

Test Code
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ADVANCED SCHOLARSHIP TEST 2027

for

AIM 2027: ADVANCED INTEGRATED MENTORSHIP PROGRAM

CA-VA 2027: CURRENT AFFAIRS-VALUE ADDITION PROGRAM

Updated Answer Key

1. (a)	21. (a)	41. (c)	61. (c)	81. (b)
2. (a)	22. (d)	42. (c)	62. (b)	82. (a)
3. (b)	<u>23. (b)</u>	43. (a)	63. (d)	83. (a)
4. (a)	24. (b)	44. (b)	64. (d)	84. (c)
5. (c)	25. (a)	45. (b)	65. (b)	85. (d)
6. (c)	26. (a)	46. (a)	66. (c)	86. (c)
7. (b)	27. (a)	47. (d)	67. (a)	87. (a)
8. (a)	28. (d)	48. (c)	68. (c)	88. (b)
9. (b)	29. (c)	49. (b)	69. (d)	89. (b)
10. (d)	30. (b)	50. (a)	70. (a)	90. (a)
11. (b)	31. (c)	51. (b)	71. (a)	91. (c)
12. (b)	32. (a)	52. (c)	72. (d)	92. (d)
13. (a)	33. (c)	53. (b)	73. (d)	93. (b)
14. (d)	34. (c)	54. (c)	74. (c)	94. (d)
15. (c)	35. (b)	55. (c)	75. (b)	95. (a)
16. (c)	36. (b)	56. (a)	76. (a)	96. (c)
17. (a)	37. (c)	57. (b)	77. (a)	97. (c)
18. (d)	38. (a)	58. (c)	78. (c)	98. (c)
19. (a)	39. (d)	59. (a)	79. (b)	99. (b)
20. (a)	<u>40. (c)</u>	<u>60. (a)</u>	80. (a)	100. (b)

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ADVANCED SCHOLARSHIP TEST 2027

1. (a)

Statement 1 is correct: The 24th Amendment, 1971 was enacted to overcome the judgment in the *Golaknath case (1967)*, which declared that **Parliament could not amend fundamental rights:**

1. **It inserted clause (4) to Article 13:** Nothing in this article shall apply to any amendment of this Constitution made under Article 368.

- Article 13 prohibits the State from making any ‘law’ that takes away fundamental rights. By adding this clause, Parliament ensured that a Constitutional Amendment would no longer be considered a ‘law’ under the definition of Article 13, thus shielding it from judicial scrutiny regarding fundamental rights.

2. **It amended Article 368:** The heading was changed from “Procedure for amendment of the Constitution” to “Power of Parliament to amend the Constitution and procedure thereof”. This clarified that **Article 368 contains the power to amend, not just the procedure.**

- It explicitly stated that Parliament may, in exercise of its constituent power, amend by way of addition, variation, or repeal any provision of this Constitution.
- A new clause, Article 368(3), was added stating that nothing in Article 13 shall apply to an amendment made under Article 368 (mirroring the change in Article 13).

3. Before this amendment, the President could technically withhold assent to an Amendment Bill. In Article 368(2). the wording was changed to: “the President shall give his assent to the Bill”, **thereby**

making it obligatory for the President to sign the judgement.

Statement 2 is correct: The 42nd Amendment, 1976 was enacted to overcome the judgment in the *Kesavanand Bharati case (1967)*, which provided for basic structure of the Constitution to restrict the power of the Parliament to amend the Constitution.

- **It added clause (4) and (5) to Article 368:** These clauses stated that **there shall be no limitation whatsoever on the constituent power of Parliament and that no amendment could be questioned in any court.** The clauses verbatim read:

4. *No amendment of this Constitution (including the provisions of Part III) made or purporting to have been made under this Article [whether before or after the commencement of section 55 of the Constitution (Forty-second Amendment) Act, 1976] shall be called in question in any court on any ground.*

5. *For the removal of doubts, it is hereby declared that there shall be no limitation whatsoever on the constituent power of Parliament to amend by way of addition, variation or repeal the provisions of this Constitution under this article.*

Later, in the *Minerva Mills case (1980)*, the Supreme Court struck down the clauses (4) and (5) that gave Parliament ‘unlimited’ power.

Statement 3 is not correct: The 44th Amendment, 1978 was passed under the excessive power concentrated by the 42nd Amendment, rather than to expand Parliament’s power to amend the Constitution or overturn judicial interpretations of Parliament’s power to amend the Constitution. The Amendment in **itself did not amend Article 368.**

2. (a)

Option (a) is correct: Poll performance is the sole criteria for recognition of National parties and State parties by the Election Commission of India. **The criteria for National parties in ECI are:**

1. It should get a 6% vote share in the last Assembly elections in 4 States and 4 seats in the last Lok Sabha polls; or
2. It should get 2% of all Lok Sabha seats in the last election and these seats should be from at least 3 States; or
3. A State Party in at least 4 States.

The criteria for States parties in ECI are:

1. If it secures 6% of the valid votes polled in the State at a General election to the Legislative Assembly of the State concerned and in addition, it wins 2 seats in the Assembly of the State concerned; or
2. If it secures 6% of the valid votes polled in the State at a General election to the Lok Sabha from the State concerned and in addition, it wins 1 seat in the Lok Sabha from the State concerned; or
3. If it wins 3% of seats at a general election to the Legislative Assembly of the State concerned or 3 seats in the Assembly, whichever is more; or
4. If it wins 1 seat in the Lok Sabha for every 25 seats or any fraction thereof allotted to the State at a General election to the Lok Sabha from the State concerned or
5. If it secures 8% of the total valid votes polled in the state at a General Election to the Lok Sabha from the State or to the Legislative Assembly of the State.

3. (b)

Option (b) is correct: The defining feature of a parliamentary system is the collective responsibility of the executive (council of ministers) to the legislature (specifically the Lok Sabha). This means:

- I. **Accountability:** The Government derives its legitimacy from and remains in office only as long as it enjoys the confidence of the Lok Sabha.
- II. **Removal:** If the Lok Sabha passes a vote of no-confidence, the entire council of ministers must resign.
- III. **Constitutional basis:** This principle is enshrined in Article 75(3) of the Constitution.

4. (a)

Statement 1 is automatically disqualified: Under Article 164(1B) (added by the 91st Amendment), **a member of the State Legislature who is disqualified for being a member of that House under the X Schedule (Anti-defection) shall also be disqualified to be appointed as a minister.**

Statements 2 and 3 are automatically disqualified: In *B.R. Kapur v. State of Tamil Nadu, 2001*, the Supreme Court held that **an MLA who is otherwise disqualified from being an MLA cannot be appointed as minister, even for a grace period of 6 months.** The Article 164(4) shall be read with 173 and 194, that **means the 6-month grace period is meant for people who are otherwise qualified to be members but simply haven't been elected yet.**

So, a person who is disqualified under Article 102(2) or 191 shall also be **disqualified from being a minister.**

Statement 4 is not automatically disqualified: A member of the State Legislative Assembly whose election has been declared void by the High Court is **not disqualified under Article 191(1) or (2) of the Constitution and can be a minister for a further period of 6 months.**

5. (c)

Statement 1 is not correct: The official theme for the UN International Year of Cooperatives 2025 is **“Cooperatives Build a Better World”.**

The theme “Cooperatives Build Prosperity for All” was actually the specific theme of the ICA Global Cooperative Conference 2024 held in New Delhi, which served as the curtain-raiser for IYC 2025.

Statement 2 is correct: India hosted the ICA Global Cooperative Conference and General Assembly from November 25 to 30, 2024, at Bharat Mandapam, New Delhi. This was indeed the first time in the 130-year history of the International Cooperative Alliance that India hosted this premier global event.

Statement 3 is correct: According to the National Cooperative Database (NCD) records (updated through early 2026), **Maharashtra is the leading state, accounting for approximately 25% to 27% of India’s total cooperatives (with over 2.25 lakh societies out of a national total of roughly 8.5 lakh).** While **Gujarat** has a robust cooperative sector (with over 86,500 societies), it **constitutes roughly 10% of the total.**

6. (c)

Triplet 1 is correctly matched: The Repo Rate (Repurchasing Option Rate) is the primary benchmark interest rate at which the Reserve Bank of India (RBI) lends short-term funds to commercial banks against government securities. It is the principal tool of monetary policy and is determined periodically by the six-member Monetary Policy Committee (MPC) to control inflation and regulate the money supply.

Triplet 2 is correctly matched: The Standing Deposit Facility (SDF) is a liquidity absorption mechanism that allows banks to park their excess funds with the RBI without the central bank needing to provide government securities as collateral (which was a constraint under the traditional reverse repo framework). Under the modern Liquidity Adjustment Facility (LAF) corridor, the SDF rate serves as **the floor of the LAF framework** and

is systematically fixed at 25 basis points (0.25%) below the policy repo rate.

Triplet 3 is correctly matched: The Marginal Standing Facility (MSF) is an emergency window for scheduled commercial banks to borrow overnight liquidity from the RBI when inter-bank funds completely dry up. Banks can avail this by dipping into their Statutory Liquidity Ratio (SLR) portfolio up to a certain limit. The MSF rate **serves as the ceiling of the LAF corridor** and is systematically fixed at 25 basis points (0.25%) above the policy repo rate.

Together, the SDF, Repo Rate, and MSF form the Liquidity Adjustment Facility (LAF) corridor, which is symmetrically aligned with a width of 50 basis points around the central policy repo rate.

7. (b)

Statement 1 is correct: Following the economic disruptions caused by the COVID-19 pandemic, the government outlined a revised fiscal consolidation glide path in the Union Budget 2021-22. The stated objective, which has been consistently reiterated in subsequent budgets, is to steadily reduce the fiscal deficit to below 4.5% of GDP by the financial year 2025-26.

Statement 2 is not correct: The Finance Act of 2018 significantly amended the FRBM Act, shifting the primary focus toward controlling the Fiscal Deficit and the overall Debt-to-GDP ratio. As part of these amendments, the statutory targets for reducing the Revenue Deficit and Effective Revenue Deficit were completely removed from the FRBM framework. Therefore, the government no longer sets these specific, fixed-percentage targets for them under the Act.

Statement 3 is not correct:

Escape Clause: Under Section 4(2) of the FRBM act, the government can deviate

from the target by up to 0.5% of GDP in specific exigencies (national security, war, collapse of agriculture, structural reforms).

8. (a)

Statement 1 is correct: The Structured Financial Messaging System (SFMS) is India's robust domestic alternative to SWIFT. The RBI and the government are actively working on integrating SFMS with the messaging systems of partner countries (like the UAE and Russia) to bypass the SWIFT network for bilateral trade.

Statement 2 is correct: The Special Rupee Vostro Account (SRVA) framework allows Indian importers and exporters to invoice and settle their payments in Indian Rupees (INR) rather than US Dollars, completely circumventing the need for the SWIFT messaging system and US correspondent banks.

Statement 3 is correct: The Asian Clearing Union (ACU) is a regional payment arrangement (of which India is a founding member) that clears payments for intra-regional transactions among participating central banks, providing a localized alternative to the SWIFT-dominated global system.

Statement 4 is not correct: Project mBridge is a highly prominent cross-border multi-CBDC (Central Bank Digital Currency) platform developed by the BIS Innovation Hub. However, **India is not a part of this mechanism.** The founding and participating central banks belong to China, Hong Kong, Thailand, the UAE, and Saudi Arabia. India has deliberately chosen to stay out of this China-led initiative, preferring to pursue its own bilateral CBDC linkages instead.

9. (b)

Co-lending is a collaborative financial model where a primary lender (usually a

bank) partners with another entity, such as a Non-Banking Financial Company (NBFC) or Fintech, to jointly fund loans. It allows banks to leverage the last-mile reach of NBFCs, while NBFCs gain access to lower-cost funds, sharing risks and rewards in a predetermined ratio (typically 80:20).

Statement 1 is not correct: Under the Reserve Bank of India's (RBI) Co-Lending Model (CLM), banks are allowed to claim Priority Sector Lending (PSL) status for their respective share of the credit. This is permitted provided that the ultimate borrower belongs to the specified priority sectors (such as agriculture, MSMEs, housing, etc.) and other regulatory conditions are met. Earning PSL certificates is one of the primary incentives for banks to participate in these arrangements.

Statement 2 is correct: Co-lending between banks and Non-Banking Financial Companies (NBFCs) is explicitly permitted and actively promoted by the RBI in India. The CLM framework was specifically introduced to combine the comparative advantages of both entities – the lower cost of funds of banks and the greater on-ground reach and origination capabilities of NBFCs – to improve credit flow to unserved and underserved sectors of the economy.

10. (d)

Statement 1 is correct: The RBI increases its gold reserves to diversify its foreign currency asset base. This helps reduce the nation's dependency on the US dollar, a strategic shift commonly referred to as de-dollarization.

Statement 2 is correct: Accumulating gold acts as a reliable hedge against inflation, which can help protect the overall purchasing power of India's foreign reserves over time.

During times of high inflation, confidence in the financial system and the government's

ability to control the economy often wavers. Gold is independent of any government or corporation; it has no “counterparty risk.” If a bank fails or a currency collapses, the physical gold still exists and retains value globally, providing a “safety blanket” for the economy.

