



# CURRENT AFFAIRS

## MCQ CONSOLIDATION

**APRIL**  
**2025**  
**PART-I**



C-171/2,  
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Sector-15,  
Noida



641, Mukherjee Nagar,  
Opp. Signature  
View Apartment,  
New Delhi



21,  
Pusa Road,  
Karol Bagh  
New Delhi



Tashkent Marg,  
Civil Lines,  
Prayagraj,  
Uttar Pradesh



Tonk Road,  
Vasundhra Colony,  
Jaipur,  
Rajasthan



Burlington Arcade Mall,  
Burlington Chauraha,  
Vidhan Sabha Marg,  
Lucknow



12, Main AB Road,  
Bhawar Kuan,  
Indore,  
Madhya Pradesh

E-mail : [care@groupdrishti.in](mailto:care@groupdrishti.in)

Phone: +91-87501-87501

## Practice Question

### Art & Culture

**1. Consider the following statements regarding the Mahabodhi Temple at Bodh Gaya:**

1. Emperor Ashoka constructed the original shrine at Bodh Gaya in the 3<sup>rd</sup> century BCE to mark the site of Buddha's Enlightenment.
2. The temple came under shared management between Buddhists and Hindus following the enactment of the Bodh Gaya Temple Act in 1949.

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

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**2. Consider the following statements regarding the Daulatabad Fort:**

1. The fort was originally known as Devgiri and was renamed Daulatabad by Muhammad bin Tughlaq.
2. Daulatabad Fort, the capital of several dynasties including Yadavas, Tughlaqs, and Mughals, is a UNESCO-nominated heritage site.

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

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**3. Consider the following statements regarding Buddhist architecture in India:**

1. The Stupa is a dome-shaped structure that is primarily used to house relics of the Buddha and his disciples.
2. The Ajanta and Ellora caves are famous for their rock-cut architecture and murals depicting various Buddhist themes.
3. The Kandariya Mahadev Temple at Khajuraho is an example of Buddhist architecture.

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

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2, and 3

**4. Consider the following statements regarding the Sacred Relics of Buddha:**

1. According to Buddhist tradition, the Mallas of Kushinagar divided the relics of Buddha into eight parts after cremating his body with royal honours.
2. Emperor Ashoka is believed to have redistributed the relics of Buddha into 84,000 stupas to propagate Buddhism and the stupa cult.

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

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

### History

**5. Consider the following statements regarding Rabindranath Tagore:**

1. He was the first non-European to receive the Nobel Prize in Literature in 1913 for his work Gitanjali.
2. He established Visva-Bharati University at Santiniketan in 1921, based on the philosophy of 'learning in harmony with nature'.
3. In 1937, he established Cheena Bhavana to foster Indo-Burmese civilisational ties and global cultural dialogue.

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

- A. 1 and 3 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2, and 3

**6. With reference to Balochistan, consider the following statements:**

1. Balochistan is bordered by Afghanistan, Iran, Punjab and Sindh, and the Arabian Sea.
2. During the Partition of India, Balochistan comprised 4 princely states namely Kharan, Makran, Las Bela, and Kalat.

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

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

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7. With reference to Bankim Chandra Chattopadhyay, consider the following statements:

1. *Vande Mataram*, the national song of India, was composed by him and first appeared in the novel *Anandamath*.
2. *Rajmohan's Wife* was the first Indian novel written in English by Bankim Chandra Chattopadhyay.
3. He founded the literary magazine *Bangadarshan*, which played a key role in fostering Bengali nationalism.

Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 3 only
- D. 1, 2 and 3

8. Consider the following statements:

1. Jyotirao Phule founded the Satyashodhak Samaj in 1873 to challenge caste-based discrimination.
2. He opened India's first girls' school in 1848 and later started night schools (1855) for workers, farmers, and women in Pune.
3. *Tritiya Ratna* is a Marathi language play written by Jyotirao Phule in 1885.

How many of the statements given above is/are correct?

- A. Only One
- B. Only Two
- C. All Three
- D. None

9. Consider the following Jain philosophical terms and their meanings:

Philosophy	Meaning
1. Anekantavada	Doctrine of multiplicity of viewpoints
2. Syadvada	Theory of conditional or relative truth
3. Kevala Jnana	Non-attachment to material possession
4. Sallekhana	Voluntary peaceful death through fasting

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

- A. 1, 2 and 4 only
- B. 1 and 2 only
- C. 1, 2, 3 and 4
- D. 1, 2 and 3 only

10. In the context of the Bhakti Movement, the term 'Nirguna Bhakti' refers to:

- A. Devotion to God with attributes and form
- B. Worship of nature and elements
- C. Devotion to a formless, attributeless God
- D. Ritual offerings in temples

11. Consider the following:

Social Reform Movement	Associated Leader
1. Aligarh Movement	Syed Ahmed Khan
2. Prarthana Samaj	Gopal Krishna Gokhale
3. Theosophical Society	Annie Besant

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

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

12. Consider the following statements regarding Gandhian Satyagraha:

1. It is a method of nonviolent resistance based on the power of truth and moral force.
2. It aims to destroy the opponent through prolonged non-cooperation.
3. It includes self-suffering as a means of appealing to the conscience of the oppressor.

Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2 and 3

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## Geography

### 13. Consider the following statements with reference to Fluoride:

1. Fluoride is found in minerals like fluorspar, cryolite, and fluorapatite.
2. Its compounds are extensively utilized in aluminium manufacturing and serve as fluxing agents in steel and glass fibre industries.
3. The National Programme for Prevention and Control of Fluorosis (NPPCF) has been launched as part of the Jal Jeevan Mission.

How many of the above statements is/are not correct?

- A. Only one
- B. Only two
- C. All three
- D. None

### 14. Consider the following statements:

**Statement-I:** The mountain peak in Kashmir valley has diverse habitats suitable for the growth of various plants.

**Statement-II:** The altitudinal gradient in the valley allows different types of flora to thrive from plains to alpine meadows, making the region an ecological hotspot.

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

- A. Both Statement-I and Statement-II are correct, and Statement-II is the correct explanation for Statement-I.
- B. Both Statement-I and Statement-II are correct, and Statement-II is not the correct explanation for Statement-I.
- C. Statement-I is correct, but Statement-II is incorrect.
- D. Statement-I is incorrect, but Statement-II is correct.

### 15. Consider the following statements regarding the Thar Desert:

1. It is an arid region of rolling sand hills that stretches across parts of Rajasthan, Gujarat, Punjab, and Haryana in India and extends into Sindh and Punjab provinces of Pakistan.

2. It is bordered by the Indus River plain to the west, Punjab Plain to the north and northeast, Aravalli Range to the southeast, and Rann of Kachchh to the south.
3. It is home to one of the world's largest reserves of Bituminous coal.

How many of the above statements is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

### 16. Consider the following statements regarding Atmospheric Rivers:

1. Atmospheric rivers are long, narrow bands of moisture-laden air that transport water vapor from the tropics to mid and high latitudes.
2. Atmospheric rivers are commonly associated with the Maritime Tropical (mT) air mass and can cause intense precipitation upon landfall.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

## Polity & Governance

### 17. Consider the following statements:

1. To authorize Parliament to legislate on a State subject in the national interest.
2. To approve the Proclamation of Emergency under Article 352.
3. To create a new All India Service in the national interest.

Which of the powers above given is/are part of the exclusive powers of the Rajya Sabha?

- A. 1 and 3 only
- B. 2 and 3 only
- C. 1 and 2 only
- D. 1, 2 and 3

### 18. Consider the following statements regarding the joint sitting of Parliament under Article 108:

1. It is presided over by the Speaker of the Lok Sabha.
2. A joint sitting cannot be summoned for a Constitutional Amendment Bill.

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3. The quorum for a joint sitting is the same as that for an ordinary sitting of either House.

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

- A. 1 and 3 only  
B. 2 and 3 only  
C. 1 only  
D. 1, 2 and 3

**19. Consider the following statements regarding Article 21 of the Indian Constitution:**

1. It is available to both citizens and non-citizens.
2. It guarantees protection against arbitrary action of only the legislature and not the executive.
3. The scope of Article 21 has been expanded to include the right to a clean environment and livelihood.

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

- A. 1 and 2 only  
B. 2 and 3 only  
C. 1 and 3 only  
D. 1, 2 and 3

**20. Consider the following statements regarding Anti-Defection Law in India:**

1. The Tenth Schedule of the Constitution contains the Anti-Defection Law which was added by the 54<sup>th</sup> Constitutional Amendment Act, 1985.
2. Disqualification under the Anti-Defection Law is decided by the President or the Governor, as the case may be.
3. A nominated member of a House can be disqualified if they join a political party after 6 months of nomination.

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

- A. 1 only  
B. 3 only  
C. 2 and 3 only  
D. 1, 2 and 3

**21. Consider the following organizations/bodies in India:**

1. National Commission for Backward Classes (NCBC)
2. National Human Rights Commission (NHRC)
3. Law Commission of India
4. Election Commission of India (ECI)

**How many of the above are constitutional bodies?**

- A. Only one  
B. Only two  
C. Only three  
D. Only four

### Social Issues

**22. Consider the following statements regarding Transgender Persons (Protection of Rights) Act, 2019:**

1. The Act allows transgender persons to self-identify their gender only after undergoing a mandatory medical examination.
2. It ensures access to gender-affirming treatments and HIV surveillance with insurance coverage.
3. The National Council for Transgender Persons (NCTP) was established in 2020 under this Act as a statutory body.

**How many of the above statements is/are correct?**

- A. Only one  
B. Only two  
C. All three  
D. None

### Agriculture & Allied Sector

**23. With reference to artificial fruit ripening agents, consider the following statements:**

1. Calcium carbide is permitted for fruit ripening as long as it is used in minimal quantities.
2. Ethylene gas, approved by FSSAI, must be applied in controlled ripening chambers and not in direct contact with fruits.

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

- A. 1 Only  
B. 2 Only  
C. Both 1 and 2  
D. Neither 1 nor 2

### Environment & Ecology

**24. Consider the following statements regarding Olive Ridley Turtles:**

1. They are known for their unique mass nesting behaviour called Arribada, where thousands of females nest simultaneously on the same beach.

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2. Odisha's Gahirmatha Marine Sanctuary is recognised as the world's largest nesting site (rookery) for sea turtles.

**Which of the above statements is/are correct?**

- A. 1 Only  
B. 2 Only  
C. Both 1 and 2  
D. Neither 1 nor 2

25. The Central Pollution Control Board (CPCB) has recently revised its industry classification system. Which of the following best describes the new "Blue Category" added to the system?

- A. It is created for industries providing essential environmental services like waste management and biomining.  
B. It is introduced to classify industries based on their potential for producing noise pollution.  
C. It categorizes industries involved in reducing water pollutants in lakes.  
D. It is designed to classify industries that focus on reducing air pollution.

26. Consider the following statements regarding the Himalayan High Altitude Atmospheric and Climate Research Centre:

1. It is located in Himachal Pradesh at an altitude of over 3,000 meters.  
2. It is India's first high-altitude climate research station.  
3. It is ideal for high-accuracy atmospheric measurements due to clean air and minimal pollution.

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

- A. 1 and 2 only  
B. 2 and 3 only  
C. 1 and 3 only  
D. 1, 2 and 3

27. Consider the following statements:

1. The Loss and Damage Fund (LDF) provides financial support for climate resilience infrastructure and renewable energy transitions in Asia-Pacific nations.  
2. India has a legally mandated Green Taxonomy, which aligns with the objectives of the National Action Plan on Climate Change (NAPCC).

