

Test Code

01011826



Date : 18/01/2026

CA-VA : CURRENT AFFAIRS

ALL INDIA OPEN TEST FOR CSE 2026

(GENERAL STUDIES)

Answer Key

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

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1. (c)

Why in News?

Indian Iron Age archaeology was in the news due to recent excavations in Tamil Nadu, Telangana, and Karnataka and reinterpretations of material culture that refine our understanding of early social complexity and architecture.

DETAILED SOLUTIONS:

Statement 1 – Correct.

Iron tools are a defining feature of the Iron Age. Early Iron Age sites in peninsular India, like those in the Deccan and South India, show clear evidence of iron implements used for agriculture and warfare.

Statement 2 – Correct.

Black-and-Red Ware pottery is commonly found at early Iron Age sites in peninsular India. This distinctive pottery is a key archaeological marker for this period in regions like the Deccan and South India.

Statement 3 – Correct.

Megalithic burial practices, such as stone circles and dolmens, are strongly associated with the early Iron Age in peninsular India. These burials often contain iron objects and Black-and-Red Ware.

Statement 4 – Incorrect.

Extensive use of baked brick architecture was not a feature of early Iron Age sites in peninsular India. This type of advanced, urban architecture developed later in the Gangetic plains during the subsequent historical periods.

2. (b)

Why in News?

Recently, Himachal Pradesh notified ST status for the Hatti community in Sirmour, while Irula families in Tamil Nadu's Kunnappattu face eviction and lack legal land rights and recognition.

DETAILED SOLUTIONS:

A. Stamp A

Stamp A describes the Toda tribe. They are a pastoral tribe from the Nilgiri hills, known for rearing buffalo and living in unique barrel-shaped huts. This is a perfect match with the tribe listed for Stamp A.

B. Stamp B

Stamp B is incorrect because it misrepresents the Hatti tribe. The Hattis were recently granted Scheduled Tribe status and live in the western Himalayan region (mainly Himachal Pradesh and parts of Uttarakhand). They are primarily a settled agrarian/rural community, not transhumant pastoralists.

C. Stamp C

Stamp C describes the Irula tribe. They are a Particularly Vulnerable Tribal Group, skilled in snake catching and forest livelihoods. This is a correct match with the tribe listed for Stamp C.

Based on the explanations above, only two stamps (A and C) correctly match their listed tribes. Therefore, answer corresponds to option B.

3. (c)

Why in News?

A three-foot-tall statue of the 13th-century saint Narahari Tirtha, holding palm-leaf manuscripts and accompanied by devotees, was found at Simhachalam Temple, Visakhapatnam (Andhra Pradesh).

DETAILED SOLUTIONS:

1. Narahari Tirtha was a follower of Madhvacharya's Dvaita philosophy. This school strongly believes in dualism, meaning God and the individual soul are separate. It explicitly rejects monism, the idea that all is one.
2. Narahari Tirtha served as a governor or administrator for the Eastern Ganga dynasty, a major South Indian empire. After his political career, he renounced worldly life to fully dedicate himself to spiritual pursuits.
3. He played a key role in eastern India, particularly Odisha, by establishing Vaishnava centers and rituals. His efforts helped strengthen and organize the devotional worship of Lord Vishnu in that region.
4. His legacy is deeply connected to promoting organized worship in temples. He is credited with installing deities and establishing systematic temple rituals, making temples central to community religious practice.

4. (b)

Why in News?

There has been renewed public discussion on the President's clemency (pardoning) powers under Article 72 of the Constitution, including comparisons with how clemency works in other countries like the US.

DETAILED SOLUTIONS:

Statement 1 – Correct.

Remission means the sentence length is shortened, but the type of punishment stays the same. For example, a 10-year jail term might be reduced to 7 years. It does not change the fact that the punishment is imprisonment.

Statement 2 – Incorrect.

Commutation means substituting a punishment with a less severe one (e.g., death → life imprisonment; life imprisonment → rigorous imprisonment). Hence, "irrespective of severity" is incorrect, since commutation generally reduces the severity of punishment.

Statement 3 – Incorrect.

A reprieve is a temporary delay of a punishment, usually a death sentence, to allow the convict time to seek a pardon or commutation. It is not about waiting for other legal cases to finish.

Statement 4 – Correct.

Respite is giving a convict a lesser sentence because of a unique personal situation, like the prisoner's poor health or if the convict is a woman who is pregnant. It considers special individual factors.

5. (a)

Why in News?

The topic of Presidential Election gained attention during the election cycle, sparking discussion on the electoral college and vote value calculation. The ECI clarified that MP/MLA vote values are still based on the 1971 Census, reviving debates on population control and federal balance.

DETAILED SOLUTIONS:

Statement 1 – Incorrect.

Nominated members of Parliament and State Legislative Assemblies are not part

of the electoral college for the Presidential election. Only elected members of both houses of Parliament and elected members of State Legislative Assemblies can vote.

Statement 2 – Incorrect.

The value of an MLA's vote depends on the state's population divided by its number of elected seats. A higher number of elected seats, if the population is the same, actually lowers the value of each vote, not increases it.

Statement 3 – Incorrect.

The value of an MLA's vote in Madhya Pradesh is less than that of Kerala. This is because Kerala has a higher population per elected seat, which is the formula used to calculate the vote value.

Statement 4 – Correct.

Puducherry's population-to-seat ratio is higher than Arunachal Pradesh, hence per-MLA vote value is higher.

6. (d)

Why in News?

Recently, the Supreme Court declared the National Green Tribunal (NGT) as a "unique" institution, empowered to initiate suo motu proceedings to address environmental matters across the country.

DETAILED SOLUTIONS:

Statement 1 – Correct.

The National Green Tribunal can initiate proceedings suo motu. This power is given by law to protect the environment. It allows the tribunal to act when it sees an environmental problem, even if no one files a complaint.

Statement 2 – Correct.

The Competition Commission of India can begin inquiries by itself. Its law permits

it to look into anti-competitive practices without needing a formal complaint. This helps ensure fair markets proactively.

Statement 3 – Correct.

The National Commission for Women has the power to take up issues on its own motion. It can investigate matters related to women's rights and safeguards without waiting for a victim to come forward.

7. (b)

Why in News?

The Bihar State Government has proposed the inclusion of the Krishi Vaishya/Chasot community in the Scheduled Tribes list.

DETAILED SOLUTIONS:

Statement 1 – Incorrect.

The Governor does not have the power to declare a community as a Scheduled Tribe. This power belongs to the President of India. The President issues the official list after consulting with the state government.

Statement 2 – Correct.

A community can be recognized as a Scheduled Tribe in one state but not in another. The list is state-specific. This is because tribal status depends on the social and historical conditions of that community in each particular state.

8. (c)

Why in News?

Recently, the Supreme Court set aside the Madras High Court's judgment and granted maternity leave to a woman who was earlier denied it because she had two children from a previous marriage.

DETAILED SOLUTIONS:

1. A woman with children from a previous marriage seeks maternity benefit for a later pregnancy

The law says maternity benefit is for every pregnancy. It cannot be denied just because a woman already has children. This rule protects working mothers regardless of their family size or past marriages.

2. Maternity benefit denied solely because the employee is not a biological mother Denying benefits because someone is an adoptive or commissioning mother is wrong. It goes against constitutional rights to equality and dignity, as recognized by the Supreme Court of India.

3. Reproductive choices made subject to employer approval

Forcing an employee to get an employer's permission for personal choices like pregnancy violates their right to privacy and decisional freedom under Article 21 of the Constitution.

All three pairs correctly describe the legal and constitutional positions based on Indian court judgments, hence option C is correct.

9. (a)

Why in News?

A five-judge Constitution Bench of the Supreme Court delivered an advisory opinion under Article 143 of the Constitution on the powers and limits of Governors and the President when Bills reach their office for assent.

DETAILED SOLUTIONS:

Statement 1 – Correct.

A Bill that reduces the power of a High Court must be sent to the President by the Governor. This is a constitutional rule to protect the independence of the judiciary from state governments.

Statement 2 – Incorrect.

A Money Bill passed without the Governor's prior recommendation is

irregular. However, the Constitution does not say such a Bill must be sent to the President. The Governor can return it to the legislature.

10. (a)

Why in News?

Recently, the engineering exporters' body Engineering Export Promotion Council (EEPC India) has urged the government to reinstate the Interest Equalization Scheme (IES) for all exporters and to enhance its benefits for Micro, Small and Medium Enterprises (MSMEs).

DETAILED SOLUTIONS:

Statement 1 – Correct.

The scheme's main goal is to help Indian exporters compete globally. It does this by reducing their cost of loans from banks. This helps balance the higher interest rates they face compared to foreign competitors.

Statement 2 – Incorrect.

The scheme does not give direct cash to exporters. Instead, it provides a subsidy to banks. Banks then reduce the interest rate on loans given to exporters for their shipments.

11. (d)

Why in News?

Recently, ITAT rulings highlighted issues in **capital gains tax exemptions**, granting relief in a reinvestment-related penalty case and clarifying rules that affect eligibility for exemption.

DETAILED SOLUTIONS:

Option (a) – Incorrect.

Conversion of a capital asset into stock-in-trade is treated as a transfer under the Income-tax Act. This triggers capital gains tax liability in the year of conversion, as the asset is deemed to be transferred to the business.

Option (b) – Incorrect.

Transfer of land under a development agreement where possession is given is considered a transfer. Capital gains tax applies because giving possession is seen as a part of transferring rights in the capital asset.

Option (c) – Incorrect.

Distribution of assets on dissolution of a firm to its partners is a transfer under the law. It attracts capital gains tax as the assets are transferred from the firm to the individual partners.

Option (d) – Correct.

Gift of a listed equity share to a relative is not considered a transfer for capital gains purposes. The Income-tax Act specifically exempts gifts to relatives from capital gains tax, so no tax is payable on this transaction.

12. (b)

Why in News?

Recently, global trade debates intensified as countries raised tariff and non-tariff barriers, raising concerns over their consistency with WTO principles like MFN, national treatment, and rules-based trade.

DETAILED SOLUTIONS:

Country A: Keeps import duty unchanged, introduces a product-specific safety certification, applies only to imported goods, compliance cost is borne by exporters.

Country A uses a non-tariff barrier. It creates a hidden cost for foreign sellers through a special rule only for imports, not by changing taxes.

Country B: Raises import duty uniformly, makes no change to standards or procedures, applies equally to all

importers, additional revenue accrues to the government.

Country B uses a tariff barrier. It directly increases the tax on imported goods, which is a traditional tax method that generates government income.

Based on the explanations above, Country A uses a non-tariff barrier and Country B uses a tariff barrier, hence option B is correct.

13. (a)

Why in News?

Recently, the RBI fine-tuned tools like SDF, MSF, LAF, and VRRR to manage surplus liquidity, stabilize short-term rates, and ensure smooth monetary policy transmission amid changing conditions.

DETAILED SOLUTIONS:**A. Absorption of surplus liquidity without collateral**

The Standing Deposit Facility (SDF) is a tool where banks can park excess funds with the RBI. It absorbs extra money from the banking system. No government securities are needed as collateral for this operation.

B. Provision of overnight liquidity at a penal rate

The Marginal Standing Facility (MSF) lets banks borrow money from the RBI for one night. This happens when they face a sudden cash shortage. The interest rate is higher than normal, acting as a penalty.

C. Framework for day-to-day liquidity management

The Liquidity Adjustment Facility (LAF) is the RBI's main system for managing daily cash flow. It uses repo and reverse repo operations. This helps keep short-term interest rates stable and aligned with policy goals.

D. Absorption of excess liquidity without changing the policy rate

Variable Rate Reverse Repo (VRRR) auctions are used to absorb large amounts of surplus cash. The interest rate is set through an auction, not fixed. This helps manage liquidity without affecting the main policy rate.