Statement 3 is not correct: Unlike government bonds or foreign currency deposits, physical gold has a zero yield. It does not generate any future interest or dividends; it is primarily held as a secure store of value.

Statement 4 is correct: Holding gold serves as a vital risk mitigation tool. It helps protect the central bank against global currency volatility and the subsequent revaluation risks to its foreign exchange stockpile.

11. (b)

Dholavira, located in the Kutch district of Gujarat, is unique among Harappan cities because it was divided into **three parts: the Citadel (Upper Town), the Middle Town, and the Lower Town.**

I. Unlike most other Harappan settlements (such as Mohenjodaro and Harappa) which were typically bipartite, consisting only of a raised citadel and a larger lower town, Dholavira featured a distinct middle section.

II. **Each of these three sections was separated by massive stone walls** and interconnected through elaborate gateways.

III. The city is also famous for its sophisticated water management system and a large stone inscription known as the ‘signboard’.

Chahnudaro is the only Harappan city found without a citadel entirely. It was primarily an industrial center focused on bead-making and crafts.

Hence, Option (b) is correct.

12. (b)

Statement 1 is correct: The **yajna** (sacrificial ritual) was the core of the Rigvedic religious life. Sacrifices took place in the house of the yajamana (the person for whom the sacrifice

was performed and who bore its expenses) or on a specially prepared plot of land nearby. They consisted mostly of oblations of milk, ghee, and grain poured into the fire, accompanied by the recitation of appropriate sacrificial formulae. Some yajnas involved the sacrifice of animals. The gods were supposed to partake of the offerings as they were consumed by the fire. A part of the offerings was eaten by the officiating priests. The goals of Rig Vedic sacrifices included wealth, good health, sons, and a long life for the yajamana.

Seven types of sacrificial priests are mentioned in the Rig Veda—the Hotri, Adhvaryu, Agnidh, Maitravaruna, Potri, Neshtri, and Brahmana—each with his particular tasks clearly laid down. Priests were given a fee (dakshina) in return for the important duties they performed.

Statement 2 is correct: The Rigveda **does not mention temples or the worship of deities in image form.** There is no archaeological or textual evidence in the Rigveda for the construction of temples or the use of idols (murti).

Statement 3 is not correct: While the Rigveda is dominated by male deities (like Indra, Agni, and Varuna), it **does dedicate hymns to several goddesses. Ushas, goddess of the dawn, is mentioned 300 times in the Rig Veda, and 20 hymns are addressed to her.** Representing the victory of light over darkness, she is generous and is invoked by those desiring wealth. Aditi, mother of the Adityas, is another important goddess. Her name means freedom, and she is invoked to bestow freedom from sickness, harm, and evil. Some hymns speak of her as a mother and connect her with the earth and the cow. Raka is a benevolent, bountiful goddess. Sinivali bestows children. Prithvi (Earth) is a minor goddess, most often invoked together with Dyaus. Vach (speech), Ida (literally, ‘the milk and butter offered in the sacrifice’), and Sarasvati (representing the river of this name) are some of the other goddesses mentioned in the Rigveda.

13. (a)

Bhavaviveka, *Nagarjuna*, *Aryadeva*, and *Buddhapalita* are philosophers belonging to the **Madhyamaka school of Buddhism**.

I. **Nagarjuna (c. 150 – c. 250 CE)** is the founder of the Madhyamaka school, which emphasizes sunyata (emptiness).

II. **Aryadeva (c. 170–270 C.E.)** was the primary disciple of Nagarjuna and a major Madhyamaka philosopher.

III. **Buddhapalita (c. 500 c.e.)** was a key proponent of the *Prasangika* branch of Madhyamika, which uses logical reduction to show emptiness.

IV. **Bhavaviveka (c. 500 – c. 570)** was a commentator who, while analyzing Nagarjuna's work, founded the *Svatantrika* branch of Madhyamaka.

Hence, Option (a) is correct.

14. (d)

Statement 1 is not correct: Ashoka was a **patron** and a devout follower of Buddhism, especially after the Kalinga war, but he was not a 'profound Buddhist scholar' or 'metaphysician' as seen in his edicts. His interest was primarily in the **ethical and practical application** of Buddhist principles to governance and social harmony, rather than the complex metaphysical or philosophical debates of the clergy.

Statement 2 is not correct: The Dhamma officially propagated by Ashoka was not Buddhism at all, but a system of morals consistent with tenets of most of the sects of the empire. It emphasized tolerance, respect for elders, kindness to slaves, and non-violence (*Ahimsa*).

I. While inspired by Buddhist ethics, it was designed to be **acceptable to followers of all faiths (including Brahmins and Jainas), focusing on civic responsibility rather than specific religious rituals or Nirvana.**

15. (c)

Statement 1 is correct: Ratnavali is a 7th-century Sanskrit drama (*Natika*) written by emperor Harshavardhana of Kannauj. It is a **romantic comedy focusing on the love story and marriage of King Udayana of Kaushambi and Princess Ratnavali of Ceylon.**

Note*: King Udayana of *Vatsa* (Kaushambi) is a 'superhero' of ancient Sanskrit drama. He appears in Bhasa's *Svapnavasavadattam*, Harsha's *Ratnavali*, and *Priyadarsika*.

Statement 2 is not correct: *Mudrarakshasa* is a 4th–8th century CE Sanskrit political drama by **Vishakhadatta depicting the ascent of Chandragupta Maurya to the Magadha throne.** It focuses on Chanakya's diplomatic maneuvering, espionage, and strategies to defeat the Nanda dynasty and secure the loyalty of the rival minister, Rakshasa, to consolidate the new Mauryan empire.

Statement 3 is correct: *Malavikagnimitra* is a five-act Sanskrit drama written by the celebrated classical Indian poet and dramatist **Kalidasa**. Believed to be his first work, it was likely composed in the 5th century AD and **follows the romantic love story of King Agnimitra of the Shunga dynasty and a palace maid named Malavika.**

16. (c)

Arctic amplification is the phenomenon where the Arctic region warms at a rate two to four times faster than the global average. Primarily driven by sea-ice loss and decreased surface reflectivity (albedo), this accelerated warming creates a positive feedback loop. The region is increasingly experiencing rapid melting, permafrost thaw, and impacts on global weather patterns, with the Barents Sea area showing the most intense warming.

Statement 1 is correct: The ice-albedo feedback is one of the primary drivers of Arctic Amplification. As highly reflective sea ice and snow melt, they expose the much darker

ocean water and landmasses underneath. These darker surfaces absorb significantly more incoming solar radiation, creating a positive feedback loop that further accelerates regional warming and ice melt.

Statement 2 is not correct: This statement describes the atmospheric dynamics of the tropics, not the poles. In the Arctic, the atmosphere is highly stable, which suppresses the rapid vertical convection of heat. Because the extra heat cannot easily escape into the upper atmosphere, it remains trapped near the surface, compounding the warming effect at ground level (a phenomenon known as the lapse rate feedback).

Statement 3 is correct: As the Arctic warms, evaporation increases, leading to a higher concentration of water vapour in the atmosphere. This exerts a warming “triple effect”: water vapour is a potent greenhouse gas itself, it leads to the formation of specific types of clouds that trap outgoing longwave radiation (especially in winter), and it releases latent heat into the atmosphere when it condenses into liquid water or ice.

Statement 4 is correct: The Arctic does not exist in isolation. Global atmospheric and oceanic circulation patterns (like ocean currents and atmospheric Rossby waves) continuously transport massive amounts of heat and moisture from the warmer equatorial and tropical regions toward the poles, steadily contributing to the amplified warming experienced in the region.

17. (a)

Statement 1 is not correct: The Garo, Khasi, Jaintia (forming the Meghalaya Plateau) and the Mikir Hills (in Assam) are actually an eastern extension of the Peninsular Plateau (the Deccan block). They were separated from the main Indian peninsula by a massive geological depression known as the Malda Fault (or Garo-Rajmahal gap).

Statement 2 is correct: The Barail Range is a critical topographical feature in Assam. It runs southwest to northeast and serves as a massive water divide. It physically separates the Brahmaputra valley (to its north) from the Barak/Surma valley (to its south). It also acts as a structural link joining the Meghalaya plateau to the Naga Hills.

Statement 3 is not correct: Mount Saramati is indeed the highest peak of the Purvanchal, but it is located in the Naga Hills (straddling the India-Myanmar border), not the Lushai Hills. The highest peak of the Lushai (Mizo) Hills is Phawngpui, which is famously known as the Blue Mountain.

18. (d)

Statement 1 is not correct: LPA of rainfall is the rainfall recorded over a particular region for a given interval (like month or season) averaged over a long period (not for a given year but for a long period of time like 30 years, 50 years etc)

Statement 2 is not correct: By strictly reading the data provided, ‘normal’ rainfall has a lower boundary of 96%, while ‘deficient’ rainfall has a strict upper boundary of falling below 90%. This leaves a deliberate statistical gap between 90% and 95.9%. Therefore, a monsoon that fails to meet the ‘normal’ threshold (e.g., scoring 93%) is not automatically classified as ‘deficient’. (In real meteorological terms, this gap is classified as ‘Below Normal’, though you only need the text’s data boundaries to prove the statement logically false).

19. (a)

The Indian Ocean Dipole (IOD), often referred to as the “Indian Niño,” is a critical ocean-atmosphere phenomenon that significantly influences the Indian Monsoon.

Statement 1 is correct: The IOD is fundamentally a Sea Surface Temperature (SST) anomaly that occurs primarily in the equatorial Indian Ocean. It is characterized by an irregular oscillation or difference in surface temperature between two “poles” or areas: a western pole in the Arabian Sea (western Indian Ocean) and an eastern pole in the eastern Indian Ocean south of Indonesia.

Statement 2 is correct: During a Positive IOD, the waters in the eastern Indian Ocean become unusually cold, creating a high-pressure zone. Conversely, the western Indian Ocean becomes unusually warm, creating a low-pressure zone. Because winds naturally flow from high to low pressure, the equatorial winds blow directly from the south-eastern Indian Ocean toward the western Indian Ocean.

Statement 3 is not correct: While it is true that “more evaporation occurs in warm water,” during a Negative IOD, that pool of warm water shifts to the eastern Indian Ocean (near Indonesia and Australia), while the western Indian Ocean (near India) remains cooler. This shifts the low-pressure zone and the associated convection (cloud formation and rain) away from India and towards Australia. Consequently, the moisture is pulled away from the subcontinent, making a Negative IOD detrimental to the Indian Monsoon, often leading to deficient rainfall.

The “Coupling” Concept: The IOD is not just about water temperature; it is a cycle. Temperature changes lead to pressure changes, which lead to wind changes (Walker Circulation), which then further reinforce the temperature change.

Logical Elimination: If you know that Positive IOD = Good for India, you can deduce that the warm water must be near India (Western side). Since winds blow from Cold (High Pressure) to Warm (Low

Pressure), the winds in a +IOD must blow from the East (Indonesia) to the West (India).

20. (a)

Statement 1 is correct: The 11° channel precisely cuts through the upper portion of the archipelago, separating the Aminidivi subgroup (north) from the Cannanore subgroup (south).

Statement 2 is not correct: The 9° channel does not border the Maldives; rather, it separates the main Lakshadweep archipelago (north) from its southernmost island, Minicoy (south).

Statement 3 is not correct: It is the 8° channel (the lowest latitude of the three) that acts as the international maritime boundary separating India’s Minicoy Island (north) from the sovereign nation of the Maldives (south).

CONCEPT CORNER:

The “Step-Ladder” Memory Technique

Think of the channels as steps on a ladder climbing away from the Equator:

- Step 8: The international gate (India-Maldives).
- Step 9: The internal gate (Minicoy to Main Lakshadweep).
- Step 11: The internal divider (Splitting the main group).

21. (a)

India’s Green Credit Programme (GCP), notified on October 12, 2023, under the Environment Protection Act, 1986, is a market-based mechanism designed to incentivize voluntary environmental actions. It rewards individuals, companies, and organizations with tradable ‘green credits’ for positive efforts like tree plantation, water management, and sustainable agriculture.

Statement 1 is not correct: The Green Credit Rules, 2023, were notified by the Ministry of Environment, Forest and Climate Change

(MoEFCC) under the Environment (Protection) Act, 1986, not the Forest (Conservation) Act, 1980. It is a flagship global initiative launched by India at COP28 (UAE).

Statement 2 is not correct: Green credits cannot be claimed immediately after the completion of the physical work (such as planting trees). The Green credits can be claimed by an applicant only after a minimum of five years of restoration work have been completed and a minimum canopy density of forty per cent has been achieved. A five-year establishment period is prescribed to allow the planted seedlings and natural regenerations to mature and develop adequate canopy cover, so as to achieve the prescribed 40 per cent canopy density, corresponding to a moderately dense forest.

Statement 3 is correct: The primary objective of the Green Credit Programme (GCP) is to incentivize voluntary pro-planet actions. It is a market-based mechanism intrinsically linked to the 'LiFE' (Lifestyle for Environment) movement, aiming to drive communities, individuals, and the private sector toward behavioral changes that support sustainable and environment-friendly practices.

