

## AANKLAN-II-25

### GENERAL STUDIES-I

#### Answer Key

1. (b)	26. (a)	51. (c)	76. (d)	101. (a)	126. (a)
2. (d)	27. (b)	52. (b)	77. (c)	102. (b)	127. (c)
3. (d)	28. (b)	53. (b)	78. (a)	103. (d)	128. (d)
4. (a)	29. (c)	54. (a)	79. (b)	104. (b)	129. (b)
5. (a)	30. (c)	55. (a)	80. (d)	105. (c)	130. (d)
6. (b)	31. (b)	56. (a)	81. (c)	106. (a)	131. (d)
7. (a)	32. (d)	57. (a)	82. (c)	107. (d)	132. (d)
8. (b)	33. (a)	58. (b)	83. (b)	108. (c)	133. (b)
9. (a)	34. (c)	59. (c)	84. (b)	109. (a)	134. (b)
10. (d)	35. (a)	60. (b)	85. (b)	110. (d)	135. (d)
11. (c)	36. (b)	61. (c)	86. (b)	111. (d)	136. (a)
12. (a)	37. (b)	62. (b)	87. (b)	112. (c)	137. (a)
13. (a)	38. (c)	63. (c)	88. (c)	113. (c)	138. (b)
14. (b)	39. (d)	64. (c)	89. (a)	114. (d)	139. (c)
15. (b)	40. (a)	65. (b)	90. (d)	115. (b)	140. (b)
16. (a)	41. (a)	66. (b)	91. (a)	116. (b)	141. (b)
17. (d)	42. (b)	67. (d)	92. (b)	117. (d)	142. (c)
18. (c)	43. (b)	68. (a)	93. (a)	118. (c)	143. (a)
19. (d)	44. (d)	69. (a)	94. (c)	119. (d)	144. (b)
20. (a)	45. (b)	70. (b)	95. (d)	120. (c)	145. (a)
21. (d)	46. (a)	71. (a)	96. (b)	121. (d)	146. (a)
22. (a)	47. (c)	72. (d)	97. (c)	122. (b)	147. (a)
23. (a)	48. (b)	73. (c)	98. (b)	123. (d)	148. (a)
24. (a)	49. (d)	74. (a)	99. (d)	124. (c)	149. (b)
25. (d)	50. (d)	75. (b)	100. (a)	125. (c)	150. (a)

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# AANKLAN-II-25

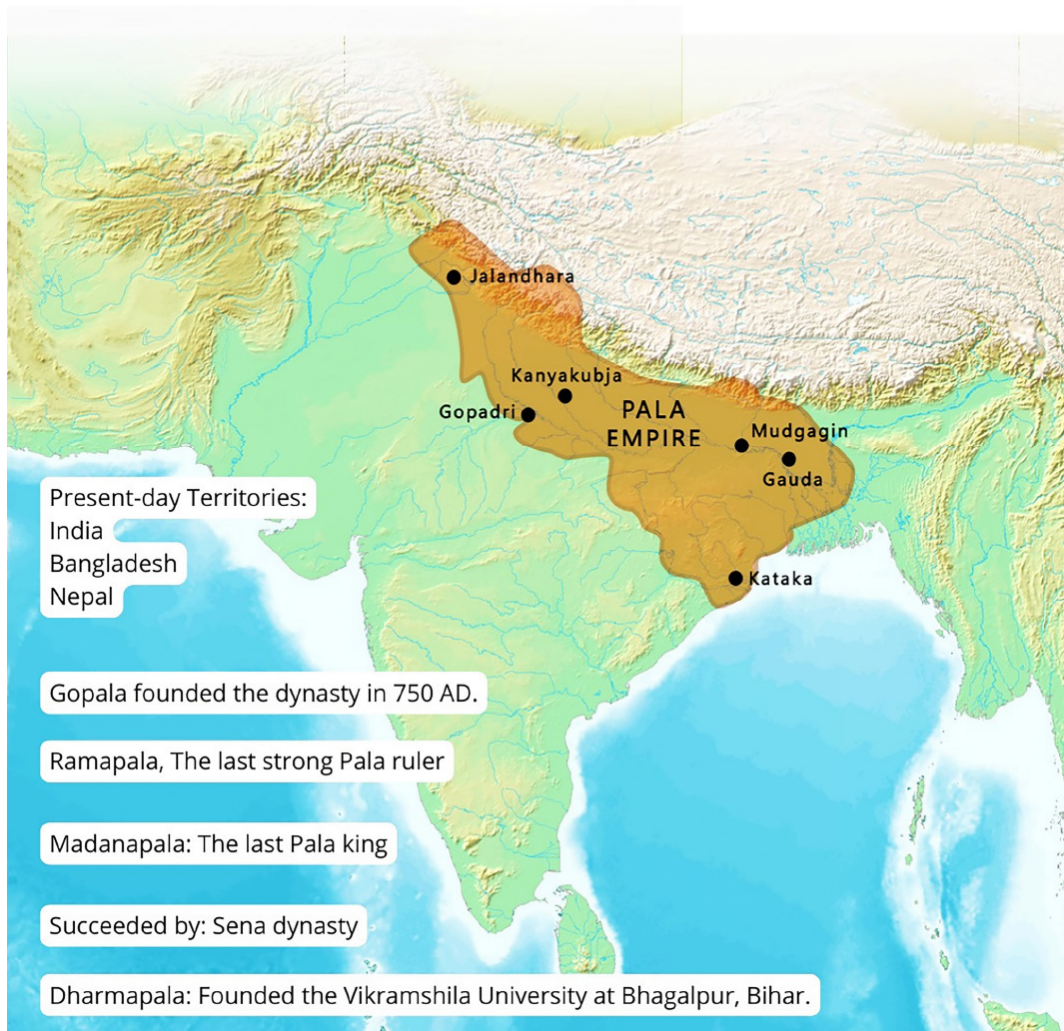
## GENERAL STUDIES-I

1. (b)

The correct chronological order of the given Pala rulers is Devapala (4) → Mahipala I (1) → Nayapala (2) → Rampala (3).

**The Pala dynasty ruled over Bengal and Bihar from the 8th to the 12th century CE. Founder: Gopala I (c. 750–770 CE):** He was elected as king by local chieftains to restore order, ending the state of anarchy in the region known as matsyanyaya (the law of the fish). He consolidated control over Bengal and Magadha (Bihar).

## PALA DYNASTY REGION



Devapala ( 810–850 CE), the grandson of Gopala, was one of the earliest and greatest Pala rulers who expanded the empire over Bengal, Bihar, Assam, and parts of Odisha, and patronized Buddhist institutions like Nalanda and Vikramashila.

Mahipala I ( 988–1038 CE) revived the Pala power after a phase of decline and successfully restored control over north Bengal and Bihar.

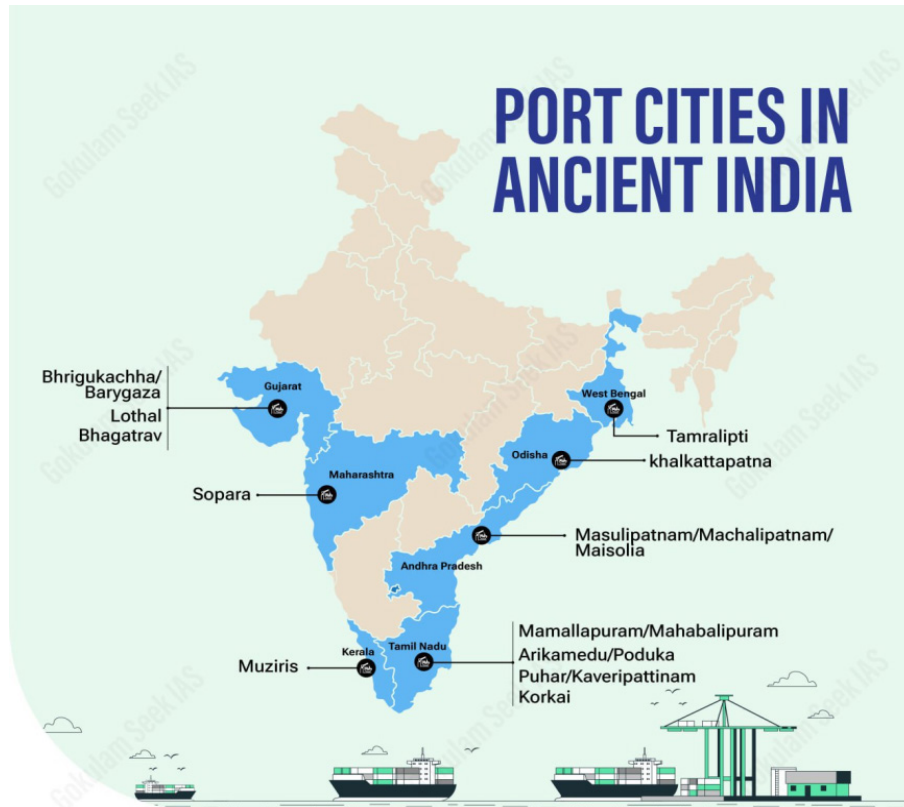


He was succeeded by his son Nayapala (1038–1055 CE), who is remembered for his conflict with the Kalachuri king Karna, which ended through the mediation of the Buddhist scholar Atisha.

The last in this sequence is Rampala (1077–1133 CE), regarded as the last great Pala ruler, who revived learning and culture, consolidated Bengal once again, but after his death, the dynasty rapidly declined and was eventually replaced by the Sena dynasty.

Thus, the correct order is 4, 1, 2, 3.

2. (d)



### West coast ports

#### Lothal (Gujarat)

- **Period:** Indus Valley Civilization (c. 2400 BCE).
- **Location:** Ahmedabad district, on the banks of a tributary of the Sabarmati River.
- **Significance:** Considered the world's oldest known dockyard. Archaeological excavations have revealed a planned township, marketplace, and dock.
- **Trade:** Facilitated maritime trade with Mesopotamia, Persia, and the Arabian Peninsula.

#### Barygaza (Bharuch, Gujarat)

- **Period:** Active from the 6th century BCE, prominent during the Mauryan and Satavahana periods.
- **Location:** At the mouth of the Narmada River.
- **Significance:** Mentioned as "Barygaza" in the *Periplus of the Erythraean Sea*, it served as a key port for land and sea trade.
- **Trade:** Traded goods like cotton, ivory, and gemstones for Roman items such as silverware and wine.

#### Muziris (Muchiri) (Kerala)

- **Period:** Sangam Age, active from the 1st century BCE.
- **Location:** On the Periyar River near Kodungallur.
- **Significance:** A major Chera port noted in Tamil and Roman texts. It was a hub for the spice trade.
- **Trade:** Exported pepper, ivory, and pearls for Roman gold and textiles.
- **Decline:** May have been destroyed by a flood in 1341 CE.



### **Sopara (Maharashtra)**

- **Period:** Satavahana era, active from the 3rd century BCE.
- **Location:** Near present-day Mumbai.
- **Significance:** An important commercial and religious center where Ashokan edicts and Buddhist relics were found.

### **East coast ports**

#### **Tamralipti (Tamluk, West Bengal)**

- **Period:** Mauryan to Gupta periods.
- **Location:** At the confluence of the Rupnarayan River and the Bay of Bengal.
- **Significance:** A chief eastern port for trade with Southeast Asia, China, and Sri Lanka, visited by Chinese pilgrims. mentioned by Chinese pilgrims like Faxian and Xuanzang.
- **Trade:** Traded goods like copper, silk, and indigo.

#### **Arikamedu (Puducherry)**

- **Period:** 2nd century BCE to 7th century CE.
- **Location:** Near present-day Puducherry.
- **Significance:** A major Indo-Roman trade center known for artifacts like amphorae and Roman pottery.
- **Trade:** Important for bead-making and trade with the Roman Empire.

#### **Kaveripattinam (Puhar) (Tamil Nadu)**

- **Period:** Sangam Age.
- **Location:** At the mouth of the Kaveri River.
- **Significance:** The capital and main port of the early Chola kingdom, mentioned in Sangam literature and the *Periplus*.
- **Trade:** Traded spices, textiles, and pearls with various regions.

#### **Korkai (Tamil Nadu)**

- **Period:** Sangam Age.
- **Location:** On the banks of the Tamraparni River.
- **Significance:** The main port of the early Pandyan kingdom, famous for pearl fishing and trade.

### **3. (d)**

**Rana Kumbha (1433–1468 CE)**, also known as **Maharana Kumbhakarna**, was a distinguished ruler of the **Mewar kingdom**, known for his military prowess and significant patronage of arts, architecture, and literature. His reign is often regarded as a **golden period for Mewar**.