3. Masdar City located in the United Arab Emirates (UAE) is a global example of a climate-resilient Special Economic Zone (SEZ).

**How many of the above statements is/are correct?**

- A. Only one  
B. Only two  
C. All three  
D. None

28. Consider the following statements regarding the Agasthyamalai Biosphere Reserve:

1. It is part of the Western Ghats and spans across Tamil Nadu and Karnataka.  
2. The Neelakurinji flower, which blooms once every 12 years, is found in this region.  
3. The region is home to the Kani tribe.

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

- A. 1 and 2 only  
B. 2 and 3 only  
C. 1 and 3 only  
D. 1, 2 and 3

29. Regarding the Olive Ridley turtle, consider the following statements:

1. They are amongst the smallest sea turtle species, recognized by their olive or grayish-green color and heart-shaped carapace.  
2. They are omnivores and nest in mass events called arribadas, where thousands of females gather to lay eggs.  
3. They are protected under Schedule I of the Wildlife Protection Act, 1972.

**How many of the statements given above is/are correct?**

- A. Only One  
B. Only Two  
C. All Three  
D. None

30. Consider the following statements with reference to the project RE-HAB:

1. It aims to reduce human-elephant conflict.  
2. The project is an initiative of the Khadi and Village Industries Commission (KVIC).  
3. The project is a sub-mission under the National Honey Mission.

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How many of the statements given above is/are correct?

- A. Only One
- B. Only Two
- C. All Three
- D. None

31. Which of the following is true about the newly inaugurated Pamban Bridge in India?

- A. It is a suspension bridge built to carry road traffic.
- B. It is designed to withstand cyclonic storms and seismic activity.
- C. It is a vertical lift railway bridge designed for single-track usage only.
- D. It connects India to Sri Lanka through the Gulf of Mannar.

32. Consider the following statements:

- 1. They belong to a group of marine mammals called the pinniped group (fin-footed marine mammals).
- 2. They are found in large groups and are known for their loud barking sounds.
- 3. Spend most of their time in the ocean but come ashore for resting, mating, and pupping.
- 4. They live mostly in Pacific waters.

Which of the following species best matches the above description?

- A. Sea Lion
- B. Walrus
- C. Sea Otter
- D. Dugong

33. With reference to the Global Carbon Tax on Shipping, consider the following statements:

- 1. The carbon tax was imposed by the United Nations Framework Convention on Climate Change (UNFCCC).
- 2. It will apply to ships above 5,000 gross tonnage starting from 2028.
- 3. The funds generated through this tax will be reinvested into decarbonising the maritime sector.

Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

34. Consider the following statements about Carbon Capture, Utilisation and Storage (CCUS) technology:

- 1. It is primarily used to capture carbon dioxide emissions from industrial sources and power plants.
- 2. Captured CO<sub>2</sub> can be converted into products like synthetic fuels (methanol, methane) and materials such as concrete and plastics.
- 3. India has implemented commercial-scale CCUS projects across all major thermal power plants.

Which of the statements given above is/are not correct?

- A. 1 only
- B. 2 only
- C. 1 and 3 only
- D. 3 only

## Economy

35. Consider the following schemes:

- 1. Amended Technology Upgradation Fund Scheme (ATUFS)
- 2. SAMARTH Scheme
- 3. Power-Tex India

How many of the above are associated with the Textile Sector?

- A. Only one
- B. Only two
- C. All three
- D. None of the above

36. Consider the following statements with reference to the Pradhan Mantri Mudra Yojana (PMMY):

- 1. It is managed by MUDRA which is a subsidiary of NABARD.
- 2. It facilitates micro-credit for small business owners in the corporate and farm sectors.
- 3. Loan between ₹10 lakh and ₹20 lakh is provided under the Tarun Plus category.

How many of the above statements is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

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37. Consider the following measures:

1. Disinvestment and asset monetization
2. Increase in fiscal deficit
3. Appreciation of Indian Rupee against foreign currencies
4. Increase in interest rates by RBI

**Which of the above can help reduce the public debt burden of the Government?**

- A. 1 and 3 only
- B. 2 and 4 only
- C. 1, 3 and 4 only
- D. 1, 2 and 3 only

### Defence & Security

38. Consider the following statements regarding Exercise AIKEYME:

1. It is a maritime exercise co-hosted by India and Tanzania and its inaugural edition is set to take place in Dar-es-Salaam, Tanzania.
2. Key Participants of this exercise include Comoros, Djibouti, Eritrea, Kenya and Sri Lanka.

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

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

39. Which of the following statements about 'Exercise INDRA-2025' is/are correct?

1. It is a joint military exercise between India and Russia.
2. It commenced in Moscow.
3. It aims to counter maritime threats, promote global peace and stability, and strengthen joint operations.

**Select the correct answer using the code given below:**

- A. 3 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

40. Consider the following statements with respect to the Long-Range Glide Bomb (LRGB) 'Gaurav':

1. It is an indigenously developed surface-to-air weapon system designed and developed by the Defence Research and Development Organisation (DRDO).
2. It is a bomb powered by jet or rocket engines to reach long distances.
3. Its navigation system includes Inertial Navigation System (INS), satellite guidance, and a digital control system.

**How many of the above statements is/are not correct?**

- A. Only one
- B. Only two
- C. All three
- D. None

41. Consider the following pairs with regard to Military exercises:

1. Vajra Prahar- India and US
2. Garuda Shakti- India and Indonesia
3. Mitra Shakti- India and Bangladesh
4. Dharma Guardian- India and Sri Lanka

**How many of the above pairs is/are correctly matched?**

- A. Only one
- B. Only two
- C. Only three
- D. All four

### Science & Tech

42. Consider the following statements regarding Transgenic Research:

1. Transgenic research involves altering the genomes of organisms by introducing foreign Deoxyribonucleic Acid sequences from another species.
2. Cotton is the only transgenic crop that is being commercially cultivated in India.
3. Genetic Engineering Appraisal Committee (GEAC) under the Ministry of Science & Technology responsible for evaluating impact of transgenic research.

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Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2, and 3

43. Regarding avian influenza, consider the following statements:

1. It is a highly contagious disease caused by avian influenza A viruses that affect both wild and domestic birds.
2. H5N1, a subtype, is listed as a priority disease under the World Health Organization (WHO) Research and Development (R&D) Blueprint.

Which of the statements given above is/are correct?

- A. 1 Only
- B. 2 Only
- C. Both 1 and 2
- D. Neither 1 nor 2

44. Consider the following statements regarding HALEU (High Assay Low Enriched Uranium):

1. HALEU is produced through uranium enrichment and contains between 5% and 20% of the U-235 isotope.
2. HALEU can be used in India's existing Pressurised Heavy Water Reactors (PHWRs) along with thorium.
3. Spent fuel from Pressurized Heavy Water Reactors (PHWRs) using HALEU-thorium can be reprocessed to extract valuable fissile material.

How many of the above statements is/are not correct?

- A. Only one
- B. Only two
- C. All three
- D. None

45. Regarding the Small Modular Reactors (SMRs), consider the statements:

1. They are advanced nuclear reactors with a capacity of about one-third of traditional reactors.
2. They are compact and factory-assembled, making them suitable for remote or space-constrained areas.
3. They require refueling every 1 to 2 years, compared to 3 to 7 years in conventional plants.

How many of the statements given above is/are correct?

- A. Only One
- B. Only Two
- C. All Three
- D. None

46. Which of the following best describes Additive Manufacturing (AM)?

- A. A process of assembling prefabricated parts into a final product
- B. A method where material is removed from a solid block to form a desired object
- C. A layer-by-layer technique of creating a 3D object directly from a digital model
- D. A manual method of building models using molds and carving tools

47. With reference to Ammonia, consider the following statements:

1. Ammonia is produced using the Haber-Bosch process involving nitrogen and hydrogen under low temperature and pressure.
2. It is stored in liquid form under pressure and is highly corrosive in its concentrated form.
3. Ammonia is insoluble in water and does not react to form any hydroxide.
4. Ammonia is being explored as a carbon-free energy carrier due to its high energy density compared to lithium-ion batteries and compressed hydrogen.

Which of the statements given above is/are correct?

- A. 1, 2 and 4 only
- B. 1 and 3 only
- C. 2 and 4 only
- D. 1, 3 and 4 only

48. The terms CAPTCHA, Two-Factor Authentication (2FA), and honeypots are often seen in the news in the context of:

- A. E-commerce security
- B. Cybersecurity
- C. Data privacy regulations
- D. Cloud computing technologies

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## 49. Consider the following statements:

1. Formaldehyde is commonly found in household cleaning agents and insecticides.
2. Asbestos exposure can lead to serious lung diseases.
3. Carbon monoxide is an odorless gas released during incomplete combustion.

Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

## 50. Consider the following statements:

**Statement-I:** India's indigenous Automatic Train Protection (ATP) system, developed to prevent train collisions by automatically activating the braking system if the loco pilot fails to act.

**Statement-II:** Radio Frequency Identification (RFID) tags are placed throughout the entire track length to enable the Kavach system to track train positions.

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

- A. Both Statement-I and Statement-II are correct, and Statement-II is the correct explanation for Statement-I.
- B. Both Statement-I and Statement-II are correct, and Statement-II is not the correct explanation for Statement-I.
- C. Statement-I is correct, but Statement-II is incorrect.
- D. Statement-I is incorrect, but Statement-II is correct.

## 51. Consider the following statements regarding transgenic organisms:

1. A transgenic organism carries recombinant DNA from another species.
2. All genetically modified organisms (GMOs) are transgenic.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

## 52. Consider the following statements regarding Genome Sequencing:

1. It helps in identifying genetic disorders and contributes to the development of precision medicine.
2. Genome sequencing can aid in tracking the spread and mutation of infectious diseases during epidemics.
3. Whole Genome sequencing decodes only the coding regions, while exome sequencing covers the entire genome.

Which of the statements given above is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

## 53. Consider the following pairs:

- |                |   |
|----------------|---|
| A. Carbon-14   | 1. Treatment of cancer through radiation therapy. |
| B. Iodine-131  | 2. Dating of archaeological samples.              |
| C. Cobalt-60   | 3. Treatment of thyroid diseases.                 |
| D. Uranium-235 | 4. Nuclear fuel and weapons.                      |

Match the isotopes given above with their uses and select the correct answer using the code given below:

- A. A-2, B-3, C-1, D-4
- B. A-1, B-2, C-4, D-3
- C. A-3, B-2, C-4, D-1
- D. A-2, B-1, C-3, D-4

## 54. Consider the following nuclear reactor type and the fuel used:

- | Reactor Type                              | Fuel Used         |
|---|-------------------|
| 1. Pressurised Heavy Water Reactor (PHWR) | Natural Uranium   |
| 2. Fast Breeder Reactor (FBR)             | Mixed Oxide (MOX) |
| 3. Advanced Heavy Water Reactor (AHWR)    | Thorium-232       |

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

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. 1 and 3 only

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55. Consider the following:

1. Mutation
2. Sexual reproduction
3. Genetic drift
4. Clonal propagation

Which of the following processes given above contributes to genetic diversity in plant species?

- A. 1 and 2 only
- B. 1, 2 and 3 only
- C. 1, 2, 3 and 4
- D. 2 and 4 only

### International Relations and Current Affairs

56. Consider the following statements:

1. It is a coral atoll and the largest island of the Chagos Archipelago, located 7° south of the equator.
2. It was leased to the United States and the United Kingdom, and later became a military base.
3. It played a significant role in the Gulf War, Iraq and Afghanistan wars, and post-9/11 operations, highlighting the Indo-Pacific's strategic importance.