The Indian Council of Forestry Research and Education (ICFRE) is the designated administrator for the programme.

I. **Tradability:** Unlike carbon credits, Green Credits are not just for CO₂; they cover 8 sectors (Water, Agriculture, Waste, Forest, Air, etc.).

II. **The 'Double Counting' Rule:** Green credits generated from a project can also result in Carbon Credits if they lead to carbon sequestration, allowing for a dual benefit (though rules on this are evolving to prevent double-monetization in the same registry).

22. (d)

Statement 1 is not correct: The two frameworks have fundamentally different participation structures. The Kyoto Protocol was strictly

bifurcated, placing binding emission reduction targets only on developed nations (Annex I countries), while developing nations had no such mandatory targets. In contrast, the Paris Agreement requires universal participation, mandating that all member countries submit and act upon Nationally Determined Contributions (NDCs).

Statement 2 is not correct: A major structural difference lies in ensuring environmental integrity. While the Kyoto Protocol's Clean Development Mechanism (CDM) generated millions of credits (CERs), the rules finalized for the Paris Agreement (Article 6.4) heavily restrict the transition and use of those older, low-quality 'legacy' credits to prevent the artificial dilution of current global climate goals.

Under the Glasgow Climate Pact (COP26), a compromise was reached to allow certain CDM credits (registered after Jan 1, 2013) to be transitioned to the Art 6.4 mechanism. Saying Paris "outright bans" them is a slight exaggeration. It is more accurate to say Paris restricted them, whereas Kyoto did not have a "legacy" issue as it was the first of its kind.

Statement 3 is not correct: The Kyoto Protocol relied almost exclusively on market-based mechanisms (such as Emissions Trading, the Clean Development Mechanism, and Joint Implementation). The Paris Agreement, however, explicitly encompasses both: Articles 6.2 and 6.4 govern market-based mechanisms, while Article 6.8 specifically introduces a formal framework for non-market approaches (such as technology transfer, capacity building, and financial assistance) to achieve climate goals.

23. (b)

Statement 1 is correct: Nitrogen is one of the most critical macronutrients required by living organisms. It is a fundamental structural component of amino acids, which are the building blocks of proteins. Furthermore, it

is a **key constituent of hormones, nucleic acids (DNA/RNA), chlorophylls (essential for photosynthesis in plants), and various vitamins.**

Statement 2 is not correct: For over a century, it was believed that only prokaryotes (bacteria and archaea) could fix nitrogen. However, in April 2024, researchers discovered a nitrogen-fixing organelle called the nitroplast within the eukaryotic marine alga *Braarudosphaera bigelowii*. This organelle evolved from a symbiotic bacterium and is now a permanent part of the eukaryotic cell, meaning eukaryotes are indeed capable of biological nitrogen fixation.

Statement 3 is correct: The conversion of ammonia into nitrate in the soil is a two-step process known as nitrification, performed by specific chemoautotrophic soil bacteria.

1. First, ammonia is oxidized to nitrite by bacteria such as *Nitrosomonas* and *Nitrosococcus*.
2. Then, the resulting nitrite is further oxidized to nitrate primarily by the bacterium *Nitrobacter*.
3. Denitrification (reducing nitrate back to nitrogen gas) is done by bacteria like *Pseudomonas* and *Thiobacillus*.

24. (b)

Triplet 1 is correctly matched: In predation, the predator benefits while the prey is harmed. While often viewed negatively, predators play a crucial ecological role. By keeping the population of dominant prey species in check, they prevent those species from monopolizing resources, thereby reducing competition and maintaining overall species diversity in the community.

Triplet 2 is not correctly matched: While parasitism does involve one species benefiting and the other being harmed, the female mosquito is not considered a parasite. By ecological definition, a parasite must live in or

on another living species (the host) to get its nourishment and shelter. The mosquito merely takes a blood meal for reproduction and leaves; it does not live on the human host.

Triplet 3 is correctly matched: Symbiosis involves both interacting species benefiting. Lichens are the textbook example of an intense, obligate mutualistic relationship where neither the algae (phycobiont) nor the fungus (mycobiont) can survive in that environment without the other. The fungus provides the structure, anchors the lichen, and absorbs moisture/minerals, while the algae produces food through photosynthesis.

25. (a)

Option (a) is correct: Ecological succession follows a logical progression where each stage alters the environment to pave the way for the next:

1. **Increased productivity:** Succession begins with pioneer species colonizing a barren area. Their establishment leads to an initial surge in primary productivity as they convert solar energy into biomass.
2. **Shift of nutrients from reservoirs:** As these early producers grow, die, and decompose, they begin drawing raw minerals and nutrients out from environmental 'reservoirs' (like bare rock or sterile soil) and locking them into the active biological cycle (organic matter).
3. **Increased diversity of organisms:** The newly enriched soil and altered microclimate make the environment less harsh, allowing a wider variety of larger plant and animal species to successfully colonize and inhabit the area.
4. **Complexity of food webs:** Finally, as species diversity peaks near the climax community stage, the simple, linear food chains of the early pioneer stages mature into highly intricate and interconnected food webs.

26. (a)

Statement I is correct: The James Webb Space Telescope (JWST) was specifically

designed to look back over 13.5 billion years to see the first stars and galaxies forming after the Big Bang.

Statement II is correct: JWST is primarily an **infrared telescope, but it can also detect the long-wavelength visible light** (specifically the red and gold part of the spectrum) through its NIRCam instrument.

Statement III is correct: Because the universe is expanding, **light traveling from distant galaxies is stretched**. By the time that light reaches us, **its wavelength has shifted from the visible or ultraviolet spectrum into the infrared**.

Statements II and III are the correct explanation of Statement I: Because the universe is expanding, light emitted by the very first galaxies (as ultraviolet/visible light) billions of years ago has been stretched into longer wavelengths. Consequently, these early galaxies are no longer visible in visible light, but rather in infrared. Webb is specifically optimized to detect these infrared wavelengths to observe these distant, early-universe galaxies.

27. (a)

Astronomers reported finding the most distant hydroxyl maser yet **using the MeerKAT telescope**.

A **hydroxyl megamaser is a giant and naturally occurring laser found in deep space**. Just as a regular laser focuses **visible-light into a concentrated beam**, a maser focuses **microwave or radio waves**.

The 'hydroxyl' part refers to a simple molecule made of one oxygen atom and one hydrogen atom (OH-). These molecules float in large clouds of gas within distant galaxies. When two galaxies collide, the impact triggers intense star formation and feeds giant black holes, and also releases massive amounts of infrared energy.

When this energy strikes the hydroxyl molecules, it pumps them into a high-energy state. As the molecules settle back down,

they release a powerful, amplified beam of radio waves. Astronomers call these signals megamasers because they shine millions of times brighter than the smaller masers found in our own *Milky way* galaxy.

Hence, Statements 1 and 2 are correct.

Astronomers treat these beams as cosmic beacons. **Because the radio waves can travel through thick dust, scientists can study them to reveal where they came from and how they could've been produced, even if the source is obscured**. In turn, they can measure how fast galaxies are moving and better understand the evolution of the universe.

Hence, Statement 3 is not correct.

If you know megamasers involve radio/microwaves, and you know radio waves are used for communication because they pass through obstacles (like walls or clouds), you can logically conclude Statement 3 is likely false. High-frequency/short-wavelength (Visible, UV, X-ray) is what gets blocked by dust

28. (d)

Statement 1 is not correct: RNA can and does exist outside of cells:

- I. **Viruses:** Many viruses (like *SARS-CoV-2*) have RNA genomes encapsulated in a protein coat that exist in the environment between hosts.
- II. **Extracellular RNA (exRNA):** Small RNA molecules are found in human bodily fluids like blood, saliva, and urine, often transported in 'packages' called exosomes.

Statement 2 is not correct: While RNA is primarily single-stranded, it is not 'essentially' or exclusively so.

- I. **Secondary structures:** RNA often folds back on itself to form double-stranded regions (hairpin loops).
- II. **Double-stranded RNA (dsRNA):** Some viruses have entirely double-stranded RNA genomes. Additionally, cells use dsRNA

during processes like RNA interference (RNAi).

Statement 3 is not correct: RNA is generally less stable than DNA due to a 2' –OH group, allowing it to act as a versatile, short-term messenger, catalyst (ribozymes), and structural molecule, primarily functioning in protein synthesis.

29. (c)

Dimethyl ether (DME) is a synthetically produced alternative to diesel for use in specially designed compression ignition diesel engines. Under normal atmospheric conditions, **DME is a colorless gas. It is used extensively in the chemical industry and as an aerosol propellant.** Dimethyl ether requires about 75 pounds per square inch (psi) of pressure to be in liquid form. Because of this, DME's handling requirements are similar to those of propane—both must be kept in pressurized storage tanks at an ambient temperature.

Statement 1 is correct: DME is a clean-burning synthetic fuel that can be used in compression ignition (diesel) engines and as a blend with LPG.

Statement 2 is correct: DME (designated R-E170) is used as an eco-friendly refrigerant due to its zero ozone depletion potential (ODP) and low global warming potential (GWP).

Statement 3 is correct: DME is often used as a solvent in various chemical processes, including as an aerosol propellant in personal care products (deodorants, hair sprays).

Statement 4 is not correct: DME has very poor lubricity and low viscosity, which causes premature wear in fuel pumps and injection systems. It requires the addition of lubricity enhancers (like biodiesel) rather than acting as a lubricant itself.

- **Production:** Produced from syngas (derived from coal, natural gas, or biomass). When produced from biomass, it is called Bio-DME, making it carbon-neutral.

- **Comparison with LPG:** DME has a similar boiling point to LPG and can be blended (up to 20%) with LPG for domestic use without major stove modifications.
- **Environmental Edge:** It produces zero soot/particulate matter and significantly lower NO_x than diesel because it lacks Carbon-Carbon bonds.

30. (b)

Statement 1 is not correct: Saturated fats are found in butter, red meat, and full-fat dairy. They raise the level of LDL cholesterol in the blood by reducing the number of LDL receptors in the liver. As a result, the liver removes less LDL from the blood. And as the LDL in the blood builds up, it is oxidised and lodged in the artery walls, where it triggers inflammation and forms plaques. Over time, these plaques narrow the arteries and raise the risk of heart attack and stroke.

On the other hand, monounsaturated fats lower LDL levels without touching the HDL cholesterol level, which helps carry LDL back to the liver for disposal. Polyunsaturated fats, especially omega-3 fatty acids, go further and also reduce the level of triglycerides and dampen inflammation.

Statement 2 is correct: Saturated fats have no double bonds, which makes them rigid and solid at room temperature. Unsaturated fats have one or more double bonds, making them flexible and liquid and thus allowing them to behave differently inside the body.

31. (c)

Triplet 1 is correctly matched: Kharg Island is a highly strategic continental island belonging to Iran, located in the Persian Gulf. It handles the vast majority of Iran's crude oil exports. It is frequently in the news as a primary potential target for retaliatory strikes, which would severely disrupt global energy markets.

Triplet 2 is correctly matched: Hodeidah is a major port city in Yemen, located on the coast of the Red Sea. Controlled by the Houthis, it

has been heavily featured in the news as the launchpad for anti-ship ballistic missiles and has been the target of retaliatory airstrikes by the US and Israel.

Triplet 3 is not correctly matched: While **Eilat** is indeed a vital port city in **Israel** (and a frequent target of Houthi drone strikes from Yemen), it is located at the northern tip of the **Gulf of Aqaba** (an inlet of the Red Sea), *not* the Mediterranean Sea. Israel's major Mediterranean ports are Haifa, Ashdod, and Tel Aviv.

Triplet 4 is correctly matched: **Bandar Abbas** is a major port city and the main naval base of **Iran**. It is strategically positioned to command the **Strait of Hormuz**, the world's most important oil chokepoint, where Iran has occasionally seized commercial vessels.

32. (a)

Statement 1 is correct: Unlike traditional corporate cab aggregators where drivers are legally classified as "independent contractors," Bharat Taxi (Sahakar Taxi) is registered as a cooperative society. Drivers must purchase a nominal share to join, making them formal equity co-owners with a voice in governance and a right to annual profit dividends.

Statement 2 is correct: The platform operates on a revolutionary Zero-Commission model. Instead of taking a percentage cut from every single ride, the app allows drivers to keep 100% of the customer's fare. Drivers only pay a flat, nominal daily subscription fee to access the digital infrastructure.

Statement 3 is not correct: Because the initiative is fundamentally structured as a multi-state cooperative society (backed by major entities like Amul and IFFCO), it was launched by and operates under the jurisdiction of the Ministry of Cooperation, not the Ministry of Electronics and Information Technology (MeitY).

33. (c)

Option (c) is correct:

- **Lacks an official capital:** Nauru does not have an official capital city; Yaren merely

functions as its administrative center. (Kiribati's capital is Tarawa, Tuvalu's is Funafuti, and Marshall Islands' is Majuro).