#### **Political and military achievements**

- **Expansion of Mewar:** He succeeded his father, Rana Mokal, in 1433 CE and significantly expanded the Mewar kingdom. He conquered territories such as Bundi, Kotah, Dungepur, and annexed regions including Nagaur, Ranthambore, and Ajmer.
- **Victories over rivals:** Rana Kumbha successfully defended Mewar against powerful neighboring sultans, including Mahmud Khalji of Malwa and Qutbuddin Ahmad Shah II of Gujarat.
  - **Battle of Sarangpur (1437):** He decisively defeated the combined armies of Malwa and Gujarat. To commemorate this victory, he had the Vijay Stambha (Tower of Victory) constructed in Chittorgarh Fort.
- **Fortification:** He strengthened Mewar's defenses by constructing 32 of the 84 fortresses in the kingdom. The most prominent among these is the formidable **Kumbhalgarh Fort, a UNESCO World Heritage Site**.





- **Treaty of Champaner (1456):** Despite the alliance formed by the Sultans of Malwa and Gujarat against Mewar, Rana Kumbha's forces were able to successfully repulse their attacks.

#### Architectural contributions

- **Kumbhalgarh Fort:** A massive hill fort with a wall extending over 36 km, it is one of the largest fort complexes in the world and a testament to Rajput military architecture.
- **Vijay Stambha:** A nine-story tower in Chittorgarh, adorned with sculptures of Hindu deities and scenes from the epics, built between 1458 and 1468.
- **Temples:** He commissioned the construction of several temples, including the Ranakpur Jain Temple, and renovated the fort at Chittorgarh.

#### Patronage of arts and literature

- **Scholar and musician:** Rana Kumbha was a learned scholar and an accomplished veena player who patronized artists and musicians in his court.
- **Literary works:** He authored several treatises on music, including:
  - *Sangeet Raj*
  - *Sangeet Mimansa*
  - *Sangeet Ratnakar*
  - *Shudprabandha*
- **Commentaries and dramas:** He wrote a **commentary on Jayadeva's Gita Govinda** and composed four dramas in multiple languages.
- **Scholarly court:** His court was home to scholars like Atri and his son Mahesa, who composed the inscription on the Kirti Stambha (Tower of Fame).

4. (a)

Global Financial Stability Report – Published by the IMF, not the World Bank. Incorrect.

World Happiness Report – Released by SDSN, based on indicators like income, health, social support. Correct.

Trade and Development Report – Published by UNCTAD, focusing on global trade and development issues. Correct.

Global Risks Report – Released by the World Economic Forum (WEF), highlighting key global risks like climate change and cyber threats. Correct.

Therefore, only 2, 3 and 4 are correctly matched.

5. (a)

**National Food Security Act – 2013:** Enacted on 12 September 2013, ensures subsidized foodgrains to ~2/3 of India's population under PDS.

**Skill India Mission – 2015:** Launched on 15 July 2015, aims to train over 40 crore people in different skills by 2022.

**Pradhan Mantri Fasal Bima Yojana – 18 February 2016:** Provides comprehensive crop insurance to farmers with low premium rates.

**Pradhan Mantri Ujjwala Yojana – 1 May 2016:** Provides LPG connections to women from BPL households to replace unclean cooking fuels.

Thus, the correct chronological order is NFSA (2013), Skill India (2015), PMFBY (Jan 2016), PMUY (May 2016) → 1, 4, 3, 2.

6. (b)

**Balaji Vishwanath (1713–1720):** Consolidated the Maratha administration under Chhatrapati Shahu; first notable Peshwa.

**Baji Rao I (1720–1740):** Son of Balaji Vishwanath; expanded Maratha influence in the north.



**Balaji Baji Rao (Nana Saheb) (1740–1761):** Son of Baji Rao I; his tenure ended with Third Battle of Panipat (1761).

**Madhav Rao I (1761–1772):** Son of Balaji Baji Rao (Nana Saheb); restored Maratha power after the disaster at Panipat (1761).

**Raghunath Rao (Raghoba) (1773–1774, brief and contested):** Uncle of Madhav Rao I; claimed Peshwa position after Madhav Rao's death, leading to internal conflict.

**Correct chronological order:** Balaji Vishwanath → Baji Rao I → Balaji Baji Rao → Madhav Rao I → Raghunath Rao → 1, 2, 3, 5, 4

7. (a)

**Namdapha National Park – Arunachal Pradesh (F):** Located in the eastern Himalayas, it is the largest protected area in Northeast India. Home to species like snow leopard, clouded leopard, and hoolock gibbon. Notable for its tropical and subtropical rainforests.

**Keibul Lamjao National Park – Manipur (A):** World's only floating national park, situated on Loktak Lake. Natural habitat of the endangered Sangai deer, also called the "dancing deer of Manipur."

**Desert National Park – Rajasthan (D):** Covers parts of the Thar Desert; known for arid desert ecosystem. Important species include the Great Indian Bustard, desert fox, and wild camel.

**Dibru-Saikhowa National Park – Assam (G):** Riverine island ecosystem at the confluence of Brahmaputra and Lohit rivers. Famous for Gangetic dolphins, swamp deer, and migratory birds.

**Bhitarkanika Wildlife Sanctuary – Odisha (C):** Known for mangrove forests and estuarine crocodiles. Rich in aquatic biodiversity including several fish species and migratory birds.

8. (b)

**Statement 1 – Correct:** Biomes are large ecological units defined by climate, flora, and fauna, e.g., tundra, desert, tropical rainforest.

**Statement 2 – Correct:** Edge effect occurs at the boundary of two ecosystems, where species diversity tends to be higher due to overlap of habitats.

**Statement 3 – Incorrect:** Keystone species have a disproportionately large effect on their ecosystem relative to their abundance; they cannot be easily replaced. Examples: sea otters in kelp forests, fig trees in tropical forests.

9. (a)

**Mitra Mela – 1899:** Founded by Vinayak and Ganesh Savarkar in Nashik, Mitra Mela was a secret society aimed at fostering nationalist sentiments and preparing youth for revolutionary activities. It emphasized physical training and political education to instill a sense of patriotism and readiness for armed resistance against British rule.

**Anushilan Samiti – 1902:** Originating from various local youth groups and gyms (akhara) in Bengal, Anushilan Samiti was an underground society that supported revolutionary violence as a means to end British rule. It engaged in militant nationalism, including bombings, assassinations, and politically motivated violence.

**Abhinav Bharat Society – 1904:** Evolving from Mitra Mela, Abhinav Bharat Society was a secret revolutionary organization founded by the Savarkar brothers. It aimed at overthrowing British rule through armed rebellion and had branches in various parts of India and abroad, including London.

**Ghadar Party – 1913:** Formed by Indian expatriates, particularly Punjabis, in the USA and Canada, the Ghadar Party aimed to incite armed rebellion in India against British rule. It distributed revolutionary literature and coordinated with underground groups within India to mobilize support for the cause.

10. (d)

**Chittagong Armoury Raid:** This occurred on **April 18, 1930**, when Indian revolutionaries, led by Surya Sen, attacked the British colonial armouries in Chittagong (now in Bangladesh) to seize weapons and disrupt colonial rule.



**Vidurashwatha Massacre:** This took place on **April 25, 1938**, in Vidurashwatha, Karnataka, when British police fired on a crowd of protesters gathered to oppose colonial policies, resulting in several deaths.

**Kayyur Incident:** This happened on **March 28, 1941**, in Kayyur, Kerala, where a group of peasants and Communist activists clashed with police, leading to the death of a policeman and the subsequent execution of four revolutionaries.

**Punnapra-Vayalar Uprising:** This occurred in **October-November 1946** (often cited as peaking around **October 24-27, 1946**), in Kerala, where Communist-led workers and peasants revolted against the Travancore princely state, resulting in a violent crackdown.

11. (c)

**IITM Pune, NCMRWF Noida, and the IMD**

**BHARAT FORECAST SYSTEM (BharatFS)**

India has developed Bharat Forecast System (BharatFS), an advanced weather prediction model that improves extreme rainfall forecasting accuracy by 30% compared to earlier models.

**About**

**What it is:** India's most advanced real-time global weather prediction model.

**Developed by:** IITM Pune, NCMRWF Noida, and the IMD.

**Key Features**

- Uses a new Triangular Cubic Octahedral (TCO) grid system.
- Gives very detailed weather forecasts at 6 km resolution (world's highest for real-time models).
- The older model (GFS T1534) had a 12 km resolution; global models usually work at 9–14 km.

12. (a)

**Explanation:** Vitamin K is a **fat-soluble vitamin** critical for synthesizing clotting factors such as **prothrombin (factor II)** in the liver, which are essential for proper **coagulation of blood**. Deficiency can cause prolonged bleeding and hemorrhagic conditions. Sources include green leafy vegetables, broccoli, and fermented foods. Vitamin K also plays a role in **bone metabolism**, regulating osteocalcin and mineralization.

Vitamin A is also **fat-soluble**, not water-soluble, and regulates **vision, epithelial cell integrity, immune function, and reproduction**. It does not directly influence calcium absorption; this function is primarily associated with Vitamin D. Vitamin A deficiency leads to night blindness and increased susceptibility to infections. Its sources include **retinol (animal products)** and **beta-carotene (plant sources)**.

Statement 1 is correct, representing the essential role of Vitamin K in blood clotting. Statement 2 is incorrect, misrepresenting Vitamin A's solubility and function.

Options b, c, and d are incorrect due to this misrepresentation. This highlights the importance of distinguishing **fat-soluble vitamins** and understanding their **metabolic roles and physiological functions**.

13. (a)

Sodium chloride (NaCl) is **common salt**, essential for electrolyte balance, nerve transmission, and osmotic regulation. It is also used industrially in chemical processes, water softening, and de-icing roads.

Sucrose ( $C_{12}H_{22}O_{11}$ ) is a **disaccharide sugar** obtained from sugarcane or sugar beet. It is used in **food, fermentation, and pharmaceuticals**, providing energy. Excess consumption can lead to **obesity and diabetes**.

Sodium bicarbonate ( $NaHCO_3$ ), or **baking soda**, reacts with acids in baking to produce  $CO_2$ , causing dough to rise. It also serves medicinally for **acidity**, and in cleaning and deodorizing applications.

Methane ( $CH_4$ ) is a **hydrocarbon fuel** and major component of natural gas, used in **heating, electricity generation, and industrial processes**. It is also a **greenhouse gas** contributing to climate change.



14. (b)

DNA (deoxyribonucleic acid) is a **double-stranded helical molecule** composed of nucleotides containing adenine (A), thymine (T), cytosine (C), and guanine (G). Its structure, described by the Watson-Crick model, allows replication and genetic information storage. DNA is mainly located in the **cell nucleus**, with small amounts in mitochondria and chloroplasts.

RNA (ribonucleic acid) is **usually single-stranded** and contains adenine (A), uracil (U), cytosine (C), and guanine (G). RNA types include **mRNA, tRNA, rRNA**, each playing a role in **protein synthesis**. Uracil in RNA replaces thymine found in DNA.

Option A is incorrect because DNA does **not contain uracil**, and RNA does **not contain thymine**.

Option c is incorrect because DNA is double-stranded, not single-stranded.

Option d is incorrect as DNA is predominantly **nuclear**, not cytoplasmic.

The distinction between DNA and RNA is fundamental to **molecular biology, genetics, and biotechnology**. DNA stores hereditary information, while RNA facilitates gene expression. Understanding their structure, composition, and functions is critical for analyzing replication, transcription, translation, and genetic engineering processes.

15. (b)

**Pancreas and Islets of Langerhans:** The pancreas is both an endocrine and exocrine gland. Its endocrine function is performed by clusters of cells called islets of Langerhans, which include:

- **Alpha cells:** secrete glucagon
- **Beta cells:** secrete insulin
- **Delta cells:** secrete somatostatin
- **PP cells:** secrete pancreatic polypeptide
- **Insulin Secretion and Function:** Insulin is secreted by beta cells, not alpha cells. It is a peptide hormone that plays a critical role in lowering blood glucose levels. Its main actions include:
  - Promoting **glucose uptake** into muscle and adipose tissue by increasing the activity of **GLUT4 transporters**.
  - Stimulating **glycogenesis** in the liver, converting glucose to glycogen for storage.
  - Supporting **lipogenesis** and protein synthesis, contributing to energy storage.
  - Inhibiting gluconeogenesis and glycogenolysis to prevent excessive glucose release into the blood.
- **Glucagon Secretion and Function:** Glucagon is secreted by alpha cells of the pancreas. Its primary function is to increase blood glucose levels during fasting, starvation, or hypoglycemia. Key mechanisms include:
  - **Glycogenolysis:** Breaking down glycogen stored in the liver into glucose.
  - **Gluconeogenesis:** Synthesizing glucose from non-carbohydrate precursors such as amino acids and glycerol.
  - **Lipolysis stimulation:** Mobilizing fatty acids for energy, preserving glucose for essential tissues like the brain.
- **Antagonistic Hormonal Regulation:** Insulin and glucagon act as **counter-regulatory hormones**, maintaining blood glucose within a narrow range (70–110 mg/dL). While insulin reduces glucose after meals, glucagon ensures glucose availability during fasting or increased energy demand.
- **Clinical Relevance: Disruption of this balance leads to metabolic disorders:**
  - **Diabetes mellitus:** Insufficient insulin production (Type 1) or insulin resistance (Type 2).
  - **Hypoglycemia:** Excess insulin or inadequate glucagon secretion.