Which of the following locations best matches the above description?

- A. Diego Garcia
- B. Maldives
- C. Seychelles
- D. Mauritius

57. Consider the following statements regarding the term **Global South**:

1. The Brandt Line roughly separates the economically developed Global North from the developing Global South along a latitude of approximately 30° North.
2. The Global South broadly comprises countries from Latin America, Asia, Africa, and Oceania.
3. The absence of a UN Security Council mandate does not affect the legitimacy of Global South-led peacekeeping missions.

How many of the above statements is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

58. Which one of the following countries is not a member of the Indian Ocean Rim Association (IORA)?

- A. Germany
- B. Maldives
- C. Australia
- D. Indonesia

59. Consider the following statements:

1. In FY-23, India was Sri Lanka's largest trade partner, the leading source of Foreign Direct Investment (FDI), and the top contributor to its tourism sector.
2. The Kankesanthurai Port is a key infrastructure project in Sri Lanka funded by India.

Which of the statements given above is/are correct?

- A. 1 Only
- B. 2 Only
- C. Both 1 and 2
- D. Neither 1 nor 2

60. Consider the following statements regarding the **Ottawa Convention, 1997**:

1. It is an international agreement that prohibits the use, production, stockpiling, and transfer of anti-personnel landmines.
2. India is a signatory to the Ottawa Convention.
3. In 2025, Poland, Finland, and the Baltic states withdrew from the Convention.

How many of the above statements is/are not correct?

- A. Only one
- B. Only two
- C. All three
- D. None

61. Consider the following statements:

1. The President of India was conferred the 'City Key of Honour', the highest civilian award presented by the city of Lisbon, Portugal.
2. Portugal is situated in southwestern Europe on the Iberian Peninsula and also comprises the Atlantic archipelagos of Madeira and the Azores.

Which of the statements given above is/are not correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

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**62. Consider the following statements:**

1. It is one of the two most strategically significant artificial waterways in the world.
2. It connects the Atlantic Ocean and the Pacific Ocean.
3. It uses a system of locks and water elevators to transport ships from one ocean to the other.

**Which of the following locations best matches the above description?**

- A. Suez Canal
- B. Panama Canal
- C. Kiel Canal
- D. Corinth Canal

**63. Consider the following statements:**

1. The State of Social Protection Report is published by the International Labour Organization (ILO).
2. The World Social Protection Report (WSPR) 2024–26 is published by the World Bank.

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

- A. 1 Only
- B. 2 Only
- C. Both 1 and 2
- D. Neither 1 nor 2

## Answers

- |         |         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. (C)  | 2. (C)  | 3. (A)  | 4. (C)  | 5. (B)  | 6. (C)  | 7. (D)  | 8. (C)  | 9. (A)  | 10. (C) |
| 11. (C) | 12. (B) | 13. (A) | 14. (A) | 15. (B) | 16. (C) | 17. (A) | 18. (D) | 19. (C) | 20. (B) |
| 21. (B) | 22. (B) | 23. (A) | 24. (C) | 25. (A) | 26. (B) | 27. (B) | 28. (B) | 29. (C) | 30. (C) |
| 31. (B) | 32. (A) | 33. (C) | 34. (D) | 35. (C) | 36. (A) | 37. (A) | 38. (A) | 39. (A) | 40. (B) |
| 41. (B) | 42. (A) | 43. (C) | 44. (D) | 45. (B) | 46. (C) | 47. (C) | 48. (B) | 49. (B) | 50. (A) |
| 51. (A) | 52. (B) | 53. (A) | 54. (C) | 55. (B) | 56. (A) | 57. (B) | 58. (A) | 59. (C) | 60. (A) |
| 61. (D) | 62. (B) | 63. (D) |         |         |         |         |         |         |         |

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## Explanations

### Art & Culture

1. (C)

Exp:

**Mahabodi Temple:**

- Emperor Ashoka worshiped at the Bodhi tree and built the Mahabodhi Temple in the 3<sup>rd</sup> century BCE. Hence, statement 1 is correct.

- The temple remained a Buddhist site through the Pala period and was visited by Chinese traveler Hiuen Tsang in 629 AD.

- Following Bakhtiyar Khilji's invasion in the 13th century, Buddhism declined in the region.

- The present Temple dates to 5<sup>th</sup>–6<sup>th</sup> century CE (Late Gupta period); made entirely of brick.

- In 1590, a Hindu monk established the Bodh Gaya mutt, bringing the temple under Hindu control.

- After Independence, the Bodh Gaya Temple Act, 1949 transferred control from the Hindu head to a shared management committee. Hence, statement 2 is correct.

- Architectural Features:** Shikhara, Vajrasana (Diamond Throne), Chaitya niches, amalaka, kalasha, Sculpted balustrades, Buddha images, votive stupas.

- Seven Sacred Sites** include Animeshlochan Chaitya, Ratnachakrama, Lotus Pond, Ajapala Nigrodh Tree, Ratnaghar Chaitya etc., marking Buddha's 7 weeks after Enlightenment.

2. (C)

Exp:

**Daulatabad Fort:**

- Originally called Devgiri (Hill of Gods), it was renamed Daulatabad by Muhammad bin Tughlaq when he shifted his capital there in the 14<sup>th</sup> century. Hence, statement 1 is correct.

- It served as the capital of several dynasties including Yadavas, Tughlaqs, Bahmanis, Nizam Shahis, Mughals, and briefly the Marathas before the Nizams of Hyderabad.

- It is a UNESCO-nominated heritage site, known for its historical, architectural, and ecological importance. Hence, statement 2 is correct.

- Monuments and Structures Within:**

- Chand Minar (1435 CE):** Indo-Islamic style victory tower modeled after Qutub Minar.

- Bharat Mata Mandir**, located within the fort, was previously the Jama Masjid during Qutub-ud-din Mubarak's reign (1318 CE).

- Chini Mahal**, a lavish palace turned prison by Aurangzeb.

- Artillery and Cannons:** Fort was equipped with ~288 cannons, a notable one is Aurangzeb's Mendha also called Qila Shikan (fort-breaker), symbolized military power.

3. (A)

Exp:

**Buddhist Architecture in India:**

- A Stupa is a key element of Buddhist architecture, typically dome-shaped and used to enclose relics or remains of the Buddha and other revered Buddhist figures. Stupas also serve as a symbol of the Buddha's teachings. Hence, statement 1 is correct.

- The Ajanta and Ellora caves are renowned for their rock-cut architecture and elaborate murals, which vividly depict scenes from the life of the Buddha, Jataka tales, and other Buddhist teachings. These caves represent the artistic and architectural achievements of ancient India, especially during the Gupta period. Hence, statement 2 is correct.

- The Kandariya Mahadev Temple, located in the Khajuraho group of temples, is a Hindu temple and is part of the architectural tradition of Hinduism, not Buddhism. The temple is known for its intricate carvings and is a significant example of Hindu temple architecture. Hence, statement 3 is not correct.

4. (C)

Exp:

**Sacred Relics of Buddha:**

- At the age of 80, according to Buddhist beliefs, Buddha attained salvation in Uttar Pradesh's Kushinagar district.

- The Mallas (tribal people at the time of the Buddha) of Kushinagar cremated his body.

- His relics from the funeral pyre were collected and divided into eight shares to be distributed among the Ajathasatrus of Magadha, the Licchavis of Vaishali, the Sakyas of Kapilavastu, Mallas of Kushinagar, Bullies of Allakappa, the Mallas of Pava, the Koliyas of Ramagrama and a Brahmana of Vethadipa. Hence, statement 1 is correct.

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- 💡 The purpose was to erect stupas over the sacred relics.
- ✦ Two more stupas came up - one over the urn in which the relics had been collected and the other over the embers.
- ✦ Stupas erected over the **bodily relics of Buddha (Saririka stupas)** are the earliest surviving Buddhist shrines.
- ✦ **Ashoka (272–232 BC)** opened up seven of these eight stupas, and collected major portions of the relics for enshrinement within 84,000 stupas built by him in an effort to popularize Buddhism as well as the cult of the stupas. **Hence, statement 2 is correct.**

## History

5. (B)

Exp:

- 💡 Rabindranath Tagore, **born in Calcutta on 7<sup>th</sup> May 1861**, was a Bengali poet, novelist, playwright, musician, painter, philosopher, and educationist.
- 💡 He was **popularly known as Gurudev, Kabiguru, and Biswakabi**.
- 💡 He became the first non-European to win the **Nobel Prize in Literature (1913)** for his work *Gitanjali*. **Hence, statement 1 is correct.**
- 💡 Tagore envisioned education as a **means to liberate the mind, not control it**. In 1921, he founded **Visva-Bharati University** at Santiniketan, built on the philosophy of 'learning in harmony with nature'. **Hence, statement 2 is correct.**
- 💡 In 1937, he established Cheena Bhavana to foster **Indo-Chinese civilisational ties** and global cultural dialogue. **Hence, statement 3 is not correct.**

6. (C)

Exp:

**Balochistan**

- 💡 **Geography:** Balochistan is Pakistan's southwestern province that borders **Afghanistan, Iran, Punjab and Sindh** (provinces of Pakistan), and the **Arabian Sea**. **Hence, statement 1 is correct.**
- 💡 **Demography:** It covers **44% of the country's total land area** but is home to only **5% of its population**, predominantly inhabited by the **Baloch, a Sunni Muslim ethnic group**, who also have significant communities in **Iran and Afghanistan**.

- ✦ It is the **largest and least populated province**, rich in **natural resources** such as **natural gas, coal, gold, and copper**, but remains **highly impoverished**, with 70% of its population classified as multidimensionally poor.

- 💡 **History of Insurgency:** At the time of **Partition of India (1947)**, Balochistan comprised 4 princely states: **Kharan, Makran, Las Bela, and Kalat**, with Kalat opting for **independence** while the others joined Pakistan. **Hence, statement 2 is correct.**

- 💡 **Amnesty International** reports that over **10,000 Baloch** have disappeared in Pakistan since 2011.

7. (D)

Exp

**Bankim Chandra Chattopadhyay:**

- 💡 The death anniversary of **Bankim Chandra Chattopadhyay** was observed on **8<sup>th</sup> April**, remembering his contributions to Indian literature, nationalism, and the cultural awakening of **Bengal** during the 19<sup>th</sup> century.
- 💡 **Nationalism and Literature:** Through works like *Anandamath* (banned by the British), which narrates the **Sanyasi Rebellion**, Bankim became synonymous with India's struggle for independence.
- ✦ The national song of India, **Vande Mataram**, originated from **Bankim's Anandamath**, becoming a symbol of the freedom movement. **Hence, statement 1 is correct.**
- 💡 *Rajmohan's Wife* was the first Indian novel written in **English** by him. **Hence, statement 2 is correct.**
- 💡 **Role in the Bengali Renaissance:** Bankim started the literary magazine *Bangadarshan* (1872), which played a key role in fostering **Bengali nationalism**. **Hence, statement 3 is correct.**

8. (C)

Exp:

**Jyotiba Phule:**

- 💡 He was born on **11<sup>th</sup> April, 1827**, and emerged as a pioneering social reformer who challenged **Brahmanical orthodoxy**, fought for the **rights of Dalits and women**, and laid the foundation for India's **social justice movements**.
- 💡 **Social Reforms:**
  - ✦ Phule opposed **caste oppression**, criticized Brahminical figures like **Chiplunkar and Tilak**, and **supported the British** to uplift the oppressed and women.

