular geological structures. These beautiful canyons like formations overlooking the river attract people from all corners of the state.
- During the winters, it attracts diverse migratory bird species. The place is situated on the banks of river Shilabati Gangani is locally popular as “Gangani Danga” or “Gangani Khola”.
- **Gandikota village**, located in Kadapa district, Andhra Pradesh, is home to a stunning canyon, by the Pennar river. Also called Gandikota Canyon, this natural structure is often compared to the Grand Canyon of Arizona, USA.
- **Laitlum Canyon** in Meghalaya is around 45 km away from the capital city of Shillong. Laitlum Canyons is all about dramatic landscapes and stunning vistas. Laitlum Canyons also have cultural significance as they are located within the Khasi tribal territory.

- **Raneh Falls and Canyon** is located on the Ken river near Khajuraho of Madhya Pradesh. The 98 ft deep canyon is a lesser known place in India, where the river narrow runs through narrow gorge of igneous rocks and crystalline granite stones.
- **Hence option (b) is the correct answer.**

Q 28.B

- **Sarala Devi Chaudhurani** was a prominent freedom fighter from Bengal as well as Punjab. She was born in Kolkata in a Bengali family in 1872. She was the niece of Rabindranath Tagore. She made **representations before the committee headed by Montague and Lord Chelmsford** to demand a series of reforms in the condition of the Indian women on behalf of Bharat Stree Mahamandal. She wanted to flee the 'cage' or 'prison' of home and establish her right to an independent livelihood like men. **She started a gymnasium in 1902**, where women were trained in the use of swords and 'lathi'. **Hence, option (b) is correct.**
- **Kumudini Mitra** was a revolutionary leader from Bengal. She had organized a group of educated women who liaised between the revolutionaries in hiding. In 1913 **Kumudini Mitra was invited to the International Women's Suffrage Conference at Budapest.** Hence, option (a) is not correct.
- **Hardevi Roshalal** was a revolutionary leader and editor of "Bharat Bhagini". At the sixth National Social Conference in 1892, she insisted that this platform was 'more important' than Congress. Hence, option (c) is not correct.
- **Kashibai Kanitkar** was the **first woman novelist from Maharashtra.** She had no formal education, but with her progressive husband's strong encouragement, she learned to read, and gradually mastered many Marathi, Sanskrit, and English works. **Hence, option (d) is not correct.**

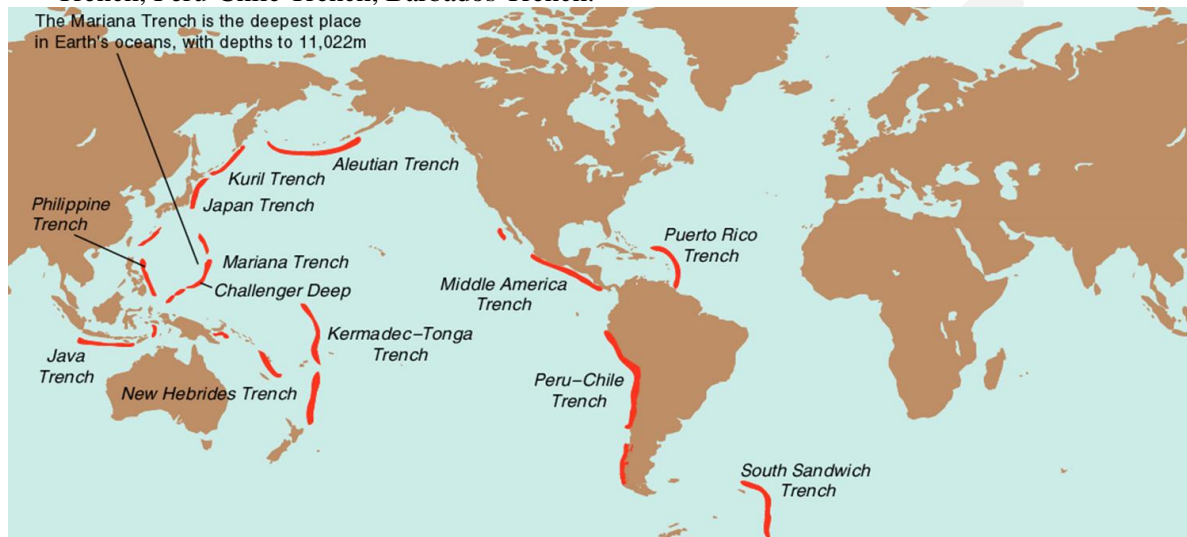
Q 29.B

- The Board of Directors manage the operations of a company. The Board of Directors consists of individual directors of a company.
- An independent director is a non-executive director of a company who helps the company in improving corporate credibility and governance standards. The independent director should not be a managing director, a whole-time director or a nominee director. He or she does not have any kind of relationship with the company that may affect the independence of his/her judgment. The provisions relating to the appointment of Independent directors are contained in Section 149 of the Companies Act, 2013.
 - **Every listed public company must have at least one-third of the total number of directors as independent directors.** Any fraction contained in that one-third shall be rounded off as one. **Hence statement 1 is not correct.**
- **Section 149 of the Companies Act, 2013 requires that listed companies appoint at least one woman director to their board.** The goal is to improve the representation of women on boards. **Hence statement 2 is correct.**
- **In 2019, the Companies Act was amended to decriminalize 16 technical and procedural breaches such as failure to file annual returns and issuing shares at a discount, which could be objectively assessed and involved no injury to public interest.** Hence statement 3 is not correct.

Q 30.A

- Trenches are long, narrow depressions on the ocean floor, formed as a result of tectonic plate interactions. These deep oceanic features are typically associated with subduction zones, where one tectonic plate is forced beneath another.
 - Trenches are the deepest parts of the ocean, and they play a crucial role in understanding the dynamics of plate tectonics and the Earth's geological processes.
- **Tonga Trench**
 - **The Tonga Trench is situated in the South Pacific Ocean, near the islands of Tonga.**
 - It is associated with the subduction of the Pacific Plate beneath the Indo-Australian Plate. The trench marks the boundary between the Pacific Plate to the east and the Indo-Australian Plate to the west.
- **Diamantina Trench**
 - **The Diamantina Trench is located in the Indian Ocean.**
 - This trench is associated with the complex tectonic interactions near the Indian-Antarctic Ridge. It marks the boundary between the Indo-Australian Plate to the north and the Antarctic Plate to the south.

- **South Sandwich Trench**
 - **The South Sandwich Trench is situated in the South Atlantic Ocean.**
 - It is related to the subduction of the South American Plate beneath the South Sandwich Plate. The trench marks the boundary between the South American Plate to the west and the Antarctic Plate to the east.
- Pacific Ocean trenches
 - Mariana Trench, Kermadec Trench, Japan Trench, Philippine Trench, Izu-Ogasawara Trench (Bonin Trench), Trench off the Coast of Peru and Chile.
- Indian Ocean trenches
 - Java Trench Sunda Trench Mauritius-Chagos Trench Andaman Trench
- Atlantic Ocean trenches
 - Puerto Rico Trench, Romanche Trench, South Sandwich Trench, Puerto Rico Trench, Cayman Trench, Peru-Chile Trench, Barbados Trench.



- Hence option (a) is the correct answer.

Q 31.A

- **The Treaty of Yandabo (1826) was signed between the British and Burma ending the First Anglo-Burma War. Hence, statement 1 is not correct.** The British expeditionary forces occupied Rangoon. According to the treaty, Burmese agreed to:
 - Pay one crore rupees as war compensation;
 - Cede its coastal provinces of Arakan and Tenasserim;
 - Abandon claims on Assam, Cachar, and Jaintia;
 - **Recognise Manipur as an independent state. Hence statement 2 is correct.**
 - Negotiate a commercial treaty with Britain; and
 - Accept a British resident at Ava while posting a Burmese envoy at Calcutta.
- **In 1852, commercial disputes in Rangoon prompted new hostilities between the British and the Burmese. After the end of the Second Burmese War (1852), Dalhousie annexed Lower Burma with its capital at Pegu. The annexation of Lower Burma proved beneficial to Britain. Rangoon, Britain's most valuable acquisition from the war, became one of the biggest ports in Asia. Hence, statement 3 is not correct.**
- In 1885, responding to the king of Burma's negotiation of commercial treaties with rival powers such as France, Germany, and Italy, Lord Dufferin issued the directive for the ultimate invasion and annexation of Upper Burma.

Q 32.B

- **Netaji Subhash Chandra Bose** was an Indian **Freedom fighter** and a young **leader of the Indian National Congress**, whose contributions to the nation are still remembered with pride and respect.
- He was one of the toppers at Calcutta University, and in 1919, he had cleared the **Indian Civil Services (ICS) examination**, securing fourth place. **Hence, statement 2 is correct.**
- He was highly influenced by **Vivekananda's** teachings and considered him his **spiritual Guru**. In the **political sphere**, his **mentor** was **Chittaranjan Das**. He even worked as the editor for Das's newspaper, "Forward". Under Das's influence, **Bose resigned from the ICS and joined the Indian National Congress. Hence, statement 1 is correct.**

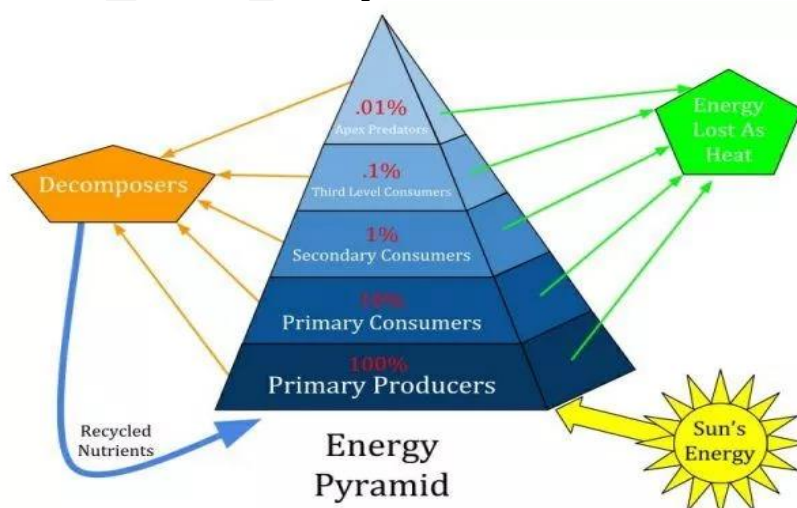
- In his time with the **INC**,
 - He actively participated in the **Salt Satyagraha of 1930**.
 - In the 1930s, he was closely associated with left politics in Congress along with **Jawaharlal Nehru and M.N. Roy**.
 - He got elected as the **Congress president at Haripura in 1938**.
 - Again in **1939**, at **Tripuri**, he won the presidential elections against Gandhi's candidate, Pattabhi Sitarammaya. Due to ideological differences with Gandhi, Bose resigned and left Congress, forming the Forward Bloc.
- The slogan '**do or die**' is associated with **Mahatma Gandhi** which came into existence during the **Quit India Movement**. Hence, **statement 3 is not correct**.
- **Bose** of the other hand has used the slogans as "**Jai Hind**", "**Delhi Chalo**", etc. He even **referred to Gandhi as the Father of the Nation**, in a radio address from Singapore in **1944**.

Q 33.B

- **Recent context:** Mauritian authorities are now working to resurrect the human-caused extinct bird 'Dodo'. Hence **option (b) is the correct answer**.
- The Dodo, scientifically known as *Raphus cucullatus*, was a flightless bird endemic to the Island of Mauritius in the Indian Ocean.
 - IUCN Status: Extinct
 - Dodos were about 3 feet (1 meter) tall and could weigh around 20-23 kilograms (44-51 pounds).
 - Dodos went extinct in 17th century. Reasons include hunting by humans as well as dogs, cats, etc
- Dodo De-extinction project:
 - The Dodo Extinction Project is an ambitious project to bring back the extinct dodo bird to life.
 - The project is a collaboration between genetic engineering company Colossal Biosciences and the Mauritian Wildlife Foundation.
 - Scientists will edit the primordial germ cells (PGCs) of the Nicobar pigeon, the dodo's closest living relative, to express the physical traits of a dodo. These edited PGCs will then be inserted into the embryos of a sterile chicken and rooster, who will act as 'interspecies surrogates'. In theory, when the chicken and rooster reproduce, they will give birth to a dodo offspring.
 - **Note-** PGCs are basically embryonic precursors of a species' sperm and egg.

Q 34.A

- An **ecological pyramid** is the **pyramidal representation of trophic levels of different organisms** based on their ecological position (producer to final consumer). The pyramid consists of a number of horizontal bars depicting specific **trophic levels**. The length of each bar represents the total number of individuals, biomass, or energy at each trophic level in an ecosystem.
- The **food producers** (plants or microbes) form the **base** of the pyramid, and the top carnivore forms the tip. Other consumer trophic levels are in between.
- These ecological pyramids are of three types, of which an **energy pyramid** represents the **amount of energy at each trophic level and the loss of energy at each transfer to another trophic level**. The pyramid is **always upward or upright**, with a large energy base at the bottom as the **energy flow in a food chain is always unidirectional**. Hence, **both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I**.