**Thus,** the statement 1 is incorrect because insulin is secreted by beta cells. Statement 2 is correct as glucagon raises blood glucose levels. The interaction between these hormones illustrates **endocrine regulation and metabolic homeostasis**, highlighting their essential roles in human physiology.





16. (a)

- The 1919 Act introduced bicameralism only at the central level (Council of State & Legislative Assembly), not in provinces.
- The 1935 Act divided powers into Federal List (59 items), Provincial List (54 items), Concurrent List (36 items), Residuary powers were given to the Viceroy.
- Provincial Autonomy (1935) gave provinces self-governing powers, but the Governor retained discretionary powers, especially in reserved subjects.
- The 1919 Act introduced limited franchise based on property, tax, or education—not universal adult franchise.

**Government of India Act, 1919 (Montagu-Chelmsford Reforms)**

- Enacted in 1919, came into force in 1921; aimed at introducing responsible government in India.
- Provincial subjects were classified into transferred (handled by The Governor with the help of ministers responsible to legislative councils) and reserved (handled by Governor & executive council). This system of governance was called Dyarchy (largely unsuccessful).
- **Bicameral legislature introduced at the Centre:** Upper House (Council of State) and Lower House (Legislative Assembly); majority of members of both houses were elected directly.
- **Indian representation:** 3 of 6 members in Viceroy's Executive Council to be Indians.
- Communal representation extended to Sikhs, Indian Christians, Anglo-Indians, and Europeans.
- Limited franchise granted on basis of property, tax, or education.
- High Commissioner's office established in London.
- Public Service Commission provided, leading to establishment of Central PSC in 1926.

17 (d)

USA → Impeachment of the President

Britain → Cabinet System

Ireland → Directive Principles of State Policy

USSR → Fundamental Duties

Country	Borrowed Features
<b>USA</b>	Preamble, Judicial Review, Independence of Judiciary, Fundamental Rights, Office of Vice-President, Impeachment of President
<b>Britain</b>	Parliamentary form of government, Rule of Law, Cabinet System, Single Citizenship, Bicameral Legislature, Law-making procedures, Parliamentary Privileges, Prerogative Writs
<b>USSR (Russia)</b>	Fundamental Duties, Ideals of Justice (Social, Economic, Political) in Preamble
<b>Australia</b>	Joint Sitting of Parliament, Language of Preamble, Freedom of Trade & Commerce, Concurrent List
<b>Canada</b>	Federal System with strong Centre, Appointment of Governors by Centre, Advisory Jurisdiction of Supreme Court, Residuary powers with Centre
<b>Ireland</b>	Directive Principles, Method of Presidential Election, Nomination of Rajya Sabha members
<b>South Africa</b>	Constitutional Amendment Procedure, Election of Rajya Sabha members
<b>Japan</b>	Procedure established by Law



18. (c)

The 42nd Amendment (1976) added “Socialist, Secular, Integrity”.

In the Berubari case (1960), the SC held that the Preamble is not a part of the Constitution (later overruled in Kesavananda Bharati, 1973).

**Important facts related to Preamble:**

**Chronological Events related to the Preamble**

- Dec 13, 1946 – Objectives Resolution presented by Pt. Jawaharlal Nehru in the Constituent Assembly.
- Jan 22, 1947 – Objectives Resolution adopted.
- **1960 – Berubari Case** – Supreme Court held Preamble is not part of the Constitution.
- **1967 – Golaknath Case** – Preamble described as the soul of the Constitution.
- **1973 – Kesavananda Bharati Case** – Supreme Court ruled that Preamble is part of the Constitution.
- **1976 – 42nd Amendment** – Added the words “Socialist,” “Secular,” and “Integrity.”
- **1994 – Bommai Case** – SC reaffirmed that Preamble is part of the Constitution; secularism is a basic feature of the constitution.

**Key Features of the Preamble:**

Declares India as a Sovereign, Socialist, Secular, Democratic Republic.

Ensures Justice – social, economic, political.

Ensures Liberty – thought, expression, belief, religion, worship.

Ensures Equality – of status and opportunity.

Acts as a guiding principle in legal interpretation.

Not justiciable (not legally enforceable in courts).

**Views & Statements by Important Personalities:**

**Sir Alladi Krishnaswamy Iyer** → Preamble represents our dreams and ideas.

**K.M. Munshi** → Preamble is the political horoscope of our sovereign democratic republic.

**Subhash Kashyap** → If Constitution is the body, Preamble is its soul; if Preamble is the foundation stone, Constitution is the edifice standing on it.

19. (d)

- **Article 2 - Admission or establishment of new States.**
  - Parliament may by law admit into the Union, or establish, new States on such terms and conditions as it thinks fit.
- **Article 44 - Uniform civil code for the citizens.**
  - The State shall endeavour to secure for the citizens a uniform civil code throughout the territory of India
- **Article 38 - State to secure a social order for the promotion of welfare of the people.**
  1. The State shall strive to promote the welfare of the people by securing and protecting as effectively as it may a social order in which justice, social, economic and political, shall inform all the institutions of national life.
  2. The State will work to reduce income differences and try to eliminate inequalities in social status, facilities, and opportunities, not just between individuals but also among people living in different regions or working in different jobs.
- **Article 350A - Facilities for instruction in mother-tongue at primary stage.**
  - Every State and its local authorities should ensure that children from linguistic minority groups can learn in their mother tongue at the primary education level. The President can give directions to any State to make sure these facilities are provided.



20. (a)

**Schedules and Their Subjects:**

Schedule	Subject
<b>First Schedule</b>	States & Union Territories
<b>Second Schedule</b>	Provisions relating to allowances, privileges, & emoluments of the President of India & others
<b>Third Schedule</b>	Forms of Oath or Affirmation
<b>Fourth Schedule</b>	Allocation of seats in the Rajya Sabha to the states & union territories
<b>Fifth Schedule</b>	Provisions relating to the administration & control of scheduled areas & scheduled tribes
<b>Sixth Schedule</b>	Provisions relating to the administration of tribal areas in the states of Assam, Meghalaya, Tripura, & Mizoram
<b>Seventh Schedule</b>	Union, State & Concurrent legislative lists
<b>Eighth Schedule</b>	Languages recognized by the constitution
<b>Ninth Schedule</b>	Validation of certain acts & regulations
<b>Tenth Schedule</b>	Disqualification on the basis of defection
<b>Eleventh Schedule</b>	Provisions related to Panchayats
<b>Twelfth Schedule</b>	Provisions related to Municipalities

21. (d)

Statement 1 – Correct. Most Major Rock Edicts are in Prakrit and Brahmi, but at Kandahar (Afghanistan) some were written in Greek and Aramaic, showing Ashoka's inclusiveness.

Statement 2 – Correct. Separate Kalinga Edicts at Dhauili and Jaugada reflect Ashoka's humane concern for the welfare of the people after the conquest of Kalinga.

Statement 3 – Correct. Barabar Hill Caves in Bihar were donated by Ashoka (and later by Dasharatha Maurya) to the Ajivikas sect, as recorded in inscriptions.

Statement 4 – Correct. The Junagadh Rock Inscription contains Ashoka's edicts on Dhamma; centuries later, Rudradaman I inscribed his own achievements on the same rock, making it a layered historical record. Thus, all four statements are correct.

22. (a)

Statement 1 – Correct. Saadat Khan Burhan-ul-Mulk (1722–1739) became the first Nawab of Awadh, established hereditary rule, and strengthened finances by regulating ijaradari (revenue farming).

Statement 2 – Correct. Murshid Quli Khan, initially appointed as Diwan of Bengal by Aurangzeb, shifted the capital to Murshidabad and declared himself the first independent Nawab of Bengal after the weakening of Mughal authority.

Statement 3 – Correct. Nizam-ul-Mulk Asaf Jah I, a powerful Mughal noble and former Wazir, left Delhi and founded the Hyderabad state in 1724, ruling independently while still acknowledging Mughal sovereignty nominally.

Statement 4 – Incorrect. Alivardi Khan was not the founder; he usurped power in Bengal (1740) from the family of Murshid Quli Khan. He was not directly appointed by the Mughal emperor but took control through a coup.

Thus, only 1, 2 and 3 are correct.



23. (a)

**Early (Great) Mughal rulers (1526–1707)**

This period covers the peak of the Mughal Empire, characterized by strong, centralized rule and significant territorial expansion.

1. **Babur (1526–1530):** The founder of the Mughal Empire, he defeated Ibrahim Lodi at the First Battle of Panipat in 1526.
2. **Humayun (1530–1540 and 1555–1556):** Babur's son, he lost the empire to Sher Shah Suri but later regained it with Persian support.
3. **Akbar (1556–1605):** Known as Akbar the Great, he significantly expanded the empire and established a stable and efficient administration.
4. **Jahangir (1605–1627):** Akbar's son, his reign is known for artistic and architectural developments.
5. **Shah Jahan (1628–1658):** He ruled during the golden age of Mughal architecture and built the Taj Mahal.
6. **Aurangzeb (1658–1707):** The last of the "Great Mughals," his reign saw the empire reach its largest extent, but his policies also contributed to its decline.

**Later Mughal rulers (1707–1857)**

The period following Aurangzeb's death in 1707 saw the gradual decline of the empire. His successors were less powerful, and the empire was plagued by internal conflicts and external threats.

1. **Bahadur Shah I (1707–1712):** Aurangzeb's son, also known as Muazzam.
2. **Jahandar Shah (1712–1713):** A brief reign, characterized by incompetence and control by nobles.
3. **Farrukhsiyar (1713–1719):** A puppet of the Sayyid Brothers, who were known as "kingmakers."
4. **Rafi-ud-Darajat (February–June 1719):** Placed on the throne by the Sayyid Brothers, his rule was very short.
5. **Shah Jahan II (June–September 1719):** The elder brother of Rafi-ud-Darajat, he also ruled for a short period.
6. **Muhammad Shah (1719–1748):** Also known as Muhammad Shah "Rangila," his reign was marked by court intrigues and Nadir Shah's invasion.
7. **Ahmad Shah Bahadur (1748–1754):** His reign saw further decline and frequent invasions.
8. **Alamgir II (1754–1759):** A weak ruler who faced repeated invasions by Ahmad Shah Abdali.
9. **Shah Jahan III (1759–1760):** A short-lived claimant to the throne.
10. **Shah Alam II (1760–1806):** He was defeated at the Battle of Buxar (1764) and later became a pensioner of the British.
11. **Akbar Shah II (1806–1837):** A titular ruler with no real power.
12. **Bahadur Shah II (1837–1857):** The last Mughal emperor, he was exiled to Burma by the British after the Rebellion of 1857, which effectively ended the empire.

24. (a)

**Statement 1** – Correct. Banda Singh Bahadur (1709–1716) launched an agrarian revolution by abolishing zamindari and giving land rights to cultivators — a major shift in Punjab's agrarian society.

**Statement 2** – Correct. The Treaty of Amritsar (1809) confined Ranjit Singh's authority west of the Sutlej, ensuring the British controlled the Sikh chiefs of Malwa and Cis-Sutlej region.

**Statement 3** – Correct. Maharaja Ranjit Singh hired European officers such as Ventura, Allard, Avitabile, and Court to train his army in modern artillery and drill.





**Statement 4** – Incorrect. After Ranjit Singh’s death in 1839, Punjab went through political instability, but it was annexed only in 1849, after the Second Anglo-Sikh War under Lord Dalhousie, not immediately in 1839.

Thus, the correct answer is 1, 2 and 3 only.

25. (d)

### **Savitribai Phule**

#### **Background**

- Born on January 3, 1831, into a peasant family belonging to the Mali caste in Naigaon, Maharashtra.
- She was married to Jyotirao Phule at the age of nine.
- Initially illiterate, she was educated at home by her husband, Jyotirao, and went on to become one of the first trained female teachers in India.