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- ✦ Phule founded **Satyashodhak Samaj (1873)** to fight caste hierarchy and, in **Gulamgiri**, compared caste oppression to **American slavery**. Hence, **statement 1 is correct**.

💡 "Deenbandhu," a Marathi weekly newspaper, was founded in 1877 and served as a platform for Satyashodhak Samaj.

- ✦ Viewed it as an **upper-caste effort** to restore Brahmin rule.
- ✦ Phule and his wife **Savitribai** opened **India's first girls' school in 1848** and later started **night schools (1855) for workers, farmers, and women** in Pune. Hence, **statement 2 is correct**.

💡 **Tritiya Ratna** is a Marathi language play written by **Jyotirao Phule in 1885**. Hence, **statement 3 is correct**.

9. (A)

Exp:

**Key Jainism Related Terms and their Meanings:**

- 💡 **Anekantavada** is the Jain doctrine of the multiplicity of viewpoints, asserting that truth and reality are perceived differently from diverse points of view. Hence, **pair 1 is correctly matched**.
- 💡 **Syadvada** is known as the "**doctrine of conditioned predication**"; it holds that **statements are only relatively true depending on context**, reflecting the **non-absolutist nature** of Jain thought. Hence, **pair 2 is correctly matched**.
- 💡 **Kevala Jnana** is Jainism's concept of **omniscience or absolute knowledge**, complete and perfect knowledge attained after destroying all karmic bonds. It leads the soul towards **liberation (Moksha)**. Hence, **pair 3 is not correctly matched**.
- ✦ It is **not a non-attachment**. In Jainism, **aparigraha** is the virtue of **non-possessiveness, non-grasping, non-attachment or non-greediness**.
- 💡 **Sallekhana** is a voluntary, peaceful, and gradual fasting unto death, observed by Jain ascetics and sometimes laypersons, as a spiritual practice of detachment and renunciation. Hence, **pair 4 is correctly matched**.

💡 Hence, **option A is correct**.

10. (C)

Exp:

- 💡 The **Bhakti Movement** in India evolved as a major spiritual reform movement between the **7th and 17th centuries**, emphasizing love and devotion (bhakti) towards a personal God. This movement broadly manifested in 2 philosophical streams:

- ✦ **Saguna Bhakti** : Worship of a **personal God with form and attributes** (like Rama, Krishna, Vishnu, Shiva, etc.). It includes saints like **Tulsidas, Surdas, Mirabai, Chaitanya Mahaprabhu**.

- ✦ **Nirguna Bhakti**: Devotion to a **formless, attributeless, all-pervading God**, transcending caste, creed, and ritualism. **Nirguna Saints** like **Kabir, Guru Nanak, Ravidas, Dadu Dayal**, advocated social equality and formless devotion.

💡 Hence, **option C is correct**.

11. (C)

Exp:

- 💡 **Syed Ahmed Khan** spearheaded the **Aligarh Movement** in the 19<sup>th</sup>-century to **modernize Muslim education** and promote scientific and rational learning through the establishment of the **Muhammadan Anglo-Oriental College (later Aligarh Muslim University) in 1875**. Hence, **pair 1 is correct**.

- 💡 **Prarthana Samaj** was founded in **1867** in Bombay by **Atmaram Pandurang** and was later led by **M.G. Ranade** and **R.G. Bhandarkar**, not **Gopal Krishna Gokhale**. It promoted social reforms such as widow remarriage, women's education, and caste equality. Hence, **pair 2 is not correct**.

- ✦ **Gopal Krishna Gokhale** was a moderate Congress leader, founder of the **Servants of India Society**, and a mentor to Mahatma Gandhi.

- 💡 The **Theosophical Society** was founded in the USA in **1875** by **H.P. Blavatsky** and **H.S. Olcott**. **Annie Besant** later became its prominent leader in India. She played a key role in the Indian nationalist movement and was associated with the Home Rule Movement. Hence, **pair 3 is correct**.

💡 Hence, **option C is correct**.

12. (B)

Exp:

- 💡 Gandhian Satyagraha is a method of **nonviolent resistance** grounded in **truth (Satya)** and **moral force (soul force)**. It seeks to bring about change through **non-violent means** and appeals to the conscience of the oppressor. Hence, **statement 1 is correct**.

- 💡 Satyagraha does **not aim to destroy the opponent**. Instead, it seeks to **transform the opponent** through **compassion, dialogue, and moral persuasion**, ensuring that justice is achieved without hatred or harm. Hence, **statement 2 is not correct**.

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- Self-suffering (tapasya) is a key element of Satyagraha. Gandhi believed that willingly enduring suffering for a just cause could touch the heart of the oppressor and lead to **voluntary change**. Hence, **statement 3 is correct**.

Hence, option B is correct.

## Geography

13. (A)

Exp:

Fluoride:

- It is a **highly reactive element** that does not occur in elemental form in nature.
- It makes up **0.3 g/kg** of the **Earth's crust** and is found as **fluoride (oxidation state-1)** in minerals like **fluorspar, cryolite, and fluorapatite**. Hence, **statement 1 is correct**.
- Fluoride compounds** are extensively utilized in **aluminium manufacturing** and serve as **fluxing agents** in **steel and glass fibre industries**. Additionally, significant fluoride emissions occur during the production processes of **phosphate fertilizers**, as well as in the making of **bricks, tiles, and ceramics**. Hence, **statement 2 is correct**.
- Fluoride** has a dual impact, it is beneficial in small amounts (**prevents dental caries**), but harmful in excess (causes dental fluorosis (mottling of teeth enamel, mainly in children) and skeletal fluorosis (bone/joint issues)).
  - As per the **Bureau of Indian Standards**, the safe **fluoride level in water** is **1 to 1.5 mg/L (milligrams per liter)**, levels above this are considered hazardous to health.

- India launched the **National Programme for Prevention and Control of Fluorosis (NPPCF)** during the **11th Five Year Plan**. Additionally, the **Jal Jeevan Mission** aims to ensure safe drinking water. Hence, **statement 3 is not correct**.

14. (A)

Exp:

- Kashmir's agroclimatic** conditions set it apart from the rest of the country. The region's **prolonged** and **harsh winters** push the vegetation into a state of dormancy.
- The **mountainous region** is a home to a variety of **endemic plants**, including **indigenous bulbs, herbs, shrubs, and trees**.

- These floral species play a **crucial role** in maintaining the **valley's biodiversity**.

- The **diversity of plants in Kashmir** is largely attributed to its vast **altitudinal variations**. Hence, **statement I is correct**.

- The altitudinal gradient in the valley allows **different types of flora to thrive** from plains to alpine meadows, making the region an ecological hotspot. Hence, **statement II is correct**.

- Both Statement-I and Statement-II are correct, and Statement-II is the correct explanation for Statement-I**. Hence, option A is correct.

15. (B)

Exp:

Thar Desert:

- It is an **arid region of rolling sand hills** on the Indian subcontinent. It spans an area of **200,000 sq kms** across **northwestern India** (Rajasthan, Gujarat, Punjab, and Haryana) and **southeastern Pakistan** (Sindh and Punjab provinces). Hence, **statement 1 is correct**.

- It is bordered by the **Indus River** plain to the west, the **Punjab Plain** to the north and northeast, the **Aravalli Range** to the southeast, and the **Rann of Kachchh** to the south. Hence, **statement 2 is correct**.

- The desert **experiences a subtropical desert climate**, characterized by persistent high pressure and subsidence.

- The desert's soils include **Desert, Red Desertic, Sierozems, Red and Yellow, Saline, Lithosols, and Regosols**.

- The Desert houses **one of the world's largest lignite coal reserves**. Hence, **statement 3 is not correct**.

16. (C)

Exp:

Atmospheric River:

- The atmospheric river is a **long, narrow band of moisture-filled air** that transports significant amounts of water vapor from the tropics to higher latitudes. Hence, **statement 1 is correct**.

- The Atmospheric River is often associated with **mT (Maritime Tropical)** air mass. Hence, **statement 2 is correct**.

- When these rivers make landfall, they release **this moisture as intense precipitation**, which can manifest as **either rain or snow** depending on the altitude and temperature.

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- ⚡ The “Pineapple Express” is a well-known example of AR storms that bring heavy rainfall to the US West Coast, particularly California.

## Polity & Governance

17. (A)

Exp:

**Exclusive Powers of the Rajya Sabha:**

- ⚡ Under **Article 249** of the Constitution, **Rajya Sabha** may pass a resolution by a **two-thirds majority** of members present and voting, declaring that it is necessary in the **national interest** for Parliament to make laws with respect to **State List** subjects. This is an **exclusive power of Rajya Sabha**. Hence, **statement 1 is correct**.
- ⚡ Approval of **National Emergency** is done by **both Houses of Parliament**, as per **Article 352(4)**. Hence, this is **not an exclusive power** of the Rajya Sabha. Hence, **statement 2 is not correct**.
- ⚡ Under **Article 312**, if the **Rajya Sabha** passes a resolution by a **two-thirds majority** that it is necessary or expedient in the national interest to create an **All India Service**, Parliament may create such a service by law. This is an **exclusive power** of the Rajya Sabha. Hence, **statement 3 is correct**.

18. (D)

Exp:

- ⚡ **Article 108** of the Indian Constitution deals with the **procedure for convening a joint sitting of both Houses of Parliament (Lok Sabha and Rajya Sabha)** to resolve a legislative deadlock on an ordinary bill.
  - ✖ The **Speaker of the Lok Sabha** presides over the joint sitting. If the Speaker is absent, the Deputy Speaker presides, and in their absence, the Deputy Chairman of the Rajya Sabha takes the chair. Hence, **statement 1 is correct**.
- ⚡ **Joint sitting is not applicable to Constitutional Amendment Bills** under Article 368, as they require separate special majority approval in both Houses. Hence, **statement 2 is correct**.
- ⚡ The quorum for a joint sitting is **1/10th of the total number of members of both Houses taken together**, which is the same as the quorum for an ordinary sitting under **Article 100 (3)**. Hence, **statement 3 is correct**.

19. (C)

Exp:

- ⚡ **Article 21** states “**No person shall be deprived of his life or personal liberty except according to procedure established by law.**”
  - ✖ The term “**person**” includes both **citizens and non-citizens (foreigners)**. Hence, **Article 21 applies to every person** on Indian soil. Hence, **statement 1 is correct**.
- ⚡ **Initially**, in the **A.K. Gopalan case (1950)**, the Supreme Court held that Article 21 protected individuals only from **executive action**, not **legislative action**. However, in the landmark **Maneka Gandhi case (1978)**, the SC ruled that “**procedure established by law**” must be **just, fair, and reasonable**, and **not arbitrary**.
  - ✖ Effectively, it **introduced the concept of ‘due process of law’**. Thus, now protection under **Article 21 is available not only against arbitrary executive action but also against arbitrary legislative action**. Hence, **statement 2 is not correct**.
- ⚡ The **Supreme Court** has **expanded** the scope of **Article 21** through its **successive judgments** to include the right to a clean environment and livelihood. Hence, **statement 3 is correct**.

20. (B)

Exp:

- ⚡ The **Anti-Defection Law** is contained in the **Tenth Schedule** of the Indian Constitution. It was added by the **52<sup>nd</sup> Constitutional Amendment Act, 1985** (not the 54th Amendment). Hence, **statement 1 is not correct**.
  - ✖ The law aimed to prevent political defections by legislators motivated by the lure of office or monetary gains.
- ⚡ The power to decide disqualification under the Anti-Defection Law lies with the **Chairman or Speaker** of the respective House, **not the President or Governor**. This was clarified in the **Kihoto Hollohan case (1992)**. Hence, **statement 2 is not correct**.
- ⚡ As per the **Tenth Schedule**, a **nominated member** can **join a political party within 6 months** of their nomination **without attracting disqualification**. However, if they **join a political party after 6 months**, they **are liable to be disqualified** under the Anti-Defection Law. Hence, **statement 3 is correct**.