Based on the explanations above, the correct matching is A-1, B-2, C-3, D-4, hence option A is correct.

14. (c)

Why in News?

Recently, banks and regulators revisited wilful defaulter classification after court rulings and clarifications emphasized due process, borrower hearing rights, and stricter enforcement under RBI norms.

DETAILED SOLUTIONS:

Statement 1 – Correct.

A person is a wilful defaulter if they can repay the loan but choose not to. This shows a clear intention to avoid payment despite having the money, which is a deliberate act of default.

Statement 2 – Correct.

Using a loan for a purpose different from what was agreed with the bank is also wilful default. It violates the loan agreement and shows the borrower misused the funds intentionally.

15. (c)

Why in News?

The Centre has cautioned against “drip pricing,” saying that it can catch consumers off guard through hidden costs, and advised them to seek help if they experience sudden increases in charges over a product’s MRP (maximum retail price).

DETAILED SOLUTIONS:

The question describes a specific pricing practice.

It is not dynamic pricing, which changes prices based on demand or time which makes option (a) incorrect.

It is not differential pricing, which charges different customers different prices which makes option (b) incorrect.

It is not false advertising, which involves making untrue claims which makes option (c) incorrect.

The described practice is drip pricing, where extra mandatory fees are added step-by-step after showing an initial low price, making the final cost higher. Therefore, option (d) is correct.

16. (b)

Why in News?

Recently, the RBI clarified the difference between **SLR** and its **operational liquidity tools**, highlighting their distinct roles in managing banking system liquidity and implementing monetary policy.

DETAILED SOLUTIONS:

The Reserve Bank of India uses several tools to manage the daily flow of money in banks. The Statutory Liquidity Ratio (SLR) is a long-term rule. It requires banks to always keep a certain portion of their deposits in safe assets like government bonds. It is not adjusted daily to control short-term cash availability. Therefore, it is not a tool for day-to-day liquidity management which makes option (b) correct.

In contrast, the Marginal Standing Facility, Open Market Operations, and Bank Rate are tools the RBI actively uses to add or absorb cash from the banking system on a daily or very short-term basis to maintain stability.

17. (c)

Why in News?

The Indian rupee was in the news due to recent forex fluctuations driven by **dollar strength, crude oil prices, FPI flows, and RBI policy signals**, affecting its value against major currencies.

DETAILED SOLUTIONS:**Option (a) – Incorrect.**

A current account deficit means import payments exceed export earnings, which can pressure the rupee to depreciate. However, it does not automatically reduce forex reserves—reserves fall only if the RBI intervenes by selling dollars. CAD can be financed from Capital inflows (FDI, FPI, ECBs), External borrowing, RBI intervention, or Market adjustment of exchange rate etc. Hence, CAD → reduced reserves is not a necessary/direct link, making the chain inaccurate.

Option (b) – Incorrect.

High inflation generally weakens a currency as purchasing power falls. Even if interest rates rise, appreciation isn't assured since investor confidence may drop, real rates may stay low, and capital can flow out. Hence, inflation typically creates depreciation pressure, not a clear appreciation chain.

Option (c) – Correct.

Capital outflows happen when Foreign Institutional Investors (FIIs) / Foreign Portfolio Investors (FPIs) exit Indian markets, sell assets, and convert INR into USD/foreign currency. This raises demand for foreign currency and lowers demand for rupee, causing rupee depreciation. Therefore, chain (c) is accurate.

Option (d) – Incorrect.

A trade surplus (exports > imports) raises foreign currency inflows, increasing its supply and leading to rupee appreciation,

not depreciation. Hence, the chain should end in appreciation, not depreciation.

18. (a)

Why in News?

The Ministry of Health and Family Welfare organized World AIDS Day 2025 under the theme “Overcoming disruption, transforming the AIDS response,” showcasing India's achievements and progress in controlling AIDS.

DETAILED SOLUTIONS:**Statement 1 – Correct.**

The p24 antigen is a part of the HIV virus itself. It appears in the blood soon after infection, before the body makes antibodies. Tests that detect this antigen allow for very early diagnosis of HIV.

Statement 2 – Correct.

Antiretroviral Therapy (ART) uses a combination of drugs to stop the virus from multiplying. This can make the amount of virus in the blood so low that tests cannot find it, but the virus remains hidden in the body.

Statement 3 – Incorrect.

Even when a person on ART has an undetectable viral load, regular repeat testing is still very important. It checks that the treatment is working, ensures the virus stays suppressed, and monitors the person's overall health.

19. (b)

Why in News?

Australian researchers proposed a new pest-control method by genetically modifying male mosquitoes to produce toxic semen that kills females after mating, helping curb mosquito-borne diseases.

DETAILED SOLUTIONS:

Option A is incorrect. TMT is not about using chemicals to reduce fertility in animal populations. It is a specific genetic method targeted at insects, not a broad chemical approach for animals.

Option B is correct. TMT is a genetic pest control method. Scientists modify male insects to carry a gene that produces a toxic protein, which they pass to females during mating, shortening the female's life.

Option C is incorrect. This describes a general strategy of using plant-based toxins for pest control, which is different. TMT specifically involves the release of genetically engineered male insects, not applying plant compounds.

Option D is incorrect. TMT is used for insect pest control, not for vertebrate species like rats or birds. Releasing toxin-treated vertebrates is not the method defined by this term.

20. (d)

Why in News?

Recently, scientists proposed that tiny, ultra-hot "morsel" black holes ejected during mergers could emit detectable high-energy photons, releasing increasing Hawking radiation as they shrink and ending in an explosive burst.

DETAILED SOLUTIONS:

Statement 1 – Correct.

Hawking radiation is a theoretical emission from black holes themselves, caused by quantum effects near their event horizon. It does not require a visible star. A black hole is a region of space from which light cannot escape, but this radiation can still occur.

Statement 2 – Correct.

Gravitational lensing happens when a massive object, like a black hole or dark

matter, bends light from a distant source. The lensing object itself does not need to be a visible star. It can be any massive, invisible object in space.

Statement 3 – Correct.

An accretion disk is hot, glowing matter falling into a black hole. The black hole itself is not a visible star. The radiation comes from the superheated material in the disk, not from the central invisible object.

Statement 4 – Correct.

Cosmic Microwave Background radiation is the faint glow left over from the Big Bang. It fills all of space uniformly. It exists everywhere in the universe, completely independent of the presence of any stars, visible or otherwise.

21. (c)

Why in News?

For the first time, scientists of Italy's National Research Council have created the world's first "supersolid" made of light, transforming it into a new state of matter with unique properties.

DETAILED SOLUTIONS:

Statement I – Correct.

Supersolids are a unique state of matter that combines solid and superfluid properties. A superfluid can flow without friction. Therefore, a supersolid, which contains superfluid characteristics, can indeed exhibit frictionless flow.

Statement II – Correct.

Supersolids retain a crystalline (lattice) structure, which is the defining "solid" feature.

This lattice order is what distinguishes them from pure superfluids.

Statement III – Incorrect.

Wave-particle duality alone doesn't make light a supersolid. Supersolids require a crystal lattice plus superfluid-like flow, which photons do not naturally exhibit.

Therefore, Statement II is correct and it explains why the substance is still a "solid" while showing superfluidity, thus supporting Statement I. Therefore, Option (c) is correct- Only one among II and III is correct, and that explains I.

22. (a)

Why in News?

mRNA vaccines were in the news after the Nobel Prize recognised discoveries behind the technology, and due to fresh research highlighting how they trigger immunity by producing antigens—renewing focus on next-gen vaccines and pandemic preparedness.

DETAILED SOLUTIONS:

Option A is correct. An mRNA vaccine delivers genetic instructions. These instructions are read by the cell's machinery in the cytoplasm to make a harmless piece of the virus, called an antigen. The immune system then learns to recognize and fight the real virus.

Option B is incorrect. The mRNA from the vaccine does not enter the cell's nucleus, where transcription happens. It works directly in the cytoplasm. Therefore, the step mentioning "Transcription in nucleus" is wrong for this process.

Option C is incorrect. The mRNA does not directly produce antibodies. Instead, it causes the body's cells to produce a viral antigen. The immune system then creates antibodies in response to this antigen, so the initial step is misstated.

Option D is incorrect. mRNA vaccines do not integrate into the host's DNA. The

mRNA never enters the cell nucleus where DNA is stored. It acts as a temporary template for protein production and then naturally degrades, making this mechanism false.

23. (b)

Why in News?

NASA launched SPHEREx space telescope to investigate the early universe, uncover the origin of universe and trace the processes linked to the formation of life.

DETAILED SOLUTIONS:**1. SphereX**

SphereX is a NASA mission, but its primary objective is not to study X-ray emissions. It is designed to perform an all-sky survey in near-infrared light to study the history of the universe and the origins of galaxies. Therefore, this pair is incorrectly matched.

2. NISAR

NISAR is a joint NASA-ISRO satellite mission. Its primary objective is indeed to measure Earth's surface changes using a sophisticated dual-frequency synthetic aperture radar. It will monitor phenomena like earthquakes and ice-sheet changes. Therefore, this pair is correctly matched.

3. Aditya-L1

Aditya-L1 is India's first dedicated solar observatory mission. Its primary objectives include observing the Sun's corona (outer atmosphere) and studying solar wind and coronal mass ejections. Therefore, this pair is correctly matched.

4. CHasTE

CHasTE stands for Cosmic High-speed Advanced Satellite for Testing and Exploration. It is a small experimental

payload on India's Aditya-L1 mission, not a separate mission. Its goal is to study charged particles, not specifically to analyze cosmic rays in the heliosphere. Therefore, this pair is incorrectly matched.

Based on the explanations above, only pairs 2 (NISAR) and 3 (Aditya-L1) are correctly matched, which corresponds to two correct pairs. Hence option B is correct.

24. (a)

Why in News?

The Indian Space Research Organization (ISRO) has announced that the maiden flight of its LVM3 launch vehicle, incorporating a semi-cryogenic propulsion stage. It is scheduled for the first quarter of 2027.

DETAILED SOLUTIONS:

Statement 1 – Correct.

Cryogenic engines use very cold liquid propellants. Liquid hydrogen and liquid oxygen are common choices because they are powerful and efficient when burned together, making this statement accurate.

Statement 2 – Correct.

Semi-cryogenic engines use a mix of cryogenic and non-cryogenic fuels. A typical combination is liquid oxygen (which is cryogenic) and kerosene (which is not), which is correctly described in this statement.

Statement 3 – Incorrect.

SpaceX's Raptor engine does use liquid oxygen and methane. However, saying it is more efficient than cryogenic engines is misleading. Methane offers other benefits like cleaner burning, not necessarily higher efficiency.

Statement 4 – Incorrect.

India's GSLV Mk III (LVM3) uses a cryogenic engine in its upper stage, not a

semi-cryogenic engine in its core stage. Its core stage uses solid and liquid boosters with different propellants.

25. (a)

Why in News?

A severe winter storm hit much of the United States, affecting over 60 million people across about 30 states. The extreme cold is linked to a southward shift of the polar vortex.

DETAILED SOLUTIONS:

Trade winds associated with the Hadley Cell – Correctly placed first (southernmost). These surface winds are found near the equator, roughly between 0° and 30°N latitude, making them the southernmost feature listed.

Subtropical jet stream – Correctly placed second. This high-altitude, fast-flowing air current is typically located around 30°N latitude, north of the trade winds but south of the polar jet stream.

Polar jet stream – Correctly placed third. This jet stream is found at higher latitudes, usually around 60°N, where cold polar air meets warmer mid-latitude air, placing it north of the subtropical jet.

Polar vortex – Correctly placed fourth (northernmost). This is a large area of low pressure and cold air surrounding the North Pole, making it the most northern feature in the sequence.

The correct south-to-north order is: Trade winds (Hadley Cell) → Subtropical Jet → Polar Jet → Polar Vortex, making option (a) 1 – 2 – 3 – 4 correct.