#### **Contributions to education**

- **Established the first girls’ school:** In 1848, the Phule couple, along with Sagunabai Kshirsagar, opened the first school for girls in Pune’s Bhide Wada. This was a revolutionary act that faced significant social opposition from conservative sections of society.
- **Expansion of education:** They went on to establish and run as many as 18 schools for girls and children from marginalized communities. They also founded two educational trusts in the 1850s to expand their mission.
- **Empowerment of the oppressed:** The Phules viewed education as the most powerful tool for emancipation and awakening self-respect among marginalized groups. Savitribai’s own poem, *Go, Get Education*, directly encouraged the oppressed to pursue education as a means of liberation.
- **First female headmistress:** After receiving teacher training, she became the first professionally qualified female teacher and headmistress in India.

#### **Social reform and activism**

- **Anti-caste movement:** As an active member of her husband’s Satyashodhak Samaj (established in 1873), she worked to dismantle the oppressive caste system and promote equality. The Samaj advocated for social changes like inter-caste marriages and challenged Brahmanical rituals.
- **Fight for widows’ rights:** She campaigned vehemently against the degrading practice of tonsuring the heads of widows and advocated for widow remarriage. She initiated a barber’s strike, urging them not to shave widows’ heads, thus challenging regressive widowhood customs.
- **Protection of widows and orphans:** In 1863, the Phule couple started the *Balhatya Pratibandhak Griha* (Home for the Prevention of Infanticide) to provide shelter for pregnant widows and victims of rape. The facility saved countless lives and challenged societal double standards.
- **Women’s rights advocacy:** She founded the *Mahila Seva Mandal* in 1852 to raise awareness about women’s rights and create a space where women from all castes could gather without discrimination.
- **During the bubonic plague of 1897** in Pune, Savitribai nursed patients at a clinic she and her son set up. While serving, she contracted the disease herself and died.

#### **Literary and humanitarian efforts**

- **Poetry and writing:** Savitribai authored *Kavya Phule* (1854) and *Bavan Kashi Subodh Ratnakar* (1892), becoming one of India’s first modern published women poets.
- **Bubonic plague service:** In 1897, when the bubonic plague struck Pune, she and her adopted son, Yashwantrao, opened a clinic on the city’s outskirts. She personally carried sick patients to the hospital. It was while caring for them that she contracted the disease and died on March 10, 1897.

#### **Legacy**

- Savitribai’s tireless efforts left an indelible mark on Indian society, and she is revered as the “**Mother of Modern Education in India**”.



- She continues to be an icon for social justice and empowerment. In her honor, the University of Pune was renamed **Savitribai Phule Pune University** in 2015.
- Her birthday, January 3, is celebrated as **Balika Din** (Girl Child Day) in Maharashtra.

26. (a)

### **Henry Vivian Derozio and the Young Bengal Movement**

#### **Henry Vivian Derozio (1809–1831)**

- **Background:** Born in Calcutta to an Anglo-Indian family, Derozio was a teacher, poet, and a radical thinker deeply influenced by the ideals of the French Revolution and the Age of Enlightenment.
- **Hindu College:** At just 17, Derozio was appointed a teacher at Hindu College in Calcutta in 1826. He used his lectures to promote rational inquiry, critical thinking, and liberal ideals among his students.
- **Encouraged questioning:** He urged his students to “think freely” and question all authority, including traditional Hindu customs and religious orthodoxy. His famous motto was, “He who will not reason is a bigot; he who cannot is a fool; and he who does not is a slave”.
- **Dismissal:** His radical views alarmed the orthodox Hindu community. He was accused of influencing his students to defy religious and social norms and was forced to resign from the college in 1831.
- **Literary contribution:** Derozio is often regarded as the first nationalist poet of modern India. His patriotic poem, “To India – My Native Land,” reflected his love for India and critiqued its subjugation.

#### **Young Bengal Movement**

The Young Bengal Movement refers to a group of Derozio’s radical students at Hindu College who were inspired by his progressive ideas. They came to be known as “Derozians” and initiated an intellectual revolution in Bengal.

#### **Core ideas**

- **Rationalism:** The Derozians rejected blind faith and superstitions, advocating for a rational and scientific approach to life.
- **Liberalism:** They were proponents of liberty, equality, and freedom of thought and expression, echoing the principles of the French Revolution.
- **Social reform:** They fiercely opposed social evils like caste discrimination, child marriage, and polygamy. They also strongly advocated for women’s education and rights.
- **Political demands:** The Derozians pushed for political reforms, such as the freedom of the press, better treatment of Indian laborers in British colonies, and the inclusion of Indians in higher government posts.
- **Protection for peasants:** They stood up for the rights of *ryots* (peasants) against the exploitation of *zamindars* (landlords).
- **Academic Association:** The group formed a debating club called the Academic Association to discuss various topics, from philosophy to science.

#### **Limitations**

- **Confined to the elite:** The movement’s influence was largely restricted to a small, educated, urban, English-speaking Bengali elite. It failed to connect with the masses, particularly the rural poor.
- **Lack of tangible action:** While they were radical in their ideas, their activism was mainly limited to intellectual debates and journalism rather than organized social action. Their “bookish radicalism” meant they failed to come to grips with the reality of rural India.
- **Alienation from society:** Their extreme views, including their perceived atheism and defiance of orthodox rituals (some reportedly consumed forbidden food), alienated them from mainstream society and even from other prominent reformers like Raja Rammohun Roy.
- **Brief duration:** The movement faced a setback with Derozio’s early death and could not sustain its initial momentum.



### Legacy

- **Intellectual groundwork:** Despite its limited practical impact, the Young Bengal Movement significantly contributed to the intellectual awakening in Bengal. It promoted a spirit of inquiry, rationalism, and free thought that laid the foundation for future social and political reform movements.
- **Influence on future leaders:** Prominent figures like Surendranath Banerjea later acknowledged the Derozians as the “pioneers of the modern civilisation of Bengal,” whose legacy inspired subsequent generations.

### 27. (b)

The Varaha panel at Udayagiri, Madhya Pradesh, is a masterpiece of Gupta art, carved during Chandragupta II's reign (c. 375–415 CE). It symbolizes royal power and divine sanction, reflecting Vaishnavite iconography and the Gupta style of sculpture.

The Udayagiri Caves near Vidisha, Madhya Pradesh, are a set of rock-cut sanctuaries and one of the most significant archaeological sites from the Gupta period (4th–5th centuries CE). They are renowned for their Hindu and Jain iconography, particularly the monumental Varaha relief sculpture.

#### Location and historical context

- **Location:** The caves are situated on a sandstone hill near Vidisha in Madhya Pradesh, close to the historic Buddhist site of Sanchi.
- **Patronage:** The caves were primarily patronized by the Gupta Emperor Chandragupta II (c. 375–415 CE).
- **Construction Period:** The construction and carving occurred between the late 4th and early 5th centuries CE, a period often considered the golden age of classical Indian art.
- **Religious Significance:** The caves represent a harmonious co-existence of different religious traditions, with sanctuaries dedicated to Hindu deities and Jain *Tirthankaras*.

#### Prominent caves and features

- **Cave 5: The Varaha Panel:** This cave is famous for its massive and intricate relief sculpture of **Vishnu as the Varaha (boar) avatar**. The relief depicts Vishnu rescuing the Earth goddess, Bhudevi, from the cosmic ocean, an image with both mythological and political significance, possibly symbolizing Chandragupta II's conquests.
- **Cave 6: The Inscription:** This cave contains an inscription from the Gupta era that specifically mentions Chandragupta II and the consecration of the cave in the 82nd year of the Gupta calendar (c. 401 CE).
- **Cave 4: The Veena Players:** Also known as the Veena Cave, this features a carving of two seated figures playing the *veena*, a musical instrument.
- **Cave 13: The Anantasayana Relief:** This cave contains a large reclining image of Vishnu, known as **Anantasayana**.
- **Jain Caves:** Two of the twenty caves are dedicated to Jainism, showcasing the religious diversity of the site.

#### Architectural style and art

- **Classical Gupta Art:** The Udayagiri caves are considered a prime example of the classical Gupta style, known for its refined simplicity, realistic figures, and emotional expressions.
- **Integration with the landscape:** The rock-cut caverns are carved into the natural landscape, with some forming columned temples and ornate archways.
- **Hindu Iconography:** The caves are rich in Hindu iconography, depicting scenes and deities from Vaishnavism (Vishnu), Shaivism (Shiva), and Shaktism (Durga and the Matrikas).

### 28. (b)

- The famous rock relief known as **Arjuna's Penance** or the **Descent of the Ganga** is located in Mahabalipuram (Mamallapuram), Tamil Nadu.



- Commissioned during the reign of Pallava king Narasimhavarman I, it depicts episodes from the epics and the descent of the sacred river Ganga to earth.
- This colossal open-air bas-relief was carved during the Pallava dynasty, likely in the 7th century CE, and is considered one of the masterpieces of Indian rock-cut sculpture.
- The relief is part of the Group of Monuments at Mahabalipuram, which has been designated a UNESCO World Heritage Site.

29. (c)

**Statement 1 – Correct:** The Papanatha Temple was originally dedicated to Lord Shiva, like many temples in the Pattadakal complex.

**Statement 2 – Correct:** Architecturally, it represents a fusion of Nagara (North Indian) and Dravida (South Indian) styles, visible in its superstructure (shikhara), mandapas, and sculptural decorations.

This temple highlights the Chalukya dynasty's experimentation with hybrid architectural forms, blending northern and southern Indian traditions.

The Papanatha Temple, located at Pattadakal in Karnataka, is a significant example of early Chalukyan temple architecture. It is particularly renowned for its eclectic style, which reflects the blending of North Indian (Nagara) and South Indian (Dravida) architectural traditions.

#### Background and history

- **Patronage:** Constructed during the reign of the Badami **Chalukyas** in the 8th century CE, with scholarly consensus suggesting a completion date around 740 CE.
- **Deity:** The temple was originally dedicated to Lord Shiva.
- **Location:** Situated on the banks of the Malaprabha River, within the Pattadakal complex, a UNESCO World Heritage Site.

#### Architectural features

- **Vesara style:** The temple is a key illustration of the **Vesara style**, a hybrid form that arose in the Deccan region by combining elements from both the Nagara and Dravida schools of architecture.
- **Nagara elements:**
  - The *shikhara* (tower) is built in the northern, curvilinear Nagara style.
  - The outer walls have niches and pilasters that show Nagara influence.
- **Dravida elements:**
  - The temple retains some of the decorative and structural aspects of the southern Dravida style.
  - Unlike the Virupaksha Temple at the same site, which is predominantly Dravida, the Papanatha Temple is a more experimental design.
- **Extended Mandapa:** The temple has a large and elongated *mandapa* (pillared hall) leading to the *garbha griha* (sanctum), a feature characteristic of its style.
- **Narrative reliefs:** The temple walls are richly decorated with carved reliefs depicting scenes from the great Hindu epics, the *Ramayana* and the *Mahabharata*.

30. (c)

**Statement 1 – Correct:** The Vijayanagara Empire's capital, Hampi, was strategically located on the banks of the Tungabhadra River, with massive fortifications, making it difficult for invading armies to capture.

**Statement 2 – Correct:** Contemporaries referred to the empire as the "Karnataka Samrajyamu", emphasizing its political and cultural influence in the Karnataka region.

The empire is also notable for its administration, military strength, trade networks, and temple architecture, reflecting its significance in medieval South India.

The Vijayanagara Empire (1336–1646 CE) was a major South Indian empire that acted as a bulwark against the expansion of Muslim sultanates. Its rule is considered a golden age for culture, art, and architecture in the region.





### Origin and key rulers

- **Foundation (1336 CE):** Founded by two brothers, Harihara I and Bukka Raya I, of the Sangama dynasty on the southern bank of the Tungabhadra River. The city of Vijayanagara, now the ruins of Hampi, was the capital.
- **Four Dynasties:** The empire was ruled by four dynasties:
  - **Sangama Dynasty (1336–1485):** Founded by Harihara I and Bukka Raya I.
  - **Saluva Dynasty (1485–1505):** Founded by Saluva Narasimha.
  - **Tuluva Dynasty (1505–1570):** Ruled by Krishnadevaraya, the most famous Vijayanagara king.
  - **Aravidu Dynasty (1570–1646):** The last dynasty, ruling from Penukonda after the Battle of Talikota.
- **Krishnadevaraya (1509–1529):** The most powerful ruler, he belonged to the Tuluva dynasty. His reign marked the peak of the empire's territorial expansion and cultural achievements.
  - **Literary Patronage:** He was a poet and a scholar himself, writing *Amuktamalyada* in Telugu. His court, known as **Ashtadiggajas**, consisted of eight eminent poets.
  - **Architectural Contributions:** He built the Krishnaswamy, Hazara Ramaswamy, and Vitthalaswamy temples in his capital.
  - **Foreign Policy:** He maintained friendly relations with the Portuguese.