- **Smallest countries / Entire population:** Nauru is the world's smallest island nation (only 21 sq. km) with a micro-population of just around 10,000 residents.
- **Climate resilience citizenship:** Nauru has initiated a program to sell citizenships to raise vital funds. The goal is to finance the massive engineering and relocation efforts required to move its citizens away from the eroding coasts to the slightly higher, heavily mined interior of the island.

34. (c)

Statement 1 is correct: The Niveshak Shivir (Investor Camp) initiative is specifically designed as a one-stop facilitation platform. Its primary goal is to help investors seamlessly resolve grievances and claim their long-forgotten or unclaimed dividends and shares that have been transferred to the government.

Statement 2 is not correct: While it was indeed launched by the Investor Education and Protection Fund Authority (IEPFA), the IEPFA operates strictly under the Ministry of Corporate Affairs (MCA), not the Ministry of Commerce and Industry.

Statement 3 is correct: A major reason investors struggle to reclaim shares is the complex paperwork, which often forces them to rely on expensive middlemen or agents. The Niveshak Shivir promotes direct, intermediary-free engagement by bringing the investors, the nodal officers of the companies, and the Registrars and Transfer Agents (RTAs) together under one roof to resolve claims face-to-face.

35. (b)

Pair 1 is correctly matched: Mount Dukono is a highly active volcano located on the island of Halmahera in Indonesia. It has been frequently in the news due to its ongoing, near-continuous

eruptions and massive ash plumes that have disrupted flights and local communities.

Pair 2 is correctly matched: Mount Erebus is the southernmost active volcano on Earth, located on Ross Island in Antarctica. It recently made viral global headlines after scientists reported that its daily gas emissions are laced with tiny crystals of metallic gold, spewing roughly \$6,000 worth of gold dust into the frozen air every day.

Pair 3 is not correctly matched: While Japan is famous for its volcanoes, Lewotobi Laki-Laki is actually located on the island of Flores in Indonesia, not Japan. It is a “twin volcano” (along with its counterpart, Lewotobi Perempuan) that has been heavily featured in the news following a series of highly explosive and deadly eruptions that forced mass evacuations.

36. (b)

Pair 1 is not correctly matched: A resolution by the Rajya Sabha to create a new All-India Service under Article 312 requires only a specific type of Special Majority: “not less than two-thirds of the members present and voting.” It does not require an absolute majority (majority of the total membership of the House).

Pair 2 is correctly matched: The impeachment of the President of India under Article 61 is deliberately designed to be the most difficult process in the Constitution. It requires the strictest form of majority: a majority of “not less than two-thirds of the total membership of the House.”

Pair 3 is not correctly matched: An amendment to the Constitution under Article 368 requires a dual condition: it must be passed by a majority of the total membership of the House (Absolute Majority) AND by a majority of not less than two-thirds of the members present and voting. The phrase in the pair is incomplete because it leaves out the absolute majority requirement.

Pair 4 is correctly matched: The removal of the Speaker or Deputy Speaker of the Lok Sabha under Article 94 requires an Effective Majority. The Constitution defines this precisely as a resolution passed by a “majority of all the then members of the House” (which means the total sanctioned strength minus any vacant seats).

37. (c)

The 74th Constitutional Amendment Act of 1992 bars the interference by Courts in the electoral matters of municipalities. It declares that the validity of any law relating to the delimitation of constituencies or the allotment of seats to such constituencies cannot be questioned in any court.

1. It further lays down that no election to any municipality is to be questioned **except by an election petition presented to such authority and in such a manner as provided by the State Legislature.**
2. The 73rd Constitutional Amendment Act of 1992 contains similar provisions in relation to the panchayats.

Hence, Option (c) is correct.

38. (a)

Statement 1 is correct: In a joint sitting of Parliament (convened under Article 108 for ordinary bills), the total strength would rise to 1,100 (850 Lok Sabha + 250 Rajya Sabha). A simple majority would require 551 votes. **Since the Lok Sabha alone would have 850 members, any party or coalition with a clear majority in the Lok Sabha could easily outvote the entire Rajya Sabha,** effectively passing bills without its support.

Statement 2 is correct: Article 75(1A) of the Constitution limits the size of the council of ministers to 15% of the total strength of the Lok Sabha. **With the strength increasing to 850, the maximum number of ministers allowed would rise from**

approximately 81 to 127, representing a significant increase.

Statement 3 is not correct: The constitutional amendment Bills are governed by **Article 368**. Crucially, such Bills must be passed by **each House separately** by a special majority. There is **no provision for a joint sitting** for a constitutional amendment Bill. Therefore, **increasing the Lok Sabha's strength does not grant it more power over the Rajya Sabha in this specific process;** the Rajya Sabha retains its 'veto' power because the Bill cannot move forward without its independent approval.

Statement 4 is not correct: For impeachment of Judges, to initiate proceedings: (i) at least **100 members of Lok Sabha** may give a signed notice to the Speaker, or (ii) at least 50 members of Rajya Sabha may give a signed notice to the Chairman.

Note*: Under Article 61, the impeachment of the President of India (Article 61) requires a 14-day written notice signed by at least **one-fourth of the total members of the House** initiating the charges for 'violation of the Constitution'. In this case, the number of members required to give notice will significantly increase.

39. (d)

According to Article 3 of the Indian Constitution, **Parliament may, by law, alter the name of any State.**

Statement 1 is correct: The Article also states that **no Bill for the purpose shall be introduced in either House of Parliament except on the recommendation of the President** and unless where the proposal contained in the Bill affects the area, boundaries or name of any of the States, the Bill has been referred by the President to the Legislature of that State for expressing its views thereon within such period as may be specified in the reference or within

such further period as the President may allow and the period so specified or allowed has expired.

The State Assembly first passes a resolution for the change of the name and sends it to the Ministry of Home Affairs (MHA). It is then sent for the recommendation of the President to Parliament. Such a Bill can only be introduced in Parliament after the President recommends it.

Statement 2 is correct: The next step is to send the Bill to the affected State's Legislature to get their views within a set time. **A crucial point to note is that the State's opinion is not binding.** Parliament can move forward even if the State disagrees.

The Bill is then introduced in **either the Lok Sabha (Lower House) or Rajya Sabha (Upper House) and must be passed by a simple majority**, i.e. more than 50% of the members must be present and voting in any of the Houses.

Once passed by Parliament, the Bill goes back to the President for final signature. Once signed, **it becomes an Act, and the name is officially changed in the first and fourth Schedules of the Constitution.**

Statement 3 is correct:

Can India become 'Bharat' the same way?

The process of changing the name of the country is significantly more complex than changing the name of a State. As **Article 3 deals exclusively with changing the name of States, changing India's name would require a formal Constitutional Amendment under Article 368.**

Article 1 of the Constitution, which defines the country as "*India that is Bharat, shall be a Union of States...*," **would also need to be amended.**

40. (c)

Option (c) is correct:

Right to Vote: Despite being fundamental

to democracy, the Supreme Court (reaffirmed most recently in the majority judgment of the 2023 Anoop Baranwal case) holds that the right to vote is not an inherent constitutional guarantee. It is a statutory right created, regulated, and restricted by Section 62 of the Representation of the People Act (RPA), 1951.

Right to Contest Elections: Similarly, the right to stand as a candidate is entirely governed by the qualifications and disqualifications laid out in the RPA, 1951. As established in *Jyoti Basu vs. Debi Ghosal*, the right to be elected is “pure and simple, a statutory right.

Because both rights owe their legal enforceability entirely to parliamentary statutes rather than direct constitutional guarantees, they are both classified as statutory rights.

41. (c)

Payment Aggregators is an entity that facilitates aggregation of payments made by customers to merchants through payment channels or through merchant’s interface (physical / virtual) for purchase of goods, services or investment products. E.g., Paytm, Google Pay, PayPal, etc. It is incorporated as a company under the Companies Act, 2013.

Statement I is correct: According to the Reserve Bank of India (RBI) guidelines on the regulation of Payment Aggregators and Payment Gateways, all non-bank entities that offer payment aggregator services must obtain formal authorization from the RBI under the Payment and Settlement Systems (PSS) Act, 2007.

Statement II is not correct: Non-bank Payment Aggregators are strictly regulated by the RBI. While it is a mandatory prerequisite that a non-bank payment aggregator must be a company incorporated in India under the Companies Act (1956 or 2013), this incorporation does not shield or exempt them from RBI regulation.

The RBI actively regulates them through strict compliance requirements regarding net worth, corporate governance, merchant onboarding, KYC, and the maintenance of escrow account

Payment Gateways (PG) and Payment Aggregators (PA).

1. **Payment Gateway:** A technical service provider (like a software pipe). It does not touch the money.

2. **Payment Aggregator:** A financial intermediary. It handles the funds by collecting them from customers and pooling them in an Escrow Account before paying the merchant. Because they “touch” the money, RBI regulation is mandatory to prevent fraud or insolvency

42. (c)

Statement 1 is correct: According to the Reserve Bank of India (RBI) guidelines, a Certificate of Deposit (CD) is a negotiable money market instrument. It is issued (in dematerialised form or as a Usance Promissory Note) against funds deposited at a bank or other eligible financial institution for a specified and fixed time period.

Statement 2 is not correct: While older regulations excluded them, current RBI guidelines—specifically the Master Direction – Reserve Bank of India (Certificate of Deposit) Directions, 2021—now permit Regional Rural Banks (RRBs) and Small Finance Banks (SFBs) to issue CDs. However, Local Area Banks (LABs) and Co-operative Banks remain generally prohibited from issuing them.

Statement 3 is correct: Based on recent initiatives (such as the RBI’s planned pilots for deposit tokenisation), tokenisation involves representing traditional bank deposits as digital tokens on a programmable platform or distributed ledger. This allows wholesale instruments like CDs to be used, transferred, and settled much more fluidly, efficiently, and instantaneously across financial systems compared to legacy settlement processes.

43. (a)

In May 2025, the RBI approved a record surplus transfer of ₹2.69 lakh crore for FY 2024-25. This was significantly higher than the previous year (₹2.11 lakh crore in 2023-24).

Policy Decision: The RBI recently adjusted the Contingent Risk Buffer (CRB) to the upper end of the band (6.5%) and later expanded the range to 4.5% - 7.5% to ensure financial stability.

Statement I is correct: The transfer of surplus profits from the Reserve Bank of India (RBI) to the Central Government is officially classified as non-tax revenue. It represents the net profit (income minus expenditure) transferred from the RBI to the government, acting as a crucial source of income for the government, rather than money collected through taxation. In the Union Budget, this transfer is recorded under the major head "Dividends and Profits"

Statement II is correct: Under Section 48 of the RBI Act, 1934, the Reserve Bank of India is legally exempt from paying income tax or any other tax (like wealth tax or corporate tax) on its income, profits, or gains.

Statement II is the correct explanation of Statement I: Because the RBI is statutorily exempt from paying corporate income tax on its massive earnings (Statement II), the government cannot claim a share of the RBI's wealth via the taxation route. Instead, the mechanism designed by law is that the entirety of the RBI's net balance/profit must be transferred to the Central Government as a surplus dividend. Since it cannot be legally collected as a tax, it is inherently collected and classified as non-tax revenue

44. (b)

The recent "GST 2.0" reforms fundamentally restructured the tax system by eliminating the 12% and 28% brackets, simplifying the primary slabs to 5% and 18%, while introducing a new 40% slab for luxury and "sin" goods.

Statement 1 is correct: Most everyday FMCG products, previously taxed at 18%, were moved to the highly affordable 5% slab to boost mass consumption.

Statement 2 is correct: Individual health and life insurance policies saw massive relief, with the GST rate dropping from 18% to Nil (0%).

Statement 3 is correct: Major household electronics, often called white goods (ACs, washing machines, and TVs over 32 inches), were dropped from the highest 28% bracket down to the standard 18% slab.

Statement 4 is not correct: While small petrol cars (under 1200cc) saw a reduction from 28% to 18%, larger petrol cars (exceeding 1200cc and certain size thresholds) were classified as luxury goods and their tax rate was hiked to the new 40% slab.

Statement 5 is not correct: Despite widespread speculation, the GST Council kept mobile phones and laptops unchanged. They were already in the 18% standard bracket and remained there.

Statement 6 is not correct: Tobacco, pan masala, and aerated drinks are classified as demerit/sin goods. Under the new reforms, they were pushed from 28% up to the new maximum 40% slab to discourage consumption.

Statement 7 is correct: To make education more affordable, items like maps, charts, globes, and exercise books were dropped from 12% to Nil (0%).

45. (b)

Pair 1 is correctly matched: Commercial Paper (CP) is an unsecured, short-term money market instrument issued in the form of a promissory note. Because it is completely unsecured (no collateral), it is typically only issued by highly rated corporate borrowers, primary dealers, and all-India financial institutions who have strong credit ratings.

Pair 2 is correctly matched: Certificates of Deposit (CDs) are negotiable, short-

term, unsecured promissory notes. They are primarily issued by Scheduled Commercial Banks (SCBs) and select All-India Financial Institutions to mobilize bulk deposits from the market.