26. (a)

Why in News?

Recently, the Prime Minister of Denmark rejected U.S. suggestions to annex Greenland, calling such an action unacceptable even if justified on national security grounds.

DETAILED SOLUTIONS:



Fig: Greenland and Arctic council nations

Statement 1 – Correct.

Greenland is indeed a self-governing territory within the Kingdom of Denmark. It has its own government and parliament but Denmark handles foreign affairs and defense. This status was established in 1979 and expanded in 2009.

Statement 2 – Incorrect.

The Denmark Strait lies between Greenland and Iceland, not Canada. The Davis Strait lies between Greenland and Canada.

Statement 3 – Incorrect.

The Arctic Council includes Canada and Denmark (representing Greenland) but does not include the United Kingdom. The UK is an observer state, not a full member.

27. (c)

Why in News?

The third UN Conference on Landlocked Developing Countries (LLDC3) was held in Awaza, Turkmenistan, highlighting the development challenges faced by 32 landlocked nations.

DETAILED SOLUTIONS:



Fig: Landlocked countries

Azerbaijan – Correct. Azerbaijan has a coastline on the Caspian Sea, but the Caspian is an inland (closed) sea, not connected to the world's oceans.

Cambodia – Incorrect. Cambodia is not a landlocked country. It has a significant coastline along the Gulf of Thailand, which is part of the South China Sea.

Uganda – Correct. Uganda is a landlocked country in East Africa. It is completely surrounded by land, bordered by Kenya, South Sudan, Democratic Republic of the Congo, Rwanda, and Tanzania.

Kazakhstan – Correct. Kazakhstan is a landlocked country in Central Asia. It is the world's largest landlocked country. It is surrounded by Russia, China, Kyrgyzstan, Uzbekistan, and Turkmenistan, with no direct access to an open ocean.

Therefore, 3 countries (Azerbaijan, Uganda, Kazakhstan) are landlocked, which makes option (c) correct.

28. (c)

Why in News?

Recently, US President Donald Trump proposed renaming the Gulf of Mexico as the "Gulf of America," sparking debate over the historical and geopolitical significance of the name.

DETAILED SOLUTIONS:

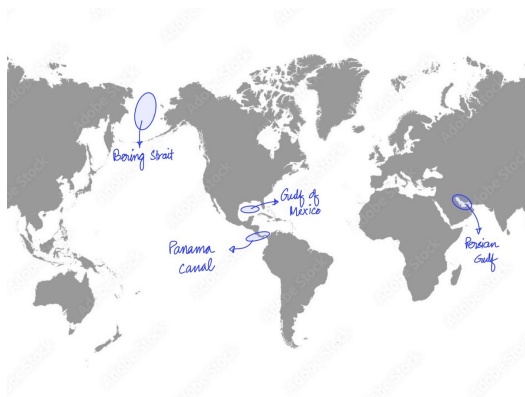


Fig: Major Gulf/Canal

- A. A marginal sea of an ocean, fed by a major river system and known for offshore energy.

The Gulf of Mexico is a marginal sea of the Atlantic Ocean. It is fed by the Mississippi River system and is a major region for offshore oil and gas drilling, fitting the description perfectly.

- B. A warm, shallow water body lying between two tectonic plates, linked to the open ocean by a strategic choke point.

The Persian Gulf is a warm, shallow sea lying between the Arabian and Eurasian plates. It is connected to the Gulf of Oman and the open ocean by the strategic Strait of Hormuz.

- C. A cold natural passage separating two continents and linking two oceans.

The Bering Strait is a cold, natural sea passage. It separates the continents of Asia and North America and connects the Pacific Ocean with the Arctic Ocean.

- D. A man-made waterway cutting across a narrow land bridge.

The Panama Canal is an artificial waterway. It cuts across the narrow Isthmus of Panama, a land bridge, to connect the Atlantic and Pacific Oceans.

Based on the explanations above, the correct matching is A-Gulf of Mexico, B-Persian Gulf, C-Bering Strait, D-Panama Canal, hence option C is correct.

29. (a)

Why in News?

Mangroves were in the news for their role in coastal protection and carbon sequestration, with India stressing their conservation and restoration, especially in the Sundarbans.

DETAILED SOLUTIONS:

Statement 1 – Correct.

Mangroves are special trees that grow where saltwater meets land. They have unique roots and can filter out salt, allowing them to thrive in salty, coastal areas that are regularly flooded by tides.

Statement 2 – Correct.

Their dense roots trap soil and reduce wave energy, protecting coasts from storms. They also absorb and store large amounts of carbon dioxide from the air, helping to fight climate change.

Statement 3 – Incorrect.

India has significant mangrove forests, but it does not have the largest cover in the world. Countries like Indonesia and Brazil have larger total areas of mangrove forests than India.

30. (c)

Why in News?

A recent State Forest Department survey found that the **saltwater crocodile population** in the **Sundarban Biosphere Reserve** has increased compared to last year.

DETAILED SOLUTIONS:

The description says “largest living reptile in the world.” The saltwater crocodile is the biggest reptile, much larger than the

gharial, Nile crocodile, or Komodo dragon. This fact alone points to the correct answer. It mentions the animal can tolerate salty water due to salt glands. Saltwater crocodiles have special glands to remove salt, allowing them to live in the sea, unlike most other crocodilians.

The text notes a wide range in estuaries, coasts, and rivers. Saltwater crocodiles are found in these habitats across Southeast Asia and Australia, fitting the description perfectly.

Finally, it is known for long ocean journeys. Saltwater crocodiles are famous for swimming far across the sea to reach new islands, which matches the “oceanic dispersal” clue.

31. (d)

Why in News?

Recent expeditions to Antarctica highlighted its ecological importance and the need for conservation, with scientists including from India studying its unique marine biodiversity.

DETAILED SOLUTIONS:

Statement 1 – Correct.

India’s first research base in Antarctica was indeed Dakshin Gangotri. It was established in 1983. This station was built on an ice shelf and has since been decommissioned, but it marked India’s entry into Antarctic research.

Statement 2 – Correct.

The Ross Sea Region Marine Protected Area was created in 2016. It covers a vast area of the Southern Ocean. This makes it the largest marine protected area located in international waters, or the high seas, in the world.

Statement 3 – Correct.

The Antarctic Circumpolar Current flows continuously around Antarctica from west

to east. It connects the Atlantic, Pacific, and Indian Oceans. It moves more water than any other current on Earth, making it the largest ocean current.

32. (d)

Why in News?

At COP29, carbon markets under Article 6 of the Paris Agreement were fully operationalised to boost climate finance. Earlier, India advanced this by signing the Joint Crediting Mechanism, enabling cooperation under Article 6.2.

DETAILED SOLUTIONS:

Statement 1 – Incorrect.

This statement is reversed. Under the Paris Agreement, Article 6.2 allows for bilateral transfers between countries. Article 6.4 creates a central UN-supervised mechanism for carbon credits. The roles are opposite to what is stated.

Statement 2 – Incorrect.

The Carbon Credit Trading Scheme in India is regulated under the Energy Conservation Act, 2001, not the Environment (Protection) Act, 1986. The latter is a broader environmental law.

Statement 3 – Correct.

Renewable Energy Certificates represent the environmental benefits of generating electricity from renewable sources. They trade the “green” attribute of the power, not the actual reduction in carbon dioxide emissions.

33. (a)

Why in News?

Wildlife authorities in Madhya Pradesh are preparing to introduce a female cheetah into **Gandhi Sagar Wildlife Sanctuary**, located in northwestern MP near the Rajasthan border in the **Khathiar-Gir dry deciduous ecoregion**.

DETAILED SOLUTIONS:

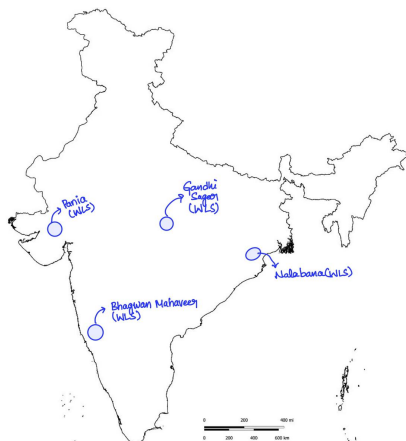


Fig: Major Wildlife Sanctuaries

A. Gandhi Sagar Wildlife Sanctuary

Gandhi Sagar Wildlife Sanctuary is located in Madhya Pradesh. It is situated on the Chambal River and is known for its crocodiles and diverse bird species. It is an important part of the region's ecosystem.

B. Pania Wildlife Sanctuary

Pania Wildlife Sanctuary is located in Gujarat. It is a protected forest area known for its population of the endangered Asiatic lion. It helps in the conservation of this big cat species.

C. Nalabana Wildlife Sanctuary

Nalabana Wildlife Sanctuary is located in Odisha. It is a bird sanctuary found within the Chilika Lake, a large brackish water lagoon. It is a major stop for migratory birds.

D. Bhagwan Mahaveer Sanctuary

Bhagwan Mahaveer Sanctuary is located in Goa. It is the largest wildlife sanctuary in the state and is home to the famous Dudhsagar Waterfalls. It protects various plants and animals.

Based on the explanations above, the correct matching is A-3, B-2, C-1, D-4, hence option A is correct.

34. (d)

Why in News?

Recently, PET, PVC, and PLA plastics were in the news due to discussions on single-use plastic rules, recycling standards, and promoting biodegradable alternatives like PLA for a circular economy.

DETAILED SOLUTIONS:

Polyethylene Terephthalate (PET) – Correct.

PET is a common plastic made from petroleum. It is widely used for drink bottles and food containers. Its raw materials come from oil refining, making it a conventional petroleum-based plastic.

High-Density Polyethylene (HDPE) – Correct.

HDPE is a strong plastic made from petroleum. It is used for milk jugs and detergent bottles. Like PET, it is derived from fossil fuels, classifying it as a conventional petroleum-based plastic.

Polyvinyl Chloride (PVC) – Correct.

PVC is a versatile plastic made from petroleum and salt. It is used in pipes, cables, and window frames. Its production relies on petrochemicals, so it is a conventional petroleum-based plastic.

Polylactic Acid (PLA) – Incorrect.

PLA is a bioplastic made from plant materials like corn starch or sugarcane. It is biodegradable and not derived from petroleum. Therefore, it is not a conventional petroleum-based plastic.

35. (a)

Why in News?

The President of the USA publicly demanded that the Taliban return Bagram Airbase to the United States, citing strategic reasons.

DETAILED SOLUTIONS:

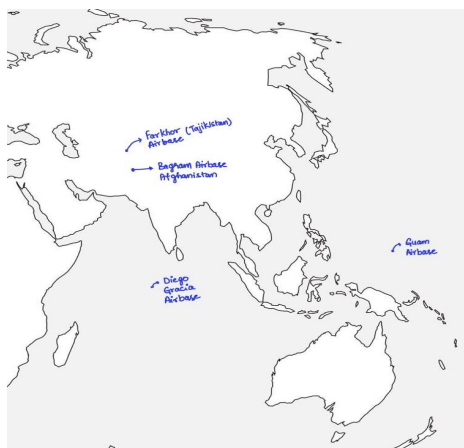


Fig: Major Airbases

A. Farkhor airbase

Farkhor Air Base is a military airfield located in Tajikistan. It is historically significant as India's first overseas military base, established to support logistical and humanitarian operations in the region.

B. Bagram airbase

Bagram Air Base is a large former U.S. military facility located in Afghanistan. It was a major hub for coalition forces during the war in Afghanistan and is situated north of the capital, Kabul.

C. Diego Garcia base

Diego Garcia is a strategic military base situated on an atoll in the Chagos Archipelago. It is a key joint facility for the United States and the United Kingdom in the Indian Ocean.