### Administration and economy

- **Amara-Nayaka System:** This was the most important feature of the Vijayanagara administration. Military commanders (**Nayakas**) were granted land (**amaram**) in exchange for military service and tribute to the king.
- **Provincial Administration:** The empire was divided into provinces (**mandalams**), which were governed by a **mandalesvara** or **nayaka**. These provinces enjoyed a degree of autonomy.
- **Sources of Revenue:** Land revenue was the primary source. Other income came from tributes from vassals, customs duties at ports, and taxes on various professions.
- **Agriculture and Trade:** The empire had a well-developed irrigation system, and agriculture was the backbone of the economy. Foreign trade flourished, with ports on both coasts handling exports of textiles, spices, and rice.
- **Currency:** The empire issued gold coins called **pagodas** or **varahas**, which were widely circulated.

### Society and culture

- **Religious Tolerance:** Although the rulers were staunch patrons of Hinduism, they practiced religious tolerance. Temples and mosques received state patronage, and foreign visitors noted the peaceful coexistence of different religions.
- **Position of Women:** Women held important positions in the state, including in the administration, army, and court. Some royal women were accomplished poets.
- **Art and Architecture:** The Vijayanagara style of architecture is a notable blend of earlier Chola, Hoysala, and Pandya traditions.
  - **Key Features:** Monolithic pillars, elaborate *gopurams* (gateways), ornate pillared halls (**kalyana mandapams**), and a strong focus on intricate carvings.
  - **Notable Monuments:** The Virupaksha Temple, Vitthala Temple (with its iconic stone chariot), and the monolithic Narasimha statue in Hampi.

### Decline

- **Battle of Talikota (1565):** This battle is considered the turning point in the decline of the empire. The Vijayanagara forces, led by Rama Raya, were decisively defeated by a coalition of the Deccan sultanates.
- **Sacking of Hampi:** Following the defeat, the capital city of Vijayanagara was brutally sacked and destroyed by the victorious sultanate armies.

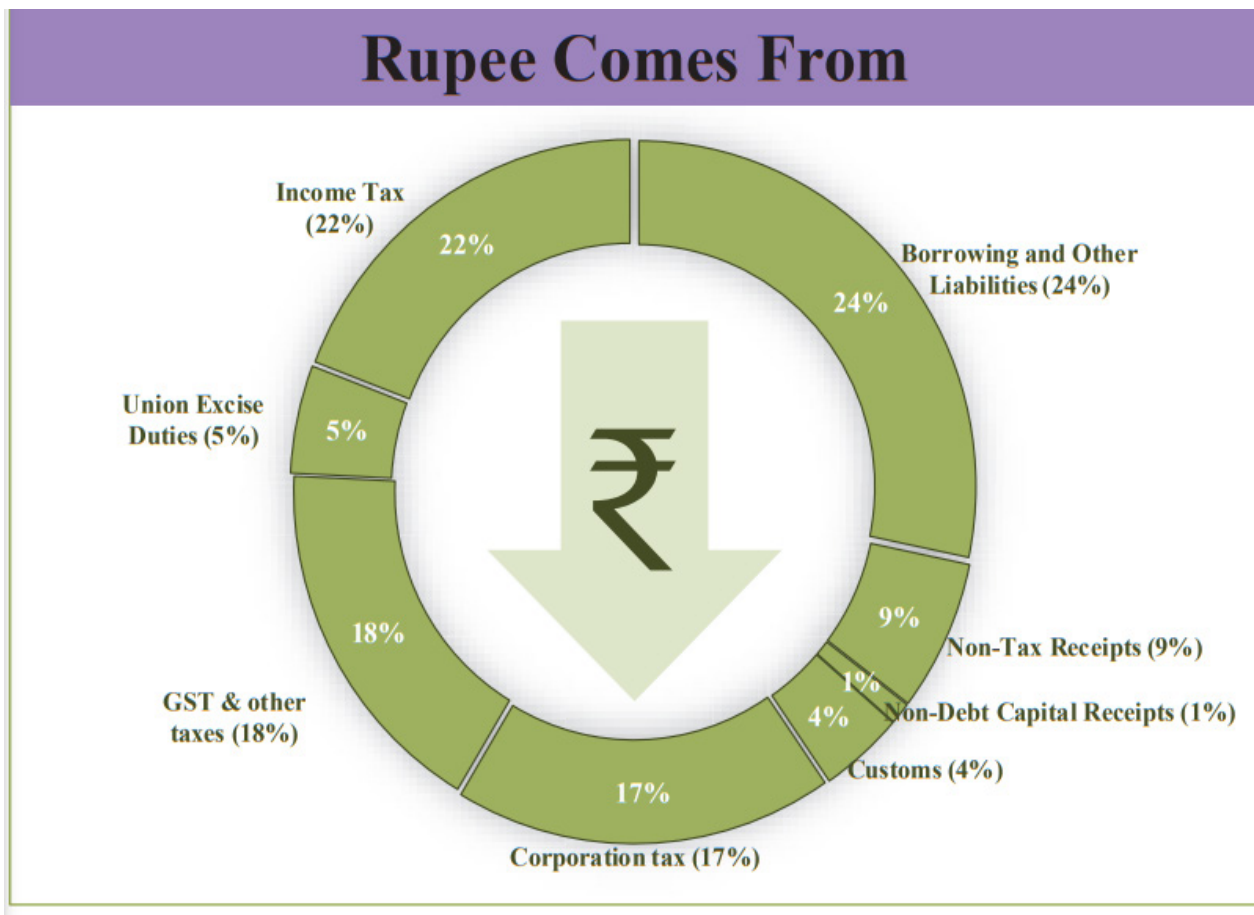


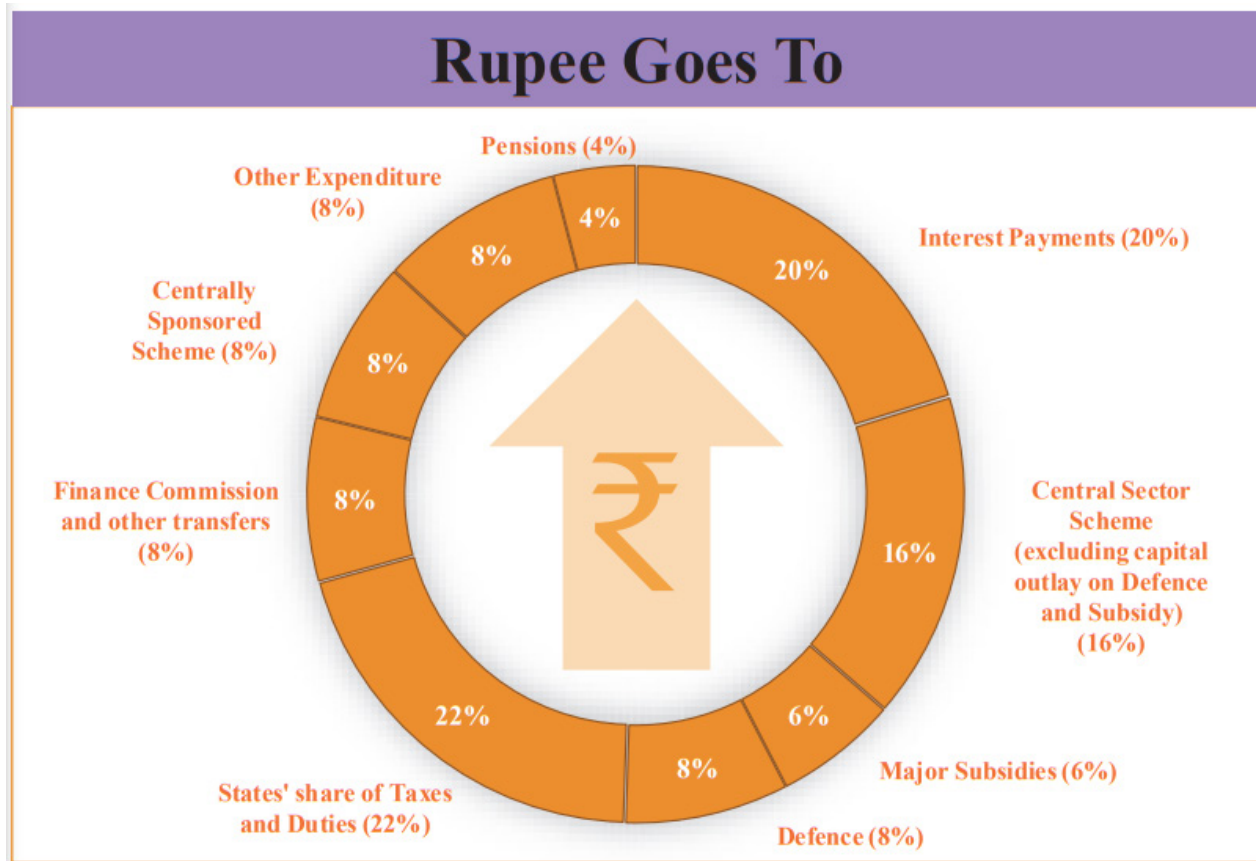
- **Internal Conflicts:** Succession disputes and internal rebellions by provincial governors (**Nayaks**) weakened the central authority.
- **Weak Successors:** Ineffective rulers after Krishnadevaraya were unable to hold the vast empire together.
- **Disintegration:** Although the empire continued under the Aravidu dynasty from a different capital, its power was severely diminished, and it eventually disintegrated into smaller states.

31. (b)

- The **Industrial Finance Corporation of India (IFCI)** was established in **1948 under an Act of Parliament**. Its objective was to provide medium- and long-term finance to the industrial sector to promote industrial development in the country. It was India's first Development Financial Institution (DFI), providing loans and capital assistance to public and private sector industrial enterprises.
- **Note:** In 1993, it was converted into a company (IFCI Ltd.) registered under the Companies Act, 1956.
- The **Industrial Development Bank of India (IDBI)** was established in **1964**. It was initially established as a subsidiary of the Reserve Bank of India (RBI) to provide long-term finance for industrial development in the country.
- In 1976, it was separated from the Reserve Bank and made a fully autonomous institution under the Central Government.
- **SIDBI** (Small Industries Development Bank of India) was established on **April 2, 1990**. It is a statutory body formed under an Act of Parliament. Its main objective is to function as a specialized bank for the development, promotion, and financial assistance of the micro, small, and medium enterprises (MSME sector) in the country.
- **IIFC** (India Infrastructure Finance Company Limited) was established in **2006** by the Government of India. It was formed with the objective of providing long-term financial assistance to infrastructure projects in the country.

32. (d)





### Budget Estimates 2025-26

- The total receipts other than borrowings and the total expenditure are estimated at ₹34.96 lakh crore and ₹50.65 lakh crore respectively.
- The net tax receipts are estimated at ₹28.37 lakh crore.
- The fiscal deficit is estimated to be 4.4 percent of GDP.
- The gross market borrowings are estimated at ₹14.82 lakh crore.
- Capex expenditure of ₹11.21 lakh crore (3.1% of GDP) earmarked in FY2025-26.

### Other key features of the Union Budget 2025-26 are:

- **Direct Tax:** No income tax on annual income up to ₹12 lakh, with exemptions raised to ₹12.75 lakh for salaried taxpayers.
- Income (in ₹) - Tax Rate
- ₹0 - ₹4 lakh - Zero
- ₹4 - ₹8 lakh - 5%
- ₹8 - ₹12 lakh - 10%
- ₹12 - ₹16 lakh - 15%
- ₹16 - ₹20 lakh - 20%
- ₹20 - ₹24 lakh - 25%
- ₹24 lakh - 30%

33. (a)

**The Gloabl Multidimensional Poverty Index (MPI) has 10 indicators:** health (child mortality, nutrition), education (years of schooling, enrollment), and standard of living (water, sanitation, electricity, cooking fuel, floor space, property).

**the Multidimensional Poverty Index (MPI), developed by UNDP and OPHI, captures poverty beyond just income by assessing deprivations in three dimensions:**



- **Health (2 indicators):** child mortality, nutrition
- **Education (2 indicators):** years of schooling, school enrollment
- **Standard of Living (6 indicators):** access to drinking water, sanitation, electricity, cooking fuel, housing/floor space, and assets/property
- A household is considered **multidimensionally poor** if it is deprived in at least **one-third of these weighted indicators**. This index provides a more comprehensive measure of poverty compared to income or consumption alone, as it reflects real living conditions and basic human capabilities.