Q 35.A

- Artificial reefs, characterized as engineering interventions, play a crucial role in the rehabilitation and enhancement of natural habitats, as well as the management of aquatic resources. Their installation serves various advantageous purposes.
- Similar to natural reefs, artificial reefs act as aggregators for fish, providing a conducive environment for their habitation and growth. Additionally, they contribute to the **reduction of wave damage along coasts, facilitate the regeneration of marine ecosystems, and function as carbon sinks. Hence statement 1 is not correct.**
- According to the Central Marine Fisheries Research Institute (CMFRI), the deployment of artificial reefs can lead to a two to three-fold increase in catch rates and efficiency, **resulting in substantial fuel and energy cost savings** and, consequently, heightened income for fishers. These reef structures also offer a firm substrate for diverse marine life, including corals, algae, and plankton, promoting attachment and growth. **Hence statement 2 is correct.**
- Furthermore, they create favourable conditions for sea ranching and serve as essential spawning and nursery grounds for fish. Beyond their ecological impact, **artificial reefs contribute to enhancing recreational fisheries, snorkelling, and eco-tourism, establishing suitable areas for diving and mitigating conflicts in marine environments. Hence statement 3 is not correct.**
- Notably, these structures play a crucial role in restricting bottom trawling in nearshore areas, contributing to marine environmental regeneration and ensuring higher catch rates for small-scale fishers. CMFRI estimates that a single artificial reef of 300m³ has the potential to support 25-30 non-mechanized boats, emphasizing their multifaceted significance in marine resource management.

Q 36.A

- The Constitution of India makes a mention of parliamentary committees at different places, but without making any specific provisions regarding their composition, tenure, functions, etc. All these matters are dealt with by the **rules of two Houses**. Accordingly, **a parliamentary committee is a committee that:**
 - **Is appointed or elected by the House or nominated by the Speaker / Chairman.**
 - Works under the direction of the Speaker / Chairman
 - Presents its report to the House or the Speaker / Chairman
 - Has a secretariat provided by the Lok Sabha / Rajya Sabha
- The Consultative Committees provide a forum for free and open discussion on the policies, programs, and schemes of the concerned Ministries/Departments in an informal environment. **The Government will decide the composition of these Committees** with due regard to the respective strengths of various parties in Parliament. A Consultative Committee will have a Minimum membership of ten and a maximum membership of thirty. **The consultative committees, which also consist of members of Parliament, are not parliamentary committees as they do not fulfill the above four conditions. Hence both Statement I and Statement-II are correct and Statement-II is the correct explanation for Statement-I**

Q 37.C

- Hyper loop is an ultra-high-speed ground transportation system for passengers and cargo proposed as a concept by Elon Musk, CEO of Tesla and SpaceX, in a white paper back in 2013. Hyperloop Technology consists of a long vacuum tube, and it has a compartment like a capsule. Those compartments are called pods. These pods run at high speed inside the vacuum tube. These tubes are called loops. **Hence statement 1 is correct.**
- There are two big differences between Hyperloop and traditional rail. Firstly, the pods carrying passengers travel through tubes or tunnels from which most of the air has been removed to reduce friction. This should allow the pods to travel at up to 1200 km per hour. **Hence statement 2 is correct.**
- Secondly, rather than using wheels like a train or car, the pods are designed to float on air skis, using the same basic idea as an air hockey table, or use magnetic levitation to reduce friction. Hyperloop technology had not been fully implemented for commercial passenger services in any country. While several companies and projects were working on developing Hyperloop technology, such as Virgin Hyperloop and SpaceX's Hyperloop Pod Competition, these projects were still in the testing and development phases. **Hence statement 3 is correct. Hence option (c) is the correct answer.**

Q 38.C

- Greenwashing is the deceptive practice of providing inaccurate information or a misleading impression regarding the environmental friendliness of a company's products. It entails making unverified claims

with the intent to mislead consumers into believing that the products are more eco-friendly or have a more positive environmental impact than they truly do. **Hence option (c) is the correct answer.**

- Furthermore, greenwashing may occur when a company seeks to highlight the sustainable aspects of a product in order to divert attention from its involvement in environmentally harmful practices. Utilizing environmental imagery, deceptive labels, and concealing tradeoffs, greenwashing draws parallels to the concept of "whitewashing," which involves using false information to intentionally mask wrongdoing, errors, or unpleasant situations, aiming to portray them as less severe than they actually are.
- **Green marketing:** Unlike greenwashing, green marketing is when companies sell products or services based on legitimate environmental positives. Green marketing is generally practical, honest and transparent, and it means that a product or service meets these criteria: Manufactured in a sustainable fashion.

Q 39.D

- The World Meteorological Organization (WMO) traces its roots to the International Meteorological Organization (IMO), **originating from the 1873 Vienna International Meteorological Congress. Hence statement 1 is not correct.**
- The IMO evolved into a specialized agency of the United Nations in 1951.
- The transition aimed to enhance international collaboration in meteorology, promoting research and standardizing operational practices. The establishment of WMO in 1950 marked a milestone, elevating global cooperation in meteorology, hydrology, and related geophysical sciences to address the challenges of an evolving world. It does not involve providing financial assistance. **Hence statement 2 is not correct.**

Q 40.B

- **The Square Kilometre Array (SKA) is a next-generation radio telescope that will ultimately have a square kilometre of collecting area, making it the most sensitive radio telescope in the world.** Its mission is to build and operate cutting-edge radio telescopes to transform our understanding of the Universe, and deliver benefits to society through global collaboration and innovation. **Hence statement 1 is incorrect.**
- SKA is an international collaboration, involving 15 countries. These include Australia, Canada, China, India, Italy, New Zealand, South Africa, Sweden, the Netherlands and the UK. Site selection was decided in 2012; with one site in Australia, another in South Africa and headquarters in the United Kingdom. **Hence statement 2 is correct.**
- The SKA will be built in two phases in both places, with the first phase of construction of SKA1 having begun in December 2022. It is expected to begin operations by 2029. Once constructed, the telescopes will scan the skies faster than any previous of its kind, mapping out all visible galaxies up till the edge of the universe, in more detail than ever before. Survey data from SKA observation will provide deep insights into the early days of the evolution of our galaxy, and the telescope will also search for signs of life elsewhere outside the Earth. **Hence statement 3 is correct.**
- **Hence option (b) is the correct answer.**

Q 41.A

- Lingaraj Temple is a temple situated in Bhubaneswar, Odisha. It is dedicated to Lord Shiva. The following image describes its various features.



LINGRAJ TEMPLE



HISTORY

- Dedicated to Lord Shiva located in Bhubaneswar, Odisha and referred to as 'Swayambhu' – (self-originated Shivling).
- Built by Somavanshi Dynasty King Jajati Keshari (10th Century).
- Completed by King Lalatendu Keshari (11th Century).



ARCHITECTURE DETAILS

- Represents Kalinga type of architecture.
- Divided into four sections
 - Garbha Griha (sanctum sanctorum).
 - Yajna Shala (hall for prayers).
 - Bhoga Mandap (hall of offering).
 - Natya Shala (hall of dance).



OTHER KEY FEATURES

- Signifies the syncretisation of Shaivism and Vaishnavism sects in Odisha.
- Shivling is known as Hari Hara.
- Walled campus has about 50 smaller shrines, including one dedicated to Goddess Parvati.

- Kalinga style or type of architecture is a sub-type of Nagara style and not Dravidian style. **Hence statement 1 is correct and statement 2 is not correct.**

Q 42.A

- Thorium is about 3.5 times more common than uranium in the Earth's crust. Present knowledge of the distribution of thorium resources is poor because of the relatively low-key exploration efforts arising out of insignificant demand. Hence, statement 1 is not correct.**
- Thorium, commonly found in igneous rocks and heavy mineral sands, is named after Thor, the god of thunder in Norse mythology. It is three times more abundant in nature than uranium, but historically has found little use in industry or power generation. This is partly because thorium itself is not a nuclear fuel, although it can be used to create such a fuel. Thorium-232, the only naturally occurring isotope of thorium, is considered 'fertile' for fission.
- Globally, monazite was produced primarily for its rare-earth-element content, and only a small fraction of the byproduct thorium produced was consumed. Madagascar was the leading producer of monazite.** Thorium consumption worldwide is relatively small compared with that of most other mineral commodities. In international trade, China was the leading importer of monazite; Brazil, Madagascar, Thailand, and Vietnam were China's leading import sources. The United States exported monazite to China, including Hong Kong. China's exports became more regulated and were optimized to add value. **Hence, statement 3 is correct.**
- The world's leading thorium resources are found in placer, carbonatite, and vein-type deposits. Thorium is found in several minerals, including monazite, thorite, and thorianite. According to the World Nuclear Association, worldwide identified thorium resources were estimated to total 6.4 million tons of thorium.** Thorium resources are found throughout the world, most notably in Australia,

Brazil, India, and the United States. **India has the largest resources (850,000 tons), followed by Brazil (630,000 tons) and Australia and the United States (600,000 tons each).** Hence, statement 2 is not correct.

Q 43.B

- **Jungle Mahal Revolt or the Chuar Uprising(1766-1809):**
 - **Jungle–or Jungals–Mahals** is the name given to an indefinite administrative unit lying between the Chota Nagpur and the plains of Bengal. **The Chuars were the Bhumij tribals belonging originally to the Mundari main stock.**
 - The Chuars were basically farmers and hunters; some of them worked under the local zamindars.(Jungle Zamindars). 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.**
 - **These jungle zamindars used to hire paiks (guards who policed the village) from among the Chuars. The head paiks were known as the sardars. Hence statement 2 is correct.**
- **The Chuar uprisings:**
 - The Chuar uprisings occurred in phases, each one with its own characteristics, leaders, and epicentre. The first Chuar rebellion broke out as a reaction to the increase of the revenue of the jungle zamindars. Moreover, in 1767, the British resident of Midnapur was instructed to demolish their(Jungle Zamindars) mud forts, something that offended the zamindars.
 - **The most significant of uprisings was under Durjan (or Durjol) Singh in 1798.**
 - The revenue and administrative policies of the East India Company (**the Permanent Settlement being one of them**) as well as the police regulations imposed in rural Bengal **made the system of hiring local paiks redundant** as they came to be **replaced by professional police.**
 - **The aggrieved paiks and ordinary Chuars joined hands with the jungle zamindars in the Chuar rebellion of 1798. The Chuar's Uprising was not between Chuars and Jungle Zamindars, they both were against British Government. Hence statement 1 is not correct.**
 - Other leaders of the Chuars were Madhab Singh, the brother of the raja of Barabhum; Raja Mohan Singh, zamindar of Juriah; and Lachman Singh of Dulma. Hence statement 3 is correct.

Q 44.B

- **A Patent is a statutory right for an invention granted for a limited period of time to the patentee by the Government,** in exchange of full disclosure of his invention for excluding others, from making, using, selling, or importing the patented product or process for producing that product for those purposes without his consent. **Hence statement 1 is correct.**
- The term of every patent granted is 20 years from the date of filing of an application. Patent protection is a territorial right and therefore it is effective only within the territory of India. There is no concept of a global patent. **Therefore, the Indian Patent doesn't give protection worldwide. Hence statement 2 is not correct.**
- According to Section 3(h) of the Patents Act, 1970, **a method of agriculture or horticulture is not considered a patentable subject matter.** This provision protects traditional farming and breeding practices by preventing their exclusive appropriation through patents. **Hence statement 3 is correct.**

Q 45.C

- **Kakatiyas were earlier feudatories of Western Chalukyas. All three contemporary dynasties of Deccan i.e. Hoysalas, Yadavas and Kakatiyas were feudatories of Western Chalukyas.**
- The independent dynasty was established when **Rudradeva (Prataparudra I) became first independent ruler of Kakatiya dynasty in 1158 AD. Warangal was the capital of Kakatiyas.**
- They **faced Islamic invasion** from 1310 (by Alauddin Khilji) and ultimately came under control of Delhi Sultanate in 1323 (invasion by Sultan Ghiyasuddin Tughlaq).
- Ganapatideva's reign was the longest amongst all the Kakatiya rulers, starting from 1199 till 1262 CE during which he expanded his kingdom from the coastal Bay of Bengal in the east to Kanchipuram in the south.
- **Motupalli was the famous trading seaport of the Kakatiyas.**
- **Marco Polo the famous Venetian traveler visited Kakatiya kingdom** through this port and wrote about the prosperity and power in Andhras in his travelogue.
- **Kakatiya dynasty was famous for the construction of large tanks** and used the sluice-weir device in it to boost crop production.
- **The Koh-i-noor diamond** was mined during Kakatiya rule from the Golconda mines.