D. Guam Air Base

Guam Air Base refers to Andersen Air Force Base, a major U.S. military installation located on the island of Guam in the Western Pacific Ocean. It serves as a strategic hub for operations in the Asia-Pacific region.

Based on the explanations above, the correct matching is A-4 (Farkhor-Tajikistan), B-2 (Bagram-Afghanistan), C-1 (Diego Garcia-Chagos Archipelago), D-3 (Guam-Western Pacific), hence option A is correct.

36. (a)

Why in News?

Recently, India has been granted a six-month waiver from United States sanctions related to Iran's Chabahar Port, enabling New Delhi to continue its operations at the port until at least April 2026.

DETAILED SOLUTIONS:



Fig: Major Trade routes/economic corridors

The question describes a port on Iran's Makran coast, outside the Strait of Hormuz. Chabahar Port in Iran fits this description. It is India's key gateway to Afghanistan and Central Asia, avoiding overland transit through Pakistan.

The described corridor uses sea, rail, and land routes across Iran and the Caspian Sea region. The International North-South Transport Corridor (INSTC) is this exact multi-modal network, providing a shorter trade link between India and Eurasia.

Therefore, the port is Chabahar and the corridor is the INSTC. This matches option A.

37. (c)

Why in News?

During Singapore PM's visit to India in September 2025, both countries adopted a roadmap for the India-Singapore Comprehensive Strategic Partnership, covering eight areas including semiconductors, defence technology, and maritime security.

DETAILED SOLUTIONS:

East Asia Summit (EAS) – Correct. Both India and Singapore are founding members of this forum for strategic dialogue among Asia-Pacific nations.

Regional Comprehensive Economic Partnership (RCEP) – Incorrect. Singapore is a member, but India chose not to join this trade agreement in 2020.

Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) – Incorrect. India is a member, but Singapore is not part of this regional group of seven countries.

Indian Ocean Rim Association (IORA) – Correct. Both India and Singapore are member states of this organization promoting cooperation in the Indian Ocean region.

Asia-Pacific Economic Cooperation (APEC) – Incorrect. Singapore is a member, but India is not a member of this economic forum for Pacific Rim countries.

G20 – Incorrect. While India is a permanent member, Singapore participates as a guest and is not a member.

The correct answer will be (C) 1 and 4 only.

38. (a)

Why in News?

Recently, ECOWAS was in focus as some members announced plans to withdraw, raising concerns over regional integration and renewed debate on AU coordination and the delayed common currency "Eco."

DETAILED SOLUTIONS:



Fig: ECOWAS countries

Statement 1 – Correct.

ECOWAS was created in 1975. The African Union (AU) was formed much later in 2002, replacing the older Organization of African Unity. Therefore, ECOWAS was indeed established before the AU came into existence.

Statement 2 – Incorrect.

ECOWAS aims to include all West African countries, but it does not. For example, Mauritania left the group in 2000. So, it currently has 15 member states but does not include every nation in the West African region.

Statement 3 – Incorrect.

ECOWAS has planned a common currency named the Eco for many years. However, this currency has not been launched yet. As of now, there is no operational single currency used by all ECOWAS members.

39. (a)

Why in News?

The Nobel Peace Prize was recently in the news after reports that the 2025 laureate handed over the Peace Prize medal to the U.S. President at the White House, sparking widespread reactions.

DETAILED SOLUTIONS:**Statement 1 – Correct.**

The Nobel Prize money comes from the fortune Alfred Nobel left in his will. He instructed that the interest from his money should fund the prizes each year.

Statement 2 – Incorrect.

The Nobel Peace Prize ceremony is held in Oslo, Norway, not Stockholm. The other Nobel Prizes are awarded in Stockholm, Sweden, as per Alfred Nobel's will.

Statement 3 – Correct.

The International Committee of the Red Cross (ICRC) has indeed won the Nobel Peace Prize three times, in 1917, 1944, and 1963. This is the highest number of awards for any single organization.

40. (c)

Why in News?

At the 15th BRICS Summit held in Johannesburg, the grouping—comprising Brazil, Russia, India, China, and South Africa—marked a significant expansion by inviting six additional countries to join.

DETAILED SOLUTIONS:**Statement 1 – Correct.**

BIMSTEC has Bay of Bengal members like India and Thailand, and landlocked states like Nepal. ASEAN also has Bay of Bengal members like Myanmar and Thailand, and landlocked states like Laos. So, both parts of the statement are true.

Statement 2 – Correct.

At the 15th BRICS Summit in Johannesburg in 2023, the group decided to expand. Iran was officially invited to join as a full member in official declaration, along with several other countries, starting from January 2024.

41. (b)

Why in News?

Subhas Chandra Bose was in News due to Parakram Diwas (23 January), marking his birth anniversary, with government commemorations highlighting his role in the freedom struggle and the Azad Hind Fauj.

DETAILED SOLUTIONS:

The question describes a plan for military resistance using discipline and sacrifice, rejecting peaceful or spiritual methods. Subhas Chandra Bose strongly believed in this approach. He formed the Indian National Army to fight British rule with armed force, matching the proposal's core idea perfectly.

42. (a)

Why in News?

Recently, the Supreme Court of India reiterated limits on the use of Money Bills under Article 110, stressing that bypassing the Rajya Sabha undermines bicameralism and parliamentary procedure.

DETAILED SOLUTIONS:**Statement 1 – Correct.**

The Constitution says the Rajya Sabha must send back a Money Bill **within 14 days** of receiving it from the Lok Sabha. It cannot change the bill, only give suggestions, which the Lok Sabha may accept or reject.

Statement 2 – Correct.

Article 110 allows a Money Bill to include provisions that are connected to the main

financial matters it deals with. These are called incidental provisions and are a normal part of such bills.

Statement 3 – Incorrect.

The Rajya Sabha does not have equal power for Money Bills. It cannot amend or reject them. Its role is limited to reviewing and suggesting changes within 14 days, giving the Lok Sabha final authority.

Statement 4 – Incorrect.

A Money Bill deals only with specific financial subjects like taxes or government spending listed in Article 110. It cannot be used to change the Constitution, which requires a separate constitutional amendment bill.

43. (a)

Why in News?

Recently, the Election Commission of India was in the news over debates on its independence, constitutional status, and appointment of Election Commissioners.

DETAILED SOLUTIONS:

Statement 1 – Correct.

The Election Commission of India is a permanent body created directly by the Constitution. It was indeed established on January 25, 1950, just before India became a republic. It is not a temporary agency.

Statement 2 – Correct.

The Election Commission conducts elections for the Parliament and State Legislatures. It also conducts elections for the President and Vice-President of India, as per the Constitution.

Statement 3 – Incorrect.

The Election Commission does not have the power to disqualify candidates for corrupt practices. This power lies with the President or Governor, based on the opinion of the Election Commission.

Statement 4 – Incorrect.

The Election Commission cannot deregister a political party. It registers parties under the law, but the power to cancel registration is very limited and not a general deregistration power.

44. (a)

Why in News?

The Supreme Court and the Kerala High Court reaffirmed that the right to a fair trial under Article 21 includes effective legal aid and strict compliance with criminal procedure.

DETAILED SOLUTIONS:

Statement 1 – Correct.

An accused who is properly informed about free legal aid and then chooses to decline a lawyer is making a voluntary decision. This does not violate fairness as the opportunity was provided and the choice was free.

Statement 2 – Incorrect.

If a poor accused is sent to custody without being told about free legal aid, it violates fairness. The court must inform an indigent person of this right to ensure **a fair trial under Article 21.**

Statement 3 – Incorrect.

Denying a lawyer to a convicted person during their first appeal violates fairness. The **right to legal aid** extends to the **first appeal stage** to ensure the accused can properly challenge the conviction.

Statement 4 – Incorrect.

In a Sessions trial, if the court proceeds without offering legal aid to an unrepresented poor accused, it violates fairness. The court has a duty to **provide legal assistance in serious criminal cases.**

45. (a)

Why in News?

Recently, the Supreme Court revisited issues of legislator disqualification, sparking debate on delays, misuse, and the need for faster, independent decision-making.

DETAILED SOLUTIONS:**Statement 1 – Correct.**

Parliament has the power to make laws about elections. Amending the election law to increase the disqualification period is a valid legislative action, as long as it follows the Constitution's basic structure.

Statement 2 – Incorrect.

The Election Commission cannot create a lifetime ban through instructions. It is an executive body; such a major change requires a law passed by Parliament, as it affects fundamental rights.

Statement 3 – Correct.

Amending the Constitution itself to add a permanent disqualification rule is permissible. This is the supreme legal method, provided the amendment follows the proper procedure and respects the Constitution's basic structure.

46. (c)

Why in News?

Recently, the issue of "Delegated legislation" came in news due to concerns over inadequate parliamentary oversight and non-compliance with the laying procedure before Parliament.

DETAILED SOLUTIONS:**Statement I – Correct.**

Rules and notifications made under an Act are a form of delegated legislation. The Constitution and various Acts require them to be placed before Parliament.

This allows Parliament to review them, ensuring oversight is maintained.

Statement II – Correct.

Parliament has the authority to change or cancel such delegated rules if the parent Act allows it. This is a key control mechanism, ensuring that the executive's law-making power remains under the legislature's ultimate authority.

Statement III – Incorrect.

Simply failing to lay a rule before Parliament does not make it invalid. Courts have ruled that such a lapse is a procedural irregularity. The rule remains effective unless specifically struck down by Parliament or a court.

Explanation:

Only Statement II is correct, and it explains why Statement I is true, as parliamentary modification power is a core aspect of oversight. Statement III is wrong, so it cannot explain Statement I. Statements I and II are correct, and statement II explains statement I. Therefore, option C is correct.

47. (b)

Why in News?

The Supreme Court of India has recently taken suo motu cognisance of alleged "collusive litigations" involving officials of the Bengaluru Development Authority (BDA).

DETAILED SOLUTIONS:**Option A – Incorrect.**

This describes a normal, genuine lawsuit where two sides have a real disagreement. Collusive litigation is different because the parties are not truly opposed; they secretly work together.

Option B – Correct.

Collusive litigation is a fake case with no real argument. The parties cooperate to

get a court order for a hidden goal, which is improper and often meant to set a legal precedent.

Option C – Incorrect.

This describes a joint lawsuit or a Public Interest Litigation (PIL) against the government. It involves a real issue, unlike collusive litigation where the dispute is manufactured by cooperating parties.

Option D – Incorrect.

This describes a constitutional challenge, often where a person's rights are affected. While it may not involve physical injury, it is a real dispute, not a pretend case created by collusion.

48. (c)

Why in News?

Recently, Chemists at Michigan State University have identified the piezoelectric effect in liquids, discovered accidentally during a study of ionic liquids and reported in The Journal of Physical Chemistry Letters.

DETAILED SOLUTIONS:

Option A – Incorrect.

Materials that produce light when exposed to vibrations are called **luminescent or triboluminescent**, not piezoelectric. Piezoelectric materials generate electricity from pressure, not light from vibrations.

Option B – Incorrect.

Materials that change electrical resistance in magnetic fields are called **magnetoresistive**. This is a different property used in devices like hard drives, not related to the piezoelectric effect.

Option C – Correct.

Piezoelectric materials create an **electric charge** when **squeezed or bent**. This is

their defining property, used in common devices like lighters, microphones, and sensors to convert motion into electricity.

Option D – Incorrect.

Changing thermal conductivity with voltage describes **electrocaloric or thermoelectric effects**, not piezoelectricity. Piezoelectricity is about mechanical stress creating electricity, not heat flow changes.

49. (c)

Why in News?

Recently, China's Experimental Advanced Superconducting Tokamak (EAST) has achieved stable plasma at densities beyond the Greenwald limit, overcoming a key barrier to nuclear fusion.

DETAILED SOLUTIONS:

Assertion (A) – Correct.