34. (c)

According to the budget estimates for the financial year 2025-26, total receipts, **excluding borrowings, are estimated at ₹34.96 lakh crore and total expenditure at ₹50.65 lakh crore.**

**Net tax receipts are estimated at ₹28.37 lakh crore.** The fiscal deficit is projected at **4.4 percent of gross domestic product (GDP)**. Gross market borrowings are expected to reach **₹14.82 lakh crore during this period**. **Capital expenditure (capex) is estimated at ₹11.21 lakh crore, representing approximately 3.1 percent of GDP.**

**The correct match is –**

- Defense - 491,732 **crore**
- Rural Development- 266,817 **crore**
- Home Ministry - 233,211 **crore**
- Agriculture and Allied Activities- 171,437 **crore**
- Education - 128,650 **crore**
- Health - 98,311 **crore**
- Urban Development 96,777 **crore**



35. (a)

- On August 15, on the occasion of Independence Day, Prime Minister Narendra Modi, while addressing the nation from the Red Fort, announced the launch of the **₹1 lakh crore Pradhan Mantri Vikas Bharat Rojgar Yojana (PMVY)**.
- This national-level scheme aims to create new employment opportunities for youth and encourage the private sector to hire them. This scheme, which came into effect on August 15th, will provide incentives to both first-time job seekers and employers who hire them.
- According to the scheme, **young people who secure their first job in the private sector will receive a direct government grant of ₹15,000.** This will help them enter formal employment. Additionally, companies hiring new employees will also receive financial incentives. Companies will receive up to ₹3,000 per month per new employee, while the manufacturing sector will receive additional benefits. Hence, statement 1 is correct.
- The scheme is expected to create approximately **35 million new jobs over the next two years, of which 19.2 million will be first-time workers.** Hence, statement 2 is not correct.
- The Ministry of Labor and Employment and the Employees' Provident Fund Organization (EPFO) have been entrusted with implementing the scheme. PM Modi described it as a crucial part of the "Developed India Mission," stating that its goal is to build a developed and inclusive India by 2047.

36. (b)

**The allocations for major schemes in the Budget for the financial year 2025-26 have been made at different levels. If we arrange these schemes in ascending order (from least to most) according to their allocations, the order is as follows:**

- **PM-KISAN Samman Nidhi (III) – A provision of ₹63,500 crore** has been made for this scheme. This scheme is run with the aim of providing direct income support to farmers.





- **Jal Jeevan Mission (IV)** – A provision of `67,000 crore has been made for this, which aims to provide piped water facility to all rural households.
- **Pradhan Mantri Awas Yojana (II)** – A total of `78,126 crore has been allocated for this, both rural and urban areas. This scheme is related to providing permanent houses to the poor.
- **Mahatma Gandhi National Rural Employment Guarantee Scheme (I)** – The highest provision of `86,000 crore has been made. This scheme provides employment and ensures income security in rural areas

37. (b)

**Malaria:**

- Malaria is a life-threatening disease caused by **Plasmodium parasites**, transmitted to humans through the bite of infected **female Anopheles mosquitoes**.
- Among the Plasmodium species, **Plasmodium falciparum** is the most deadly, responsible for the majority of malaria-related deaths, especially in sub-Saharan Africa.

**Need for a Malaria Vaccine:** Malaria has a **complex life cycle** involving both mosquito and human hosts, making vaccine development challenging. Traditional prevention methods include **insecticide-treated bed nets, vector control, and antimalarial drugs**, but a vaccine is crucial for long-term protection, particularly in children who are highly vulnerable.

**RTS, S/AS01 (Mosquirix):**

- RTS,S/AS01, commercially known as **Mosquirix**, is the **first vaccine against malaria approved by the World Health Organization (WHO)**.
- It targets **Plasmodium falciparum** at the **pre-erythrocytic stage**, preventing the parasite from infecting liver cells after a mosquito bite.
- The vaccine contains **recombinant circumsporozoite protein (CSP)** of the parasite fused with **hepatitis B surface antigen**, along with the **AS01 adjuvant** to stimulate a strong immune response.

**Mechanism of Action:** Mosquirix works by **inducing antibodies and cellular immunity** that attack sporozoites in the blood before they reach liver cells, thereby reducing parasite multiplication and the severity of infection.

**Administration and Efficacy:**

- Administered in **four doses**, starting at 5–6 months of age.
- Clinical trials showed **30–50% reduction in clinical malaria episodes** and around **30% reduction in severe malaria**, significantly lowering morbidity and mortality in children.

**Comparison with Other Vaccines:**

- Covaxin, Pfizer-BioNTech, and Sputnik V are **COVID-19 vaccines** targeting SARS-CoV-2, unrelated to malaria.
- RTS,S/AS01 is the **first successful vaccine against a parasitic disease**, a major milestone in global health.

**Public Health Significance:** The approval of Mosquirix demonstrates progress in **parasitology, immunology, and vaccine research**, offering protection to millions of children in endemic regions and complementing other malaria control measures.

38. (c)

**FIRST ANIMAL STEM CELL BIOBANK**

**India's first-of-its-kind state-of-the-art Animal Stem Cell Biobank and Animal Stem Cell Laboratory opened at the National Institute of Animal Biotechnology (NIAB), Hyderabad.**

**About Stem Cell**

- They are special cells capable of developing into various cell types in the body and play a key role in repair and regeneration.
- India's first Animal Stem Cell Biobank and Laboratory



- The cutting-edge facility of Animal BioBank , spread over 9,300 sq ft and constructed at a cost of ` 1.85 crore.
- It will focus on regenerative medicine and cellular therapies for livestock.
- It is equipped with a stem cell culture unit, 3D bioprinter, bacterial culture lab, cryostorage, autoclave rooms, advanced air handling systems, and uninterrupted power backup.
- It is supported by the National Biopharma Mission (NBM) of DBT–BIRAC.

39. (d)

A-3, B-2, C-1

T-cell Type	Function
<b>Cytotoxic T-cells</b>	Kill infected, tumorous, and bacterially infected cells.
<b>Helper T-cells</b>	Direct other immune cells to fight infection.
<b>Regulatory T-cells</b>	Suppress excessive immune responses and maintain immune tolerance.

### T CELL

A team of Harvard scientists has used artificial intelligence (AI), in the form of AI-designed proteins, to generate large numbers of immune cells and enhance immunity against diseases ranging from cancer to viral infections.

#### About B and T-Cells

- B-cells and T-cells are a specific type of white blood cell called lymphocytes.
- They help the immune system to fight germs and protect from disease.
- B-cells make antibodies in response to antigens (antibody generators).
  - **There are two main types of B-cells:** plasma cells and memory cells. Both types help to protect from infection and disease.
- T-cells start in bone marrow, mature in thymus and eventually relocate to lymph tissue or bloodstream.

#### Significance of the Discovery:

- Enabled large-scale T cell production in lab bioreactors, important for CAR T-cell immunotherapies.
- In mice, injections of these agonists enhanced immune responses and boosted memory T cell production, improving the effectiveness of vaccines

40. (a)

**Blood Groups and Antigens:** Human blood groups are classified based on the presence or absence of **ABO antigens (A, B)** on red blood cells and the **Rh factor (D antigen)**. These antigens are critical markers recognized by the immune system.

**Importance of Compatibility:** During a blood transfusion, if a recipient receives blood with incompatible antigens, their **immune system produces antibodies** against the foreign antigens. This can lead to **hemolysis**, severe transfusion reactions, kidney failure, or even death.

**Role of ABO System:** The **ABO system** determines whether blood is type A, B, AB, or O. For example, type A blood has A antigens and anti-B antibodies. Receiving type B blood would trigger an immune response.

**Role of Rh Factor:** The **Rh factor** adds another layer of compatibility. Rh-negative individuals should not receive Rh-positive blood to avoid sensitization and hemolytic reactions, especially critical in pregnant women to prevent **hemolytic disease of the newborn**.

Thus, Blood transfusions require careful matching of **ABO and Rh antigens** to ensure safety. Therefore, both the assertion and reason are true, and the reason correctly explains the necessity of blood group compatibility.



41. (a)

List I (Mission/Project)	List II (Agency/Country)
A) CHAPEA Project	NASA
B) HOPE Mission	ISRO
C) Shenzhou-20 Mission	China
D) Hera Mission	European Space Agency

### NASA'S CHAPEA PROJECT

NASA has unveiled the second Crew Health and Performance Exploration Analog (CHAPEA) habitat, designed for a series of analogue missions simulating year-long stays on the surface of Mars.

#### About

- The mission consists of four crew members living in the CHAPEA habitat, an isolated 1,700 square foot, 3D-printed structure.
  - The CHAPEA mission is part of NASA's ongoing efforts to prepare for future manned missions to Mars.
- Objective:** Study physical and psychological effects of longduration space missions.
- Activities:** Scientific tasks, growing vegetables, maintaining habitat, simulated "Marswalks."

#### HOPE Mission:

**Objective:** Prepare for future manned missions to the Moon and Mars.

**Organization:** ISRO and Protoplanet, a Bengaluru-based space science company.

**Project:** HOPE (Human Outer Planet Exploration) launched in **Tso Kar, Ladakh**.

**Start Date:** August 1.

**Activity:** Selected crew members will live in the station for **10-day isolation missions**.

**Focus:** Conduct **physiological and psychological studies** to assess human adaptability and resilience in deep space-like conditions.

**Outcome:** Insights will aid in developing **protocols and technologies** for sustained human presence beyond Earth.

#### Shenzhou-20 Mission

China plans to launch the **Shenzhou-20 mission** on **Thursday, April 24, 2025**, carrying astronauts **Chen Dong, Chen Zhongrui, and Wang Jie** to its space station. The crew will conduct space science experiments, install a space debris protection device, manage extravehicular payloads, and perform recovery tasks. The mission will also carry **zebrafish, planarians, and streptomyces** for three life science experiments aboard the station.

#### Hera Mission:

Hera is a planetary defence mission under development at the European Space Agency (ESA) - launching in October 2024. Its objectives are to investigate the Didymos binary asteroid, including the very first assessment of its internal properties, and to measure in great detail the outcome of NASA's DART mission kinetic impactor test. Hera will provide extremely valuable information for future asteroid deflection missions and science; increasing our understanding of asteroid geophysics as well as solar system formation and evolutionary processes.

42. (b)

$$KE = \frac{1}{2} mv^2$$

**Definition of Kinetic Energy:** Kinetic energy (KE) is the **energy possessed by a body due to its motion**. Any object in motion, whether moving slowly or at high speed, has kinetic energy, which depends on its **mass** and **velocity**.



**Formula Derivation:** The standard formula for kinetic energy is:

$$KE = \frac{1}{2}mv^2$$

where **m** is the mass of the object and **v** is its velocity. The factor  $\frac{1}{2}$  arises from the integration of **work done** ( $W = F \times d$ ), using Newton's second law. The work done to accelerate a body from rest to velocity **v** equals its kinetic energy.

**Comparison with Other Options:**

- $KE = mv^2$  (option a) is incorrect because it lacks the factor  $\frac{1}{2}$ .
- $KE = mgh$  (option c) is the **gravitational potential energy** formula.
- $KE = F \times d$  (option d) is the general formula for **work done**, not kinetic energy.

**Significance:** Kinetic energy is **scalar** and always positive. It plays a key role in **mechanics, collisions, energy conservation, and engineering applications**, helping calculate motion, impact forces, and energy transfer in systems.

43. (b)

**James Webb Space Telescope**

**‘S/2025 U1’: 29TH MOON OF URANUS**

NASA announced that the James Webb Space Telescope has discovered a new, 29th satellite of Uranus, which was named S/2025 U1.

**About**

- The diameter of the Moon is estimated to be only some 10 kilometres. And orbits the planet at a distance of about 56,000 kilometres.
- S/2025 UI will get an official name from the International Astronomical Union (IAU) sometime in the future.

44. (d)

**1. Habeas Corpus (to have the body of)**

- Issued against both public authorities and private individuals.
- Commands to produce the detained person before the court.
- If detention is illegal → person set free.
- Safeguard of individual liberty against arbitrary detention.

**2. Mandamus (We command)**

- Issued against a public official, public body, corporation, inferior court, tribunal, or government.
- Commands them to perform official duties that they failed/refused to perform.

**3. Prohibition (to forbid)**

- Issued by a higher court to a lower court or tribunal.
- Prevents them from exceeding their jurisdiction or usurping jurisdiction not possessed.

**4. Certiorari (to be certified)**

- Issued on grounds of excess of jurisdiction, lack of jurisdiction, or error of law.
- The higher court directs the lower court to transfer a case or quash its order.

**5. Quo Warranto (By what authority or warrant)**

- Issued to enquire into the legality of a person's claim to a public office.