- **Rammappa Temple:** It is the only temple in India known by the name of the sculptor who built it, rather than after the presiding deity. It was built on behalf of the king, Kakati Ganapathi Deva by his chief commander Rudra Samani.
- The Thousand Pillared Temple at Hanamkonda is dedicated to Lord Shiva, Vishnu, and Surya. The period is also famous for the patronage given to Sanskrit Literature.
- **Hence option (c) is the correct answer.**

Q 46.C

- **The Financial Stability Forum was founded in 1999 by the G7 Finance Ministers and Central Bank Governors for enhancing cooperation among the various national and international supervisory bodies and International financial institutions so as to promote stability in international financial system.**
 - In 2008, G20 leaders called for the Financial Stability Forum to enlarge its membership. Hence, **Financial Stability Board (endorsed by G20) established as a successor to the Financial Stability Forum in 2009. Hence, statement 1 is correct.**
 - It consists of 71 member institutions (as of December 2023), **comprising ministries of finance, central banks and supervisory and regulatory authorities from 25 jurisdiction and 10 international organisations. India is also a member of it. Hence, statement 2 is not correct.**
- The FSB was established to:
 - Assess vulnerabilities affecting the global financial system
 - Promote coordination and information exchange among authorities responsible for financial stability
 - Monitor and advise on market developments and their implications for regulatory policy
 - Collaborate with the International Monetary Fund (IMF) to conduct Early Warning Exercises
 - Support contingency planning for cross-border crisis management.
- **The FSB's decisions are not legally binding on its members. Instead the organisation operates by moral suasion and peer pressure, in order to set internationally agreed policies and minimum standards that its members commit to implementing at national level. Hence, statement 3 is not correct.**

Q 47.D

- **Yakshas were deities connected with water, fertility, trees, the forest, and the wilderness. Yakshis were their female counterparts and were originally benign deities connected with fertility.**
- **Yaksha and Yakshi images of stone and terracotta have been found at many sites in the subcontinent, indicating that their worship was an important part of popular religion in ancient India.**
- **During c.300 BCE–200 CE, they were an important part of the religious landscape.** For example: Yaksha figures found at Besnagar and Pawaya in Madhya Pradesh hold a money bag in their left hand, indicating their connection with wealth and the Yaksha Manibhadra found at Parkham near Mathura. Literary and epigraphic evidence indicates that Manibhadra was a tutelary deity of merchants and travellers, especially worshipped in important trading centres.
- **With the growing influence of Brahmanism, their worship was eventually absorbed into and marginalized by the dominant religious tradition. The period c. 300–600 CE is often seen as a phase of 'Brahmanical revival' or a consolidation of Brahmanical ideology.**
- The colossal sculptures of the type found in earlier times disappear, and yakshas and their consorts now appear more often as dvarapalas (gatekeepers) of the great gods or as subsidiary figures. **This phenomenon reflects the attempts of the dominant religious traditions to establish links with the popular cults as well as to appropriate and subordinate them.**
- **Therefore, Statement-I is incorrect but Statement-II is correct. Hence, option (d) is the correct answer.**

Q 48.A

- Human development is a process of enlarging the range of people's choices, increasing their opportunities for education, health care, income and empowerment and covering the full range of human choices from a sound physical environment to economic, social and political freedom.
- Thus, enlarging the range of people's choices is the most significant aspect of human development. People's choices may involve a host of other issues, but, living a long and healthy life, to be educated and have access to resources needed for a decent standard of living including political freedom, guaranteed human rights and personal self-respect, etc. are considered some of the non-negotiable aspects of the human development. Different approaches of human development are as discussed below:

- **Income Approach:** This is one of the oldest approaches to human development. 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. The higher the level of income, the higher is the level of human development. Hence, statement 1 is correct.
- **Welfare Approach:** This 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 maximizing expenditure on welfare. Hence, statement 3 is not correct.
- **Basic Needs Approach:** This 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.
- **Capability Approach:** This approach is associated with Prof. Amartya Sen. Building human capabilities in the areas of health, education and access to resources is the key to increasing human development. Hence, statement 2 is not correct.

Q 49.A

- Scientists have discovered fossils belonging to a previously unknown group of ancient aquatic predators near Greenland. Named “Timorebestia” or “terror beasts”, these large worm-like creatures may have been apex predators more than 518 million years ago.
- The Timorebestia fossils were found at the renowned Early Cambrian fossil site of Sirius Passet in North Greenland. Scientists reveal 30 cm long creatures. The giant worm sported fins along its body, had a distinctive head with long antennae, and formidable jaw structures inside its mouths. These features, coupled with their swimming prowess, made them one of the largest predators in the Early Cambrian era, about half a billion years ago.
- The Timorebestia is a close relative of arrow worms, minuscule predators of today, primarily feeding on tiny zooplankton. Hence option (a) is the correct answer.

Q 50.C

- The Compensatory Afforestation Fund (CAF) Act, 2016 establishes the National Compensatory Afforestation Fund under the Public Account of India and a State Compensatory Afforestation Fund under the Public Account of each state.
- These Funds will receive payments for: (i) compensatory afforestation, (ii) net present value of forest (NPV), and (iii) other project-specific payments. The National Fund will receive 10% of these funds, and the State Funds will receive the remaining 90%. These Funds will be primarily spent on afforestation to compensate for the loss of forest cover, regeneration of the forest ecosystem, wildlife protection and infrastructure development. Hence statement 1 is correct.
- The State and Union territories are required to submit the Annual Plan of Operations (APO), prepared by State CAMPA in accordance with the provisions of the CAF Act, 2016 & Rules. The Compensatory Afforestation Fund (CAF) Act, 2016 provides for the audit of the accounts of both National and State/UTs CAMPA Authorities by the Comptroller and Auditor-General of India (C&AG). The Audit of States CAMPA is done by C&AG through the respective Accountant General Office. Hence statement 2 is correct.

Q 51.A

- The National Commission for Women was set up as a statutory body in January 1992 under the National Commission for Women Act, 1990 (Act No. 20 of 1990 of Govt. Hence statement 1 is not correct.
- The Central Government appoints the National Commission for Women to exercise the powers conferred on, and to perform the functions assigned to, it under this Act.
- The Commission shall consist of— a Chairperson, committed to the cause of women, to be nominated by the Central Government (there is no mention of NCW to be headed by a woman chairperson only); Hence statement 2 is not correct.
- Five Members to be nominated by the Central Government from amongst persons of ability, integrity and standing who have had experience in law or legislation, trade unionism, management of an industry or organisation committed to increasing the employment potential of women, women’s voluntary organisations (including women activists), administration, economic development, health, education or social welfare. Provided that at least one Member each shall be from amongst persons belonging to the Scheduled Castes and Scheduled Tribes respectively; Hence statement 1 is not correct.

- **Term of office and conditions of service of Chairperson and Members.**— The Chairperson and every Member shall hold office for such period, not exceeding three years, as may be specified by the Central Government in this behalf. The Chairperson or a Member (other than the Member-Secretary who is a member of a civil service of the Union or of an all-India service or holds a civil post under the Union) may, by writing and addressed to the Central Government, resign from the office of Chairperson or, as the case may be, of the Member at any time.
- **National Commission for Women is empowered to look into complaints and take suo moto notice of matters relating to: (hence statement 3 is correct):**
 - deprivation of women's rights;
 - non-implementation of laws enacted to protect women and also to achieve the objective of equality and development;
 - non-compliance of policy decisions, guidelines or instructions aimed at mitigating hardships and ensuring welfare and providing relief to women, and take up the issues arising out of such matters with appropriate authorities; etc.

Q 52.B

- The United Nations Security Council is one of the six principal organs of the United Nations and is charged with ensuring international peace and security, recommending the admission of new UN members to the General Assembly, and approving any changes to the UN Charter.
- **All members of the United Nations agree to accept and carry out the decisions of the Security Council. Hence, statement 1 is correct.**
- **While other organs of the United Nations make recommendations to member states, only the Security Council has the power to make decisions that member states are then obligated to implement under the Charter. Hence, statement 2 is correct.**
- The Security Council's role in the admission of new members to the United Nations is laid out in Article 4 of the Charter of the Organization, which states that the **admission is done by a decision of the General Assembly following the recommendation of the Security Council. Hence, statement 3 is not correct.**

Q 53.B

- **Languages to be used in Courts in India**
 - **Recent Context:** Union Law Minister has stated that regional languages should be used in courts in every state.
 - **About the languages to be used in courts in India:**
 - **Article 348(1)(a):** Unless Parliament by law provides otherwise, all proceedings before the Supreme Court and in every High Court shall be conducted in English.
 - **Article 348(2):** The Governor of a state may, with the previous consent of the President, authorise the use of Hindi or any other language used for any official purpose, in proceedings in the High Court except for any final judgement, decree or order (which has to be in English). E.g., the States of Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh have already authorised the use of Hindi.
 - **Official Languages Act 1963:**
 - **High Court:** It empowers the Governor of a state to, with the previous consent of the President, authorise the use of Hindi/the official language of the state, in addition to English, for the purpose of any judgement, decree or order passed by the High Court of that state. **Hence, statement 2 is correct.**
 - It further provides that where any judgement/decreed/order is passed in any such language it shall be accompanied by a translation of the same in English. Read with the constitutional provisions, it is clear that primacy is given to English even by this Act.
 - **Subordinate Courts (District Courts, etc.):** Regional language determined by the state government.
 - **Supreme Court:** The Official Languages Act makes no mention of the Supreme Court, where English is the only language in which proceedings are conducted. **Hence, statement 1 is not correct.**

Q 54.C

- **Founded at the Bretton Woods conference in 1944, the two institutions have complementary missions. The World Bank Group works with developing countries to reduce poverty and increase shared prosperity, while the International Monetary Fund serves to stabilize the international monetary system and acts as a monitor of the world's currencies.** The World Bank Group provides financing, policy advice, and technical assistance to governments, and also focuses on strengthening the

private sector in developing countries. The IMF keeps track of the economy globally and in member countries, lends to countries with balance of payments difficulties, and gives practical help to members.

- **Countries must first join the IMF to be eligible to join the World Bank Group;** today, each institution has 189 member countries. 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).** Membership in International Development Association (IDA), International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA) are conditional on membership in IBRD. **Hence statement 1 is correct.**
- **The International Finance Corporation (IFC) is the largest global development institution focused exclusively on the private sector.** We help developing countries achieve sustainable growth by financing investment, mobilizing capital in international financial markets, and providing advisory services to businesses and governments. **Hence statement 2 is correct.**

Q 55.B

- Part IV of the Constitution (Article 36–51) contains the Directive Principles of State Policy (DPSP). They consist of all the ideals that the State should follow and keep in mind while formulating policies and enacting laws for the country.
- Article 44 mentions that "the State shall endeavor to secure for the citizen a Uniform Civil Code through the territory of India". **Hence pair 1 is not correctly matched.**
- Article 46 mentions that "the State shall promote educational and economic interests of the weaker sections of the people particularly that of the Scheduled Castes (SCs), Scheduled Tribes (STs) and other weaker sections". **Hence pair 2 is not correctly matched.**
- Article 50 mentions that the "State shall take steps to separate the judiciary from the executive in the public services of the State". **Hence pair 3 is correctly matched.**
- **Hence option (c) is the correct answer.**

Q 56.D

- It is a lunar landing mission conducted by the private spaceflight company Astrobotic. **The mission is partially funded by NASA.** It involves the Peregrine lander, a cargo transport craft designed to carry multiple payloads from various clients to the lunar surface simultaneously. The Peregrine Lander is expected to be one of the first American spacecraft to land on the Moon since the Apollo program. The Peregrine Lunar Lander, also known as Peregrine Mission One, is a lunar lander built by Astrobotic Technology. **Hence statement 1 is not correct.**
- **The primary goal of Peregrine Mission One is to pave the way for the Artemis program.** It is part of the National Aeronautics and Space Administration (NASA)'s Commercial Lunar Payload Services (CLPS) programme, which aims to stimulate a broader lunar economy. NASA is partnering with diverse American companies under the CLPS initiative to transport science and technology payloads to the lunar surface. The CLPS contracts aim to facilitate lunar exploration, experimentation, and technology demonstrations in preparation for upcoming human missions. **Hence statement 2 is not correct.**
- **Hence option (d) is the correct answer.**

Q 57.C

- In the biodiverse landscapes of the **Namdapha-Kamlang region, Arunachal Pradesh**, a groundbreaking discovery has been made by biologists from the Wildlife Institute of India. **Hence statement 1 is correct.**
- They have identified a new species of frog, now officially named the "Noa-Dihing Music Frog," paying homage to the Noa-Dihing River, a significant tributary of the Brahmaputra River. **Hence statement 2 is correct.**
- This distinct amphibian belongs to the Genus Nidirana, **marking the first instance of this species found in India.** Noteworthy features include a pale cream-colored line along the midbody, rounded snouts, and distinctive bony protrusions on their backs. Aptly named "Music frogs," these creatures derive their moniker from the distinctive and unique call patterns they produce.