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21. (B)

Exp:

- 💡 National Commission for Backward Classes (NCBC) is a **constitutional body**. It was initially a **statutory body** but was granted **constitutional status** in **2018** by the **102<sup>nd</sup> Constitutional Amendment Act, 2018**. It is now governed under **Article 338B**.
- 💡 National Human Rights Commission (NHRC) is a **statutory body**. It was established under the **Protection of Human Rights Act, 1993** and is **not** mentioned in the Constitution.
- 💡 **Law Commission of India** is a **non-constitutional, non-statutory body**.
  - ✖ It is an **executive body** constituted by the Government from time to time; hence, **not a constitutional body**.
- 💡 **Election Commission of India (ECI)** is a **constitutional body** established under **Article 324** of the Constitution of India, it is a key constitutional authority for conducting elections.
- 💡 Hence, option B is correct.

### Social Issues

22. (B)

Exp:

Transgender Persons (Protection of Rights) Act, 2019

- 💡 **About:**
  - ✖ The Act aims to **protect the rights of transgender persons** and provide a **legal framework** for their empowerment.
  - ✖ According to **Transgender Persons (Protection of Rights) Act, 2019**, a transgender person is someone **whose gender identity does not align with the gender assigned at birth**.
- 💡 **Key Provisions:**
  - ✖ **Non-Discrimination:** Prohibits discrimination in education, employment, healthcare, and public services.
  - ✖ **Self-Identification:** Grants the **right to self-perceived gender identity**, with certificates issued by district magistrates **without medical exams**. Hence, **statement 1 is not correct**.
  - ✖ **Medical Care:** Ensures access to gender-affirming treatments and HIV surveillance with insurance coverage. Hence, **statement 2 is correct**.

- ✖ **National Council:** Under this act, the **National Council for Transgender Persons (NCTP)** was established as a **statutory body** in **2020**. Hence, **statement 3 is correct**.

### Agriculture & Allied Sector

23. (A)

Exp:

Artificial Fruit Ripening Agents:

- 💡 **Calcium Carbide:** It releases **toxic acetylene gas** and may contain **phosphorus**, and **arsenic (a carcinogenic substance)** causing severe health issues.
  - ✖ Its usage has been **banned by FSSAI** under Food Safety and Standards Regulations, 2011. Hence, **statement 1 is not correct**.
- 💡 **Permitted Substances:**
  - ✖ **Ethylene Gas:** Approved by FSSAI up to **100 ppm (parts per million)**; triggers natural ripening. It must be applied in **controlled ripening chambers** and **not in direct contact** with fruits. Hence, **statement 2 is correct**.

### Environment & Ecology

24. (C)

Exp:

Olive Ridley Turtles:

- 💡 **About:**
  - ✖ The Olive ridley turtles are the **smallest and most abundant of all sea turtles** found in the world.
  - ✖ **These turtles are carnivores and get their name from their olive-coloured carapace**
  - ✖ **These turtles are carnivores** and get their name from their olive-coloured carapace.
  - ✖ They are best known for their **unique mass nesting called Arribada**, where thousands of females come together on the same beach to lay eggs. Hence, **statement 1 is correct**.
- 💡 **Habitat:**
  - ✖ They are found in **warm waters of the Pacific, Atlantic and Indian oceans**.
  - ✖ Odisha's **Gahirmatha Marine Sanctuary** is known as the **world's largest rookery** (a colony of breeding animals) of sea turtles. Hence, **statement 2 is correct**.

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💡 **Protection Status:**

- ✦ **Wildlife Protection Act, 1972:** Schedule 1
- ✦ **IUCN Red List:** Vulnerable
- ✦ **CITES:** Appendix I

**25. (A)**

**Exp:**

**Central Pollution Control Board (CPCB):**

- 💡 CPCB classifies industries based on their Pollution Index (PI), which evaluates the pollution potential of industries by taking into account emissions into the air, discharges into water, and generation of hazardous waste.

- ✦ The categories include Red ( $PI > 80$ ), Orange ( $55 \leq PI < 80$ ), Green ( $PI < 25$ ), and **Blue (for essential environmental services)**.

- 💡 The **CPCB** has introduced a revised classification system for industries, which includes a new **“Blue Category” for essential environmental services**, aiming to incentivize sectors like waste management and biomining.

- ✦ **Blue Category** covers industries like landfill maintenance, biomining, and waste-to-energy plants. They will receive a two-year extension for their consent to operate as an incentive for environmental management.

📌 Despite a high PI (97.6), waste-to-energy plants are categorized as Blue due to the essential environmental service they provide.

📌 CBG (Compressed Biogas) plants, depending on their feedstock, are also eligible for Blue Category status.

- 💡 The **Central Pollution Control Board (CPCB)** is a statutory organisation, constituted under the Water (Prevention and Control of Pollution) Act, 1974.

- 💡 Hence, option A is correct.

**26. (B)**

**Exp**

**India's First-ever “High-Altitude Climate Research Station” :**

- 💡 India has inaugurated the **Himalayan High Altitude Atmospheric and Climate Research Centre at Nathatop**, Jammu & Kashmir, marking a **major milestone in global climate science**. Hence, **statement 1 is not correct**.

- 💡 It is **India's first high-altitude atmospheric and climate research station**. Hence, **statement 2 is correct**.

**Himalayan High Altitude Atmospheric and Climate Research Centre**

- 💡 **Strategic Location:** The center is located at an altitude of 2,250 meters above sea level in **Nathatop**, chosen for its **clean air and minimal pollution**.

- ✦ Which makes the center ideal for **high-accuracy atmospheric and climate measurements**. Hence, **statement 3 is correct**.

- 💡 **Research Domain:** The centre **will facilitate cutting-edge studies on cloud formation, aerosol interactions, and weather patterns**.

- 💡 **ICE-CRUNCH:** The inauguration marked the launch of the **Indo-Swiss Joint Research Project, ICE-CRUNCH (Ice Nucleating Particles and Cloud Condensation Nuclei Properties in the North-Western Himalayas)**.

- ✦ It focuses on understanding **Ice-Nucleating Particles (INPs)** and **cloud condensation nuclei** (tiny suspended particles, either solid/liquid), pivotal to climate modelling and precipitation patterns in the region.

- 💡 **Significance:** It will **enhance India's leadership in climate science** and support efforts to meet **global climate targets**, including the country's commitment to net-zero emissions **(by 2070)**.

**27. (B)**

**Exp:**

**Climate-Resilient Infrastructure:**

- 💡 Financial tools like the **Loss and Damage Fund (LDF)** support **Asia-Pacific nations** by funding **climate resilience, better farming practices, and renewable energy transitions**. Scaling up the LDF is crucial for impactful adaptation. Hence, **statement 1 is correct**.

- 💡 India can align the **Smart Cities Mission** with the **National Action Plan on Climate Change (NAPCC)** to integrate climate adaptation and mitigation.

- ✦ India is **actively developing a green taxonomy** to align with its NAPCC, it does not yet have a **legally mandated green taxonomy**. Hence, **statement 2 is not correct**.

📌 A **“green taxonomy”** is a classification system that identifies and categorizes **economic activities and investments** as **environmentally sustainable**, helping investors and companies make informed decisions and direct capital towards sustainable projects.

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Established in 2006, Masdar City is an emerging global clean-technology cluster located in what aims to be one of the world's most sustainable urban development powered by renewable energy.

- ✦ Masdar City is a Special Economic Zone (SEZ) located about 17 km from the main city area of Abu Dhabi. Hence, statement 3 is correct.
- ✦ The city plans to institutionalise the policies aimed at zero waste, sustainable transport, building energy efficiency standards, biodiversity strategy policies, and renewable energy requirements.

28. (B)

Exp:

Agasthyamalai Biosphere Reserve:

- Agasthyamalai Biosphere Reserve stretches across Tamil Nadu and Kerala in the southernmost stretch of the Western Ghats. Hence, statement 1 is not correct.
- The Neelakurinji flower, which blooms once every 12 years, is found in this region. Hence, statement 2 is correct.
- The region is inhabited by indigenous communities, especially the Kani tribe. Hence, statement 3 is correct.
- Lion-Tailed Macaque, Bengal Tiger, Nilgiri Marten, Nilgiri Tahr, Malabar Spiny Dormouse, Great Pied Hornbill, Gaur (Indian bison), Sloth Bear found in this region.

29. (C)

Exp:

Olive Ridley (*Lepidochelys olivacea*):

- They belong to the class *Reptilia* and family *Cheloniidae* and are amongst the smallest sea turtle species, recognized by their olive or grayish-green color and heart-shaped carapace. Hence, statement 1 is correct.
- They are omnivores and nest in mass events called arribadas, where thousands of females gather to lay eggs. Hence, statement 2 is correct.
- ✦ They migrate 9,000 km from the Pacific to the Indian seas, nesting 1–3 times between December and March, and laying about 100 eggs per clutch.

They are protected under Schedule I of the Wildlife Protection Act, 1972, and under Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Hence, statement 3 is correct.

Gahirmatha and Rushikulya in Odisha are among the world's largest nesting sites for Olive Ridley turtles. In 2024, over 1.3 million turtles laid eggs at these rookeries, surpassing the previous record of 1.15 million in 2023.

- ✦ Other important nesting sites in India include the Devi River mouth in Odisha and the Andaman Islands.

30. (C)

Exp:

Project RE-HAB:

Project RE-HAB (Reducing Elephant-Human Attacks using Bees) aims to reduce human-elephant conflict by installing bee boxes along forest borders, creating "bee fences" to deter elephants without harming humans. Hence, statement 1 is correct.

- ✦ Unlike trenches or electric fences, bee boxes offer an eco-friendly and economical solution, making them suitable for large-scale deployment in conflict zones.
- ✦ The project was launched in 2021 at four locations near the periphery of Nagarhole National Park and Tiger Reserve.

RE-HAB is an initiative of the Khadi and Village Industries Commission (KVIC). Hence, statement 2 is correct.

Project RE-HAB is a sub-mission under KVIC's National Honey Mission. Hence, statement 3 is correct.

31. (B)

Exp:

The new Pamban Bridge is a vertical lift railway sea bridge built to enhance rail connectivity between Rameswaram Island and mainland India.

It spans 2.07 km across the Palk Strait, replacing the 1914 Pamban Bridge which was a cantilever structure with a Scherzer Rolling Lift span.

It has been built to withstand turbulent waters, cyclones, and seismic activity.

- ✦ During the 1964 tsunami, a passenger train was swept away from the old Pamban Bridge, although the bridge itself withstood the disaster.

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- 💡 It is a **railway bridge**, not a road bridge.
- 💡 Designed for **double tracks**, it supports **heavier, faster trains** and smooth **rail-maritime coordination**.

💡 Hence, option B is correct.

32. (A)

Exp:

- 💡 Recently, a toxic **algal bloom** off **California's coast** has led to **unprecedented aggression in sea lions**, causing them to attack humans.
  - ✖ **Domoic acid**, a **neurotoxin produced by the diatom *Pseudo-nitzschia***, is responsible for altering the brain function of sea lions.
- 💡 **Sea Lions:**
  - ✖ Sea lions (along with Seals and walruses) belong to a group of **marine mammals** called the **pinniped group** (fin-footed marine mammals).
    - 📎 They are found in **large groups** and are known for their **loud barking sounds**.
    - 📎 Spend most of their time in the ocean but come ashore for **resting, mating, and pupping**.
  - ✖ They live mostly in **Pacific waters**.
- 💡 Hence, option A is correct.