Pair 3 is not correctly matched: Cash Management Bills (CMBs) are highly flexible, short-term instruments (with maturities of less than 91 days) issued exclusively by the Central Government (not State Governments) to meet temporary, immediate mismatches in its cash flows. State Governments generally rely on Ways and Means Advances (WMA) for short-term liquidity and issue State Development Loans (SDLs) for long-term borrowings.

46. (a)

Statement 1 is not correct: Contrary to later, more rigid interpretations of Dharmashastra, the Arthashastra was quite pragmatic. It **explicitly allowed for the dissolution of marriage (Moksha) under specific conditions, such as mutual enmity or abandonment.** However, it is important to note that this generally applied to the four lower forms of marriage (Gandharva, Asura, Rakshasa, and Paishacha); for the four ‘pious’ forms (Brahma, Daiva, Arsha, and Prajapatya), divorce was much more restricted.

Statement 2 is correct: The Arthashastra permitted widows to remarry, particularly if they had no children or if they needed to ensure the continuity of the family lineage. Kautilya even detailed the protocol for a widow to marry her late husband’s brother (a practice known as *Niyoga*) or another kinsman to protect her subsistence and property.

Statement 3 is not correct: While Kautilya viewed adultery as a serious offense against the social order, **he did not prescribe a blanket death penalty for it. Instead, the Arthashastra outlined a graded system of punishments depending on the varna (caste) of the individuals involved and the circumstances.** Punishments usually involved heavy **fin**es, physical mutilation (such as

cutting off the nose or ears in extreme cases), or loss of property.

47. (d)

Statement 1 is correct: Vindhyashakti I (c. 250 – 270 CE) is credited as the founder of the Vakataka dynasty. His name is derived from the Vindhya mountains. While his son, Pravarasena I, was the only ruler of the dynasty to take the imperial title of *Samrat*, Vindhyashakti laid the groundwork for the family’s rise in the Vidarbha region.

Statement 2 is correct: It is one of the most famous political marriages in ancient Indian history. **Rudrasena II married Prabhavatigupta, the daughter of the powerful Gupta Emperor Chandragupta II (Vikramaditya).**

This alliance was strategically vital; it allowed the Guptas to secure their southern flank while they moved to eliminate the Shaka Kshatrapas in Western India. After Rudrasena II’s untimely death, Prabhavatigupta ruled as a regent for at least twenty years, effectively making the Vakataka kingdom a bridge for Gupta culture and administration into the Deccan.

Statement 3 is correct: Pravarasena II (son of Rudrasena II and Prabhavatigupta) was not only a significant ruler who founded the city of Pravarapura but also a distinguished man of letters. He is the acknowledged author of the *Setubandha* (also known as *Ravanavaho*).

I. **Language:** It is written in Maharashtri Prakrit.

II. **Theme:** It depicts the legend of Rama’s journey to Lanka and the building of the bridge (*Setu*) to defeat Ravana.

III. **Legacy:** The work was so highly regarded that even the famous poet Kalidasa is said to have revised it, and it remains a masterpiece of Prakrit literature.

48. (c)

Sittanavasal caves: (Tamil Nadu, 2nd-century Jain complex)

- Famous for themes like ‘Aravarkoil’ (the tank with lotuses).
- These paintings are significant for Jain iconography. The technique used is close to fresco-secco, where pigments are applied to a dry plaster surface.

Bagh caves: (Madhya Pradesh, Buddhist caves)

- Often called the ‘sister’ to Ajanta due to similar fresco styles.
- Though many have deteriorated, the remaining murals represent the ‘Golden age’ of Gupta art, depicting secular and religious life with a rhythmic flow similar to Ajanta.

Badami caves: (Karnataka, Early Chalukyan architecture)

- Contains some of the earliest surviving Hindu murals (dedicated to Vishnu).
- Houses the earliest evidence of Brahmanical mural paintings.
- They bridge the gap between the classical Ajanta style and the later Vijayanagara style.

Hence, Statements 1, 2 and 3 are correct.

Udayagiri & Khandagiri caves: (Odisha, Jain monastic retreats)

- Famous for the Hathigumpha inscription, but lacks mural traditions.
- These caves are famous for their bas-relief sculptures (carvings that pop out from the wall) rather than surface paintings.
- The art here is structural and lithic.

49. (b)

Statement 1 is correct: Alauddin Khilji’s market reforms were revolutionary for their time. He fixed the prices of almost all essential commodities—from **food grains and cloth to horses and slaves—based on the ‘bar-award’ (production cost) rather than market demand.** His goal was to maintain a

large standing army on low pay by ensuring the cost of living remained low.

Statement 2 is correct: To ensure a steady supply of grain to the state granaries and markets, the Sultanate enforced strict regulations. Peasants in certain regions (like the Doab) were required to pay half of their produce as land revenue in kind. Furthermore, growers were prohibited from hoarding grain or selling it privately to merchants outside of the authorized market framework.

The State mandated that all *Karwanis* (grain merchants) be registered with the *Shahna-i-Mandi* and **reside with their families in villages near Delhi to ensure supply.**

Statement 3 is not correct: While the most rigorous implementation occurred in Delhi, the price-control measures were not exclusive to the capital. Historical accounts (such as those by Barani) suggest that the **Sultan made efforts to enforce these prices in the surrounding territories and provincial towns.** The regulations were intended to be widespread enough to support the military logistics across his expanding empire.

50. (a)

Statement 1 is not correct: While Devaraya I did begin the process of modernizing the army, **it was Devaraya II (reigned 1422–1446) who is most famous for systematically recruiting thousands of skilled muslim archers and cavalymen into the Vijayanagara army.** He did this specifically to close the tactical gap between his forces and the Bahmani Sultanate.

Statement 2 is not correct: The massive engineering feat of constructing a dam across the **Tungabhadra** river and a 15-mile-long aqueduct to solve the city’s water shortage was the work of **Devaraya I (reigned 1406–1422).** He also dammed the **Haridra** river for irrigation purposes.

Statement 3 is correct: Abdur Razzaq, the Persian ambassador sent by Shah Rukh

(the Timurid ruler of Persia), visited the **Vijayanagara empire during the reign of Devaraya II in 1443**. He left behind glowing accounts of the city's wealth and grandeur, famously stating he had "never seen or heard of any place like it in the world".

51. (b)

Statement 1 is not correct: While it is true that cold currents dominate the western coasts of continents in low and middle latitudes (e.g., the California, Peru, Benguela, and Canary currents), the pattern flips in the higher latitudes of the Northern Hemisphere. In higher latitudes, cold currents flow down the eastern coasts of continents (e.g., the Labrador Current and the Oyashio Current), while warm currents bathe the western coasts (e.g., the Alaskan Current and the North Atlantic Drift/Norwegian Current).

Statement 2 is correct: Cold currents have a desiccating (drying) effect on the adjacent landmasses. Because the air above the cold water is chilled, it cannot hold much moisture, preventing cloud formation and rainfall. This is why the world's driest deserts (like the Atacama in South America and the Namib in Africa) are located right next to these western coastal cold currents.

Statement 3 is correct: These eastern boundary cold currents (like the Peru or Benguela) are strongly associated with upwelling. Offshore trade winds push the surface water away from the coast, drawing up freezing, nutrient-rich water from the deep ocean to replace it. This upwelling makes these zones some of the best fishing grounds in the world.

52. (c)

Option (c) is correct:

- **Warm, Dry Summers/Mild, Rainy Winters:** Known as a dry summer climate (Cs), this is a defining feature of the Mediterranean region.
- **Shifting Pressure Belts/Westerlies:** The climate is influenced by the southward

shift of the Westerlies in winter (bringing rain) and the northward shift of sub-tropical high pressure in summer (creating dry conditions).

- **Sclerophyllous Vegetation:** Drought-resistant vegetation with hard, leathery leaves (sclerophyllous) adapted to survive dry summers is typical.
- **Terra Rossa Soil:** This red-colored, well-drained soil forms on limestone bedrock in Mediterranean climates.

53. (b)

Statement 1 is correct: The halocline specifically measures the rapid change in salt content (salinity).

Statement 2 is correct: The pycnocline specifically measures the rapid change in water thickness or weight (density).

Statement 3 is not correct: While the thermocline (the zone of rapid cooling) is very strong in the warm tropics, it is practically non-existent at the poles. Because polar surface water is already near freezing, the water temperature remains roughly the same from the top all the way to the ocean floor.

54. (c)

Triplet 1 is correctly matched: A Cirque is the most common erosional Glacial landform. It is a deep, long, and wide trough or basin with very steep concave to vertically dropping high walls, carved by moving ice at the head of a glacier.

Triplet 2 is correctly matched: Lapies are highly irregular, sharp, and fluted rock surfaces formed by the aggressive chemical dissolution of limestone. They are a classic Karst erosional feature driven by slightly acidic groundwater.

Triplet 3 is correctly matched: A Barchan is a classic crescent-shaped sand dune. It is a depositional Aeolian (desert) landform created by the movement of wind.

Triplet 4 is not correctly matched: While standard "Bars" and "Barrier Bars" are

indeed coastal landforms created by sea waves, a Point Bar is strictly a Fluvial (Running Water) landform. Point bars are deposits of sand and gravel found on the convex, inner bank of a meandering river.

55. (c)

Statement 1 is correct: Black cotton soil (Regur) is rich in montmorillonite clay. It absorbs a massive amount of water and swells up, making the pitch highly cohesive and elastic when properly rolled. Because it holds moisture for a long time, the pitch tends to play slower, offering lower bounce. As the game extends into days 4 and 5, the moisture evaporates, causing the black soil to shrink and create wide cracks, which eventually helps spinners.

Statement 2 is correct: Red soil has a higher proportion of sand and less clay (predominantly kaolinite). It drains water quickly and does not hold moisture well. Because it dries out and hardens fast, it creates a stiff surface that provides superior pace and steep bounce for fast bowlers on Day 1. However, because it lacks the binding elasticity of black soil, the surface is brittle and begins to suffer “wear and tear” (crumbling into dust) much faster, bringing spinners into the game earlier than a black soil pitch.

56. (a)

Statement 1 is not correct: The Central Pollution Control Board (CPCB) is a statutory organization, but **it was constituted in September 1974 under the Water (Prevention and Control of Pollution) Act, 1974, not the Air Act.**

Statement 2 is correct: The Central Pollution Control Board (CPCB) acts as the technical wing of the Ministry of Environment, Forest and Climate Change (MoEFCC), providing essential technical services, policy guidance, and research

under the Environment (Protection) Act, 1986. It assists MoEFCC in setting national environmental standards, monitoring pollution, and managing hazardous waste.

Statement 3 is correct: Historically, various High Courts ruled that Pollution Control Boards **lacked the adjudicatory power to levy environmental compensation, considering it a penal power reserved for courts.** However, in a major ruling in August 2025 (*DPCC vs. Lodhi Property Co. Ltd.*), the Supreme Court completely overturned this. The Apex Court affirmed that Pollution Control Boards do have the statutory authority to impose and collect restitutionary environmental compensation. Crucially, the Court clarified that actual environmental degradation is not a prerequisite; boards can exact compensation or require bank guarantees as an ex-ante (preventative) measure against imminent or potential environmental damage.

57. (b)

Statement 1 is correct: Wetlands are classic examples of an ecotone—a transitional area of vegetation between two different plant communities. They occupy the intermediate zone between permanently flooded deep-water environments (aquatic ecosystems) and strictly dry-land environments (terrestrial ecosystems).

Statement 2 is correct: Because wetlands are typically shallow (usually less than 3 to 6 meters deep), their water is easily mixed by wind and currents. This shallow nature prevents them from developing the stable, distinct temperature layers (thermal stratification into epilimnion, thermocline, and hypolimnion) that characterize deeper lake ecosystems.

Statement 3 is not correct: While it is true that Tamil Nadu currently holds the

highest number of designated Ramsar sites in India, Uttar Pradesh does not have the highest total area of wetlands. Gujarat accounts for the highest total geographical area under wetlands in the country, largely due to the massive expanses of the Rann of Kutch and its long coastline.

58. (c)

Statement I is correct: Fly ash, when applied to soil in measured quantities, can act as a soil conditioner and fertilizer because it contains essential macronutrients and micronutrients (like potassium, calcium, magnesium, and phosphorus), thereby increasing crop yield. However, if airborne fly ash deposits directly onto the surface of plant leaves, it forms a thick, opaque physical coating. This blocks incoming sunlight and drastically reduces the plant's rate of photosynthesis.

Statement II is not correct: While fly ash does contain calcium oxide (which is highly useful for neutralizing acidic soils), it is not the calcium oxide that clogs the plant pores (stomata). The clogging of leaves is a purely physical phenomenon caused by the fine particulate matter of the ash physically coating the stomata, regardless of its specific chemical makeup. Furthermore, regarding its physical impact on the ground, the fine-grained texture of fly ash actually alters the soil matrix to significantly increase its water-holding capacity (which is especially beneficial in sandy, highly porous soils that drain too quickly), rather than acting to increase soil porosity.