Q 58.D

- **The Vedic civilization, also known as the Vedic period,** refers to the ancient period in Indian history associated with the composition of the Vedas. It is believed to have **spanned from around 1500 BCE to 600 BCE.** The Vedic texts, which include the **Rigveda, Samaveda, Yajurveda, and Atharvaveda,** are some of the oldest sacred texts of Hinduism.

- The Vedic civilization was closely tied to the region around the **Sapta Sindhu (Seven Rivers)**, which is commonly identified with the northwestern part of the Indian subcontinent. The major rivers mentioned in the Vedic texts, known as the Sapta Sindhu, include the Indus (**Sindhu**), **Sarasvati, Ganges (Ganga), Yamuna, Sutlej, Beas, and Chenab**. These rivers played a crucial role in the economic, cultural, and religious life of the Vedic people.
- **Sutudri, Vipasa, and Askini are ancient names for rivers in the Indian subcontinent.** The **Sutudri River, modern-day Sutlej**, has a rich historical significance in the Indian subcontinent. The **Sutudri River finds mention in the Rigveda**, one of the oldest sacred texts of Hinduism.
- The **Vipasa River, modernly known as the Beas River**, The river has been associated with various kingdoms and cultures that thrived along its banks.
- The **Askini River, also known as the Chenab River**, has a rich historical significance in ancient India. It flows through the Indian subcontinent, primarily in **present-day India and Pakistan**.
- **Hence option (d) is the correct answer.**

Q 59.C

- **WHAT IS ASYMMETRICAL FEDERALISM?**
 - Asymmetrical federalism refers to a **federal framework wherein the subunits within the federation possess unequal powers and rights**. It involves providing greater autonomy to some states when compared with others.
- **Asymmetrical Arrangements in Indian Federalism**
 - The Indian model of asymmetrical federalism is based on the principle of weighted and differentiated equality which is “equal treatment of all states while being mindful that some states are more equal and unequal than others”. **Hence option (c) is the correct answer.**
 - **Fiscal Asymmetry:**
 - Asymmetry can be noticed in the horizontal devolution of funds on the recommendations of the Finance Commission (Art 280) as well as in non-statutory transfers from center to states (central sector and centrally sponsored schemes)
- **The distinction between political asymmetry and Constitutional asymmetry:**
 - **In India, both Political and Constitutional asymmetry (Self-rule within shared rule) exists.**
 - **Political asymmetry**
 - It pertains to differences between federal units in terms of their territorial and demographic sizes.
 - Lok Sabha & Rajya Sabha can be taken as an example of political asymmetry where states don't have an equal standing and are represented according to their population
 - **Constitutional asymmetry**
 - It refers to the asymmetry between the states in terms of their legislative and executive powers.
 - For example, the abrogated Art 370 which grants special status to Jammu and Kashmir.
 - Special provisions and powers extended to certain states in the omnibus Article 371.
 - The parliamentary statute cannot be implemented in the northeast States mentioned above without the consent of the legislatures of these States.

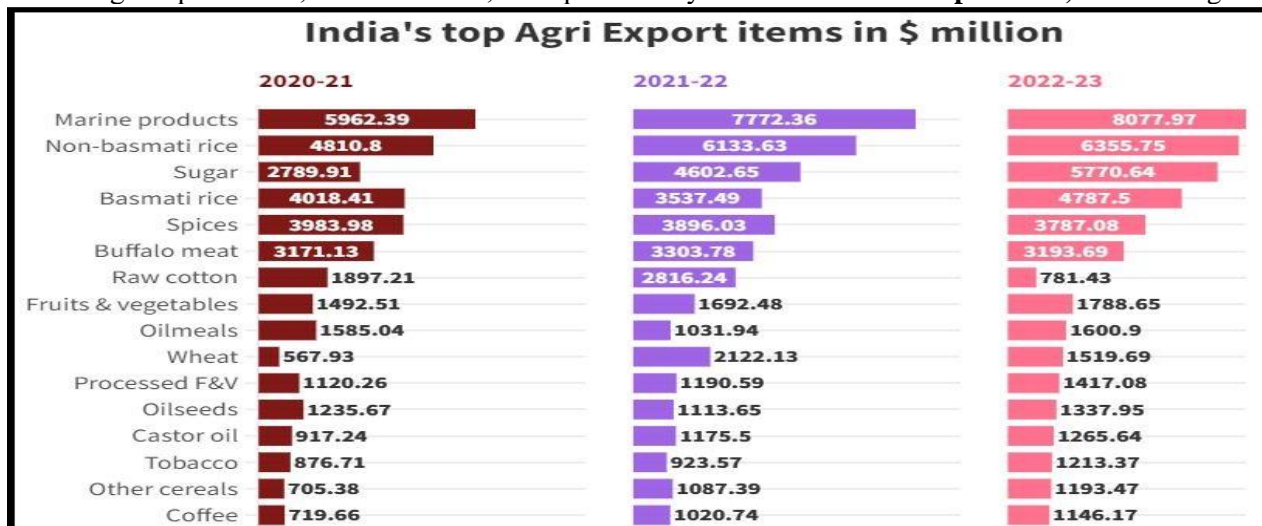
Q 60.A

- **Ecocide refers to extensive damage to, destruction of, or loss of ecosystems of a particular territory to such an extent that peaceful enjoyment by the inhabitants of that territory has been or will be severely diminished.** It is the widespread, systematic, and severe harm to the natural environment, encompassing ecosystems, biodiversity, and the overall balance of ecological systems. The term is often used in discussions around environmental law and ethics, emphasizing the gravity of ecological destruction that goes beyond localized harm and has far-reaching consequences for the environment and the well-being of living organisms.
- **Efforts to recognize ecocide as an international crime are underway to hold individuals and corporations accountable for actions leading to widespread environmental devastation.**
- **Hence option (a) is the correct answer.**

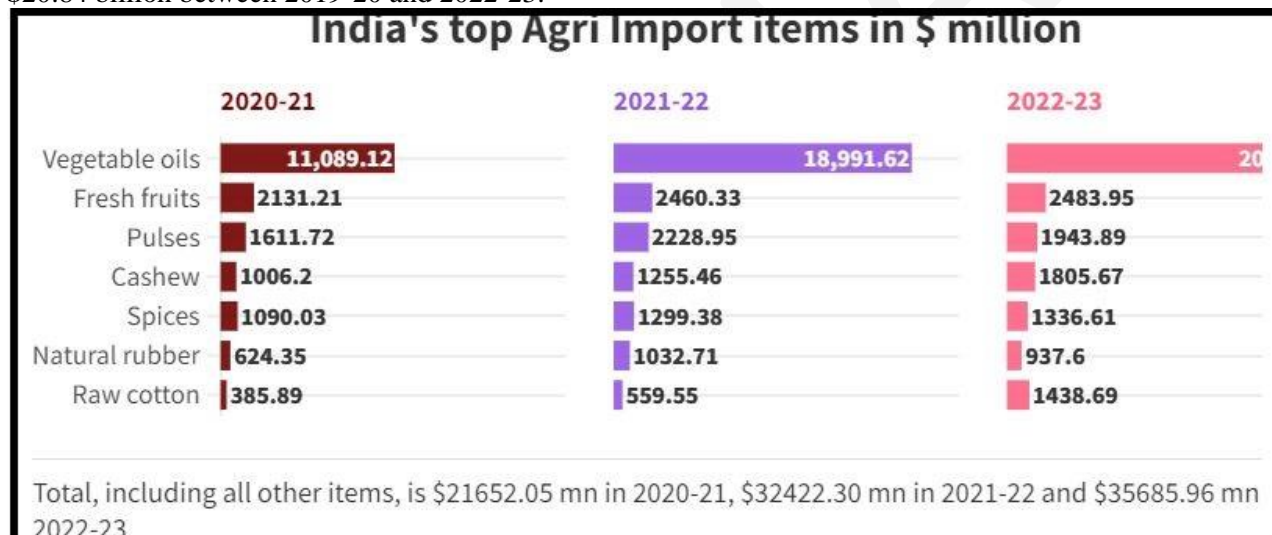
Q 61.B

- Both agricultural exports from and imports into India have scaled new highs in the fiscal year that ended March 31, 2023. Provisional data from the Department of Commerce shows total farm exports at \$53.15 billion and imports at \$35.69 billion during 2022-23, surpassing their previous year's records of \$50.24 billion and \$32.42 billion respectively.

- India's agri exports have, in recent times, been powered by three items: **Marine products**, rice and sugar.



Unlike exports, India's imports of farm produce are dominated by a handful of items. **Vegetable oil, pulses, and fresh and dry fruits account for 72.1% of agriculture imports of India in 2023.** The most significant is **vegetable oils**, whose imports have more than doubled in value terms, from \$9.67 billion to \$20.84 billion between 2019-20 and 2022-23.



- Hence option (b) is the correct answer.

Q 62.A

- Dedicated to the might of Islam, The Quwwat-ul-Islam mosque is one of the earliest mosques, said to be built in a period of four years (1193 C.E to 1197 C.E). It was built by Qutbuddin Aibak, who has established his government at the citadel called Qila-i-Rai Pithaura (the fort of Prithviraj Chauhan).** The mosque was constructed by demolishing twenty-seven Brahmanical and Jain temples that lied inside the citadel. The spoils of these Hindu temples were the main construction material for this mosque. This can be seen not just in the inner courtyards that are surrounded by graceful colonnades of highly decorated pillars, but also on the walls of the mosques, its capitals, ceilings etc. Subsequent additions were done after Aibak's death by Iltutmish in 1230 C.E. and Alauddin in 1316 C.E. **Hence, statement 1 is not correct.**
- Dakhil Darwaza Gate, also known as Salami Darwaza, is the largest structure of its kind in the medieval Sultanate of Bengal. It was the main entrance to the citadel of Lakhnauti the old name for the city of Gaur. It was built by Barbak Shah (1559-74) as a ceremonial gateway in front of the citadel.** With a tall arched entrance between vertical pylons on either side and tapering towers on the corners, it is an imposing structure. **Hence, statement 2 is not correct.**
- The Gol Gumbad of Bijapur is the mausoleum of Muhammad Adil Shah (1627-57). It is the largest dome cubicle in the world covering a total interior surface of over 1600 sq. meters. Architecturally it is a simple construction, its underground vaults consisting of a square grave chamber and a large single square chamber above ground.** The large hemispherical dome surmounting it and then seven storeyed octagonal towers on its corners lend it a unique appearance. Each of its walls on the outside is

divided into three recessed arches, the central one panelled, with a running bracket-supported Chhajja at the cornice. A 3.4 m. wide gallery rests on its interior at the level of the drum. It is known as the whispering gallery, as even a whisper here reverberates as an echo under the dome. The large dome is hemispherical but is covered with a row of petals at the base. **Hence, statement 3 is correct.**

Q 63.C

- “Rivet popper hypothesis” answers the question “how species richness contributes to the well-being of an ecosystem” through an analogy. In an airplane (ecosystem) all parts are joined together using thousands of rivets (species). If every passenger traveling in it starts popping a rivet to take home (causing a species to become extinct), it may not affect flight safety (proper functioning of the ecosystem) initially, but as more and more rivets are removed, the plane becomes dangerously weak over a period of time. Furthermore, which rivet is removed may also be critical. Loss of rivets on the wings (key species that drive major ecosystem functions) is obviously a more serious threat to flight safety than loss of a few rivets on the seats or windows inside the plane. **Hence statement 1 is correct.**
- “Rivet popper hypothesis” was given by Stanford University ecologist **Paul Ehrlich** in his famous book “**The Population Bomb**”- that species are to ecosystems what rivets are to a plane's wing. **Hence statement 2 is correct.**

Q 64.B

- **The All India Kisan Congress/Sabha was founded in Lucknow in April 1936.**
- **Swami Sahajanand, the militant founder of the Bihar Provincial Kisan Sabha (1929), was elected the President, and N.G. Ranga, the pioneer of the Kisan movement in Andhra and a renowned scholar of the agrarian problem, was the General Secretary. So, statement 1 is not correct.**
- A Kisan manifesto was issued and a periodical under Indulal Yagnik started.
- The AIKS and the Congress held their sessions in Faizpur in 1936. The Congress manifesto (especially the agrarian policy) for the 1937 provincial elections was strongly influenced by the AIKS agenda.
- The Civil Disobedience Movement contributed to the emerging peasant movement in another very important way; a whole new generation of young militant, political cadres was born from its womb.
- This new generation of political workers, which first received its baptism of fire in the Civil Disobedience Movement, was increasingly brought under the influence of the Left ideology that was being propagated by Jawaharlal Nehru, Subhas Bose.
- **With the decline of the Civil Disobedience Movement, these men and women began to search for an outlet of their political energies and many of them found the answer in organizing the peasants. Also, in 1934, with the formation of the Congress Socialist Party (CSP), the process of the consolidation of the Left forces received a significant push forward. This consolidation of the Left acted as a spur to the formation of an all-India body to coordinate the Kisan movement, a process that was already underway through the efforts of N.G. Ranga and other Kisan leaders. Hence statement 3 is correct.**
- The Conference resolved to bring out a Kisan Manifesto and a periodic bulletin edited by Indulal Yagnik.
- A Kisan Manifesto was finalized at the All-India Kisan Committee session in Bombay and formally presented to the Congress Working Committee to be incorporated into its forthcoming manifesto for the 1937 elections.
- **The Kisan Manifesto considerably influenced the agrarian program adopted by the Congress at its Faizpur session, which included demands for a fifty percent reduction in land revenue and rent, a moratorium on debts, the abolition of feudal levies, security of tenure for tenants, a living wage for agricultural laborers, and the recognition of peasant unions. So, statement 2 is correct.**
- At Faizpur, in Maharashtra, along with the Congress session, was held the second session of the All India Kisan Congress presided over by N.G. Ranga.
- **Therefore, option (b) is the correct answer.**

Q 65.A

- **Recent context:** A Zero FIR was filed in connection to the May 4 incident, in which two Manipuri women were stripped and paraded in the state's Thoubal district.
- An FIR is a document that has been prepared by the police after verifying the facts of the complaint. The FIR may contain details of the crime and the alleged criminal.
 - The term first information report (FIR) is not defined in the Indian Penal Code (IPC), Code of Criminal Procedure (CrPC), 1973, or in any other law, but in police regulations or rules, information recorded under Section 154 of CrPC is known as First Information Report (FIR).