33. (C)

Exp:

**India Supports First Global Carbon Tax on Shipping**

- 💡 India and 62 other nations have voted in favour of the **world's first-ever global carbon tax** on the shipping industry, imposed by the **United Nations' shipping agency, the International Maritime Organisation (IMO)**. Hence, **statement 1 is not correct**.
- 💡 **Carbon Tax Framework:** The tax will come into effect in 2028, requiring **ships above 5,000 gross tonnage** (which account for 85% of total CO<sub>2</sub> emissions from international shipping) to either shift to cleaner fuel technologies or pay a fee ranging from **USD 100 to USD 380 per tonne** of CO<sub>2</sub> emitted, depending on emission thresholds. Hence, **statement 2 is correct**.
  - ✖ The tax is expected to generate up to **USD 40 billion by 2030**, which will be **reinvested into decarbonising the maritime sector**, with no provision for broader climate adaptation. Hence, **statement 3 is correct**.

34. (D)

Exp:

- 💡 **Carbon Capture, Utilisation and Storage (CCUS)** technology is primarily used to **capture carbon dioxide emissions** from large point sources like industrial facilities and power plants to reduce greenhouse gas emissions. Hence, **statement 1 is correct**.

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- Captured CO<sub>2</sub> can be converted into useful products such as **synthetic fuels (e.g., methanol, methane) and construction materials** like concrete and plastics, adding economic value to the process. **Hence, statement 2 is correct.**
- India is still in the **early stages of adopting CCUS**. While pilot projects and research initiatives are ongoing, **commercial-scale CCUS projects have not yet been implemented** in India. **Hence, statement 3 is not correct.**

## Economy

35. (C)

Exp :

The **National Technical Textiles Mission (NTTM)**, launched in **2020** by the **Ministry of Textiles**, aims to position India as a **global leader in technical textiles** by **2025-26** has **completed 5 years**.

- Technical Textiles:** Technical textiles are **functional fabrics** made from **natural and synthetic fibers**, used across industries like **defense, healthcare, infrastructure, automotive, medicine etc.**
    - Examples:** Mosquito nets, seat belts, helmets, fireproof jackets, and sanitary napkins.
  - NTTM:** Launched for a period from **2020-21 to 2025-26**, the **mission** focuses on promoting **research, market growth, exports, and skill development** in key sectors like **agriculture, healthcare, and infrastructure in technical textiles**.
    - Key Components:** Supporting R&D for new materials, promoting market adoption, strengthening exports, and training 50,000 individuals through skill development programs.
  - Schemes Related to the Textile Sector:** **PM MITRA Park Scheme, Amended Technology Upgradation Fund Scheme (ATUFS), Scheme for Integrated Textile Parks (SITP), SAMARTH Scheme, Power-Tex India.**
    - PM Mega Integrated Textile Regions and Apparel (PM MITRA) Park Scheme:** Launched to **create integrated textile parks under PPP mode** via **SPVs**, with facilities like processing units and design centres.
      - Inspired by the **5F vision (Farm to Fibre to Factory to Fashion to Foreign)**, it aims to boost competitiveness, cut logistics costs, and generate jobs in the textile sector.
- Hence, option C is correct.

36. (A)

Exp:

- The **Pradhan Mantri Mudra Yojana (PMMY)**, managed by **MUDRA** (a subsidiary of **SIDBI**). **Hence, statement 1 is not correct.**
  - It facilitates micro-credit up to ₹10 lakh for small business owners in the **non-corporate, non-farm sector**. **Hence, statement 2 is not correct.**
  - It offers three categories:
    - Shishu:** covering loans upto ₹ 50,000.
    - Kishore:** covering loans above ₹ 50,000 and up to ₹ 5 lakhs.
    - Tarun:** covering loans above ₹ 5 lakh and up to ₹ 10 lakhs.
    - Tarun Plus:** Loans between ₹10 lakh and ₹20 lakh – Available to entrepreneurs who have previously availed and successfully repaid loans under the Tarun category. **Hence, statement 3 is correct.**

37. (A)

Exp:

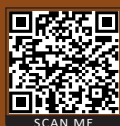
- Public Debt** refers to the total liabilities incurred by the government to finance its fiscal deficit. It includes both internal debt (raised within the country) and external debt (borrowed from foreign sources).
  - Disinvestment** refers to the sale of government stake in public sector enterprises and **asset monetization** involves leasing or selling existing government-owned infrastructure (like roads, railways, etc.) to raise funds.
    - These generate non-debt capital receipts, **reducing the need for borrowing** and thereby lowering the debt burden. **Hence, statement 1 is correct.**
  - Fiscal Deficit** is the gap between total expenditure and total non-debt receipts. A higher deficit **requires borrowing** to bridge the gap, increasing public debt. **Hence, statement 2 is not correct.**
  - Appreciation** means the value of the rupee rises relative to other currencies. It **reduces the repayment burden** of external debt (which is denominated in foreign currencies), thus helping reduce total debt burden. **Hence, statement 3 is correct.**
  - Higher **interest rates** make government borrowing more expensive as debt servicing costs rise. This **increases** the overall debt burden. **Hence, statement 4 is not correct.**
- Hence, option A is correct.

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## Defence & Security

38. (A)

Exp:

- ✦ **Africa India Key Maritime Engagement (AIKEYME):**
  - ✦ It is co-hosted by India and Tanzania, with its first edition in April 2025 at **Dar-es-Salaam, Tanzania**. Hence, **statement 1 is correct**.
  - ✦ The exercise involves **11 nations**, including Comoros, Djibouti, Eritrea, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, South Africa, India, and Tanzania. Hence, **statement 2 is not correct**.
  - ✦ Includes training on anti-piracy operations, Search and Rescue (SAR), seamanship skills, visit board search and seizure (VBSS), and helicopter operations.

39. (A)

Exp:

**Exercise INDRA-2025:**

- ✦ The **14<sup>th</sup>** edition of the **bilateral naval exercise INDRA-2025** between **India and Russia** was conducted in **Chennai**. Hence, **statement 1 is not correct**.
- ✦ It was held in **2 phases**:
  - ✦ Harbour Phase in **Chennai**, featuring **expert exchanges, ship visits, and sports**.
  - ✦ Sea Phase in the **Bay of Bengal**, with **advanced drills like tactical manoeuvres, anti-air operations, and helicopter landings**. Hence, **statement 2 is not correct**.
- ✦ Russian ships such as **Pechanga, Rezkii, Aldar Tsydenzhapov**, and Indian warships- **Rana, Kuthar, and the P-8I aircraft** participated in the exercise.
- ✦ **Exercise INDRA**, conducted regularly since **2003**, aims to **counter maritime threats**, promote global peace and stability, and strengthen joint operations. Hence, **statement 3 is correct**.

40. (B)

Exp:

**Long-Range Glide Bomb (LRGB) 'Gaurav':**

- ✦ It is an indigenously developed **air-launched precision-guided weapon** for **accurate strikes on land targets** from **stand-off distances** designed and developed by the **Defence Research and Development Organisation (DRDO)**. It is not a **surface-to-air weapon system**. Hence, **statement 1 is not correct**.
- ✦ It is a glide bomb which is a **precision-guided munition** that travels long distances **without powered propulsion** by using **aerodynamic lift**. Hence, **statement 2 is not correct**.

- ✦ It uses **Inertial Navigation System (INAS)**, satellite guidance and **digital control system**. Hence, **statement 3 is correct**.

- ✦ It Enhances India's **precision strike capabilities**, aligning with **indigenous defence development**.

41. (B)

Exp:

- ✦ **Vajra Prahar** is an annual exercise hosted alternatively between **Special Forces India and the United States**. Hence, **Pair 1 is correctly matched**.
- ✦ **Garuda Shakti** is a bilateral military exercise between **Indian Army Special Forces and Indonesian Special Forces**. Hence, **Pair 2 is correctly matched**.
- ✦ **Mitra Shakti** is an annual exercise between **India and Sri Lanka** based on counter insurgency and counter terrorism operations in semi urban terrain. Hence, **Pair 3 is not correctly matched**.
- ✦ **Dharma Guardian** is an annual exercise conducted alternatively in **India and Japan**. Hence, **Pair 4 is not correctly matched**.
- ✦ Hence, **option B is correct**.

## Science & Tech

42. (A)

Exp:

- ✦ **Transgenic research** involves altering the genomes of organisms by introducing foreign **Deoxyribonucleic Acid (DNA)** sequences from another species, typically in a laboratory setting. Hence, **statement 1 is correct**.
- ✦ The term "transgenic" comes from the root word "trans" meaning "across" or "from one to another," and "genic," which refers to genes.
  - ✦ This research creates transgenic animals, plants, and microorganisms for genetic studies, disease modeling, and biotechnology advancements.
- ✦ Cotton is the only transgenic crop that is approved by the Genetic Engineering Appraisal Committee (GEAC) for commercial cultivation in the Country. Hence, **statement 2 is correct**.
- ✦ **GEAC** is the apex body under the **Ministry of Environment, Forest and Climate Change** responsible for evaluating the environmental impact of transgenic research and industrial use of hazardous microorganisms and recombinants. Hence, **statement 3 is not correct**.

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43. (C)

Exp:

Avian Influenza:

- 💡 Bird flu, or avian influenza, is a highly contagious viral disease that affects both wild and domestic birds. It is caused by **avian influenza A viruses**, with subtypes such as **H5N1** and **H5N8** being particularly significant. Hence, **statement 1 is correct**.
- 💡 The first human cases were reported in **1997 in Hong Kong**.
  - ✖ Most cases have occurred in Asia and were linked to close contact with infected birds.
- 💡 H5N1 spreads primarily through **direct contact with infected live or dead birds or contaminated environments** (e.g., live bird markets).
  - ✖ Rarely, transmission from infected mammals to humans has been observed. H5N1 is listed as a priority disease under the World Health Organization (WHO) Research and Development (R&D) Blueprint. Hence, **statement 2 is correct**.
  - 📌 The R&D Blueprint is a **global strategy and preparedness plan** that allows the **rapid activation of R&D activities** during epidemics. It aims to **fast-track the availability of effective tests**, vaccines, and medicines that can be used to save lives and avert a large-scale crisis.
- 💡 H5N8 primarily affects birds but can occasionally infect humans and other animals.
  - ✖ It is **highly contagious among poultry** and can lead to significant economic losses in the poultry industry.
- 💡 Recently, a casualty was observed in Andhra Pradesh from the bird flu virus, marking **India's second recorded human fatality from H5N1 since 2021**.

44. (D)

Exp:

HALEU (High Assay Low Enriched Uranium):

- 💡 HALEU is not naturally occurring; it is produced through **uranium enrichment**.
- 💡 HALEU is uranium enriched between **5% and 20% U-235**. This approach enables India to **start utilizing thorium sooner**, making its **nuclear power generation more sustainable**. Hence, **statement 1 is correct**.
- 💡 Recycling spent fuel ensures **long-term sustainability** and optimal fuel usage in India's nuclear sector.

- 💡 India can enhance its nuclear energy programme by using a mix of **High Assay Low Enriched Uranium (HALEU)** and **thorium** in existing **700 MWe Pressurised Heavy Water Reactors (PHWRs)**. Hence, **statement 2 is correct**.
- 💡 The reprocessed **fissile material** can be utilized in **advanced reactors** such as **Molten Salt Reactors (MSRs)**.
- 💡 Spent fuel from **Pressurised Heavy Water Reactors (PHWRs)** using HALEU-thorium can be reprocessed to extract valuable fissile material. Hence, **statement 3 is correct**.