59. (a)

Statement I is correct: The Great Nicobar Island (GNI) Project is a massive infrastructure initiative that requires the diversion of approximately 130 sq. km of pristine tropical

forest. To compensate for this ecological loss, the Indian government has formally approved carrying out Compensatory Afforestation (CA) over thousands of hectares in the Aravalli range of Haryana (specifically in districts like Gurgaon, Nuh, and Rewari), rather than in the Andaman and Nicobar Islands.

Statement II is correct: According to the Ministry of Environment, Forest and Climate Change (MoEFCC) guidelines issued in 2019, if a State or Union Territory has a highly dense forest cover—specifically exceeding 75% of its total geographical area—it faces a genuine shortage of available, contiguous non-forest land. Therefore, they are legally exempted from conducting compensatory afforestation within their own borders and are permitted to fund afforestation in a “forest-deficient” state instead.

Statement II is the correct explanation of Statement I: The Andaman and Nicobar Islands boast an exceptionally high forest cover of roughly 82%, which significantly exceeds the 75% statutory threshold mentioned in Statement II. Because they cross this legal limit, the administration is not required to find scarce non-forest land on the islands. This legal exemption directly explains why the compensatory afforestation for the GNI project (Statement I) is being exported thousands of kilometers away to Haryana, a state with one of the lowest forest covers in India (approx. 3.6%).

60. (a)

Statement 1 is not correct: CITES is an international multilateral agreement that was drafted as a result of a resolution adopted in 1963 at a meeting of members of the International Union for Conservation of Nature (IUCN). While the idea for CITES originated from a 1963 resolution adopted by members of the IUCN, the IUCN itself did not (and cannot) adopt the treaty. CITES is a legally binding international agreement

that was formally adopted by sovereign governments (representatives of 80 countries) at a plenipotentiary conference in Washington, D.C., in 1973.

Statement 2 is correct: Although CITES is legally binding on the Parties (meaning they are internationally obligated to implement it), it does not take the place of national laws. Instead, it provides a broad framework that each Party must respect by adopting its own domestic legislation (like India's Wildlife Protection Act) to enforce CITES at the ground level.

Statement 3 is correct: All species listed in the CITES Appendices (I, II, and III) are now covered under Schedule IV of the Wild Life (Protection) Amendment Act, 2022, in India. This amendment streamlines compliance with international trade regulations, mandating registration for possessing or breeding these exotic species via the PARIVESH 2.0 portal.

61. (c)

A rare, years-long 'civil war' among 200+ chimpanzees in Uganda's Kibale National Park (Ngogo community) has resulted in fatal, organized violence between rival factions that split from a single group around 2015.

Statement 1 is correct: Chimpanzees are well-documented for engaging in 'warfare'. The most famous example is the Gombe Chimpanzee War (1974–1978), observed by Jane Goodall.

Statement 2 is not correct: While bonobos and chimpanzees share nearly 99% of their DNA with humans, they have evolved drastically different social behaviors. Bonobos **do not engage in the lethal, organized, intergroup warfare ('civil war') that has been observed in chimpanzees.**

I. Instead of resorting to violent fighting, bonobos use sexual behavior and physical contact to de-escalate tensions and resolve conflicts.

II. Bonobo society is female-dominated, and females form strong coalitions that restrain male aggression.

Statement 3 is correct: Honey bees engage in what is known as robber wars. When resources are scarce, a colony may send scouts to find other hives. If they locate a weaker colony, the **stronger hive will launch a massive, coordinated invasion to kill the guards and steal the honey stores.** These 'civil wars' between neighboring colonies of the same species result in thousands of casualties and the total collapse of the defeated hive.

62. (b)

Statement 1 is correct: Unlike traditional turbojets or turbofans, a Ramjet does not use a mechanical compressor or turbine. Instead, they rely on the 'ram' effect, where the **high forward speed of the vehicle naturally compresses the incoming air.** This makes them significantly lighter and mechanically simpler, though they cannot produce thrust at a standstill.

Statement 2 is correct: Ramjets **cannot start from zero speed because they rely on high-speed ram air pressure for compression, rather than a mechanical compressor.** They need to reach supersonic speeds (roughly Mach 3–6) via a booster, such as a rocket, to produce positive thrust, rendering them incapable of lifting a rocket from a standstill.

Statement 3 is not correct: Ramjets are most efficient at **supersonic speeds (typically Mach 3 to Mach 5).** Above Mach 5 (hypersonic speed), they become **inefficient due to heat and pressure drag.**

63. (d)

Statement 1 is not correct: Type I diabetes is an autoimmune condition where the immune system mistakenly attacks and destroys the **insulin-producing beta cells** in the pancreas.

Statement 2 is not correct: Type II diabetes is a chronic condition where high blood sugar results from the body's inability to properly use insulin or produce enough of it, often caused by genetics, overweight, and inactivity.

64. (d)

Statement 1 is correct: The core of the PFBR is surrounded by a blanket of Uranium-238. Fast neutrons convert this fertile material into fissile Plutonium-239, enabling the reactor to produce more fuel than it consumes.

Statement 2 is correct: Unlike conventional thermal reactors, the PFBR uses Uranium-Plutonium Mixed Oxide (MOX) fuel. The fissile material used is recovered from the reprocessing of spent fuel from Pressurised Heavy Water Reactors, closing the loop on Stage 1.

Statement 3 is correct: The spent fuel generated by the PFBR will be reprocessed and recycled back into the reactor. This closes the second-stage fuel cycle and paves the way for large-scale use of India's abundant thorium reserves in Stage

65. (b)

Option (b) is correct: Aflatoxins are natural, highly toxic compounds produced by certain fungi (*Aspergillus*) that grow on improperly stored agricultural feed (like corn or peanut meals) which becomes damp.

When dairy animals (cows and buffaloes) consume this fungus-contaminated fodder, their livers metabolize the original toxin (Aflatoxin B1) into a new, highly dangerous variant: Aflatoxin M1. The animal then directly secretes this Aflatoxin M1 into its milk. It frequently appears in the news because the Food Safety and Standards Authority of India (FSSAI) regularly flags it as a major public health hazard. Furthermore, standard boiling or

factory pasteurization of the milk does not destroy this toxin.

66. (c)

Statement 1 is correct: The core objective of the Apna Ghar Initiative (launched in 2025) is to address the fatigue, hygiene, and overall well-being of truck drivers who are the backbone of India's logistics sector. It does this by building dedicated resting infrastructure directly at highway fuel stations.

Statement 2 is correct: Because the scheme is entirely focused on "road safety," "highways," and "truck drivers," it is natural to assume it falls under MoRTH. However, because these facilities are being built and operated at fuel retail outlets by Public Sector Oil Marketing Companies (OMCs like Indian Oil, HPCL, BPCL), the nodal ministry is actually the Ministry of Petroleum and Natural Gas.

67. (a)

Statement 1 is correct: The core purpose of the ABHA ID (under the Ayushman Bharat Digital Mission) is to create a seamless digital health ecosystem. It gives citizens a 14-digit number to act as a digital locker, allowing them to consolidate lab reports, prescriptions, and diagnoses, and share them easily with doctors.

Statement 2 is not correct: The creation of an ABHA ID is strictly voluntary. While the government highly encourages it, no hospital (public or private) can deny medical treatment to a patient simply because they do not have an ABHA ID.

Statement 3 is not correct: ABHA is purely a digital identity and records platform, not a financial product. Having an ABHA ID does not automatically grant you free health insurance. (The insurance component is the Ayushman Bharat PM-JAY scheme, which has its own specific

eligibility criteria based on socio-economic deprivation, not just digital registration).

68. (c)

Statement 1 is correct: Because of this immense internal consumption, the domestic prices for both mature and tender coconuts remain significantly higher than prevailing international market rates. (This is a primary reason why India struggles to compete in raw coconut exports against cheaper Southeast Asian markets).

Statement 2 is correct: While countries like Indonesia and the Philippines have larger total land areas dedicated to coconut cultivation, India holds the global record for yield. Thanks to better agricultural practices, India's per palm and per hectare productivity far exceeds that of its major global competitors. For example, In Anaimalai, Tamil Nadu, dwarf × tall hybrid palms yield an impressive 250–300 tender coconuts per tree.

69. (d)

Statement I is not correct: The phrase "blind as a bat" is a complete myth. No bats are blind. All bat species have eyes and are capable of seeing. While it is true that many smaller bats (microbats) rely heavily on echolocation to navigate and hunt insects in pitch darkness, larger fruit bats (megabats, like flying foxes) do not use echolocation at all. Instead, they rely entirely on their excellent night vision and keen sense of smell to find food. Large fruit bats can see up to three times better than humans in dim light.

Statement II is correct: Because bats are primarily nocturnal or crepuscular (active at dawn and dusk), their eyes have evolved specifically for low-light conditions. Unlike human eyes, which have many cone cells for sharp, colorful, daylight vision, bat eyes have a very high concentration of rod cells. This makes their vision highly sensitive in the dark

but easily overwhelmed by bright light. Consequently, their vision is not sharp or colorful compared to humans, but it is highly effective for their nocturnal lifestyle.

70. (a)

Option (a) is correct: The "Three Seas" initiative gets its name from the three distinct bodies of water that border the participating nations: the Baltic, Black, and Adriatic seas.

It is exclusively composed of 13 European Union member states located in Central and Eastern Europe (running vertically down the map from Estonia to Greece, which recently joined as the 13th member). Historically, European infrastructure was built on an East-West axis. The 3SI was created specifically to build massive infrastructure, energy, and digital corridors to connect these Central and Eastern European nations and reduce their historical reliance on Russian energy.

71. (a)

Fundamental Right	Article	Category
Protection of life and personal liberty	Article 21	Right to Freedom
Prohibition of traffic in human beings and forced labour	Article 23	Right against Exploitation. Hence, Statement 2 is not correct.
Protection against arrest and detention	Article 22	Right to Freedom
Abolition of untouchability	Article 17	Right to Equality. Hence, Statement 4 is not correct.

The rights under the 'Right to freedom' are:

1. Protection of certain rights regarding freedom of speech, etc.
2. Protection in respect of conviction for offences.
3. Protection of life and personal liberty.

4. Right to education.
5. Protection against arrest and detention in certain cases. **Hence, Statements 1 and 3 are correct.**

72. (d)

Statement II is correct: Proviso 1 to Section 3(2) of the Judges Inquiry Act, 1968 reads: "Provided that where notices of a motion referred to in sub-section (1) are given on the same day in both Houses of Parliament, no Committee shall be constituted unless the motion has been admitted in both Houses and **where such motion has been admitted in both Houses, the Committee shall be constituted jointly by the Speaker and the Chairman.**"

Statement I is not correct: The Supreme Court, recently, concluded that where notices of motion have been given in both Houses on the same day, the rejection of a notice in one House would **not** automatically result in the notice in the other House failing. There is **nothing in the Inquiry Act to suggest that rejection of a motion in one House would render the other House incompetent to proceed in accordance with law.**

The Supreme Court stated,

It is a settled principle of statutory interpretation that a proviso cannot be read in a way which nullifies the provision to which it is a proviso, unless such an intention is manifest. The main part of Section 3(2) vests the power to constitute a Committee in the Speaker or the Chairman, as the case may be, upon admission of the notice of motion. The first proviso cannot be read to curtail this power except in one clearly defined circumstance, namely, the admission of notices in both Houses. In all other cases, the power of the Speaker or the Chairman to constitute a Committee remains unaffected.

73. (d)

Statement 1 is not correct: Article 44 states that the State shall endeavor to **secure a uniform civil code for all citizens (not all persons living)** throughout the territory of India.

Statement 2 is not correct: Article 43 states that the State shall endeavour to secure, by suitable legislation or economic organization, **a living wage (not fair wage)** and conditions of work ensuring a decent standard of life to all workers (agricultural, industrial, or otherwise).

Statement 3 is not correct: Article 45 states that the State shall endeavour to provide early childhood care and education for all children until **they complete the age of six years.** It was substituted by the **86th Amendment, 2002, which removed from DPSPs the provision for free and compulsory education for all children until they complete the age of fourteen years.**

74. (c)

Statement 1 is correct: The address for removal of the Chief Election Commissioner can be presented to the President **only on the ground of 'proved misbehaviour' or 'incapacity'** and is to be so presented in the same session in which it is passed by each House of Parliament supported by a majority of the total membership of each House and also by a majority of not less than two-thirds of the members of each House present and voting. Further, the conditions of service of the Chief Election Commissioner cannot be varied to his disadvantage after his appointment.

Statement 2 is correct: Protection has similarly been given under the Constitution to the other Election Commissioners and Regional Commissioners **who cannot be removed from Office except on the recommendation of the Chief Election**

Commissioner. Their conditions of service and tenure of Office, subject to the provisions of any law made by Parliament, are regulated by the President.

75. (b)

Statement 1 is correct: Under Article 275, Parliament is authorized to provide statutory grants-in-aid to specific states that are in need of financial assistance (not every state). These grants are charged to the Consolidated Fund of India and are made only on the recommendation of the Finance Commission.

Statement 2 is correct: Article 282 is a very broad provision dealing with discretionary grants. It explicitly states that both the Union and the States can make grants for any “public purpose,” even if that specific subject does not fall within their respective legislative domains (Union List or State List).