- When a police station receives a complaint regarding an alleged offense that has been committed in the jurisdiction of another police station, it registers an FIR and then transfers it to the relevant police station for further investigation.
 - **This is called a Zero FIR. No regular FIR number is given. After receiving the Zero FIR, the relevant police station registers a fresh FIR and starts the investigation. Hence statement 2 is not correct.**
- **The provision of Zero FIR came up after the recommendation in the report of the Justice Verma Committee**, which was constituted to suggest amendments to the Criminal Law in a bid to provide for faster trial and enhanced punishment for criminals accused of committing sexual assault against women. **Hence statement 3 is not correct.**
- **A Zero FIR can be filed in any Police Station by the victim, irrespective of their residence or the place of occurrence of crime. Hence statement 1 is correct.**
 - The objective of a Zero FIR is to ensure the victim doesn't have to run from pillar to post to get a police complaint registered. The provision is meant to provide speedy redressal to the victim so that timely action can be taken after the filing of the FIR.

Q 66.A

- **Clethodim** is a member of the **cyclohexanedione family of herbicides**.
- According to findings published in scientific journal Chemosphere, clethodim-based herbicide exposure has **alarming impact on male reproductive function and early embryonic development**.
- A spectrum of effects include a reduction in testicular weight, a decrease in germ cell population, lower levels of serum testosterone, abnormalities in sperm and compromised pre-implantation embryo development.
- **Hence, option (a) is the correct answer.**

Q 67.C

- North India fragmented into various warrior kingdoms following the decline of the Gupta Empire.
- Regional identities became distinct, with small states emerging, except in areas subdued by the Huns.
 - **The Maitrakas** were tributary chiefs of the Guptas, who established an independent kingdom in western India. Dhruvasena II was the most important ruler of the Maitrakas. The Maitrakas established a powerful state in Sourashtra (Gujarat) with Valabhi as their capital. **Hence pair 1 is correctly matched.**
 - **The Maukharis: The capital of the Maukhari dynasty**, established in the 6th century CE, was at **Kannauj**. The Maukharis played a significant role in Indian history, founding an independent and sovereign state that encompassed regions such as **Agra and Awadh** during their rule. **Hence pair 2 is correctly matched.**
 - **The Pushyabhutis or Vardhana dynasty:** An important ruling family to gain prominence after the fall of the Gupta was that of the Pushyabhutis who had their capital at Thanesar (Thanesvara in Kurukshetra). The dynasty became influential with the accession of Prabhakarvardhana, who was able to defeat the Hunas and strengthen his position in the regions of Punjab and Haryana. **Hence pair 3 is correctly matched.**
 - Harsha ruled a vast kingdom, extending from 606 to 647 CE, centered around Thanesar, north of Delhi.

Q 68.B

- **Recent Context:** The triple-train accident in Odisha's Balasore has raised questions regarding the safety of the railway network in India. It has also brought the spotlight on the Commission for Railway Safety (CRS) that has the responsibility of ensuring railway safety operations in the country and conducting inquiries into major accidents.
- **Commission of Railway Safety (CRS)** is responsible for **ensuring railway safety operations** in the country. It comprises of 1 Chief Commissioner in Lucknow and 9 Commissioners located across the country.
- The Commission is also entrusted with **conducting inquiries into serious train accidents** and making recommendations for improving the safety of the Indian railways. The CRS works under the **administrative control of the Ministry of Civil Aviation (MoCA)**, Government of India. **Hence, statement 1 is not correct.**
- The main functions of the Commission are **inspectorial, investigatory and advisory** in nature. Though the administrative control is that of the MoCA, the Commission derives its **statutory powers from the Railways Act, 1989**. **Hence, statement 2 is correct.**

Q 69.B

- A parliamentary system of government is a system in which the executive branch of government is fused with the legislative branch.
 - In this form of government, the head of government, usually called the prime minister or premier, is chosen from the legislature and is accountable to it.
 - The parliamentary system is based on the principle of collective responsibility, where the executive branch derives its authority and legitimacy from the support of the legislative body.
- Features
 - Dual executive
 - Majority party rule
 - Collective responsibility
 - Political homogeneity
 - Double membership
 - Leadership of prime minister
 - Dissolution of Lower House
 - Fusion of powers
- A presidential form of government is a system of governance in which the head of state and the head of government are combined into one person, known as the president.
 - In this form of government, the president is elected by the people or by a representative body for a fixed term and exercises executive powers independently of the legislature.
 - The president serves as both the symbolic leader of the country and the chief executive responsible for the administration of the government.
- Features
 - Single executive
 - President and legislators elected separately for a fixed term
 - Non-responsibility
 - Political homogeneity may not exist
 - Single membership
 - Domination of president
 - No dissolution of Lower House
 - Separation of powers
- **The main difference between a presidential system and a parliamentary system of government lies in the relationship between the executive and legislative branches and the way in which the head of government is selected:**
 - Separation of powers vs. Fusion of powers: In a presidential system, there is a clear separation of powers between the executive and legislative branches. The president, who is the head of state and government, is elected separately from the legislature and exercises significant executive powers independently. The executive and legislative branches are distinct and have separate sources of legitimacy.
 - In contrast, a parliamentary system fuses the executive and legislative branches. The head of government, usually the prime minister, is chosen from the legislature and is accountable to it. The executive branch derives its authority from the support of the legislative body, and the two branches work closely together.
- **Hence option (b) is the correct answer.**

Q 70.A

- The Bosphorus or Bosphorus Strait is a natural strait and an internationally significant waterway located in Istanbul, Turkey. **The Bosphorus connects the Black Sea to the Sea of Marmara and forms one of the continental boundaries between Asia and Europe.** It also divides Turkey by separating Anatolia from Thrace.
- **The Sunda Strait is the strait between the Indonesian islands of Java and Sumatra.** It connects the Java Sea with the Indian Ocean.
- **The Bering Strait is a strait between the Pacific and Arctic oceans,** separating the Chukchi Peninsula of the Russian Far East from the Seward Peninsula of Alaska.
- **The Strait of Magellan, also called the Straits of Magellan, is a navigable sea route in southern Chile separating mainland South America to the north and Tierra del Fuego to the south.** The strait is considered the most important natural passage between the Atlantic and Pacific oceans.

- **The Kerch Strait is a strait in Eastern Europe.** It connects the Black Sea and the Sea of Azov, separating the Kerch Peninsula of Crimea in the west from the Taman Peninsula of Russia's Krasnodar Krai in the east. The strait is 3.1 kilometres to 15 kilometres wide and up to 18 metres deep.
- **Therefore, option (a) is correct.**

Q 71.C

- **Muddiman Committee, 1924**
 - The Muddiman Committee, officially known as the Report of the Reforms Enquiry Committee, was set up in 1924, **mainly to look into the working of the Constitution as set up in 1921 under the Act of 1919. Hence pair 1 is correctly matched.**
 - **It's Members are Sir Alexander Muddiman, Sir Sivaswami Aivar, Dr. R P Paranjape, Sir Teibahadur Sapru, Mohammad Ali Jinnah, Bijov Chand Mahtab.**
 - **Its report was not unanimous:**
 - The Majority Report declared by officials that a diarchy had not been established, has not been given a fair trial run, and so only minor changes in non-official Indians were recommended.
 - The Minority Report declared by non-officials that the Act of 1919 had failed, and that they need a Constitution that has a permanent basis with a provision for automatic progress in the future.
- **Butler Committee, 1927:**
 - The Harcourt Butler Committee, also known as the Indian States Committee, was a three-member committee appointed by the British government in 1927 **to investigate and clarify the relationship between the paramount power of the British Raj in India and the rulers of the Princely States. Hence pair 2 is correctly matched.**
- **Floud Commission, 1937:**
 - **It was a land revenue commission set up by the Bengal Government in 1938 under the chairmanship of Francis Floud. The Commission was set up to assess the problems of the land revenue system.**
 - A. K Fazlul Hug became the first Prime Minister of Bengal in 1937. He was under pressure to take necessary measures to abolish the Zamindari system (or Permanent Settlement) in Bengal. To end this, the Government of Bengal formed a commission headed by **Sir Francis Floud to look into the problems of the land revenue administration. In particular, this Land Revenue Commission was set up to examine the question of the abolition of the zamindari system. Hence pair 3 is not correctly matched.**
 - **Recommendations of Floud Commission**
 - The Bengal Land Revenue Commission, popularly known as Floud Commission, submitted its report on 2 March 1940, which suggests several reforms. Among its recommendations were the abolition of Permanent Settlement and the end of rent-receiving interests of all forms. Along with other suggestions, the Commission also proposed that the sharecroppers should retain a two-third share of the total crops.
- **Lee Commission 1924:**
 - Lee Commission was appointed in 1923 to look into the **organisation and general conditions of service as well as the methods of recruitment for Europeans and Indians in the civil services. Hence pair 4 is correctly matched.**
 - Being concerned only with the superior civil services, it came to be known as the Royal Commission on the Superior Civil Services in India.
 - The commission suggested that the statutory public service commission, as put forward by the Government of India Act 1919, needed to be established without delay.

Q 72.B

- Forest (Conservation) Amendment Act, 2023 amends the Forest (Conservation) Act, 1980 to make it applicable to certain types of land.
- These include land notified as a forest under the Indian Forest Act, 1927, or in government records after the 1980 Act came into effect. The Act will not be applicable for land converted to non-forest use before December 12, 1996. **Hence statement 1 is correct.**
- This revision stands in stark contrast to the wide applicability of the 1980 Act at present – i.e. it applies to “any forest land”. A Supreme Court judgment in 1996 reiterated such a broad application.
- In the matter of **T. N. Godavarman Thirumulkpad Vs Union of India & Others** supreme court laid down that ‘forests’ will be understood by its dictionary meaning, and the provisions of the Forest (Conservation) Act 1980, shall apply to all thickly wooded areas. States were directed to form expert committees to identify forests as defined and file reports. **Hence statement 1 is correct.**

- The bill also exempts certain types of land from the purview of the Act. These include land within 100 km of India's border needed for national security projects, small roadside amenities, and public roads leading to a habitation. **Hence statement 2 is not correct.**
- The Forest Conservation Act 1980 restricts the de-reservation of forests or use of forest land for non-forest purposes. The 1980 Act specifies certain activities that will be excluded from non-forest purposes, meaning that restrictions on the use of forest land for non-forest purposes will not apply.
- These activities include works related to the conservation, management, and development of forests and wildlife such as establishing check posts, fire lines, fencing, and wireless communication.
- The 2023 Bill adds more activities to this list such as: (i) zoos and safaris under the Wild Life (Protection) Act, 1972 owned by the government or any authority, in forest areas other than protected areas, (ii) **ecotourism facilities**, (iii) silvicultural operations (enhancing forest growth), and (iv) any other purpose specified by the central government. **Hence statement 3 is correct.**

Q 73.B

- The **National Crisis Management Committee** Functions under the **Chairmanship of the Cabinet Secretary**. It is a committee set up by the Government of India in the wake of a natural calamity for effective coordination and implementation of relief measures and operations. **Hence, pair 1 is correctly matched.**
- The **Cabinet Committee on Economic Affairs** is chaired by the **Prime Minister**. The function of the committee is to review on a continuous basis economic trends, problems and prospects for evolving a consistent and integrated economic policy framework for the country. **Hence, pair 2 is correctly matched.**
- The **National Executive Committee** was constituted in pursuance of Section 8 of the Disaster Management Act, 2005. The NEC is mandated to act as a monitoring and coordinating body for disaster management. **It is chaired by the Union Home Secretary** and comprises Secretary level officers from other ministries and organizations. **Hence, pair 3 is not correctly matched.**