45. (B)

Exp:

Small Modular Reactors (SMRs):

- 💡 SMRs are advanced nuclear reactors with a **capacity of up to 300 MW(e)**, about **one-third of traditional reactors**. Hence, **statement 1 is correct**.
- 💡 They are **compact, factory-assembled, and transported for installation**, making them suitable for **remote or space-constrained areas**. Hence, **statement 2 is correct**.
  - ✖ Eg: NuScale (USA), CAREM (Argentina)
- 💡 They require refueling every **3-7 years** as compared to **1-2 years in conventional plants**. Hence, **statement 3 is not correct**.
- 💡 The **Union Budget 2025-26** announces the launch of a **Nuclear Energy Mission** with a focus on **research and development of Small Modular Reactors (SMRs)** and to develop **at least 5 indigenously designed and operational SMRs by 2033**.

46. (C)

Exp:

Additive Manufacturing (3D Printing)

- 💡 Additive Manufacturing (AM) is a process that **builds objects by adding material layer by layer** based on a **digital 3D model**.
- 💡 It contrasts with traditional subtractive manufacturing methods where the material is removed (e.g., cutting, drilling) to create the desired shape.
- 💡 AM enables **precise fabrication of complex geometries with minimal waste** and greater design flexibility, making it a transformative technology in sectors like aerospace, healthcare, and consumer goods.
- 💡 Hence, **option C is correct**.

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47. (C)

Exp:

Ammonia:

- 💡 **Ammonia (NH<sub>3</sub>)** is a colorless gas with a sharp smell, widely used in **industry** and naturally found in the **environment and the human body**.
- ✖ It is produced by the **Haber-Bosch process** ( $N_2 + 3H_2 \rightarrow 2NH_3$ ) under **high temperature and pressure** in the presence of a catalyst. Hence, **statement 1 is not correct**.
- ✖ Its concentrated form is **corrosive and can cause burns or explode under high heat**. It is stored as a **compressed liquid**. Hence, **statement 2 is correct**.
- ✖ It is **highly water-soluble** and forms **ammonium hydroxide** in contact with **water**. Hence, **statement 3 is not correct**.
- ✖ It has **9 times the energy density of Li-ion batteries** and **3 times that of compressed hydrogen**, making it a promising **carbon-free energy carrier**. Hence, **statement 4 is correct**.

48. (B)

Exp:

- 💡 **CAPTCHA (Completely Automated Public Turing test to tell Computers and Humans Apart)** is a **challenge-response test** used to **distinguish bots from human users**, enhancing online security and protecting user data.
- ✖ **Bots** are automated software programs that **perform repetitive online tasks**.
- ✖ It **blocks bots, preventing fake accounts, spam, and data theft**, ensuring only human users access digital platforms.
- ✖ CAPTCHA is used in **logins, registrations, transactions, comments, account recovery, and surveys to block bots** and verify users. **ReCAPTCHA** also aids in **book digitisation**.
- 💡 Other measures include **Two-Factor Authentication (2FA)**, adding a second verification layer via device codes, **biometric verification** using fingerprints or facial recognition, **honeypots** to trap bots, and **behavioral biometrics** that track typing or swipe patterns to distinguish humans from bots.
- 💡 Hence, **option B is correct**.

49. (B)

Exp:

Common Indoor Air Pollutants:

- 💡 **Formaldehyde**: Found in wood products, glues, paints, and furnishings; a known **carcinogen**. Hence, **statement 1 is not correct**.

- 💡 **Asbestos**: Found in older construction materials **used for making fireproof or incombustible building components**; exposure can lead to serious lung diseases. Hence, **statement 2 is correct**.
- 💡 **Carbon Monoxide (CO)**: A toxic **odorless gas** produced from incomplete combustion. Hence, **statement 3 is correct**.

50. (A)

Exp:

Kavach System:

- 💡 It is India's indigenous **Automatic Train Protection (ATP) system**, developed to prevent train collisions by automatically activating the braking system if the loco pilot fails to act. Hence, **statement 1 is correct**.
- 💡 **Radio Frequency Identification (RFID) tags** are placed throughout the entire track length to enable the **Kavach system** to track train positions. Hence, **statement 2 is correct**.
- ✖ **Optical Fibre Cable** is laid along the tracks to ensure **fast and efficient data transmission**.
- 💡 India operates the **world's fourth-largest railway network**, spanning over **65,000 kms**, and is projected to account for **40% of global rail activity** by 2050, highlighting its significance in **sustainable transportation and mobility**.
- 💡 Hence, **option A is correct** because both **Statement-I** and **Statement-II** are correct, and **Statement-II** is the correct explanation for **Statement-I**.

51. (A)

Exp:

- 💡 A **transgenic organism** is one that has been **genetically modified to contain DNA from a different species**.
- ✖ This is typically done using **recombinant DNA technology**, where genes from one organism are inserted into the genome of another to give it new traits (e.g., Bt cotton with bacterial genes for pest resistance). Hence, **statement 1 is correct**.
- ✖ **Recombinant DNA Technology** is a technique to combine DNA from different sources to create new genetic traits using enzymes.
- 💡 A **Genetically Modified Organism (GMO)** refers to any organism whose genetic material has been **altered using genetic engineering techniques**.
- ✖ **Not all GMOs are transgenic**. For example, some GMOs may involve editing the organism's **own genes** (e.g., through CRISPR) without introducing foreign DNA. These are **non-transgenic GMOs**. Hence, **statement 2 is not correct**.

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52. (B)

Exp:

💡 **Genome sequencing** is the process of decoding the complete genetic material of an organism. It aids in identifying genetic disorders, enabling precision medicine, tracking disease outbreaks, improving crop varieties, and conserving biodiversity. **Hence, statement 1 is correct.**

✖ It helps identify genetic mutations and disorders, thereby playing a key role in **precision medicine**, which involves tailoring medical treatment to the individual characteristics of each patient.

💡 During **epidemics and pandemics**, genome sequencing is crucial for **tracking the spread, mutation, and evolution** of infectious agents like viruses and bacteria. For instance, it was extensively used to monitor SARS-CoV-2 variants. **Hence, statement 2 is correct.**

💡 **Whole Genome Sequencing (WGS)** decodes the **entire DNA, including both coding and non-coding regions**, offering a complete genetic profile. **Exome sequencing** targets only the **gene-coding regions (exons)**, which make up 1–2% of the genome but hold about 85% of disease-causing mutations. **Hence, statement 3 is not correct.**

53. (A)

Exp:

💡 **Carbon-14** is a **radioactive isotope** of carbon commonly used in **radiocarbon dating** to determine the **age of archaeological samples**, particularly organic materials such as fossils or ancient remains.

✖ **Iodine-131** is a radioactive isotope used in the treatment of **thyroid diseases**.

✖ **Cobalt-60** is widely used in **radiation therapy for the treatment of cancer**. It emits **gamma rays** that are effective in killing cancer cells, particularly in the treatment of deep-seated tumors.

✖ **Uranium-235** is used as fuel in **nuclear reactors** and is a key element in the production of **nuclear weapons**.

💡 Hence, option A is correct.

54. (C)

Exp:

💡 **PHWR (Pressurised Heavy Water Reactor)** uses **Natural Uranium (U-238 + U-235)** as fuel and **heavy water (D<sub>2</sub>O)** as both moderator and coolant. It is cost-effective, avoids the need for uranium enrichment, and forms the **first stage** of India's three-stage nuclear programme. **Hence, pair 1 is correctly matched.**

💡 **FBR (Fast Breeder Reactor)** uses **MOX fuel** (a mix of **plutonium and uranium**) and is designed to **breed more fissile material (Pu-239)** than it consumes, making it central to the **second stage** of India's nuclear programme. **Hence, pair 2 is correctly matched.**

💡 **AHWR (Advanced Heavy Water Reactor)** is designed to use **Thorium-232**, a fertile material, along with a **fissile seed** like U-233 or Pu-239 to sustain the chain reaction. It represents **India's third stage** of the nuclear programme, aiming for long-term energy sustainability using thorium. **Hence, pair 3 is correctly matched.**

💡 Hence, option C is correct.

55. (B)

Exp:

💡 **Mutation** introduces **new genetic variations** by **altering DNA sequences**. These changes can be **passed to the next generation**, thereby contributing to genetic diversity.

💡 **Sexual reproduction** leads to **genetic recombination during meiosis**, producing offspring with **unique genetic makeups**. This is a **major source of variation** in plant populations.

💡 **Genetic drift** is a **random change in allele frequencies**, especially in small populations, and can lead to genetic diversity over time.

💡 **Clonal propagation**, on the other hand, involves **producing genetically identical copies** of a plant. Since it **does not involve genetic recombination or mutation**, it does **not** contribute to genetic diversity.

💡 Hence, option B is correct.

## International Relations and Current Affairs

56. (A)

Exp:

Diego Garcia:

💡 It is a **coral atoll and the largest island of the Chagos Archipelago**, located 7° south of the equator. It was leased to the US and UK in 1967 and **became a military base in 1986**.

💡 In 2024, the **UK agreed to transfer sovereignty of the Chagos Islands to Mauritius** while retaining control of the military base on Diego Garcia under a 99-year lease.

✖ This followed the **2019 International Court of Justice (ICJ) ruling** supporting Mauritius' sovereignty claims.

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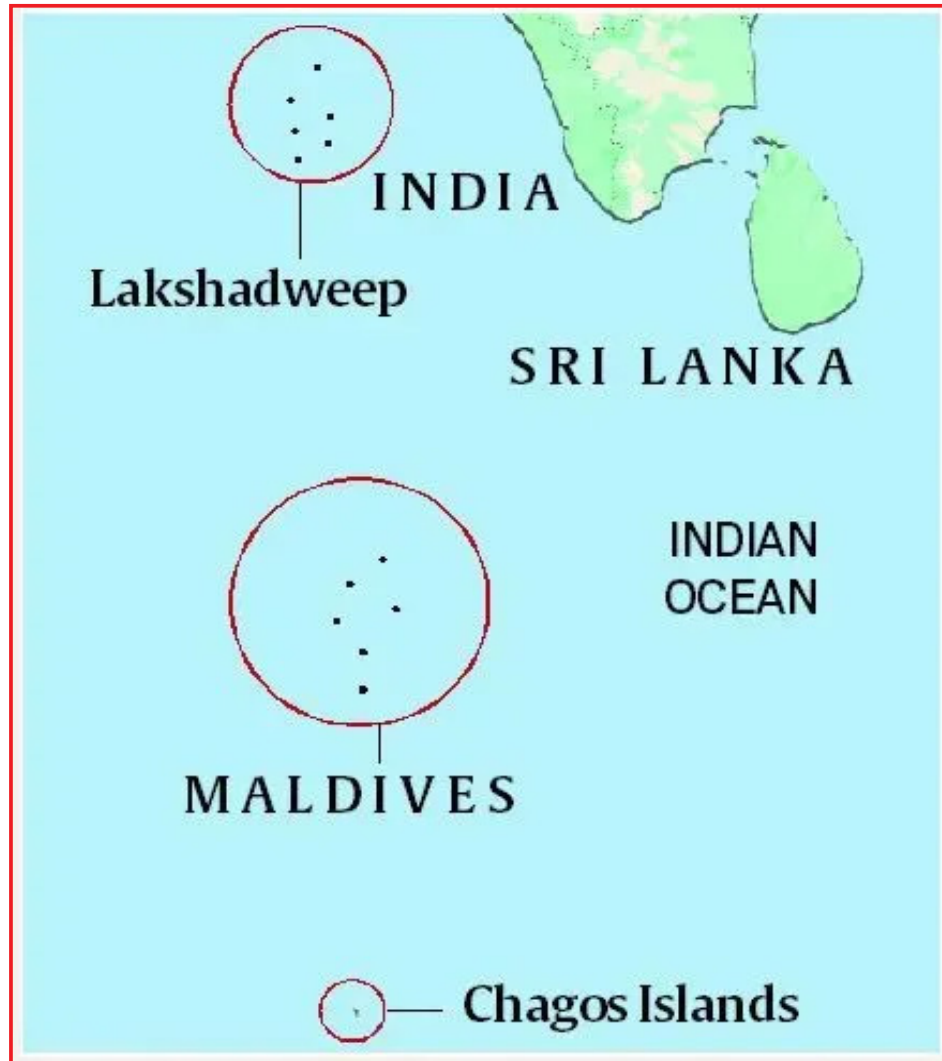
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- 💡 It played a significant role in the Gulf War, Iraq and Afghanistan wars, and post-9/11 operations- highlighting the Indo-Pacific's strategic importance.