Statement 3 is not correct: Under Article 293, State governments can only borrow money from within the territory of India; they have absolutely no constitutional power to borrow from abroad. Furthermore, they cannot do this “without central oversight.” If a state has any outstanding loans or guarantees from the Centre (which all states currently do), they must obtain the prior consent of the Central Government before borrowing.

Statement 4 is correct: Under Article 279, the Constitution dictates that the “net proceeds” of any tax or duty (which is the gross tax revenue minus the cost of collection) are to be calculated and ascertained strictly by the Comptroller and Auditor-General (CAG) of India. The CAG’s certificate regarding this calculation is final and binding.

76. (a)

Statement 1 is correct: The 69th Amendment Act (1991) inserted Article

239AA, which granted special status to Delhi. It redesignated the Union Territory of Delhi as the National Capital Territory (NCT) of Delhi and established a 70-member legislative assembly and a 7-member council of ministers.

Statement 2 is correct: The 25th Amendment Act (1971) was a major socialist amendment. It inserted Article 31C to give precedence to the Directive Principles of State Policy (DPSP) contained in Article 39(b) [equitable distribution of material resources] and 39(c) [prevention of concentration of wealth] over the Fundamental Rights guaranteed by Articles 14, 19, and 31.

Statement 3 is not correct: The 52nd Amendment Act (1985) introduced the Tenth Schedule (Anti-Defection Law). It made the Chairman or the Speaker of the House the deciding authority on disqualification, not the “judicial reviewer.” In fact, the original amendment explicitly barred the jurisdiction of courts. (It was only later, in the landmark Kihoto Hollohan case (1992), that the Supreme Court struck down this bar, ruling that while the Speaker acts as a tribunal, their final decision is subject to judicial review by the High Courts and the Supreme Court, not by the Speaker themselves).

77. (a)

Statement 1 is correct: According to the Constitution, a Money Bill can only be introduced in the Lok Sabha, and it requires the prior recommendation of the President to be introduced.

Statement 2 is not correct: While the Rajya Sabha cannot directly amend or reject a Money Bill, it absolutely has the power to recommend amendments. It must return the bill with its recommendations within 14 days. The Lok Sabha then has the exclusive authority to either accept or

reject those recommendations.

Statement 3 is not correct: While the President cannot return a Money Bill for reconsideration by the Houses, the President does retain the power to either give assent or withhold assent to the bill (though withholding is practically rare since the bill was introduced with their prior permission).

Statement 4 is not correct: A money bill can be introduced also by a non minister MP in Lok Sabha, with a prior recommendation of the President.

78. (c)

Statement I is correct: An International Financial Services Centre (IFSC), such as the one in GIFT City, caters to customers outside the jurisdiction of the domestic economy. It essentially acts as an offshore financial center situated within the onshore territory, providing financial products and services to both non-residents and resident institutions, while dealing exclusively in foreign currencies rather than the domestic currency (INR).

Statement II is not correct: Transactions and payment systems within the IFSC are governed under the Payment and Settlement Systems (PSS) Act, 2007. Through legislative amendments (such as those in the Finance Act), the powers to regulate, supervise, and authorize payment systems under the PSS Act within the IFSC have been explicitly vested in the International Financial Services Centres Authority (IFSCA).

Statement III is correct and it explains Statement I: The primary legal mechanism that allows an IFSC to operate as an offshore jurisdiction (dealing in foreign currency) while physically located within India is its explicit designation as a non-resident zone under the Foreign Exchange Management Act (FEMA). Because it is

treated as a foreign territory for exchange control purposes, it bypasses domestic currency restrictions, allowing it to legally provide the offshore financial services in foreign currencies as described in Statement I.

79. (b)

In early 2026, the Ministry of Statistics and Programme Implementation (MoSPI) introduced a massive structural reset to India's headline inflation measurement by shifting the CPI base year from 2012 to 2024. Based on the latest Household Consumption Expenditure Survey (HCES), the item basket was expanded from 299 to 358 items to reflect contemporary, post-pandemic consumption patterns and align with the global COICOP 2018 framework.

Statements 1, 2, 4, and 6 are correct:

- To capture the modern service-driven economy, digitalization, and changing lifestyle behaviors, several new items were explicitly added to the new CPI basket.
- Rural house rent was introduced for the very first time, improving the representativeness of rural inflation.
- The digital economy is now captured through Online media/streaming services (OTT platforms) and e-commerce prices.
- Changing demographics and lifestyle needs brought in Attendant and babysitter services and exercise equipment.
- The energy transition is reflected by adding Cleaner domestic fuels (CNG/PNG).

Statements 3 and 5 are not correct: These items were not added; they were explicitly deleted from the new index. Items like VCR, VCD, and DVD players, audio/video cassettes, radios, and second-hand clothing were removed from the new CPI basket because they have suffered technological obsolescence and no longer hold meaningful weight in modern household expenditure.

80. (a)

Statement 1 is correct: India is categorized as having full Current Account Convertibility. This was achieved in August 1994 when India accepted obligations under Article VIII of the IMF Articles of Agreement. This means there is full freedom to convert the Indian Rupee into other currencies (and vice versa) for day-to-day current account transactions, such as payments for the import and export of goods and services, interest payments, and remittances.

Statement 2 is not correct: This refers to Capital Account Convertibility, which is currently only partial in India. The Tarapore Committees (1997 and 2006) laid out roadmaps, but India has never transitioned to full capital account convertibility. Inward and outward capital flows (like purchasing foreign assets, foreign direct investment, and external commercial borrowings) remain regulated and subject to specific constraints, sectoral caps, and quotas (such as the Liberalised Remittance Scheme limits for individuals).

Statement 3 is not correct: The RBI has been pushing for the use of Special Vostro Rupee Accounts (SVRA) to settle international trade in INR (specifically with Russia, Sri Lanka, and Mauritius).

The definitions provided in the statement are swapped.

- A **Nostro account** (from Latin for “ours”) is “our account with you.” It refers to a **domestic bank’s account held in a foreign bank in the foreign country’s currency** (e.g., SBI India holding a US Dollar account with Citibank in New York).
- A **Vostro account** (from Latin for “yours”) is “your account with us.” It refers to a **foreign bank’s account held in a domestic bank in the domestic currency** (e.g., Citibank New York holding an Indian Rupee account with SBI in Mumbai).

81. (b)

Statement I is correct: Under the Income Tax Act 2025, the powers of income tax authorities during search and seizure proceedings have been significantly broadened. Authorities are now explicitly permitted to gain access to a “virtual digital space” (defined as environments like email servers, cloud storage, social media, and online trading accounts) and even override access controls or passwords to retrieve electronic documents and evidence of unaccounted transactions.

Statement II is correct: To keep pace with the evolving economic environment, the definition of “undisclosed income” for the purpose of assessing search and block period cases has been expanded. While it previously covered physical items like money, bullion, and jewellery, it now explicitly includes “virtual digital assets” (such as cryptocurrencies and NFTs).

While both statements are factually correct and reflect the Act’s modernization regarding the digital economy, **Statement II is not the correct explanation for Statement I.** The procedural power to search a virtual digital space is primarily intended to uncover digital footprints, encrypted communications, and electronic records of any tax evasion or hidden financial data, not solely because virtual digital assets are now classified as undisclosed income.

82. (a)

Statement 1 is not correct: Regional Rural Banks (RRBs) were established in 1975, but they were formed based on the recommendations of the Narasimham Working Group (1975), not the Dr. Vyas Committee. The Vyas Committee was formed much later in 2004, recommending the amalgamation and restructuring of RRBs.

Statement 2 is not correct: While it is true that RRBs are regulated by the RBI and supervised by NABARD, their ownership structure is a

joint venture between three entities, not just two. The equity of a Regional Rural Bank is held by the Central Government, the Sponsor Bank, and the State Government in the proportion of 50:35:15, respectively.

Statement 3 is correct: To fulfill their core mandate of serving the rural economy, RRBs are required to allocate a significantly higher portion of their lending to priority sectors compared to standard commercial banks. They must allocate 75% of their Adjusted Net Bank Credit (ANBC) or Credit Equivalent Amount of Off-Balance Sheet Exposure (CEOBE), whichever is higher, to Priority Sector Lending (PSL).

83. (a)

Statement 1 is correct: Babur's invasion was not a random act of aggression; he was actively encouraged by internal rivals of the Delhi Sultanate. Daulat Khan Lodi, the Governor of Punjab sent invitations to Babur, hoping he would overthrow the unpopular Ibrahim Lodi and then depart, leaving the throne vacant for them.

Statement 2 is correct: Babur's victory against a much larger army (roughly 12,000 against Lodi's 100,000) was due to his superior tactics:

I. **Tulughma:** This involved dividing the army into different units (left, right, and center) to encircle the enemy from the flanks.

II. **Araba:** Babur used carts (wagons) tied together with animal hide ropes to create a defensive breastwork, behind which his cannons and matchlock men could fire safely.

Statement 3 is not correct: While Babur is credited with the first effective and decisive use of **artillery** (cannons/field guns) in Northern India, he was **not** the first to introduce gunpowder to the subcontinent. Gunpowder and early pyrotechnics had been used in India (specifically in the Deccan and Bengal regions) as early as the mid-14th century. Babur's contribution was the organized use of 'gunpowder warfare' through heavy artillery and musketry.

Note*: Ustad Ali and Mustafa: These were **Babur's two master gunners (of Ottoman descent) who handled the artillery.**

84. (c)

Statement 1 is correct: The Ryotwari system was **first introduced on a trial basis by Captain Alexander Read in the Baramahal region (modern-day Tamil Nadu) in 1792.** It was later developed and refined by Thomas Munro, who became the Governor of Madras in 1820.

Statement 2 is not correct: Mackenzie's recommendations led to the implementation of the **Mahalwari system in the North-Western provinces of the Bengal Presidency** (parts of modern-day Uttar Pradesh) around 1822.

Mackenzie's recommendations were incorporated in the Regulation VII of 1822, which provided for a detailed field-to-field survey for revenue assessment. Settlement was to be made with the village community or with a taluqdar where available; and in addition to the rights of the proprietors, the rent to be paid by the resident cultivating peasants was also to be ascertained and recorded.

Statement 3 is correct: After its success in Madras, the Ryotwari system was extended to the **Bombay Presidency.** This **expansion took place under the supervision of Mountstuart Elphinstone**, who served as the Governor of Bombay. The system was slightly modified to suit the local conditions of the Deccan.

Note*: The Ryotwari system in the Bombay Presidency had its beginning in Gujarat after its annexation in 1803, and then when the peshwa's territories were conquered in 1818, it was extended to those areas as well under the supervision of Munro's disciple, Mountstuart Elphinstone.

85. (d)

The Indian Association for the Cultivation of Science (IACS) was established in Calcutta on

July 29, 1876, by **Dr. Mahendra Lal Sircar (also spelled Mahendralal Sarkar)**.

I. **Founder:** Dr. Mahendra Lal Sircar, a dedicated medical practitioner and campaigner for scientific education in India, founded the institution to cultivate science in all its departments through original research.

II. **Significance:** It was the first national science association in India, designed to be funded, run, and managed by native Indians.

Note*: Keshub Chandra Sen was on the first Trustee Board.

86. (c)

The Munda ulgulan of 1899–1900, under the guidance of a charismatic religious leader, Birsa Munda was one of the most important tribal movements.

The alienation of Munda land and the advent of dikus had spurred an agitation under their leaders in 1890–95. This **movement gradually came under the leadership of Birsa, who for two years mobilised the Munda tribal peasants from a wide region in Chhota Nagpur in Bihar**, by promising to protect them from an apocalyptic disaster. Rumours spread about his occult powers, ability to heal diseases and perform miracles. In tribal imagination, he appeared as a messiah who could turn British bullets into water. He took them on a pilgrimage to Munda holy places and on the way held large public meetings, **talking about a golden past or satyug that was gone and the dark kalyug that had befallen, when the Munda land was ruled by Queen Mandodari, the wife of the demon King Ravana—probably a metaphor for the Raj under Queen Victoria.**

What came out in these meetings was the tribal peasants' antipathy towards the foreigners, the dikus—the landlords and the moneylenders and their patrons, the sahibs (Europeans)—both officials and Christian missionaries. The grounds were thus prepared for a massive

anticolonial tribal uprising that started during the Christmas of 1899.

It targeted churches, temples, policemen and other symbols of the new regime and was finally defeated by the government forces. What was important, however, about the Munda ulgulan was their greater awareness of the wider political realities of the colonial state. Tribal territoriality notwithstanding, Birsa's ambitions were no longer localised. The aim of his movement was not merely to drive out the dikus, but **“to destroy their enemies and put an end to the British Raj”** and establish in its place **“a Birsa Raj and a Birsait religion”**. It was this political awareness and ability to connect to the broad picture that was new in the late nineteenth century tribal movements.

Hence, Statements 1, 2 and 3 are correct.

87. (a)

The Simon Commission was boycotted by all major political parties because **it did not include any Indian member. Hence, Option (a) is correct.**

I. **All-White Commission:** The Commission, appointed in 1927 to review the Government of India Act 1919, **consisted of seven British Members of Parliament and no Indian representatives.**

II. **Insult to self-respect:** The exclusion of Indians was seen as an insult to Indian self-respect, as it implied that only foreigners could decide the constitutional future of India.