Q 74.B

- **Kalidasa is widely regarded as one of the greatest poets and playwrights in classical Sanskrit literature. He is significantly known as 'Kavikulaguru'; i.e., 'magnificent among poets. Kalidasa lived in the court of Chandragupta II in the fifth century AD. His dramas—Abhijnanashakuntala, Malavikagnimitra, Vikramorvasi, and his lyrical poems—Raghuvamsha, Kumarasambhava and Meghaduta—are considered masterpieces of Sanskrit literature.** 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. **Hence, pair 1 is correctly matched.**
- The **"Mricchakatika"** (The Little Clay Cart) is a famous Sanskrit play attributed to **Shudraka**, a classical Indian playwright. **"Mricchakatika"** is set in the ancient city of Ujjayini, which is modern-day Ujjain in Madhya Pradesh, India. The play provides a glimpse into the socio-cultural and political life of the time. The central plot revolves around the love story between Charudatta, a Brahmin merchant, and Vasantsena, a courtesan. The play explores themes such as love, morality, social class, justice, and the clash between personal desires and societal norms. **Hence, pair 2 is correctly matched.**
- **"Kiratarjuniya"** composed by **Bharavi** translates to **"Arjuna and the Kirata"** or **"Arjuna and the Hunter."** The poem narrates the story of a confrontation between Arjuna, one of the Pandava princes from the Indian epic Mahabharata, and Lord Shiva in the disguise of a Kirata (mountain-dwelling hunter). The epic is set against the backdrop of the Mahabharata and focuses on a specific incident during the Pandavas' exile in the forest. **Hence, pair 3 is not correctly matched.**
- **Bhasa was an ancient Indian playwright who is considered one of the earliest known dramatists in Sanskrit literature.** He was the author of works such as the **Madhyamavyayoga, DutaGhatotkacha, Dutavakya, Balacharita and Charudatta.**

Q 75.A

- In Jaina tradition, **Gommateshvara** or **Bahubali** is the son of **Adinatha**, the first Tirthankara. **Hence, statement 1 is not correct.**
- The colossal image of **Gommateshvara (57-feet tall)** at **Shravana Belagola** is in the **Channarayana taluk of Hassan district in Karnataka**. Its name derives from **shramana**, which means 'ascetic' in Sanskrit, and **bela-kola** which means 'white tank' in Kannada. The town lies between two rocky hills known as **Chandragiri** or **Chikkabetta** and **Vindhyagiri** or **Indragiri** (also known as **Doddabetta**). The **mahamastabhisheka** or head anointment of **Bahubali** is performed every 12 years. On

this occasion, devotees pour offerings including milk, flowers, and jewels over the head of the colossal image. **Hence, statement 2 is not correct.**

- **Pampa, a Kannada poet and literary figure was called adikavi ("first poet") in the Kannada language. His part of the Great Kannada triumvirate - Pampa, Ponna and Ranna. His two epic works, Vikramarjuna Vijaya or Pampa Bharata and the Adi Purana, written around 939 CE, were composed in the champu style and served as court poet for the Vemulavada Chalukyan king Arikesari II. Adipurana contains the narrative of Rishabhath, the first Tirthankara and his sons Bharata and Gomateshwara. The epic revolves around the struggle for power between the two brothers Bharata and Bahubali, sons of Rishabh. Hence, statement 3 is correct.**
- Note: Not to be confused with Adipurana, a 9th-century Sanskrit poem written by Jinashena, about the life of the first Tirthankara Rishabhath.

Q 76.C

- **The Global River Cities Alliance (GRCA), led by the National Mission for Clean Ganga (NMCG) under the Ministry of Jal Shakti, Government of India, was launched at COP28, the United Nations Climate Change Conference in Dubai, United Arab Emirates with countries namely India, Egypt, Netherlands, Denmark, Ghana, Australia, Bhutan, Cambodia, Japan and river-cities of The Hague (Den Haag) from the Netherlands, Adelaide from Australia, and Szolnok of Hungary and International funding agencies the World Bank, Asian Development Bank (ADB), Asian Infrastructure Investment Bank (AIIB) and knowledge management institution like KPMG entering into a partnership, widely expanding the reach of the existing River Cities Alliance (RCA), formed by NMCG in association with National Institute of Urban Affairs (NIUA) in 2021. Hence, statement 2 is correct.**
- **GRCA is a unique alliance covering 275+ global river cities in 11 countries, international funding agencies and knowledge management partners and is the first of its kind in the world. Hence, statement 1 is correct.**
- The launch of GRCA signifies a momentous step in global efforts toward river conservation and sustainable water management.
- Following this, partner countries are poised to coordinate post-COP activities, shaping the architecture of GRCA for effective implementation

Q 77.A

- The Indian government is actively promoting e-vehicles with schemes like **Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME)**, FAME-II, etc.
- e-vehicles and their batteries are made up of various components some of which are potential **environmental pollutants** if not treated well. These include **Sulphuric acid (used in batteries), Lead, Chromium and Aluminium.**
- **Plutonium** is a nuclear waste and is not borne out of e-vehicles. **Hence option (a) is the correct answer.**

Q 78.B

- **In FY22-23, India recorded the highest ever export of 1.73MMT of fisheries and fisheries products.** The fisheries sector in India has shown a sustained annual average growth rate of 8.61% for the eighth year from 2014-15 to 2021-22 at constant price. **India has the second largest aquaculture nation in the world and the third largest fish producing country in the world accounting for 8% of global production.** The fisheries sector contributes about 1.09% and over 6.72% to the countries GVA and agricultural GVA respectively. **India is the fourth largest exporter of fisheries and fisheries products in the world. Hence the statement 3 is not correct.**
- **Till 2000, marine fish production dominated India's total fish production.** However due to practice of science-based fisheries, **inland fisheries in India has seen a turnaround and presently contributes ~70 % of total fish production. Hence statement 1 is correct.**
- Although inland fisheries and aquaculture have grown in absolute terms, the development in terms of its potential is yet to be realized. Hence to realise these potential the government of India took various measures:
 - Pradhan Mantri Matsya Sampada Yojna (PMMSY)
 - National Surveillance Programme for Aquatic Animal Disease (NSPAAD)
 - Fisheries and Aquaculture Infrastructure Development Fund (FIDF)
 - Kisan Credit Card (KCC) facilities to fish producing farmer.
 - **100% FDI under the automatic route in pisciculture and aquaculture sector in India. Hence statement 2 is correct.**

Q 79.D

- Article 76 of the Constitution has provided for the office of the Attorney General (AG) for India. He/She is the **highest law officer in the country**. The AG is appointed by the President of India, and **they hold their position at the pleasure of the President**. This means that there is no specified tenure and that they hold office unless the President removes them.
- 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 Judges of the High Court thus do not hold their office during the pleasure of the president**, though they are appointed by him. **Hence statement 1 is not correct.**
- The **Constitution of India provides that a person to be appointed as Attorney General (AG) must be a person who is qualified to be appointed a judge of the Supreme Court**. In other words, he must be a citizen of India and he must have been a judge of some high court for five years or an advocate of some high court for ten years or an eminent jurist, in the opinion of the president. **Hence statement 2 is not correct.**
- Rights and Duties of AG:**
 - As the chief law officer of the Government of India, the duties of the AG include the following:
 - To advise the Government of India upon such legal matters, which are referred to him by the president.
 - To perform such other duties of a legal character that are assigned to him by the president. \
 - To discharge the functions conferred on him by the Constitution or any other law.
 - In the performance of his official duties, the Attorney General has the right to audience in all courts in the territory of India. **He/she has pre-audience over all other advocates while appearing before the Supreme Court.**
 - AG 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.

Q 80.A

- Brain-computer interfaces (BCIs) are a rapidly evolving technology that has the potential to revolutionize how humans interact with computers. BCIs measure brain activity and translate it into commands for a computer or other device, allowing users to control machines and devices using only their thoughts. **Hence statement 1 is correct.**
- Neuralink has already successfully tested its BCIs in animals. In 2019, the company showed a video of a monkey playing a video game using only its thoughts. The monkey had a Neuralink chip implanted in its brain, and the chip was able to track the monkey's brain activity and control the movement of a cursor on the screen. **Hence statement 2 is not correct.**
- BCIs are typically divided into unidirectional and bidirectional categories based on the direction of their action. Unidirectional BCIs either receive signals from the brain or send them to it, while bidirectional BCIs allow for information exchange in both directions, enabling control of external devices by the brain. **Hence statement 3 is not correct.**
- Hence option (a) is the correct answer.**

Q 81.D

- The **IUCN red list** provides **taxonomic data, conservation status, and distribution information** on species that are at **high risk of global extinction**.
- The "**Threatened species**" are classified under three categories, including:
 - Vulnerable
 - Endangered, and
 - Critically Endangered
- The **sarus crane** is classified as **vulnerable** on the IUCN Red List. **Hence, option 1 is correct.**
- The **Great Indian Bustard** has been listed as **Critically Endangered** on the Red List of Threatened Species by IUCN. **Hence, option 2 is correct.**
- The **Golden mahseer** has been classified as **Endangered (EN)** category by the IUCN. **Hence, option 3 is correct.**
- The **Indian Pangolin** has been classified as **Endangered (EN)** category by the IUCN. **Hence, option 4 is also correct.**

Q 82.B

- **Labour Code on Wages, 2019**
 - The code subsumes relevant provisions of the following acts:
 - Minimum Wages Act, 1948
 - Payment of Wages Act, 1936
 - Payment of Bonus Act, 1965
 - Equal Remuneration Act, 1976
 - **Coverage: The Code will apply to all employees.** The central government will make wage-related decisions for employments such as railways, mines, and oil fields, among others. State governments will make decisions for all other employments.
 - **Wages include salary, allowance, or any other component expressed in monetary terms. This does not include bonus payable to employees or any travelling allowance, among others. Hence statement 1 is not correct.**
 - **Floor wage:** According to the Code, the **central government will fix a floor wage, taking into account living standards of workers.** Further, it may set different floor wages for different geographical areas. Before fixing the floor wage, the **central government may obtain the advice of the Central Advisory Board and may consult with state governments.** The **minimum wages decided by the central or state governments must be higher than the floor wage.** In case the existing minimum wages fixed by the central or state governments are higher than the floor wage, they cannot reduce the minimum wages.
 - **Fixing the minimum wage:** The Code prohibits employers from paying wages less than the minimum wages. **Minimum wages will be notified by the central or state governments.** This will be based on time, or number of pieces produced. **The minimum wages will be revised and reviewed by the central or state governments at an interval of not more than five years.** While fixing minimum wages, the central or state governments may take into account factors such as: (i) skill of workers, and (ii) difficulty of work. **Hence statement 3 is correct.**
 - **Overtime:** The central or state government may fix the number of hours that constitute a normal working day. In case employees work in excess of a normal working day, they will be entitled to overtime wage, which must be at least twice the normal rate of wages.
 - **Payment of wages:** Wages will be paid in (i) coins, (ii) currency notes, (iii) by cheque, (iv) by crediting to the bank account, or (v) through electronic mode.
 - The wage period will be fixed by the employer as either: (i) daily, (ii) weekly, (iii) fortnightly, or (iv) monthly.
 - **Gender discrimination:** The Code **prohibits gender discrimination in matters related to wages and recruitment of employees for the same work or work of similar nature.** Work of similar nature is defined as work for which the skill, effort, experience, and responsibility required are the same. **Hence statement 2 is correct.**
 - **Advisory boards:** The central and state governments will constitute advisory boards.
 - The **Central Advisory Board** will consist of: (i) employers, (ii) employees (in equal number as employers), (iii) independent persons, and (iv) five representatives of state governments.
 - State Advisory Boards will consist of employers, employees, and independent persons. Further, one-third of the total members on both the central and state Boards will be women.
 - The Boards will advise the respective governments on various issues including: (i) fixation of minimum wages, and (ii) increasing employment opportunities for women.
 - **Offences:** The Code specifies penalties for offences committed by an employer, such as (i) paying less than the due wages, or (ii) for contravening any provision of the Code. Penalties vary depending on the nature of offence, with the maximum penalty being imprisonment for three months along with a fine of up to one lakh rupees.

Q 83.C

- Wi-Fi 7 is the next big thing in wireless connectivity and is currently under development. The wireless standard could, in theory, support a bandwidth of up to 330 Gigabits per second per access point which is over three times faster than the maximum 9.6 Gbps speed of the WiFi 6. In addition, Wi-Fi 7 allows devices to connect with the router over different bands such as 2.4GHz, 5GHz, and 6GHz at the same time to deliver a higher data transfer rate using the technology called Multi-Link Operation (MLO). **Hence statement 1 is correct.**
- Compared to the earlier generation of IEEE standards, Wi-Fi 7 marks a significant milestone in almost every aspect. It offers twice the throughput compared to Wi-Fi 6 with lower latency and greater reliability.