45. (b)

- Certain fundamental rights are reserved **only for Indian citizens** to **uphold democracy, support overall development, and provide special privileges and protections** to members of the nation.
- Fundamental rights which are mentioned in **articles 15,16,19, 29 and 30** are available only to citizens and not to foreigners.



Sl. No.	Provision	Article
1.	Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth	15
2.	Equality of opportunity in matters of public employment	16
3.	Protection of six rights regarding freedom of: (i) speech and expression, (ii) assembly, (iii) association, (iv) movement, (v) residence, and (vi) profession	19
4.	Protection of language, script and culture of minorities	29
5.	Right of minorities to establish and administer educational institutions	30

**Fundamental Rights available to both citizens and foreigners (except enemy aliens)**

Sl. No.	Provision	Article
1.	Equality before law and equal protection of laws	14
2.	Protection in respect of conviction for offences	20
3.	Protection of life and personal liberty	21
4.	Right to elementary education	21A
5.	Protection against arrest and detention in certain cases	22
6.	Prohibition of traffic in human beings and forced labour	23
7.	Prohibition of employment of children in factories etc.	24
8.	Freedom of conscience and free profession, practice and propagation of religion	25
9.	Freedom to manage religious affairs	26
10.	Freedom from payment of taxes for promotion of any religion	27
11.	Freedom from attending religious instruction or worship in certain educational institutions	28

46. (a)

**Both A and R are true, and R is the correct explanation of A**

- The Directive Principles of State Policy, enshrined in Part IV (Articles 36–51), are unique provisions borrowed from the Irish Constitution.
- Dr. B.R. Ambedkar called them “novel features,” while Granville Austin described them along with Fundamental Rights as the “Conscience of the Constitution.”
- These principles are positive obligations that direct the State to promote social justice, economic democracy, and community welfare. However, they are **non-justiciable**, meaning courts cannot enforce them if violated.
- Their authority lies in moral and political sanctions rather than legal compulsion. While no law can be struck down for violating DPSPs, courts may uphold laws enacted to implement them. Thus, DPSPs function as guiding beacons for governance, shaping policies to realize a welfare state.

47. (c)

- **Article 222 - Transfer of a Judge from one High Court to another:** The President may, [on the recommendation of the National Judicial Appointments Commission referred to in article 124A], transfer a Judge from one High Court to any other High Court.
- **Article 371I - Special provision with respect to the State of Goa:** Notwithstanding anything in this Constitution, the Legislative Assembly of the State of Goa shall consist of not less than thirty members
- **Article 312 - All-India Services:** if the Council of States passes a resolution with at least two-thirds of members present and voting declaring it necessary in the national interest, then Parliament can make laws to:





- Create one or more all-India services (including an all-India judicial service) shared by the Union and the States.
- Regulate recruitment and service conditions of people appointed to these services, following other provisions of this Chapter.
- **Article 253 - Legislation for giving effect to international agreements:** Parliament can make laws for all or part of India to implement any treaty, agreement, or convention with other countries, or to follow decisions made at international conferences or organizations.

**Some Important Articles:**

- **371. Special provision with respect to the States of Maharashtra and Gujarat:**

allows the President to set up **separate development boards** for **Vidarbha, Marathwada, Saurashtra, and Kutch**.

- 371A. Special provision with respect to the State of Nagaland

gives **Nagaland special provisions**, so laws on religion, customary practices, justice, and land apply only **with the Nagaland Assembly's approval**.

- 371B. Special provision with respect to the State of Assam

**Allows the President to issue orders for Assam** to set up and manage a **Legislative Assembly committee**.

- 371C. Special provision with respect to the State of Manipur

Indian Constitution grants special provisions for the State of Manipur to protect the interests of the tribal communities residing in its hill areas

- 371D. Special provisions with respect to the State of Andhra Pradesh or the state of Telangana

- 371E. Establishment of central university in Andhra Pradesh

empowers the President to ensure **equitable opportunities in employment and education** across **Andhra Pradesh and Telangana**.

- 371F. Special provision with respect to the State of Sikkim

continuation of existing Sikkimese laws, the Governor's special discretionary powers, specific representation for different sections of the Sikkimese population in the legislative assembly, and exemption from income tax for Sikkimese citizens on income earned within the state.

- 371G. Special provision with respect to the State of Mizoram

special provisions to the State of Mizoram, primarily to protect the Mizo people's social practices, customary law, and land ownership.

- 371H. Special provision with respect to the State of Arunachal Pradesh grants the Governor of Arunachal Pradesh special responsibility for law and order in the state.

- 371I. Special provision with respect to the State of Goa ensuring that the Goa Legislative Assembly must have at least 30 members.

- 371J. Special provision with respect to the State of Karnataka provides special provisions for the Hyderabad-Karnataka region of the state of Karnataka, which includes the backward districts of Gulbarga, Bidar, Raichur, Koppal, Yadgir, and Bellary.

**48. (b)**

**National Flag (Tricolour):** Rectangular (ratio 3:2), saffron–white–green bands. Chakra (navy blue, 24 spokes, from Sarnath Ashoka pillar) in the centre. Designed by Pingali Venkayya. **Adopted on 22 July 1947.**

**State Emblem:** From Sarnath lion capital of Ashoka, **adopted on 26 January 1950**. Motto – *Satyameva Jayate* (Mundaka Upanishad).

**National Anthem:** *Jana Gana Mana* (Rabindranath Tagore, from *Geetanjali*), first sung in 1911 INC session (Chairman Pt. Bishan Narayan Dar). **Adopted on 24 January 1950**. Playing time ~52 sec.



**National Song:** *Vande Mataram* (Bankim Chandra Chatterjee, from *Anand Math*). First sung in the 1896 INC session (Chairman Rahimtulla Sayani). **Adopted on 24 January 1950.**

**National Calendar:** Based on the Saka era (Chaitra–Falgun). **Adopted 22 March 1957.** In leap years, Chaitra begins on 21 March.

**National Symbols:**

- **Fruit:** Mango (*Mangifera Indica*)
- **Tree:** Banyan (*Ficus benghalensis*)
- **Animal:** Tiger (*Panthera tigris*)
- **Bird:** Peacock (*Pavo cristatus*)
- **Aquatic Animal:** Ganga River Dolphin (*Platanista gangetica*)
- **River:** Ganga (declared 2008)

**National Days:** Independence Day (15 Aug), Republic Day (26 Jan), Gandhi Jayanti (2 Oct).

49. (d)

**Amendment of the Indian Constitution**

- The Indian Constitution is a **mixture of rigidity and flexibility**.
- **Article 368 (Part XX)** empowers Parliament to amend the Constitution.
- **Three methods of amendment:**
  - **Simple Majority**
  - **Special Majority**
  - **Special Majority + Ratification** by half of the state legislatures.
- A **Constitutional Amendment Bill** can be introduced in **either House** of Parliament.
- Must be passed in **each House separately** by the required majority.
- **No joint sitting** is allowed for a Constitutional Amendment Bill.

Constitutional Amendment	Features
52nd Constitution Amendment Act, 1985	Anti-Defection Law
The Constitution (69 Amendment) Act, 1991	Delhi was given the status of National Capital Territory
The Constitution (75th Amendment) Act, 1994	Establishment of State-level Rent Tribunals
81st Amendment, 2000	Protection of SC/ST reservation in the filling backlog of vacancies
The Constitution (80th Amendment) Act, 2000	Accepting the recommendations of 10th finance commission
The Constitution (83rd - Amendment) Act, 2000	The Constitution (83rd Amendment) Act, 2000, amended Article 243M of the constitution to exempt the state of Arunachal Pradesh from reserving seats for Scheduled Castes (SCs) in its Panchayats. This exemption was granted because the state is entirely populated by indigenous tribal people and has no Scheduled Caste population.
91st Amendment, 2003	Limiting the size of the Council of Ministers
97th Amendment, 2011	Right to form Co-operative societies under Article 19(1) (c)
99th Amendment, 2014	Formation of National Judicial Appointments Commission



50. (d)

To understand the formation of Indian states and their relationship with constitutional amendments, it's important to differentiate between major and minor changes. While a few states were created through specific constitutional amendments, **most were formed by ordinary laws passed by Parliament under Articles 3 and 4 of the constitution.** These laws alter the First Schedule, but they are not considered constitutional amendments under Article 368.

The most extensive reorganization of states was through the *States Reorganisation Act, 1956*, which was enacted in conjunction with the **Seventh Constitutional Amendment Act. This amendment abolished the original four-tier (Parts A, B, C, D) classification of states** and replaced it with a system of **14 states and 6 union territories.**

Indian states by year of formation

State	Formation Year	Related Major Act or Amendment
Uttar Pradesh, Bihar, Assam, Odisha, West Bengal, Tamil Nadu, Andhra Pradesh	<b>1950 (or earlier for some)</b>	<b>Seventh Amendment Act, 1956:</b> Reorganized boundaries, but statehood was already in place or formalized by gazette notification. Andhra Pradesh was formed earlier in 1953 from Madras State, but was reorganized in 1956.
Karnataka, Kerala, Madhya Pradesh	<b>1956</b>	<b>States Reorganisation Act, 1956:</b> These states were formed as part of the massive linguistic reorganization. The Mysore State was later renamed Karnataka in 1973.
Gujarat, Maharashtra	<b>1960</b>	<b>Bombay Reorganisation Act, 1960:</b> Split the bilingual Bombay State into two separate linguistic states.
Nagaland	<b>1963</b>	<b>State of Nagaland Act, 1962:</b> Carved out of the Naga Hills district of Assam.
Haryana, Punjab	<b>1966</b>	<b>Punjab Reorganisation Act, 1966:</b> Separated the state of Haryana from Punjab and created the union territory of Chandigarh.
Himachal Pradesh	<b>1971</b>	<b>State of Himachal Pradesh Act, 1970:</b> Elevated the union territory of Himachal Pradesh to full statehood.
Manipur, Meghalaya, Tripura	<b>1972</b>	<b>North-Eastern Areas (Reorganisation) Act, 1971:</b> Granted full statehood to these three former union territories.
Sikkim	<b>1975</b>	<b>36th Amendment Act, 1975:</b> Merged Sikkim into the Indian Union as the 22nd state. This was a direct constitutional amendment.
Arunachal Pradesh, Mizoram, Goa	<b>1987</b>	<b>State of Mizoram Act, 1986; State of Arunachal Pradesh Act, 1986; State of Goa Act, 1986:</b> Granted statehood to these territories.
Chhattisgarh, Uttarakhand, Jharkhand	<b>2000</b>	<b>Madhya Pradesh, Uttar Pradesh, and Bihar Reorganisation Acts, 2000:</b> These new states were carved out of existing states.
Telangana	<b>2014</b>	<b>Andhra Pradesh Reorganisation Act, 2014:</b> Created Telangana by separating it from Andhra Pradesh.



51. (c)

National Sports Governance Bill, 2025 (Introduced in Lok Sabha on July 23, 2025)

**Objective:** Recognition and regulation of national sports bodies.

**National Sports Bodies:**

- Establishes National Olympic Committee, National Paralympic Committee, and National/Regional Sports Federations for each sport.
- Must align with international bodies and have state/district affiliates.
- Required to form committees, adopt a code of ethics, and set up a grievance redressal mechanism.
- Governed primarily by international charters; the central government may clarify conflicts.

**Administrative Structure:**

**General body:** Equal representation from affiliates + ex-officio members.

**Executive committee:** Max 15 members (incl. 2 sportspersons, 4 women).

**Age limits:** 25–70 years (70–75 if allowed by international rules).

Key posts (President, Secretary General, Treasurer) require outstanding merit or two prior terms; max 3 consecutive terms.

**National Sports Board (NSB):**

- NSB will grant recognition to the national sports bodies and register their affiliate units. Only recognised bodies will be eligible to receive funds from the central government.
- The Board may suspend or cancel such recognition or registration, subject to specified conditions.

**Functions:** Issue guidelines, inquire into welfare/sports development/misuse of funds, and create ad-hoc bodies if needed.

Members appointed by the central government on recommendation of a search-cum-selection committee.

**National Sports Tribunal:**

- Adjudicates disputes (excludes international games and internal disputes).
- **Composition:** Chairperson (SC/HC judge) + 2 eminent members.
- **Appeals:** Supreme Court or Court of Arbitration for Sport (Switzerland) if required.

**Elections Oversight:**

- National panel of electoral officers for elections of national bodies.
- Each national body forms its own electoral panel for affiliates.

**Central Government Powers:**

May exempt any body/affiliate from provisions in public interest.

52. (b)

**Hydroelectric Project:**

A hydroelectric project is a system that generates electricity using the kinetic energy of flowing or falling water. It often involves dams, reservoirs, and turbines connected to generators. Projects can be small-scale for local use or large-scale supplying entire power grids.