A tokamak is a device designed for nuclear fusion research. It uses powerful magnetic fields to contain and control a hot, charged gas called plasma, preventing it from touching the walls of the container.

Reason (R) – Incorrect.

Plasma is not made of neutral atoms; it consists of **charged particles** like **ions** and **electrons**. The magnetic fields in a tokamak confine these charged particles, not neutral atoms, which are not the dominant component.

Explanation:

Assertion (A) is correct as tokamaks do use magnetic fields to confine plasma. Reason (R) is incorrect because plasma is dominated by charged particles, not neutral atoms, so it does not explain A. Therefore, option C is correct.

50. (a)

Why in News?

Neuralink's "Blindsight," a brain-computer interface (BCI) implant, has recently been granted "breakthrough device" designation by the U.S. Food and Drug Administration.

DETAILED SOLUTIONS:**Statement 1 – Correct.**

This statement is correct. A non-invasive BCI can track where a person is looking by following their pupil and the reflection off their cornea. This allows the system to detect which letter on a screen the user selects with their eyes.

Statement 2 – Incorrect.

This statement is incorrect. Direct stimulation of the visual cortex is an **invasive medical procedure**, not a non-invasive communication method. It is used for different purposes and does not logically explain how a locked-in person selects letters.

51. (a)

Why in News?

Two suspected cases of Nipah virus infection among healthcare workers in West Bengal have prompted an immediate response from both state and central health authorities, underscoring India's readiness to tackle high-risk zoonotic diseases.

DETAILED SOLUTIONS:**1. Nipah virus | Fruit bats**

This pair is correctly matched. The **Nipah virus** is known to naturally live in **fruit bats**, also called flying foxes. These bats can spread the virus to other animals and people, often through contaminated fruit or sap.

2. Ebola virus | Rodents

This pair is incorrectly matched. The **Ebola virus's** primary animal reservoir is believed to be **fruit bats**, not rodents. While the exact natural host is complex, bats are the leading scientific candidate.

3. Zika virus | Birds

This pair is incorrectly matched. The **Zika virus** is primarily spread by **mosquitoes**, not birds. The virus circulates between mosquitoes and primates, such as monkeys and humans, not avian species.

4. Hantavirus | Monkeys

This pair is incorrectly matched. **Hantaviruses** are primarily carried by **rodents** like **mice and rats**. People usually get infected by breathing in dust contaminated with rodent urine or droppings, not from monkeys.

Based on the explanations above, only Pair 1 is correctly matched, hence option A is correct.

52. (b)

Why in News?

Google has launched Ironwood, its seventh-generation Tensor Processing Unit (TPU) to accelerate AI model processing.

DETAILED SOLUTIONS:**Statement 1 – Correct.**

Graphics Processing Units (GPUs) are built with many small cores. This design allows them to perform many similar calculations at the same time, which is perfect for tasks like multiplying large grids of numbers (matrices) quickly and efficiently.

Statement 2 – Correct.

Tensor Processing Units (TPUs) are chips made by Google specifically for artificial

intelligence. They are optimized to run trained neural network models, a process called inference, making them very fast and power-efficient for that specific task.

Explanation: Both statements are true. GPUs are excellent for parallel matrix math, and TPUs are specialized for AI inference. However, the conclusion is wrong because “all AI workloads” includes training and other tasks where GPUs can be more efficient or flexible than TPUs.

53. (c)

Why in News?

A startup backed by the National Quantum Mission—QNu Labs Pvt. Ltd.—has successfully showcased India’s first quantum key distribution (QKD) network spanning a distance of 500 km.

DETAILED SOLUTIONS:

Statement I – Correct.

Quantum key distribution is indeed highly secure for sending secret keys. Its security comes from the laws of physics, making it very hard for an eavesdropper to intercept the key without being detected.

Statement II – Correct.

QKD’s security is based on quantum mechanics principles. These laws state that measuring a quantum system disturbs it, so any attempt to spy on the key exchange can be noticed by the legitimate users.

Statement III – Incorrect.

QKD does not use complex math to encrypt the actual data. It only securely distributes a secret key. That key is then used with regular, classical encryption methods to protect the data itself.

Explanation: Only Statement II is correct and it explains why Statement I

is true. Statement III is wrong because QKD handles key distribution, not data encryption. Therefore, only one of the two explains Statement I.

54. (c)

Why in News?

Astronaut Shubhanshu Shukla conducted scientific experiments aboard the International Space Station (ISS) to study muscle loss under microgravity conditions. He was part of the Axiom-4 private mission to the ISS, undertaken as a joint initiative of ISRO and NASA.

DETAILED SOLUTIONS:

Statement 1 – Correct.

In space, there is very little gravity, so muscles and bones do not need to work hard to support the body’s weight. This lack of regular stress causes them to become weaker and lose mass over time.

Statement 2 – Correct.

Weightlessness disrupts how the body manages calcium. More calcium is lost through urine, and the balance of hormones that keep bones strong is upset, leading directly to bone weakening.

Statement 3 – Correct.

In microgravity, body fluids shift upward toward the head. This change affects blood flow and pressure in bones, which can interfere with the normal process of bone building and maintenance.

55. (d)

Why in News?

Recently, concerns over rising sovereign debt and fiscal sustainability resurfaced amid debates on the growing U.S. public debt and volatility in US Treasury bonds, reflecting stress in global public finance.

DETAILED SOLUTIONS:

Note: It's a UPSC PYQ with both statements altered.

Statement I – Incorrect.

If the USA defaults, bondholders still have legal claims for payment. A default means the government fails to pay on time, but it does not erase the debt. Holders can exercise these claims through legal and financial systems. Whether it is honored or not or they are finally able to enforce, will depend on multiple factors.

Statement II – Correct.

US government debt, like Treasury bonds, is backed by the "full faith and credit" of the US government. This is a guarantee that the government promises to repay its debts using all its resources and taxing power.

Explanation: Statement I is wrong because bondholders retain enforceable claims even in a default. Statement II is correct as it describes the government's backing. Therefore, only II is correct.

56. (a)

Why in News?

Recently, The Indian rupee is witnessing sustained pressure, driven by forces such as persistent dollar outflows, and the prolonged delay in finalising a trade deal with the US.

DETAILED SOLUTIONS:

The scenario describes an increase in India's external debt-to-GDP ratio measured in US dollars, while the GDP in rupee terms is unchanged. We need to see which factor best explains this.

Option A – Correct.

A sharp rupee depreciation increases the US dollar value of India's external debt when converted from rupees. Since GDP

in dollar terms would fall, the debt-to-GDP ratio rises, fitting the scenario perfectly.

Option B – Incorrect.

A rise in FDI inflows is an investment into the country, not a borrowing. It does not directly increase external debt. Therefore, it cannot explain the increase in the debt-to-GDP ratio described.

Option C – Incorrect.

A rise in FPI inflows is also an investment in financial markets like stocks, not a loan. It does not add to external debt, so it does not cause the specified ratio to increase.

Option D – Incorrect.

A fall in foreign exchange reserves relates to assets held by the central bank, not liabilities. External debt is unchanged per the option, so the debt-to-GDP ratio would not increase from this factor alone.

57. (a)

Why in News?

India has imposed an anti-dumping duty for a period of five years on imports of hot-rolled steel from Vietnam after investigations found that underpriced imports were causing injury to the domestic steel industry.

DETAILED SOLUTIONS:**Statement I – Correct.**

Anti-dumping duties are allowed by WTO rules. They are a legal tool countries can use to shield their own industries from harm caused by unfairly cheap imported goods.

Statement II – Correct.

Dumping means selling goods in another country for less than their normal price at home. Anti-dumping duties are specifically designed to counteract this unfair pricing practice.

Statement III – Incorrect.

Duties for imports receiving government export subsidies are called countervailing

duties, not anti-dumping duties. Statement III confuses two different trade remedies.

Explanation: Statement I is a correct general claim. Statement II correctly defines dumping, which is the specific problem that anti-dumping duties address, thus explaining Statement I. Statement III describes a different remedy, so it does not explain Statement I.

58. (d)

Why in News?

Union Minister reiterated that India ranks as the world's third-largest fish-producing nation, after China, accounting for about 8% of global fish production.

DETAILED SOLUTIONS:

Statement 1 – Incorrect.

India is the world's third-largest fish producer, not the largest. It is the second-largest aquaculture producer. China holds the top position in both total fish production and aquaculture.

Statement 2 – Incorrect.

Inland fisheries contribute more to India's total fish production than marine fisheries. Aquaculture in ponds and rivers produces a larger share of the country's fish.

Statement 3 – Incorrect.

The Fisheries and Aquaculture Infrastructure Development Fund (FIDF) is implemented through multiple agencies, including NABARD, National Cooperatives Development Corporation, and all scheduled banks, not only NABARD.

Since all three given statements are incorrect, none of the options containing them are right. Therefore, the correct choice is 'None of the above'.

59. (b)

Why in News?

The Reserve Bank of India Governor urged other central banks to prioritise central bank digital currencies (CBDCs) over stablecoins. The recommendation comes against the backdrop of recent global developments, including the Guiding and Establishing National Innovation for U.S. Stablecoins Act (GENIUS Act) and South Korea's Digital Asset Basic Act Bill.

DETAILED SOLUTIONS:

Assertion (A) – Incorrect.

Stablecoins are not legally recognized in India. The Reserve Bank of India has not issued a regulatory framework for them. In fact, India has taken a cautious approach toward private cryptocurrencies and stablecoins.

Reason (R) – Correct.

The e₹ or Digital Rupee is official digital currency issued by the RBI, India's central bank. Stablecoins are different; they are private digital tokens whose value is linked to assets like traditional money.

Explanation: Statement A is false because stablecoins lack legal recognition and an RBI framework in India. Statement R is true as it correctly distinguishes sovereign digital currency from private crypto tokens. Therefore, option B is correct.

60. (c)

Why in News?

India's GDP growth rate for the first quarter of FY26 stood at 7.8%, marking the fastest expansion recorded in the last five quarters. The growth momentum was primarily supported by strong performance in the manufacturing, services, and construction sectors.

DETAILED SOLUTIONS:**Statement 1 – Incorrect.**

India's GDP growth rate has not consistently stayed above 7% annually over the last decade. There were years, like during the pandemic, when growth fell sharply below this level, making the statement incorrect.

Statement 2 – Incorrect.

The share of agriculture in India's GDP has not consistently increased since 2014. It has generally followed a long-term declining trend as the services and industrial sectors grow faster, so this statement is also not correct.

61. (a)

Why in News?

Recently, Andhra Pradesh's eco-friendly Etikoppaka Toys received widespread recognition at the Republic Day parade. Also known as Etikoppaka Bommalu, these finely crafted wooden toys are part of a 400-year-old artisanal tradition.

DETAILED SOLUTIONS:**A. Etikoppaka lacquer toys**

Etikoppaka toys are traditional wooden toys coated with lacquer. This craft originates from Etikoppaka village in Andhra Pradesh. The toys are known for their vibrant, natural colors and smooth finish.

B. Channapatna toys

Channapatna toys are wooden toys famous for their safe, vegetable-based dyes and lacquer finish. This traditional craft is from Channapatna town in Karnataka, often called the "Toy Town of India."

C. Krishnanagar clay dolls

Krishnanagar clay dolls are traditional terracotta figurines known for their detailed modeling and painting. This

art form comes from Krishnanagar in the Nadia district of West Bengal.

D. Molela Terracotta

Molela terracotta involves creating flat, relief-style pottery plaques, often depicting deities. This unique craft is practiced in Molela village in the Rajsamand district of Rajasthan.

Finally, based on the explanations above, the correct matching is A-2 (Andhra Pradesh), B-1 (Karnataka), C-3 (West Bengal), D-4 (Rajasthan), hence option A is correct.

62. (b)

Why in News?