Wi-Fi 7 also solves some real-world challenges faced by the previous standards, such as solid networking experience even in dense places like campuses, airports, and stadiums. **Hence statement 2 is not correct.**

- 802.11b, also known as 2.4GHz Wi-Fi, is still prevalent, even in 2024. Even the high-end cutting-edge Wi-Fi routers with Wi-Fi 7 will also be compatible with 802.11b standard, thanks to excellent backward compatibility support. **Hence statement 3 is correct.**
- **Hence option (c) is the correct answer.**

Q 84.D

- **Jogimara Cave or Sitabenga Cave are ancient artificially carved-out caves located in the Surguja district of Chattisgarh. Hence, statement 1 is not correct.**
- **It dates back around 1000-300 BC and has a few paintings and inscriptions of a love story in Brahmi script. Hence, statement 2 is not correct.**
- The inscriptions and the layout of the cave and the area around it suggest that this may have been an ancient amphitheatre, a place where poets recited their poems and where plays were performed.

Q 85.A

- Coal is the most important and abundant fossil fuel in India. It accounts for 55% of the country's energy needs. Hard coal deposits spread over 27 major coalfields are mainly confined to eastern and south-central parts of the country.
- **The coal resources of India are available in older Gondwana (570 million years to 245 million years ago) formations of peninsular India and younger tertiary (60 to 15 million years ago) formations of the northeastern region. Hence, statement 1 is correct.**
- The Gondwana coal belongs to the carboniferous period. It is found in the Damodar, Mahanadi, Godavari, and Narmada valleys. Raniganj, Jharia, Bokaro, Ramgarh, Giridih, Chandrapur, Karanpura, Tatapani, Talcher, Hingiri, Korba, Penchgati, Sarguja, Kamthi, Wardha valley, Singreni and Singrauli are some of the important coal mines of the Gondwana formations. The Jharguda coal mine (Chhattisgarh) is the thickest coal seam 132 meters of the Gondwana period, followed by the Kargali seam near Bokaro belong to the Gondwana period.
- **Tertiary coal is found in the rocks of the Tertiary era. It is about 15 to 60 million years old. The Tertiary coal is also known as the 'brown coal'. The Tertiary coal contributes only about two percent of the total coal production of the country. It is an inferior type of coal in which the carbon varies between 30 percent in Gujarat and Rajasthan to 50 percent in Assam. Lignite coal is found in Arunachal Pradesh and West Bengal (Darjeeling District). The largest lignite deposits of the country are at Neyveli in the state of Tamil Nadu. Hence, statement 2 is not correct.**
- The cumulative total estimated coal reserve (resource) of the country as per the Coal Inventory published by GSI, as on 01.04.2022 is 361411.46 million tonnes". Details of State-wise and category-wise coal resources of the top states are given as under:

State	Measured (331)	Indicated (332)	Inferred (333)	Total Resource
Odisha	48572.58	34080.42	5451.60	88104.60
Jharkhand	53245.02	28259.67	5155.41	86660.10
Chhattisgarh	32053.42	40701.35	1436.99	74191.76
West Bengal	17233.88	12858.84	3778.53	33871.25
Madhya Pradesh	14051.66	12722.97	4142.10	30916.73
Telangana	11256.78	8344.35	3433.07	23034.20
Maharashtra	7983.64	3390.48	1846.59	13220.71
Bihar	309.53	4079.69	47.96	4437.18
Andhra Pradesh	920.96	2442.74	778.17	4141.87
Uttar Pradesh	884.04	177.76	0.00	1061.80
Meghalaya	89.04	16.51	470.93	576.48
Assam	464.78	57.21	3.02	525.01

- **Hence statement 3 is not correct.**

Q 86.A

- Like petroleum, natural gas is not distributed evenly around the world. More than three-fourths of the world's proven natural gas reserves are located in top ten countries. Global natural gas production increased by 5.7% in 2022 compared to 2021. The largest gas-producing countries are the US, Russia, and Iran.
- In the list of the top ten largest natural gas deposits in the world, Russia has three fields in addition to Urengoy and Yamburg. The fourth largest gas field, Hassi R'Mel is located in Algeria and has a capacity estimated to be about 123 trillion cubic feet.
- Some of the largest gas fields are listed below:
 - **South Pars/North Dome – Persian Gulf, Iran and Qatar. It is also considered the largest gas field in the world.**
 - Urengoy – Siberian Basin, Russia
 - Yamburg – Arctic Circle, Russia
 - Hassi R'Mel – Algeria
 - Shtokman – Barents Sea, Russia
 - **South Iolotan-Osman/Gylkynysh – Turkmenistan**
 - Zapolyaroye – Russia
 - Hugoton – USA
 - Groningen – Netherlands
 - **Bovanenko – Russia. Hence, option (a) is the correct answer.**

Q 87.C

- Pet coke (petroleum coke) and coal are both carbon-rich solid fuels, but they differ in several properties. Here's a comparison:
- **Source and Composition:**
 - Pet Coke: Derived from the refining of crude oil, pet coke is a byproduct of the oil refining process. It consists mainly of carbon with some impurities. Coal: Formed from the remains of plants that lived and died millions of years ago, coal is a sedimentary rock primarily composed of carbon, along with various other elements.
- **Calorific Value:**
 - Pet Coke: Generally has a higher calorific value compared to coal, meaning it produces more energy per unit of weight. Coal: Calorific value varies widely depending on the type of coal but is generally lower than that of pet coke.
- **Hydrophobicity:**
 - Pet Coke: Known for its hydrophobic nature, which means it repels water. This property can be advantageous during storage and transportation. Coal: May absorb moisture, making it susceptible to spontaneous combustion and degradation during storage.
- **Volatile Matter:**
 - Pet Coke: Generally has lower volatile matter content compared to coal, contributing to its stability during combustion. Coal: Can have a higher volatile matter content, influencing combustion characteristics. Hence statement 2 is correct.
- **Ash Content:**
 - Pet Coke: Typically has lower ash content than coal, which means fewer impurities are left after combustion. Coal: Ash content varies among coal types, and high ash content can lead to ash disposal challenges. Hence statement 1 is correct.
- **Sulfur Content:**
 - Pet Coke: May have higher sulfur content than coal, contributing to air pollution concerns when burned. Coal: Sulfur content varies; efforts are made to reduce sulfur emissions through coal cleaning technologies.
- **Usage:**
 - Pet Coke: Used as a replacement for coal in various industries, including cement manufacturing, lime kilns, industrial boilers, and aluminum production. Coal: Historically the dominant source of energy for power generation, industrial processes, and residential heating.

Q 88.C

- **About Ephemerals:**
 - These are any short-lived plant, usually one that has one or more generations per year.

- They grow only during favourable periods (as when adequate moisture is available) and passing the unfavourable periods in the form of seeds.
- **They are of two types — annual and perennial**
 - Annual ephemerals form new individuals every year and are seen for a very short period.
 - They form seeds at the end of their life cycle, remaining dormant till the next year.
 - Perennials have a source like a tuber or a bulb in the soil, so it is the same individual, but the other parts (stem, flowers) are newly formed.”
- Monsoon ephemerals bloom towards the end of May and throughout June, July, August, and September.
- Some other monsoon ephemerals will just form leaves and little branch structures after a few showers.
- These leaves stay for a month or more and then flowering starts, which goes on till July and August.
- The onset of monsoon brings flowers such as ground orchids (Nervilia and Eulophia), lilies (crinum lily, pancratium lily, grass lily, star lily), wild yam (suran), and Indian squill.
- The late monsoon brings flowers such as ground orchids (Habenaria and Peristylus), several types of balsams, hill meadow rue, Dipsadi species, spider-flowers (Corynandra), pond-weeds (Aponogeton), lantern flowers (Ceropegia), bladderworts (Utricularia), pipeworts (Eriocaulon), and species of grasses. **Hence option (c) is the correct answer.**
- Significance
 - The primary job of these flowers is to act as an important source of nectar and pollen for native pollinators.
 - Their presence in all micro habitats on a plateau ensures the appropriate presence of soil and, most importantly, water.

Q 89.B

- Pradhan Mantri Fasal Bima Yojana (PMFBY) was launched in the 2016 Kharif season to provide comprehensive insurance coverage to farmers in case of crop failure, helping stabilise their incomes.
- **PMFBY is currently the largest crop insurance scheme in the world in terms of farmer enrolments, averaging 5.5 crore applications every year and the third largest in terms of the premium received.** The scheme promises minimal financial burden on the farmer, with farmers paying only 1.5 per cent and 2 per cent of the total premium for the Rabi and Kharif seasons, respectively, with Centre and State Governments bearing most of the premium cost. **Hence statement 1 is correct.**
- The Scheme covers all Food & Oilseeds crops and Annual Commercial/Horticultural Crops for which past yield data is available. **Hence statement 2 is correct.**
- The revamped Scheme w.e.f Kharif 2020 has many features, which include voluntary participation for all farmers (The scheme was earlier mandatory for loanee farmers), selection of Insurance Companies by the States for 3 years in a go, a two-step process of crop yield estimation, use of smart sampling technique through satellite data for crop cutting experiments, etc. **Hence statement 3 is not correct.**

Q 90.D

- **Recently, New India Assurance announced the launch of its surety bond business.**
 - A surety bond is a promise to be liable for debt, default, or failure of another. **It is a three-party contract among surety, principal and obligee. Hence statement 1 is not correct.**
 - Principal: the party that purchases the bond and undertakes an obligation to perform an act as promised.
 - Obligee: the party who receives the benefit of surety bond.
 - Surety: It can be any insurance Company or bank that guarantees the obligations will be performed. **If the principal fails to perform the act as promised, the surety is contractually liable for losses sustained. Hence statement 2 is not correct.**
 - A surety is not a bank guarantee and is not an insurance policy.

Q 91.C

- **India is one of the major oilseed growers and importers of edible oils. India's vegetable oil economy is the world's fourth largest after the USA, China & Brazil. Hence statement 1 is correct.**
- Total Oilseed production in the country during 2022-23 is estimated at record 413.55 Lakh tonnes which is higher by 33.92 Lakh tonnes than the oilseed production during 2021-22. Further, the production of oilseeds during 2022-23 is higher by 73.33 Lakh tonnes than the average oilseeds production of 340.22 Lakh tonnes.

- The diverse agro-ecological conditions in the country are favorable for growing 9 annual oilseed crops, which include 7 edible oilseeds (groundnut, rapeseed & mustard, soybean, sunflower, sesame, safflower and niger) and two non-edible oilseeds (castor and linseed). **Oilseed cultivation is undertaken across the country mainly on marginal lands, of which 72% is confined to rainfed farming. Hence statement 2 is correct.**

Q 92.D

- **Gandikota Reservoir is an irrigation project located across the Penna River** of Andhra Pradesh in the Indian state. It receives water from Galeru Nagari Sujala Sravanthi Project canal. It is located between Gandikota village and Kondapur village of Kadapa district. **Hence, pair 1 is correctly matched.**
- **The Srisailem Dam is constructed across the Krishna River** in Nandyal district, Andhra Pradesh and Nagarkurnool district, Telangana near Srisailem temple town and is the 2nd largest capacity working hydroelectric station in India. The dam was constructed in a deep gorge in the Nallamala Hills in between Nandyal and Nagarkurnool districts, 300 m (980 ft) above sea level. **Hence, pair 2 is correctly matched.**
- **The Hathni Kund is a concrete barrage located on the Yamuna River** in Yamuna Nagar district of Haryana state, India. It was constructed between October 1996 and June 1999 for irrigation. It replaced the Tajewala Barrage 3 km (2 mi) downstream which was constructed in 1873 and is now out of service. **Hence, pair 3 is correctly matched.**
- **The Ratle Hydroelectric Plant is a run-of-the-river hydroelectric power station, with permitted pondage under the Indus Water Treaty, currently under construction on the Chenab River,** downstream of the village near Drabshalla in Kishtwar district of the Indian Union Territory of Jammu and Kashmir. **Hence, pair 4 is correctly matched.**

Q 93.B

- 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. The 42nd and 44th Constitutional Amendment Acts have made the advice binding on the President.
- Further, the nature of advice tendered by ministers to the President cannot be enquired by any court. This provision emphasizes the intimate and confidential relationship between the President and the ministers.
- 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. Any exercise of executive power without the aid and advice will be unconstitutional as being violative of Article 74’.
- Since the Prime Minister stands at the head of the council of ministers, the other ministers cannot function when the Prime Minister resigns or dies. **In other words, the resignation or death of an incumbent Prime Minister automatically dissolves the council of ministers** and thereby generates a vacuum. Thus, the Central Council of Ministers ceased to hold office in case of the death or resignation of the Prime Minister. **Hence, options 1 and 2 are correct.**
- As regards the contingency arising out of a demand for dissolution by a **Prime Minister who is defeated in the House of the People, it cannot be said that no Council of Ministers is in existence.**
- The election of a new president does not affect the composition of the Council of Ministers. **Hence option 3 is not correct.**

Q 94.A

- **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. **Hence statement 1 is not correct.**
- No vaccine is available to prevent scrub typhus. It is suggested the risk of contracting the infection by avoiding contact with infected chiggers. If someone gets infected by scrub typhus then it should be treated with the antibiotic doxycycline. **Hence statement 2 is correct.**
- It can also be transmitted by lice, ticks and fleas. It is more common during the wet season when the mites lay eggs. The incubation period is generally 10–14 days. **Hence statement 3 is not correct.**
- Most cases of scrub typhus occur in rural areas of Southeast Asia, Indonesia, China, Japan, India, and northern Australia. Anyone living in or traveling to areas where scrub typhus is found could get infected. **Hence statement 4 is not correct.**
- **Hence option (a) is the correct answer.**

Q 95.D

- Yemen is a desert country in the Middle East on the southwestern portion of the Arabian Peninsula.
- The country is bounded in the **west by the Red Sea**, in the southwest by the Bab-el-Mandeb Strait, and the **south by the Gulf of Aden**.
- **Yemen borders Saudi Arabia in the north and Oman in the east.**
- The country also shares maritime borders with the African nations of Djibouti, Eritrea, and Somalia.