III. The Commission arrived in India in 1928 to widespread protests, hartals, and 'Simon Go Back' slogans.

IV. The **Indian National Congress, along with a majority of the Muslim League** (led by Jinnah), **decided to boycott the Commission.**

88. (b)

On January 25, 1931, Gandhi and all other members of the Congress Working Committee (CWC) were released unconditionally.

The CWC authorised Gandhi to initiate discussions with the viceroy. As a result of these discussions, a pact was signed between the viceroy, representing the British Indian Government, and Gandhi, representing the Indian people, in Delhi on February 14, 1931.

This Delhi Pact, also known as the Gandhi-Irwin Pact, placed the Congress on an equal footing with the Government.

Irwin on behalf of the Government agreed on—

1. **immediate release of all political prisoners not convicted of violence; Hence, Statement 1 is correct.**
2. remission of all fines not yet collected;
3. return of all lands not yet sold to third parties;
4. lenient treatment to those government servants who had resigned;
5. right to make salt in coastal villages for personal consumption (not for sale);
6. **right to peaceful and non-aggressive picketing; and**
7. **withdrawal of emergency ordinances. Hence, Statements 2 and 3 are not correct.**

The viceroy, however, turned down two of Gandhi's demands—

(i) **public inquiry into police excesses, and Hence, Statement 4 is correct.**

(ii) commutation of Bhagat Singh and his comrades' death sentence to life sentence.

Gandhi on behalf of the Congress agreed—

- (i) to suspend the civil disobedience movement, and
- (ii) to participate in the next Round Table Conference on the constitutional question around the three lynch-pins of federation, Indian responsibility, and reservations and safeguards that may be necessary in India's interests (covering such areas as defence, external affairs, position of minorities,

financial credit of India and discharge of other obligations).

89. (b)

Statement 1 is correct: The hydrological cycle is a continuous mechanism of evaporation, condensation, and precipitation. While water constantly changes its state (solid, liquid, gas) and its location, the absolute total volume of water on Earth—and the renewable water cycling through it—remains constant over human timescales.

To solve these “Distribution” questions, use the G-I-G-L rule (order of volume):

- Glaciers/Ice Caps (\approx 68.7\%)
- Inter-terrestrial/Groundwater (\approx 30.1\%)
- Ground Ice/Permafrost (\approx 0.8\%)
- Lakes/Rivers/Atmosphere (<0.4\%)

Statement 2 is not correct: The cryosphere (glaciers and ice caps) holds about 68.7% of the world's freshwater, while groundwater accounts for approximately 30.1%. This means the volume in the cryosphere is roughly 2.3 times the volume of groundwater, not “nearly three times”.

Statement 3 is not correct: Because humans rely almost entirely on lakes and rivers for survival, it is easy to overestimate their volume. In reality, surface water in lakes and rivers makes up a remarkably minuscule fraction of total freshwater—less than 1% (often cited as around 0.3%). The vast majority of freshwater is either frozen or buried deep underground, not flowing on the surface.

90. (a)

Statement 1 is correct: Atmospheric rivers function literally as “rivers in the sky.” They are relatively long, narrow atmospheric corridors that serve a critical geographical mechanism by transporting the vast majority of the Earth's water vapor outside of the tropics, moving moisture to

higher latitudes (a famous example being the "Pineapple Express").

Statement 2 is not correct: While it is true that exceptionally strong atmospheric rivers can stall and cause disastrous flooding or mudslides, the vast majority of atmospheric rivers are weak systems. Far from being strictly hazardous, they are highly beneficial and crucial for the global water cycle, providing essential rain and building mountain snowpacks that sustain regional water supplies.

91. (c)

Triplet 1 is correctly matched: Ujjain is a prominent historical city situated along the banks of the Shipra River in Madhya Pradesh. The Shipra is a key tributary of the Chambal River.

Triplet 2 is correctly matched: Lucknow, the capital of Uttar Pradesh, is located on the banks of the Gomti River, which is a major tributary of the Ganga.

Triplet 3 is not correctly matched: While Hyderabad is situated on the banks of the Musi River, the Musi is actually a tributary of the Krishna River, not the Godavari.

Triplet 4 is correctly matched: Kurnool is located along the Tungabhadra River, which is one of the most prominent tributaries of the Krishna River system.

92. (d)

Statement 1 is correct: During winter, Western Disturbances – which are shallow, extratropical cyclonic depressions originating over the Mediterranean Sea – are steered into the Indian subcontinent by the high-altitude Sub-Tropical Westerly Jet Stream (STWJ). They bring light but highly crucial winter precipitation (locally called Mahawat) to north-west India. This rainfall is economically vital for the successful cultivation of Rabi crops, particularly wheat.

Statement 2 is correct: The north-eastern states (such as Assam and Arunachal Pradesh) also experience winter rainfall. This precipitation is driven partly by the eastward continuation of those same Western Disturbances interacting with the local hilly topography (orographic lifting), and partly by localized cyclonic circulations or the remnants of the retreating monsoonal moisture.

Statement 3 is correct: The primary moisture source for these winter disturbances lies far to the west (the Mediterranean and Caspian Seas). Because the weather systems travel overland from west to east, they continuously shed their moisture along their path. Consequently, there is a distinct geographical gradient: the intensity and volume of winter rainfall progressively decrease as you move from the north-west (Punjab and Haryana) towards the east (Eastern UP, Bihar, and West Bengal).

Statement 4 is correct: By early winter, the Inter Tropical Convergence Zone (ITCZ) shifts southwards, triggering the North-East Monsoon (retreating monsoon). Because these winds blow primarily from land to sea, they are fundamentally dry. However, as the winds sweep over the Bay of Bengal, they absorb significant oceanic moisture. When they finally strike the Coromandel Coast, they release this moisture, making the south-eastern coastline (Tamil Nadu, Puducherry, and adjoining coastal Andhra Pradesh) the primary recipient of retreating monsoon rainfall.

93. (b)

Statement 1 is correct: Global Dimming is a direct consequence of increased atmospheric aerosols. Aerosol particles (like sulfates, ash, and black carbon) scatter or absorb incoming solar radiation,

significantly reducing the amount of direct sunlight that successfully reaches the Earth's surface.

Statement 2 is correct: Aerosols play a critical role in cloud formation by acting as Cloud Condensation Nuclei (CCN). An increase in aerosols means water vapor condenses around a much larger number of particles, creating clouds composed of many smaller water droplets. This makes the clouds more reflective to sunlight (higher albedo), a phenomenon known as the "Twomey effect" or cloud brightening, and also increases their lifespan.

Statement 3 is not correct: Increased aerosols in urban and industrialized areas do exactly the opposite. Due to vehicular emissions, construction dust, and industrial exhaust, urban areas suffer from severe aerosol concentration. This leads to the formation of dense smog, poor air quality, and localized "brown clouds" or pollution domes, rather than "clean air islands."

94. (d)

Both "Conservation Reserves" and "Community Reserves" were introduced as protected area categories under the Wildlife (Protection) Amendment Act of 2002 to act as buffer zones and migration corridors, and to bring local communities into the conservation fold.

Statement 1 is correct: While protected areas are primarily notified by the State Government, the Central Government also holds this power. Under Section 38 of the Wildlife (Protection) Act, 1972, if a State Government leases or transfers control of an area to the Central Government, the Central Government is fully empowered to declare that area as a Sanctuary, National Park, or Conservation Reserve.

Statement 2 is correct: A Conservation Reserve is typically declared on government-owned land that serves as a link between two protected areas. However, Section 36A of the

Act legally mandates that the State Government can only make this declaration after having consultations with the local communities.

Statement 3 is correct: A National Park is strictly government-owned land where all private rights are extinguished. In contrast, a Community Reserve (Section 36C) is specifically declared on private or community land when an individual or community volunteers to conserve wildlife. The legal ownership of the land does not transfer to the state; it remains with the individuals or the community.

95. (a)

Statement 1 is correct: Often referred to as the "High Seas Treaty," the BBNJ Agreement is the third legally binding implementing agreement established under the United Nations Convention on the Law of the Sea (UNCLOS). Its primary goal is to protect marine biodiversity in international waters (areas beyond 200 nautical miles from the coast).

Statement 2 is not correct: The negotiators specifically designed the BBNJ agreement to be inclusive. It is open for signature and accession to all States, even those that are not parties to the parent UNCLOS treaty (a notable example being the United States, which has not ratified UNCLOS but can still participate in the BBNJ framework).

Statement 3 is not correct: Because the treaty deals with marine life, it is tempting to link it to fisheries. However, the Union Cabinet designated the Ministry of Earth Sciences (MoES) as the nodal administrative ministry for steering the BBNJ agreement and its implementation in India.

Statement 4 is not correct: The Union Cabinet of India officially approved the signing of the BBNJ agreement in July 2024. However, India has not yet ratified it. Ratification is a separate, subsequent legal process that binds a country to the treaty's terms, and the BBNJ itself requires

60 ratifications globally to officially enter into force.

96. (c)

The Union Cabinet approved the establishment of the International Big Cat Alliance (IBCA) with Headquarters in India and has also allocated a one-time budgetary support of Rs 150 crore for a five-year period, from 2023–24 to 2027–28.

The International Big Cat Alliance (IBCA) is a global alliance that aims to conserve the world's seven main big cats. Out of 7 big cats, India is home to 5: Tiger, Lion, Leopard, Snow Leopard and Cheetah. Hence, Statements 1, 2, 3, 4, and 5 are correct.

Membership to the alliance will be open to 96 range countries These are the countries which contain the natural habitat of these big cats. The alliance is also open to other countries, conservation organisations, scientific organisations, businesses, and corporations interested in supporting big cats. In addition, nine international organizations, including the International Union for Conservation of Nature (IUCN), and the World Wildlife Fund (WWF) International, have given consent to join the alliance.

The advantages of membership are a central common repository for technical know-how and a corpus of funds. It will provide a platform for the member nations to share knowledge and expertise and extend support to recovery efforts in potential habitats.

97. (c)

The Global Environment Facility (GEF) serves as the designated financial mechanism for exactly five major international conventions:

1. United Nations Framework Convention on Climate Change (UNFCCC)
2. United Nations Convention on Biological Diversity (UNCBD)
3. Minamata Convention on Mercury

4. Stockholm Convention on Persistent Organic Pollutants (POPs)
5. United Nations Convention to Combat Desertification (UNCCD)

Hence, Statements 1, 2, 4 and 5 are correct.

Statement 3 is not correct: The Basel Convention (along with the Rotterdam Convention) is often grouped with the Stockholm Convention as part of the 'BRS Conventions' dealing with hazardous chemicals and waste. **However, the GEF is not the official financial mechanism for the Basel Convention.**

98. (c)

Option (c) is correct: The concept of Planetary Boundaries was introduced in 2009 by a group of Earth system and environmental scientists led by Johan Rockström from the Stockholm Resilience Centre. It defines a 'safe operating space for humanity' based on the intrinsic biophysical processes that regulate the stability and resilience of the Earth system. It identifies nine specific global priorities (such as climate change, ocean acidification, freshwater use, and biosphere integrity) and sets quantitative boundaries for them. **As long as humanity stays within these thresholds, we can continue to survive, develop, and thrive for generations. Crossing them increases the risk of generating large-scale, abrupt, or irreversible environmental changes.**

99. (b)

Statement 1 is not correct: As the name explicitly suggests, they are not made entirely of organic carbon. MOFs require two distinct components: Metal ions (which act as the joints) and Organic molecules (which act as the bridges connecting the metals).

Statement 2 is correct: Because MOFs act like highly customizable, microscopic molecular sponges with massive internal cavities, one of their most revolutionary applications is efficiently trapping and extracting trace

amounts of water vapor even from arid, desert environments.

Statement 3 is not correct: Ethylene is a natural plant hormone that accelerates ripening and decay. To increase shelf life, MOF-based packaging does not release ethylene; rather, it is designed to absorb and trap the ethylene emitted by the food, thereby delaying the rotting process.

100.(b)

Statement 1 is correct:

- **CFL (Compact Fluorescent Lamp):** Works by sending an electric current through a tube containing mercury vapor. This creates ultraviolet (UV) light, which then excites a phosphor coating on the inside of the tube, emitting visible light.
- **LED (Light Emitting Diode):** Works via **electroluminescence** in a semiconductor.

When current flows through the diode, electrons recombine with holes, releasing energy in the form of photons (light).

Statement 2 is not correct:

- **CFLs** typically last between **8,000 to 15,000 hours**.
- **LEDs** are far more durable, with an average lifespan ranging from **25,000 to 50,000 hours** (and sometimes up to 100,000 hours).

Statement 3 is correct:

- LEDs are significantly more efficient at converting electricity into light.
- **LEDs** use about **75-80% less energy** than traditional incandescent bulbs, whereas CFLs use about **65-70% less**.
- A large portion of energy in a CFL is wasted as heat, while LEDs remain much cooler during operation.