Recently, Samoa, Madagascar, Canary Islands, and the Kuril Islands have been in News due to political developments and governance issues (Samoa, Madagascar), concerns over overtourism and housing pressure (Canary Islands), and renewed attention on the Russia-Japan territorial dispute (Kuril Islands).

DETAILED SOLUTIONS:

Fig: Island and ocean currents

1. Samoa | South Equatorial Current | Warm current

This is correct. Samoa is in the South Pacific Ocean. The South Equatorial Current flows westward there. It is a warm current because it originates near the equator where sun heats the water.

2. Canary Islands | Canary Current | Warm current

This is incorrect. The Canary Islands are off Africa's northwest coast. The Canary Current flows southward along that coast. It is a cold current, bringing cooler waters from higher latitudes.

3. Madagascar | Agulhas Current | Cold current

This is incorrect. Madagascar is near southeastern Africa. The Agulhas Current flows south along its east coast. It is a warm, fast current moving from the tropics, not a cold one.

4. Kuril Islands | Oyashio Current | Cold current

This is correct. The Kuril Islands are in the North Pacific near Russia. The Oyashio Current flows southward from the Arctic. It is a cold current, bringing chilly, nutrient-rich waters.

Finally, based on the explanations above, only rows 1 and 4 are correctly matched. Therefore, two rows are correct, hence B is the right answer.

63. (c)

Why in News?

Iran has recently heightened its military alertness after its Army Chief, Major General Amir Hatami, issued warnings of possible preemptive strikes.

DETAILED SOLUTIONS:

Countries sharing a land border with Iran:



Fig: Landlocked countries bordering Iran

Armenia – Correct. Armenia shares a short land border with Iran to its southeast. The border is located between Armenia's Syunik province and Iran's West Azerbaijan province.

Israel – Incorrect. Israel does not share a land border with Iran. Israel is located in the Levant region, west of Jordan and Syria, and is geographically separated from Iran by Iraq and other countries.

Iraq – Correct. Iraq shares a long land border with Iran to its east. This border stretches over roughly 1,599 kilometers, running from Turkey in the north to the Persian Gulf in the south.

Syria – Incorrect. Syria does not share a land border with Iran. Syria is located west of Iraq. Iran and Syria are separated by the country of Iraq, so they do not have a direct territorial connection.

Turkey – Correct. Turkey shares a land border with Iran to its east. This border is approximately 534 kilometers long, running through mountainous regions in eastern Turkey and northwestern Iran.

Three countries (Armenia, Iraq, and Turkey) share a land border with Iran. Israel and Syria do not, as they are separated from Iran by other nations. Therefore, only three countries share a land border with Iran.

64. (a)

Why in News?

Recently, major global mineral belts—Kursk Magnetic Anomaly, Witwatersrand Basin, Bayan Obo, and Sudbury Basin—were in News in the context of discussions on critical mineral resources, strategic mining regions, and global supply chain security, especially for iron ore, gold, rare earth elements, and nickel.

DETAILED SOLUTIONS:**A. Kursk Magnetic Anomaly**

The Kursk Magnetic Anomaly is a massive iron ore deposit located in Russia. It is one of the largest known iron ore reserves in the world, situated in the Kursk region of western Russia.

B. Witwatersrand Basin

The Witwatersrand Basin is a famous geological formation in South Africa. It is renowned for being the world's largest gold-producing region and is located near Johannesburg.

C. Bayan Obo

Bayan Obo is a major mining district in Inner Mongolia, China. It is the world's largest known deposit of rare earth elements, which are crucial for modern electronics and technology.

D. Sudbury Basin

The Sudbury Basin is a large geological structure in Ontario, Canada. It is famous for its rich deposits of nickel and copper, formed by a massive meteorite impact long ago.

Finally, based on the explanations above, the correct matching is A-3 (Russia), B-4 (South Africa), C-2 (China), D-1 (Canada), hence option A is correct.

65. (a)

Why in News?

A study conducted by Utrecht University suggests that under moderate emission scenarios, global warming may be insufficient to counterbalance the cooling effects that could result from a possible collapse of the Atlantic Meridional Overturning Circulation (AMOC).

DETAILED SOLUTIONS:**Statement 1 – Correct.**

The AMOC is a large ocean current system that moves warm water northward. If it

weakens, less warm water reaches the North Atlantic. This would cause regional cooling in that area, especially around Europe.

Statement 2 – Incorrect.

A weakened AMOC does not cause a uniform global sea level rise. It can change sea levels regionally, but global mean sea level rise is primarily driven by melting ice and warming ocean water expanding.

66. (a)

Why in News?

A recent data from the India Meteorological Department indicate that India recorded 8% above-normal rainfall during this monsoon, the fifth-highest since 2001. While northwest, central, and southern parts of the country experienced surplus precipitation, eastern regions witnessed rainfall deficits.

DETAILED SOLUTIONS:**Statement 1 – Correct.**

A strong El Niño event in the Pacific Ocean typically reduces rainfall over India. It causes unusual warming of the central and eastern Pacific, which disrupts normal weather patterns and weakens the monsoon winds, leading to below-average rainfall.

Statement 2 – Incorrect.

A positive phase of the Indian Ocean Dipole (IOD) usually brings more rain to India, not less. It involves warmer western Indian Ocean waters, which can enhance monsoon circulation and increase rainfall over the Indian subcontinent.

Statement 3 – Incorrect.

An unusually high frequency of western disturbances brings rain to northern India in winter and spring, not during the summer monsoon season. They do not

cause a significant decrease in the overall monsoon rainfall.

Statement 4 – Incorrect.

The presence of a La Niña event in the Pacific Ocean generally increases monsoon rainfall over India. It is the opposite of El Niño and is associated with stronger monsoon winds and above-average rains.

67. (a)

Why in News?

Cairo Declaration was in News for the international diplomacy on the Gaza conflict, focusing on ceasefire and humanitarian concerns.

DETAILED SOLUTIONS:

A. Cairo Declaration

The Cairo Declaration on Human Rights in Islam was adopted in 1990 by OIC member states. It is a human rights framework that is explicitly anchored in and derived from the principles of Islamic Sharia law.

B. Baku Declaration

The Baku Declaration was a political outcome of the COP29 climate summit held in Azerbaijan in 2024. It focused on implementing climate action, including critical issues like climate finance and the global energy transition.

C. Jeddah Declaration

The Jeddah Declaration refers to a statement issued in 2023 regarding the Sudan conflict. It outlined key principles for protecting civilians and ensuring humanitarian access during the ongoing war in the country.

D. Kampala Declaration

The Kampala Declaration emerged from the 2023 Non-Aligned Movement

summit. Its core ideas include a strong call for faster climate action, increased funding for climate projects, and reforms to the global financial system.

Finally, based on the explanations above, the correct matching is A-3, B-4, C-2, D-1, hence option A is correct.

68. (a)

Why in News?

The conflict between Israel and Hamas has intensified in recent years, resulting in a tenuous ceasefire mediated by the United States, Egypt, and Qatar. One of the central issues under negotiation is Israel's pullback from the Philadelphi Corridor, a strategically significant stretch along Gaza's border with Egypt.

DETAILED SOLUTIONS:



Fig: Strategic corridors

Statement 1 – This describes the Philadelphi Corridor. It is a narrow strip along the Egypt-Gaza border. Israel controls it to stop weapons smuggling into Gaza. It was a major News topic in 2025 regarding border security.

Statement 2 – This describes the Netzarim Corridor. It is a military zone Israel built across central Gaza. It runs east-west, dividing northern and southern Gaza. This corridor physically splits the densely populated Palestinian territory.

Statement 3 — This describes the Lachin Corridor. It is a mountain road in the Caucasus region. It connects Armenia to the ethnic Armenian region of Nagorno-Karabakh. Control of this road determines the region's link to its mainland.

69. (b)

Why in News?

Recently, a 900-year-old Kannada inscription dating back to the Kalyani Chalukya dynasty was discovered in a neglected condition at Gangapuram in Telangana.

DETAILED SOLUTIONS:

The description is about a Deccan power between the Krishna and Tungabhadra rivers. The Kalyana Chalukyas ruled this exact core region from their capital in the Deccan plateau.

This dynasty claimed descent from the earlier Chalukyas of Badami, an imperial tradition. They fought rivals like the Cholas to the south and the Paramaras to the north throughout their rule.

Their rulers built temples in the Vesara style, which blended North Indian Nagara and South Indian Dravida architectural features. This hybrid style is a key identifier for this dynasty.

The Kalyana Chalukya administration is noted for granting lands, called nayankara, to military chiefs in return for service. This represents a clear shift toward a feudal system.

70. (a)

Why in News?

Recently the 6th BIMSTEC Summit with the theme "BIMSTEC: Prosperous, Resilient and Open," concluded in Bangkok under the chairmanship of Thailand.

DETAILED SOLUTIONS:

Statement 1 — Correct.

The BIMSTEC permanent secretariat is indeed located in Dhaka, Bangladesh. This was established to coordinate the activities of the Bay of Bengal regional group, making the first statement accurate.

Statement 2 — Incorrect.

There is no Teesta basin treaty between India and Bangladesh due for renewal in 2026. The sharing of Teesta river waters is a long-standing issue, but a comprehensive treaty has not been finalized or signed yet.

Statement 3 — Incorrect.

Mongla and Payra are not inland ports; they are major seaports of Bangladesh located on the coast. Inland ports in Bangladesh are located on rivers, such as the Port of Dhaka on the Buriganga River.

Only Statement 1 is correct. Statements 2 and 3 contains inaccuracies regarding the Teesta treaty status and the classification of Bangladeshi ports, so the correct answer is option (a) 1 only.

71. (b)

Why in News?

Recently, the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) held in Montreal, Canada (with Part I conducted virtually and in Kunming, China) was in News due to discussions on reviewing progress towards the Kunming-Montreal Global Biodiversity Framework.

DETAILED SOLUTIONS:

Entity A — Correctly identified.

Entity A is the Conference of the Parties (COP) to the Convention on Biological Diversity. It meets to create plans for protecting ecosystems, species, and genetic

resources, focusing on conservation and sustainable use.

Entity B – Correctly identified.

Entity B is the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change. It meets to set global rules for reducing greenhouse gas emissions and limiting the rise in Earth's temperature.

Finally, based on the explanations above, the key difference is that Entity A focuses on ecosystem conservation, while Entity B focuses on atmospheric greenhouse gases, hence option B is correct.

72. (b)

Why in News?

Microplastics were detected in human blood for the first time, according to a study conducted by researchers in the Netherlands, identifying particles as small as 700 nanometres.

DETAILED SOLUTIONS:

Statement 1 – Correct.

Microplastics have been found in human blood, lungs, and other tissues. Scientific studies using advanced tools confirm their presence. This shows they enter our bodies from the environment, making this impact well-established.

Statement 2 – Correct.

Lab studies show microplastics can cause oxidative stress in human cells. This stress damages cells and is linked to chronic diseases. The biological mechanism is understood, so this impact is considered established.

Statement 3 – Incorrect.

There is no strong scientific proof that microplastics cause immediate allergic reactions in people. Allergies require

specific immune responses, and such quick effects from microplastics are not yet confirmed by research.

73. (a)

Why in News?

China is constructing a massive 60,000-MW hydropower project on the Yarlung Zangbo River (known as the Brahmaputra in India and the Jamuna in Bangladesh) in Tibet, close to Gelling in Arunachal Pradesh.

DETAILED SOLUTIONS:

Statement 1 – Correct.

The Brahmaputra River begins near Mount Kailash in Tibet. It flows eastward and then takes a dramatic U-turn around the mountain called Namcha Barwa. This turn happens before the river enters India through Arunachal Pradesh.

Statement 2 – Incorrect.

China has built several dams on the Brahmaputra, known as the Yarlung Tsangpo there. However, the title of the world's largest dam belongs to the Three Gorges Dam on the Yangtze River, not on the Brahmaputra.

74. (b)

Why in News?