- 💡 Hence, option A is correct.

57. (B)

Exp:

**Global South:**

- 💡 The **Brandt Line** roughly separates the **economically developed Global North** from the **developing Global South** along a latitude of approximately **30° North**. Hence, **statement 1 is correct**.
- 💡 **Global South** denotes regions **outside Europe and North America**, mostly **low-income** and often **politically or culturally marginalised**.
  - ✦ The **Global South** broadly comprises countries from **Latin America, Asia, Africa, and Oceania**. Hence, **statement 2 is correct**.
  - ✦ **China and India** are the leading proponents of the **Global South**.
- 💡 Countries from the **Global South** are among the **largest contributors** to **United Nations peacekeeping missions**, lending stability in **post-conflict zones**.
  - ✦ **Example:** India's presence in the **Congo** and the **African Union's** peace operations in **Somalia**.

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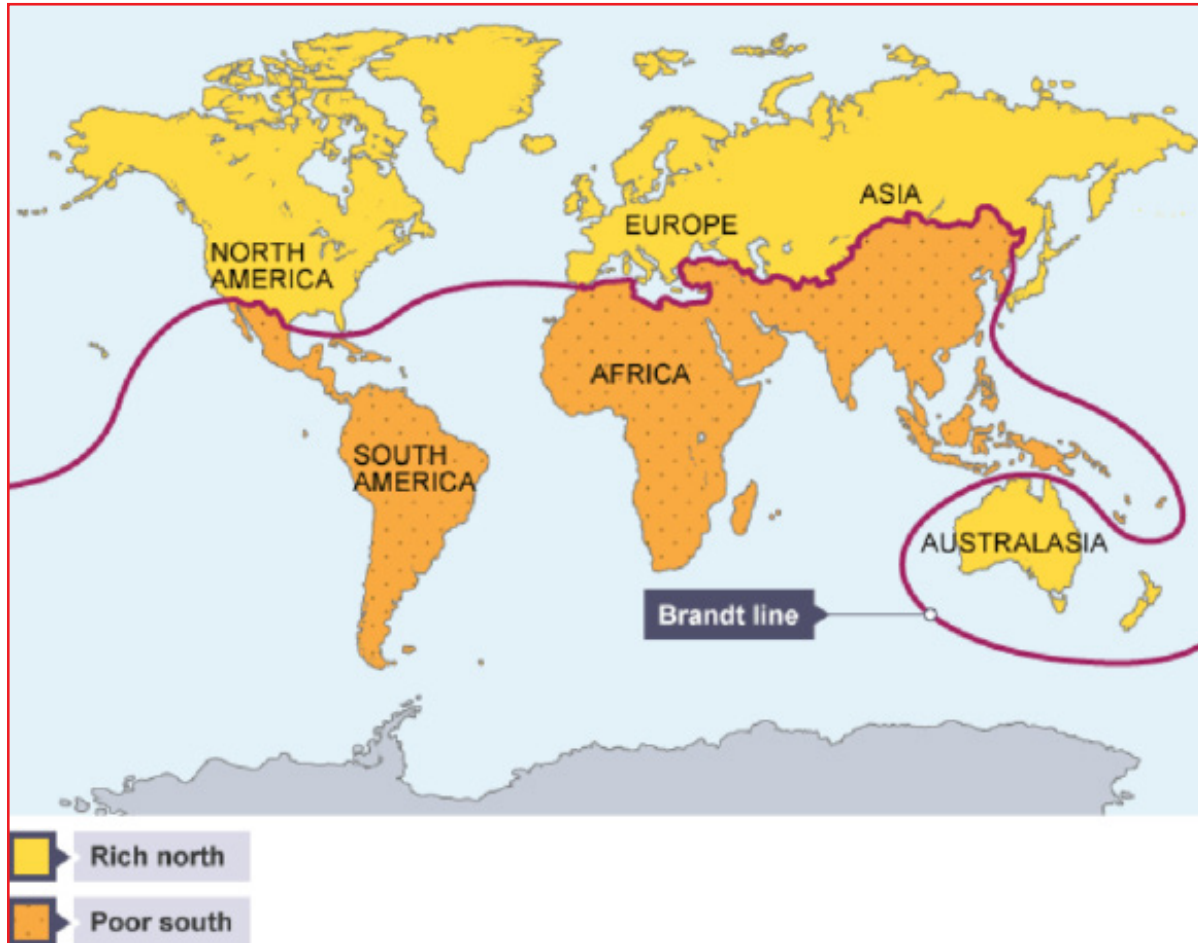
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- Global South-led peacekeeping missions require a UN Security Council mandate to ensure legal authority and international legitimacy; its absence can undermine their credibility. Hence, statement 3 is not correct.



58. (A)

Exp:

**Indian Ocean Rim Association (IORA):**

- ✦ IORA is an **intergovernmental organisation** established to promote economic cooperation and regional integration among countries bordering the **Indian Ocean**.
- ✦ Membership is open to all **sovereign states of the Indian Ocean Rim** willing to subscribe to the **principles and objectives of the Charter**.
- ✦ **Current it have 23 Member States:**
  - ✦ **Australia**, Bangladesh, Comoros, France, India, **Indonesia**, Iran, Kenya, Madagascar, Malaysia, **Maldives**, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, United Arab Emirates and Yemen.
  - ✦ Germany is not a member of IORA.

✦ Hence, option A is correct.

59. (C)

Exp:

- ✦ **India's Importance to Sri Lanka:** India has shown strong commitment to Sri Lanka's economic recovery, providing an unprecedented USD 4 billion in aid and being the first creditor to assure support for the IMF bailout programme.

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✦ India is Sri Lanka's **largest trade partner**, leading FDI source, and top tourist contributor (FY 2023). Hence, **statement 1 is correct.**

✦ India extended **grants and concessional loans**; key infrastructure and digital projects (e.g. housing, **Kankesanthurai Port**, Digital ID). Hence, **statement 2 is correct.**

💡 **Sri Lanka's Importance to India:** Located near key Indian Ocean trade routes (Palk Strait), Sri Lanka is essential to India's maritime security and energy lifelines.

✦ Sri Lanka has a central place in India's 'Neighbourhood First' policy and MAHASAGAR (Mutual and Holistic Advancement for Security and Growth Across Regions) vision.

✦ Sri Lanka acts as a buffer in countering Chinese strategic encirclement through the Belt and Road Initiative (BRI) and port developments (e.g., Hambantota).

✦ Additionally, Sri Lanka has supported India's candidature for a non-permanent seat at the UN Security Council (2028–29).

✦ As an active member of regional platforms like BIMSTEC, Indian Ocean Rim Association, Sri Lanka plays a key role in regional cooperation.

**60. (A)**

**Exp:**

**Ottawa Convention 1997:**

💡 It is an **international agreement** that prohibits the **use, production, stockpiling, and transfer of anti-personnel landmines**. Hence, **statement 1 is correct.**

💡 It aims to **mitigate civilian harm** caused by **landmines**, which remain lethal long after conflicts end.

💡 India is **not a signatory** to the Ottawa Convention, 1997. Hence, **statement 2 is not correct.**

💡 It bans ant

💡 i-personnel landmines but **does not apply to anti-vehicle mines**.

💡 **Poland, Finland, and the Baltic states- Estonia, Latvia, Lithuania** (all NATO members) are withdrawing from the **Ottawa Convention, 1997** banning **anti-personnel landmines**, citing **increased security threats** from **Russia** amid the ongoing **Russia-Ukraine war**. Hence, **statement 3 is correct.**

**61. (D)**

**Exp:**

**India-Portugal Relations:**

💡 The President of India received the '**City Key of Honour**' of **Lisbon (Portugal)**, acknowledging the strong ties and goodwill between India and Portugal.

Hence, **statement 1 is correct.**

✦ It is the **highest honour** accorded by the **city of Lisbon**, given by the **Mayor** to recognise contributions to society or ties with Portugal.

✦ **Portugal** is situated in **southwestern Europe** on the **Iberian Peninsula** and also comprises the **Atlantic archipelagos** of **Madeira** and the **Azores**. Hence, **statement 2 is correct.**

💡 **2025** marks the **50<sup>th</sup> anniversary** of India-Portugal diplomatic relations.

✦ **Portugal** has consistently backed India's bid for **UNSC permanent membership** and Nuclear Supplier Group (NSG) entry.

✦ India- Portugal connection began in 1498 with Vasco da Gama's arrival in Calicut.

✦ Full diplomatic normalization was achieved after Portugal's 1974 Carnation Revolution, culminating in the **1975 Goa Treaty**.

✦ **India and Portugal** share strong **cultural ties**, reflected in initiatives like the establishment of the **Indian Council for Cultural Relations (ICCR) Chair** at the University of Lisbon and the joint release of commemorative stamps to mark 500 years of their historical connection.

**62. (B)**

**Exp:**

**Panama Canal:**

💡 It is one of the **two most strategically significant artificial waterways** in the world, the other being the **Suez Canal**.

✦ It **connects the Atlantic and Pacific Oceans** through the narrow **Isthmus of Panama**, significantly **reducing the distance** between the US east and west coasts by **about 8,000 nautical miles**.

💡 It uses a system of **locks and water elevators** to transport ships from one ocean to the other.

✦ This design is necessary as the **Pacific Ocean** is **slightly higher (~20 cm)** in elevation than the **Atlantic Ocean**.

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✖ The locks operate by **flooding (to raise elevation)** or **draining (to lower elevation)** and act as water elevators to lift or lower vessels.

💡 The US and Panama have **formalised a new defense and security pact** aimed at countering **China's expanding influence over the Panama Canal**.

💡 China **operates two major ports at the Panama Canal**, raising US concerns about Chinese influence on global shipping, **though Panama denies any Chinese control**.

💡 Hence, option B is correct.

63. (D)

Exp:

💡 The **State of Social Protection Report** is published by the **World Bank**. It highlights that nearly two billion people in **low- and middle-income countries (LICs and MICs)** lacked adequate social protection. Hence, **statement 1 is not correct**.

💡 The **World Social Protection Report (WSPR) 2024–26** is published by the **International Labour Organization (ILO)**.

✖ India's social protection coverage doubled from **24.4% in 2021 to 48.8% in 2024**, according to the **ILO's WSPR 2024–26**. Hence, **statement 2 is not correct**.



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