- Hence option (d) is the correct answer.

Q 96.B

- **Statement 1 is not correct:** Eighth Plan (1992 - 97) undertook drastic policy measures to combat the bad economic situation and to undertake an annual average growth of 5.6% **through the introduction of fiscal & economic reforms including liberalisation.**
- **Statement 2 is correct:** The Blue Revolution, also known as the Neeli Kranti Mission, was launched in India during the 7th Five Year Plan (1985–1990). The government sponsored the Fish Farmers Development Agency (FFDA) to promote the sector by adopting new technologies in fish breeding, rearing, marketing, and export. The goal of the Blue Revolution was to boost fisheries and extend advantages to the fishing community.
- **Statement 3 is correct:** The tenth five-year plan(2002-2007) was formulated by the then Prime Minister Atal Bihari Vajpayee. The plan's key features were to promote inclusive growth and equitable development. **Under this plan, the government introduced 'monitored targets' for key indicators of development like Poverty, Literacy and Employment etc.**

Q 97.A

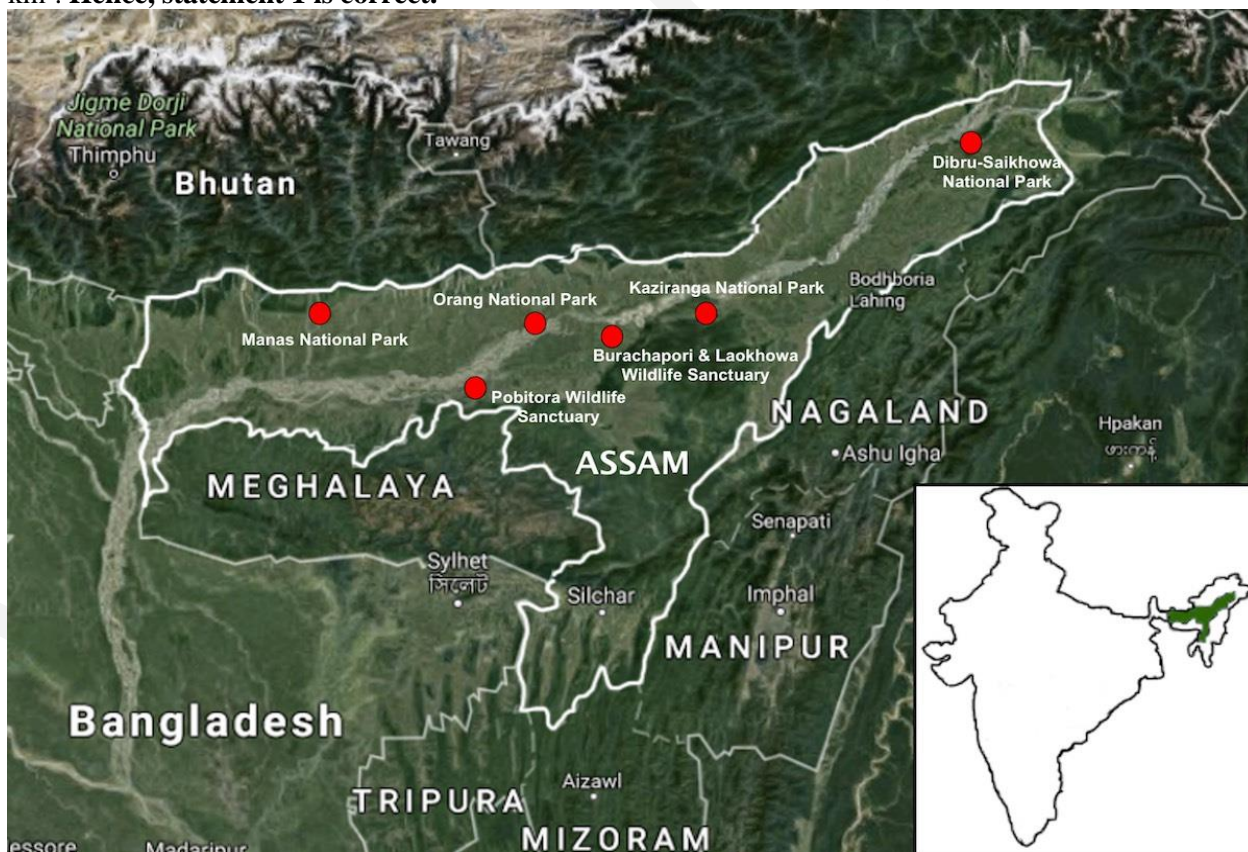
- The **Living Planet Report** is a **comprehensive** study of trends in **global biodiversity and the health of the planet.**
- It is a **flagship** publication of the **World Wildlife Fund for Nature (WWF).**
- It highlights how **climate change and biodiversity loss** are not only **environmental** issues but **economic, development, security, social, moral, and ethical** issues too. According to the report, industrialized countries have caused the most environmental degradation, yet it is developing nations that are disproportionately impacted by biodiversity loss. There's been an average **decline of 69% in species populations since 1970.** While conservation efforts are helping, urgent action is required if we are to reverse nature's loss.
- Hence option (a) is the correct answer.

Q 98.B

- **Censure Motion:** This motion can be moved **only in the Lok Sabha**. It should state the reasons for its adoption in the Lok Sabha. It can be moved against an individual minister or even a group of ministers or the entire council of ministers. It is moved for censuring the council of ministers for specific policies and actions. **If it is passed in the Lok Sabha, the council of ministers need not resign from the office. Hence option 1 is not correct.**
- **Adjournment Motion:** It is introduced in the Parliament to draw the attention of the House to a definite matter of urgent public importance. As it interrupts the normal business of the House, it is regarded as an extraordinary device. **It involves only an element of censure against the government hence the council of ministers need not resign from the office. Hence option 2 is not correct.**
- **No-Confidence Motion:** 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 the confidence of the majority of the members of the Lok Sabha. **If it is passed in the Lok Sabha, the Council of Ministers must resign from the office. Hence option 3 is correct.**
- **Motion of Thanks:** The first session after each general election and the first session of every fiscal year is addressed by the president. In this address, the president outlines the policies and programs of the government in the preceding year and ensuing years. This address of the president is discussed in both the Houses of Parliament on a motion called the 'Motion of Thanks'. At the end of the discussion, the motion is put to vote. **This motion must be passed in the House. Otherwise, the Council of Ministers must resign from the office which amounts to the defeat of the government. Hence option 4 is correct.**

Q 99.D

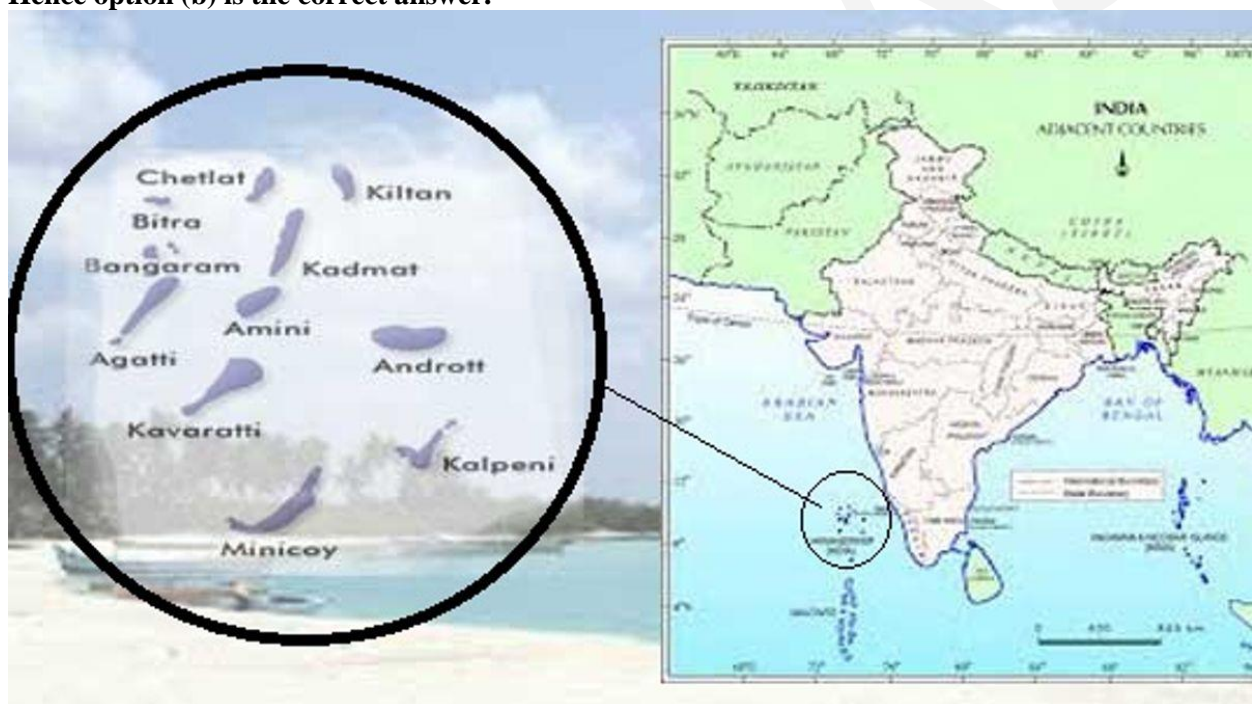
- The **Pobitora Wildlife Sanctuary** is a protected area in **Assam**. It is situated on the **southern bank of the Brahmaputra river** in Morigaon district. It was declared in 1987 and covers an area of only 38.85 km². **Hence, statement 1 is correct.**



- It provides **grassland and wetland habitat** for the Indian rhinoceros. With such ambient conditions, it holds the **largest density of Indian one-horned rhinoceros populations in Assam (and in India)** and the second-highest concentration in Assam after Kaziranga National Park. **Hence, statement 2 is correct.**
- The sanctuary consists of the **Rajamayong Reserve Forest and Pobitora Reserve Forest**. **Hence, statement 3 is correct.**
- It is often known as **Mini Kaziranga** due to its similar landscape and vegetation. **Hence, statement 4 is also correct.**

Q 100.B

- **Lakshadweep is an archipelago consisting of 12 atolls, three reefs and five submerged banks.**
 - It is a uni-district Union Territory with an area of 32 Sq.Kms and is comprised of ten inhabited islands, 17 uninhabited islands attached islets, four newly formed islets and 5 submerged reefs.
 - **The inhabited islands are** Kavaratti, Agatti, Amini, Kadmat, Kiltan, Chetlat, Bitra, **Andrott, Kalpeni** and Minicoy. Bitra is the smallest of all having only a population of 271 persons (Census 2011).
 - The uninhabited island Bangaram has been enumerated during 2011 census operation and has a population of 61 persons.
- **Divar Island is a small island on the Mandovi River in Goa. It is between two bigger islands – Chorao and Tiswaddi**
 - Divar is a green haven where you will see many palms, swaying tall trees, a mangrove swamp with many crocodiles and birds, old catholic churches, temples, vintage Portuguese-style houses, and evergreen paddy fields.
- **Netrani is a small island of India located in the Arabian Sea. It is off the coast of Karnataka situated approximately 10 nautical miles from the temple town of Murudeshwara in Bhatkal Taluka.**
 - The island can be seen from the mainland over 15 km away.
 - **It is not part of Lakshadweep group of islands.**
- **Hence option (b) is the correct answer.**



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