Recently, a new species of gecko, believed to be present only around Coonoor, has been discovered in the Nilgiris in Tamil Nadu.

DETAILED SOLUTIONS:

1. New gecko species | Coonoor Hills (Upper Nilgiris), Tamil Nadu

This pair is correctly matched. A new species of gecko, named *Cnemaspis coonoorensis*, was discovered in the Coonoor Hills of the Upper Nilgiris in Tamil Nadu in recent years.

2. **Crocodile catfish | Narmada River, Gujarat**

This pair is incorrectly matched. The crocodile catfish (*Bagarius suchus*) is primarily found in river systems in Southeast Asia, not in the Narmada River in Gujarat, India.

3. **Saffron Reedtail damselfly | Western Ghats, Karnataka**

This pair is correctly matched. The Saffron Reedtail (scientifically *Protosticta sanguinostigma*) is a damselfly species endemic to the Western Ghats, including regions in Karnataka.

4. **Banded Royal butterfly | Rajasthan desert**

This pair is incorrectly matched. The Banded Royal (*Rachana jalindra*) is a butterfly species found in the forested regions of the Western Ghats and the Himalayas, not in the Rajasthan desert.

Finally, based on the explanations above, pairs 1 and 3 are correctly matched, while pairs 2 and 4 are incorrect. Therefore, only two pairs are correct, hence option B is correct.

75. (b)

Why in News?

The severe cold conditions across the United States and Canada are being attributed to an Arctic blast caused by the southward shift of the polar vortex.

DETAILED SOLUTIONS:

Statement I – Correct.

The polar vortex is a real weather pattern. It is a huge, swirling area of very cold air and low pressure that is always present near the Earth's North and South Poles high in the atmosphere.

Statement II – Correct.

This statement is accurate. The vortex exists because the poles are much colder than the equator. This temperature difference creates strong winds that circle the poles and trap the cold air.

Statement III – Correct.

When the polar vortex weakens, its boundary becomes wavy. This allows pockets of the extremely cold, trapped air to break away and move southward, causing severe cold snaps in places like North America and Europe.

Explanation: Statements II and III are both true. However, only Statement II directly explains “why” the polar vortex forms (the temperature difference). Statement III explains a “consequence” of its weakening, not its formation.

76. (c)

Why in News?

Recently, Zoji La Pass and Nathu La Pass were in News due to strategic border infrastructure and connectivity issues, including progress on the Zoji La Tunnel and developments related to India-China border management in the Sikkim sector.

DETAILED SOLUTIONS:

1. Zoji La Pass

Zoji La Pass is a high mountain pass in the Himalayas. It connects the Kashmir Valley to the Dras and Suru valleys. This pass is located in the Union Territory of Ladakh, so the pair is correctly matched.

2. Nathu La Pass

Nathu La Pass is a mountain pass in the Himalayas. It forms a border crossing between India and China.

This important pass is located in the state of Sikkim, so the pair is correctly matched.

3. Pangsau Pass

Pangsau Pass is a mountain pass on the India-Myanmar border. It is located in the Patkai Hills. This pass is in Arunachal Pradesh, not Assam, so the pair is incorrectly matched.

4. Palghat Gap

Palghat Gap is a major break in the Western Ghats mountain range. It is a low mountain pass or corridor. It is located between the states of Kerala and Tamil Nadu, so the pair is correctly matched.

Finally, based on the explanations above, pairs 1, 2, and 4 are correctly matched while pair 3 is incorrect. Therefore, only three pairs are correct, hence option C is correct.

77. (a)

Why in News?

Recently, the World Toilet Organization was in News in connection with World Toilet Day (19 November), highlighting global efforts to improve sanitation and achieve SDG-6 (Clean Water and Sanitation).

DETAILED SOLUTIONS:

Statement 1 – Incorrect.

The World Toilet Organization is not a United Nations agency. It is a global non-profit organization founded in 2001. It works independently, though it collaborates with UN bodies on sanitation issues.

Statement 2 – Correct.

The World Toilet Organization indeed founded World Toilet Day, the World Toilet Summit, and the World Toilet

College. These are its flagship initiatives to promote sanitation awareness and build capacity globally.

Statement 3 – Incorrect.

The organization's main focus is advocacy, awareness, and capacity-building in sanitation. It does not primarily function as a grant-giving body to fund infrastructure for ending open defecation in specific countries.

78. (b)

Why in News?

Recently, amid political tensions involving Venezuelan President Nicolás Maduro, former U.S. President Donald Trump claimed that the United States would take control of Venezuela's oil sector and fund its revival.

DETAILED SOLUTIONS:

Statement 1 – Incorrect.

Venezuela has large oil reserves, but it is not the world's largest producer. The United States and Saudi Arabia produce more oil. The Orinoco Belt does hold a major part of Venezuela's heavy oil reserves.

Statement 2 – Incorrect.

The Orinoco River flows through Venezuela and empties into the Atlantic Ocean, not the Pacific Ocean. Its vast delta is on the northeastern coast of the country facing the Atlantic.

Statement 3 – Correct.

Venezuela is indeed a founding member of OPEC, which was created in 1960. It also participates in the broader OPEC+ alliance, which includes other major oil-producing countries like Russia.

Explanation: Only Statement 3 is correct. Statements 1 and 2 contain errors about Venezuela's oil production rank and the

destination of the Orinoco River, making two statements incorrect.

79. (d)

Why in News?

Project-75(I) was in News as procurement moved forward to choose a foreign partner and an Indian shipyard for building six advanced conventional submarines under India's submarine modernisation programme for the Indian Navy.

DETAILED SOLUTIONS:

Statement I – Incorrect.

Air-Independent Propulsion (AIP) systems are not designed to increase a submarine's top speed. Their main purpose is to allow the submarine to stay underwater for much longer periods without needing to surface frequently.

Statement II – Correct.

AIP systems allow submarines to generate power for propulsion and other uses without needing to draw in atmospheric oxygen from the surface. This is the core feature that gives them their "air-independent" capability.

Explanation: Statement I is wrong because AIP extends underwater endurance, not speed. Statement II is right as it correctly defines the system's oxygen-independent power generation. Therefore, only Statement II is correct.

80. (c)

Why in News?

A research team operating under the Department of Science and Technology has developed a super-fast charging sodium-ion battery (SIB) that can reach 80% charge in just six minutes and sustain over 3,000 charge-discharge cycles.

DETAILED SOLUTIONS:

A. High energy density for portable electronics

Lithium-ion batteries use a liquid organic electrolyte. Their main advantage is high energy density, which makes them ideal for portable electronics like smartphones and laptops because they can store a lot of power in a small, light package.

B. Hard carbon anode

A key component of sodium-ion batteries is a hard carbon anode. This material helps in storing sodium ions. Their main advantage is lower cost, making them suitable for large-scale grid storage where size and weight are less critical than price.

C. Polymer electrolyte membrane

The key component is a polymer electrolyte membrane. This special membrane allows protons to pass through. This design enables the Proton Exchange Membrane Fuel Cell to operate efficiently at low temperatures, which is perfect for use in vehicles.

D. Enhanced safety and stability

Solid-state batteries use a solid electrolyte instead of a liquid one. This makes them much safer and more stable, as there is no risk of leaking flammable liquid. This is their primary advantage over traditional lithium-ion batteries.

Finally, based on the explanations above, the correct matching is A: High energy density for portable electronics; B: Hard carbon anode; C: Polymer electrolyte membrane; D: Enhanced safety and stability, hence option C is correct.

81. (d)

Why in News?

The Global Methane Status Report 2025, prepared by the UN Environment Programme (UNEP) in collaboration with the Climate and Clean Air Coalition (CCAC), highlights the progress achieved since the launch of the Global Methane Pledge.

DETAILED SOLUTIONS:

Statement 1 – Incorrect.

The Global Methane Pledge does aim for a 30% reduction by 2030. However, India is not a signatory to this pledge. India has chosen not to join this international agreement.

Statement 2 – Incorrect.

In India, the largest source of methane emissions is agriculture, mainly from livestock and rice cultivation. Globally, the largest source is also agriculture, not fossil fuel activities.

Both statements contain errors. Statement 1 is wrong because India did not sign the pledge and statement 2 is wrong because agriculture, not fossil fuels, is the top global source of methane.

82. (c)

Why in News?

Recently, the Wildlife Protection Act, 1972 has been in focus due to developments related to National Parks and Community Reserves, highlighting their legal status, protection norms, and the role of local communities in conservation.

DETAILED SOLUTIONS:

Statement 1 – Incorrect.

National Parks can be established by State Governments, not only by the Central Government. The State Government first

declares its intention to create a park. The final notification, however, is issued by the Central Government.

Statement 2 – Incorrect.

The boundaries of a National Park are not fixed only by a State Legislature. They are determined by the State Government through an official notification. The legislature makes the law, but the government sets the specific limits.

Statement 3 – Correct.

Community Reserves are declared only on private or community land, not on government land. They are protected areas managed by local communities together with the government to conserve wildlife and their habitat.

83. (c)

Why in News?

Recently, the **Biological Diversity Act** was in focus due to developments related to the functioning and powers of the **National Biodiversity Authority (NBA)** and **State Biodiversity Boards**, particularly in matters of access and benefit-sharing (ABS), regulation of biological resources, and compliance by companies and research institutions under the Act.

DETAILED SOLUTIONS:

Statement I – Incorrect.

The National Biodiversity Authority does not regulate access for Indian citizens. Its main role is to approve and control access for foreign entities, companies, and non-resident Indians under the Biological Diversity Act, 2002.

Statement II – Correct.

For Indian citizens, the regulation of access to biological resources is mainly handled by the State Biodiversity Boards in each

state, as per the decentralized framework established by the national law.

84. (c)

Why in News?

India marked a major clean energy milestone in 2025, with non-fossil capacity rising to 266.78 GW – up 22.6% from 2024 – after adding 49.12 GW during the year.

DETAILED SOLUTIONS:

Statement 1 – Incorrect.

Solar energy contributes more than wind energy in India's renewable energy mix. As of recent data, solar power capacity is significantly larger and has been growing faster than wind power capacity in the country.

Statement 2 – Correct.

India's total installed renewable energy capacity, which includes solar, wind, and other sources like biomass, is indeed greater than its installed large hydropower capacity as per official government reports.

Statement 3 – Correct.

The Government of India has identified specific zones off the coasts of Gujarat and Tamil Nadu for the development of the country's first offshore wind energy projects to harness strong sea winds.

85. (b)

Why in News?

Regional Rural Banks have recently been in focus due to government-led consolidation and reforms to strengthen financial inclusion in rural and semi-urban areas under RBI and NABARD oversight.

DETAILED SOLUTIONS:

The briefing note describes a bank with local reach and formal banking discipline. This matches Regional Rural Banks (RRBs), which operate in rural areas with professional banking rules.

It mentions a tripartite shareholding among Union Government, State Government, and a sponsor bank. This is the exact ownership structure mandated for all Regional Rural Banks in India.

It states such banks have been merged while keeping ownership unchanged. This refers to the ongoing RRB consolidation process, where smaller RRBs merge but the three-part ownership model remains.

86. (a)

Why in News?

Recently, Reserve Bank of India (RBI) conducted auctions of Treasury Bills and Cash Management Bills to manage the government's short-term borrowing needs and liquidity, bringing focus to these public debt instruments.

DETAILED SOLUTIONS:

Statement 1 – Correct.

Treasury Bills are short-term government securities sold at a discount and repaid at full face value upon maturity. They do not pay periodic interest, making them zero-coupon instruments used for immediate government funding needs.

Statement 2 – Incorrect.

Cash Management Bills are also short-term, zero-coupon instruments issued by the government to manage temporary cash shortages. They are typically sold through auctions, not private placements, and do not carry a fixed coupon rate.

87. (b)

Why in News?

Recently, **National Financial Reporting Authority (NFRA)** was in focus after it took disciplinary action against auditors and reaffirmed its regulatory powers under the **Companies Act, 2013**, strengthening oversight of audit standards and auditor accountability.

DETAILED SOLUTIONS:

Statement 1 – Correct.

The National Financial Reporting Authority is indeed a statutory body created by the Companies Act, 2013. This means it is established by law passed by Parliament, giving it legal authority to regulate financial reporting and auditing standards in India.

Statement 2 – Incorrect.

NFRA's power to investigate auditors is not limited to listed companies. Its authority extends to large unlisted public companies and other specified classes of companies as prescribed by the central government, making this statement wrong.

88. (b)

Why in News?

The Financial Intelligence Unit (FIU), has issued revised Anti-Money Laundering (AML) and Combating the Financing of Terrorism (CFT) guidelines for cryptocurrency exchanges.

DETAILED SOLUTIONS:

Statement 1 – Incorrect.

Transferring cryptocurrency between your own wallets is not a sale. It is like moving money from one pocket to another. No profit is made, so no taxable income arises from this action alone under Indian tax laws.

Statement 2 – Correct.

According to Indian tax rules, profits from selling virtual digital assets like cryptocurrency are taxed at a flat 30% rate. This rule applies when you sell the asset and realize a gain, not for simple transfers.

89. (a)

Why in News?

Recently, President's Rule under Article 356 came into focus after the Union government imposed/recommended it in a State over an alleged breakdown of constitutional machinery.

DETAILED SOLUTIONS:

Event 3 – (Imposition) is the first step.

The process begins when the President issues a proclamation. This assumes the state government's functions due to a failure of constitutional machinery, placing the state under central rule.

Event 4 – (Dissolution) is the second step.

Following the proclamation, the state's legislative assembly is dissolved. This is a direct consequence to prevent the assembly from functioning while the President's Rule is in effect.

Event 2 – (Elections) is the third step.

To restore democracy, the Election Commission conducts fresh elections for a new state legislative assembly. This is a prerequisite for ending the central rule.

Event 1 – (Revocation) is the final step.

After the election results are in, the President revokes the earlier proclamation. This formally ends President's Rule and restores the state's normal governance.

The correct sequence is 3 (imposition), 4 (dissolution), 2 (elections), and 1 (revocation). This order follows the constitutional procedure from assuming control to restoring an elected government.

90. (a)

Why in News?

It was in News as the Delhi High Court expanded personality rights protection, granting relief to Aishwarya Rai Bachchan and Abhishek Bachchan against unauthorised AI-generated use of their identities.

DETAILED SOLUTIONS:**Statement 1 – Correct.**

Using a sportsperson's image or signature pose in an institute's ad without permission is a clear violation. It commercially exploits their identity for profit, infringing on their right to control the use of their likeness.

Statement 2 – Incorrect.

Using archival match footage for News reporting, even with sponsored content, is typically allowed. It falls under fair use or legitimate News reporting exceptions, as it serves a public interest purpose.

Statement 3 – Correct.

Generating an AI voice that mimics a sportsperson for a podcast without consent violates their personality rights. It misappropriates their distinctive voice attribute for a commercial or promotional purpose.

91. (d)

Why in News?

Recently, the Supreme Court recently reaffirmed that telephone interception infringes the right to privacy and must strictly follow the procedure established by law.

DETAILED SOLUTIONS:**Statement I – True.**

Intercepting phone calls is a serious act. Indian law, like the Telegraph Act,

allows it only when a proper government authority gives permission. This follows a legal procedure, so the statement is true.

Statement II – False.

The law does not always require a judge's prior approval. In India, a senior government officer can authorize interception in certain situations. Therefore, it is false to say a judicial body must always approve first.

Explanation:

Statement I correctly states the legal requirement for authorized interception. Statement II is incorrect because Indian law permits non-judicial authorization, making the prior judicial approval claim false. Thus, only Statement I is true.

92. (b)

Why in News?

Recently the Department of Agriculture has drafted the Seeds Bill, 2025 to address current needs and stakeholder concerns, including those of farmers' organisations.

DETAILED SOLUTIONS:**1. The Protection of Plant Varieties and Farmers' Rights Act, 2001**

This law is correctly matched. It protects plant breeders' rights but also gives farmers the freedom to save, use, sow, exchange, or sell seeds from their harvest, even if the variety is protected.

2. The Indian Patents Act, 1970

This pair is correctly matched. The Act does not allow patents for plants, seeds, or essentially biological processes for producing plants. This protects traditional farming and biodiversity.

3. The Seeds Act, 1966

This pair is incorrectly matched. The Seeds Act sets quality standards for

seeds but does not mandate compulsory licensing for all genetically modified crop varieties. That is governed by other rules.

Based on the explanations above, pairs 1 and 2 are correctly matched, while pair 3 is incorrect. Therefore, only two pairs are correct.

93. (d)

Why in News?

Recently, judicial accountability came into focus after allegations against a sitting judge renewed debate over the Supreme Court's in-house inquiry mechanism versus constitutional impeachment.

DETAILED SOLUTIONS:

Statement 1 – Incorrect.

For a High Court judge, the inquiry is initiated by the Chief Justice of the concerned High Court, not only by the Chief Justice of India. The in-house procedure involves the Chief Justice of India only at a later stage.

Statement 2 – Incorrect.

The findings of the in-house inquiry are not binding on Parliament. Impeachment is a separate constitutional process. Parliament makes its own decision based on the evidence presented before it.

94. (d)

Why in News?

It was in News due to judicial and policy debates on online misinformation, focusing on intermediary liability and constitutional limits on government action under Article 19(2).

DETAILED SOLUTIONS:

Statement 1 – Correct.

This is grounds for action. Indian law, like the IT Act, allows action against false

information shared knowingly if it can cause public disorder. This protects public peace and safety.

Statement 2 – Correct.

This is grounds for action. Intermediaries like social media platforms must comply with lawful government orders to remove content. Failure to do so can lead to legal penalties under Indian IT rules.

Statement 3 – Correct.

This is grounds for action. Impersonating a government authority to mislead is illegal. It is considered cheating and can be punished under laws like the Indian Penal Code to prevent fraud.

Statement 4 – Correct.

This is grounds for action. Content threatening India's sovereignty or foreign relations is prohibited. Laws like the IT Act and criminal law allow action against such threats to national security.

95. (c)

Why in News?

Recently Jarosite was in News after its detection in the Rann of Kutch, Ethambutol due to concerns over TB-related vision loss, and PRATUSH following an India-France naval PASSEX.

DETAILED SOLUTIONS:

Statement 1 – Correct.

Jarosite is indeed an iron sulfate mineral. Its discovery on Mars by rovers is significant evidence that acidic water existed there in the past, as it forms in such wet, acidic conditions.

Statement 2 – Correct

Ethambutol is a standard first-line drug used globally to treat tuberculosis. It works

by stopping the growth of the bacteria that cause the disease, making the statement accurate.

Statement 3 – Correct.

PRATUSH is a proposed Indian space mission. Its primary scientific goal is to detect faint hydrogen signals from the early universe to understand the period known as the Cosmic Dawn.

96. (c)

Why in News?

The Commonwealth of Nations was in News over debates on its membership status, institutional relevance, and the functioning of the Secretariat.

DETAILED SOLUTIONS:

Statement 1 – Incorrect.

Membership in the Commonwealth does not require recognizing the British monarch as Head of State. Most member countries are republics with their own heads of state. The organization is a voluntary association of equal members.

Statement 2 – Incorrect.

The Commonwealth operates under a formal charter, adopted in 2013. This document outlines the organization's core values, principles, and objectives, providing a written constitutional framework for its activities and membership.

Statement 3 – Correct.

The Commonwealth Secretariat is located in London, United Kingdom. The United Kingdom is not a republic; it is a constitutional monarchy where the British monarch serves as the ceremonial head of state.

97. (a)

Why in News?

Recently, Southbound traffic through the Dardanelles Strait resumed after a temporary blockage by a vessel, disrupting Black Sea–Mediterranean trade amid recent Turkish Straits tariff hikes.

DETAILED SOLUTIONS:

Easternmost point to westernmost:



Fig: Important Straits

Option 4- The **Bosphorus** is the **easternmost strait**, connecting the Black Sea to the Sea of Marmara in Turkey. It is the farthest east.

Next is **option 2- Dardanelles**, west of the Bosphorus. It connects the Sea of Marmara to the Aegean Sea, which is part of the Mediterranean.

Then comes **option 3- Strait of Messina**, located between Sicily and mainland Italy. It is in the central Mediterranean, west of the Aegean Sea.

The **westernmost** is **option 1- Strait of Gibraltar**, connecting the Mediterranean Sea to the Atlantic Ocean. It is at the far western entrance.

Therefore, the correct east-to-west order is **Bosphorus (4), Dardanelles (2), Messina (3), Gibraltar (1)**, which matches code 4-2-3-1.

98. (a)

Why in News?

The Financial Action Task Force (FATF) was in News due to its recent reviews and statements on countries' compliance with anti-money laundering (AML) and counter-terrorism financing (CFT) norms, including updates related to the grey list and monitoring of jurisdictions.

DETAILED SOLUTIONS:

(a) **Financial Action Task Force (FATF):**

It is a global watchdog. It sets standards to combat money laundering and terrorist financing. Its role is policy-making and monitoring, not providing loans or direct financial aid to countries or projects.

(b) **The International Development Association (IDA):**

It is a part of the World Bank Group. It provides concessional loans and grants to the world's poorest countries to reduce poverty and support development projects.

(c) **The Bank for International Settlements (BIS):**

It is a bank for central banks. It fosters international monetary and financial cooperation. While its primary role is not development lending, it does provide some short-term financial assistance to central banks.

(d) **The International Finance Corporation (IFC):**

It is also part of the World Bank Group. It focuses on the private sector in developing countries by providing investment, advisory services, and asset management to stimulate economic growth.

Hence, only FATF lacks a core mandate for financial assistance or investment. The IDA

and IFC are direct lenders and investors, while the BIS can provide limited financial support to central banks.

99. (a)

Why in News?

The 14th edition of Exercise ECUVERIN is scheduled to be held in Thiruvananthapuram, Kerala. Exercise ECUVERIN is an annual bilateral military exercise conducted alternately in India and the Maldives.

DETAILED SOLUTIONS:

1. **Dharma Guardian:**

Dharma Guardian is a joint military exercise between **India and Japan**. It focuses on enhancing counter-terrorism and coordination skills. The pair in the question correctly matches this exercise with Japan.

2. **Mitra Shakti:**

Mitra Shakti is a joint military exercise conducted between **India and Sri Lanka**. The question incorrectly pairs it with Bangladesh. Therefore, this match is wrong.

3. **Ekuverin:**

Ekuverin is a bilateral military exercise between **India and the Maldives**. The question incorrectly pairs it with Sri Lanka. Thus, this match is not correct.

4. **Desert Eagle:**

Desert Eagle is a joint air force exercise between **India and the United Arab Emirates (UAE)**. The question incorrectly pairs it with Saudi Arabia. This match is also incorrect.

Based on the explanations above, only the first pair (**Dharma Guardian - Japan**) is correctly matched. The other three pairs are incorrect. Hence option A is correct.

100.(c)

Why in News?

Recently, a cargo vessel collided with a tanker transporting jet fuel for the American military off the eastern coast of England, triggering fires on both ships and causing fuel to spill into the North Sea.

DETAILED SOLUTIONS:**Statement 1 – Correct.**

The EU member states bordering the North Sea are Belgium, Denmark, Germany, the

Netherlands, and Sweden. All of these countries are indeed part of the Schengen Area, which allows passport-free travel between member nations.

Statement 2 – Correct.

Norway, Switzerland, and Iceland are not members of the European Union. However, they have signed separate agreements to participate in the Schengen Area, meaning they are part of its border-free travel zone.

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