**Etalin Hydroelectric Project (EHEP) – Key Points**

**Capacity & Location:** 3,097 MW project in Dibang Valley, Arunachal Pradesh; among India's largest proposed hydropower projects.

**Design:** Combination of two run-of-the-river schemes with two concrete gravity dams (101.5 m and 80 m) on the Dri and Tangon rivers (tributaries of Dibang).

**Biodiversity:** Located in the richest biogeographical province of the Himalayan zone and part of a global mega biodiversity hotspot.

**Community:** Area inhabited by Idu-Mishmi tribes.



**Execution:** Implemented by Etalin Hydro Electric Power Company Limited, a JV of Jindal Power Ltd (74%) and Hydro Power Development Corporation of Arunachal Pradesh Ltd (26%).

53. (b)

The India - Nepal border dispute over the Kalapani-Lipulekh-Limpiyadhura region traces back to the Treaty of Sugauli (1816), which defined the Kali River as the western boundary of Nepal. However, ambiguity over the true source of the Kali River, whether Limpiyadhura or Kuti Yangti has created conflicting territorial claims. After India's 2019 political map, showing Kalapani within Indian territory following the J&K reorganization, Nepal responded by publishing its own political map and passing a constitutional amendment to formalize its claim. The issue reflects historical cartographic disputes, sovereignty sensitivities, and strategic concerns, complicated by external influences, particularly growing Chinese involvement in Nepal.

54. (a)

**Abel Prize 2025:**

**Winner:** Masaki Kashiwara, Japanese mathematician.

**Affiliation:** Research Institute for Mathematical Sciences (RIMS) & Kyoto University Institute for Advanced Study (KUIAS), Kyoto University, Japan.

**Awarding Body:** Norwegian Academy of Science and Letters.

**Citation:** For fundamental contributions to algebraic analysis and representation theory, particularly:

- Development of the theory of D-modules.
- Discovery of crystal bases.

**About the Abel Prize:**

- It is named after the Norwegian mathematician Niels Henrik Abel (1802-1829) and is one of the most coveted awards in mathematics.
- The Abel Prize is funded by the Norwegian government and amounts to NOK 7.5 million (\$710,000).
- The prize is awarded by the Norwegian Academy of Science and Letters and presented by His Majesty King Harald.
- The choice of the Abel laureate is based on the recommendation by the Abel Committee, which is composed of five internationally recognised mathematicians.

55. (a)

**Both A and R are true, and R is the correct explanation of A.**

**Swavalambini Women Entrepreneurship Programme:**

**Launched by:** Ministry of Skill Development & Entrepreneurship (MSDE) in collaboration with NITI Aayog.

**Focus Region:** Northeast India – Assam, Meghalaya, and Mizoram.

**Implementing Agency:** Indian Institute of Entrepreneurship (IIE).

**Objective:** Empower female students in HEIs with entrepreneurial mindset, resources, mentorship, and funding support.

**Inauguration:** Conducted virtually across 9 HEIs including Gauhati University, NEHU, Mizoram University.

**Training Stages:**

- **EAP (Entrepreneurship Awareness Programme):** 600 students, 2-day sessions.
- **EDP (Entrepreneurship Development Programme):** 300 students, 40-hour training on finance, compliance, market linkages, etc.
- Followed by 6 months mentorship.

**Faculty Training:** A 5-day Faculty Development Programme (FDP) to upskill HEI faculty in mentoring and incubation.





**Recognition:** Award to Rewards Initiative to celebrate successful women entrepreneurs and inspire others.

**Target Outcome:** At least 10% of EDP trainees to launch successful enterprises, boosting women-led entrepreneurship.

56. (a)

**Rajiv Krishna** – Senior IPS officer; assumed charge as the new Acting Director General of Police (DGP) of Uttar Pradesh on 31 May 2025.

**Dr. Ajay Kumar** – Assumed charge as the new Chairman of Union Public Service Commission (UPSC) on 15 May 2025.

**Prakash Magdum** – Assumed charge as the Managing Director (MD) of National Film Development Corporation (NFDC) on 5 May 2025.

**Nidhi Tiwari** – Appointed as the Private Secretary to Prime Minister Narendra Modi by the Central Government.

**Other Important appointments:**

Name	Position	Organization	Appointment Date
<b>Ajay Bhadoo</b>	Chief Executive Officer (CEO)	Government e-Marketplace (GeM)	March 3, 2025
<b>Ashish Khanna</b>	Director General	International Solar Alliance (ISA)	March 2025
<b>Gopal Vittal</b>	Chairman of the Board of Directors	GSMA (Global System for Mobile Communications Association)	March 2025
<b>Sanjeev Ranjan</b>	Secretary-General	Indian Ocean Rim Association (IORA)	January 1, 2025
<b>Tuhin Kanta Pandey</b>	Chairman	Securities and Exchange Board of India (SEBI)	March 11, 2025
<b>Shaktikanta Das</b>	Principal Secretary II to the Prime Minister	Government of India	February 22, 2025
<b>Justice Arun Mishra</b>	Lokpal and Ethics Officer	Board of Control for Cricket in India (BCCI)	January 2025
<b>Gyaneshwar Prasad Singh</b>	Director General	Central Reserve Police Force (CRPF)	February 2025
<b>Hari Babu Kambhampati</b>	Governor	Odisha	January 3, 2025
<b>Arif Mohammad Khan</b>	Governor	Bihar	January 2, 2025
<b>Bhuvanesh Kumar</b>	Chief Executive Officer (CEO)	Unique Identification Authority of India (UIDAI)	January 2025
<b>Justice V. Ramasubramanian</b>	Chairperson	National Human Rights Commission (NHRC)	December 30, 2024



<b>Jayathirtha R. Joshi</b>	CEO and Managing Director (MD)	BrahMos Aerospace	December 1, 2024
<b>Vijaya Kishore Rahatkar</b>	Chairperson	National Commission for Women (NCW)	October 2024
<b>Babita Singh Chauhan</b>	Chairman	Uttar Pradesh Commission for Women	September 2024

57. (a)

**Mehrauli (Delhi):** In May 2025, the Archaeological Survey of India (ASI) successfully completed the conservation work of Rajon ki Baoli, a stepwell built around 1506 CE during the Lodi dynasty.

**Kaleshwaram (Telangana):** Between 15–26 May, 2025, in Jayashankar Bhupalpally district, the famous religious event Saraswati Pushkaralu Kumbh was held.

**Kozhikode (Kerala):** In May 2025, Kozhikode city was included in the World Health Organization's Global Network for Age-Friendly Cities and Communities. This made it the second city from Kerala after Kochi to join this network. Previously, UNESCO had already recognized Kozhikode as the "City of Literature".

**Hyderabad (Telangana):** On 30 April, 2025, at Kanha Shanti Vanam (Ranga Reddy district), the world's first Energy Conservation Park – Babuji Vanam was inaugurated.

58. (b)

Optiemus Electronics, in partnership with Corning Incorporated, USA, established the facility in Noida to produce high-quality tempered glass under the brand "Engineered by Corning".

- India's first tempered glass manufacturing facility for mobile devices inaugurated in Noida by Union Minister Ashwini Vaishnaw.
- Set up by Optiemus Electronics in collaboration with Corning Inc., USA.
- Products branded as "Engineered by Corning" for domestic and global markets.
- Indigenous tempered glass production supports Make in India & Atmanirbhar Bharat. India aims to manufacture all mobile components including chips and cover glasses.
- Electronics manufacturing grew 6 times in 11 years to ₹11.5 lakh crore.
- Exports crossed ₹3 lakh crore, generating 2.5 million jobs.
- Strong design ecosystem – IIT Madras startup created India's first microcontroller.
- India recorded 7.8% GDP growth in Q1 FY 2025-26, showing stability and innovation.
- **Domestic market:** 500 million tempered glass units (~₹20,000 crore).
- **Facility investment:** ₹70 crore (Phase 1) → 25M units/year, 600 jobs; ₹800 crore (Phase 2) → 200M units/year, 4,500 jobs.
- **Optiemus Group:** 30 years' experience in telecom & manufacturing, driving India's electronics ecosystem.

59. (c)

#### **Learning by Doing (LBD) Programme**

- On 14 July 2025, the Uttar Pradesh government launched the Learning by Doing (LBD) Programme in government schools to improve the quality of education.
- The objective of this programme is to provide practical training to students of Classes 6 to 8 in areas such as woodwork, metalwork, energy and environment, agriculture and horticulture, as well as health and nutrition.



- In the pilot phase, 5,937 students from 60 schools across 15 districts were trained. This resulted in an increase in students' attendance and participation.
- In the academic year 2025–26, it is proposed to expand the programme to 3,288 additional schools under Samagra Shiksha and PM SHRI schemes.
- In the academic year 2024–25, modern LBD laboratories will be established in 2,274 upper primary and composite schools.
- Samagra Shiksha Abhiyan is an integrated education programme launched by the Government of India in 2018–19 through the Union Budget. It covers school education from pre-nursery to Class 12.
- **This programme integrates three earlier schemes:**
  - Sarva Shiksha Abhiyan (SSA)
  - Rashtriya Madhyamik Shiksha Abhiyan (RMSA)
  - Teacher Education (TE)

60. (b)

**Jhumoir Binandini (Mega Jhumoir) 2025:**

**Mega Jhumoir 2025** held in Guwahati, Assam; 8,000 performers showcased 200 years of Assam's tea industry & industrialisation.

**Cultural Significance** – Jhumoir dance of Tea Tribe & Adivasi communities; embodies inclusivity, unity, and Assam's folk traditions.

**PM's Address** – Praised artists, recalled 2023 Bihu world record, highlighted Assam's cultural pride, and shared personal bond with tea culture.

**Assamese Recognition** – Assamese language granted classical status; Charaideo Moidam added to UNESCO World Heritage list.

**Lachit Borphukan's Legacy** – 400th birth anniversary celebrations, Republic Day tableau, and 125-ft bronze statue erected.

**Tribal Pride** – Launch of Janjatiya Gaurav Divas; tribal museums across India to honour tribal warriors & heritage.

**Some Important Events:**

**1. MilMedicon 2025**

- Held in New Delhi from 28–29 August 2025.
- An international conference on physical and mental trauma in military settings.
- Organized by the Directorate General of Medical Services, Indian Army.

**2. 18th International Olympiad on Astronomy & Astrophysics (IOAA) 2025**

- Held in Mumbai from 11–21 August 2025.
- **Theme:** “Vasudhaiva Kutumbakam” (World is One Family).
- **Participation:** 300 students and 160 mentors from 60+ countries.

**3. India MedTech Expo 2025**

- Organized at Bharat Mandapam, New Delhi, from **4–6 August 2025**.
- **Objective:** Showcase India's journey and opportunities in medical technology.
- Displayed progress in medical technology innovations.
- **Participation:** **500+ companies** showcased innovations, products, and services.

**4. 28th National e-Governance Conference 2025:**

- **The 28th National e-Governance Conference 2025** was held in Visakhapatnam, Andhra Pradesh on June 9-10, 2025.
- The conference was organized by the Department of Administrative Reforms and Public Grievances in collaboration with the Ministry of Electronics and Information Technology (MeitY).



## 5. Gulfood 2025

- The world's largest food and beverage trade exhibition, 'Gulfood 2025,' was held at the World Trade Center in Dubai from February 17 to 21, 2025. The central theme of the exhibition was "Be Part of the Next Frontier in Food."
- More than 5,500 delegates from 29 countries participated, and over 1 million products were showcased.

## 6. BIOFACH 2025

- The world's leading organic food trade fair, 'BIOFACH 2025,' was held in Nuremberg, Germany, from February 11 to 14, 2025.
- During the event, a letter of intent was signed between the Agricultural and Processed Food Products Export Development Authority (APEDA) India and Nuremberg Messe, designating India as a partner country for BIOFACH 2026.

61. (c)

$360^\circ/24 \text{ hours} = 15^\circ$ , i.e., a  **$15^\circ$  longitude** circle is called the Hour Circle. Going **east from  $0^\circ$  longitude**, time increases by **1 hour for every  $15^\circ$  of longitude**, which becomes 12.00 hours at  $180^\circ$  longitude. This is called P.M. (Post Meridian). **Therefore, statement 1 is correct.**

Conversely, as we move towards the **Western Hemisphere**, the time lags by one hour for every  $15^\circ$  of longitude, which is called A.M. (AntiMeridian). **International Date Line passes through the Pacific Ocean, roughly following the  $180.0^\circ$  line of longitude.**

The Earth **rotates  $360^\circ$**  on its axis in 24 hours, that is, it **rotates  $15^\circ$  every hour**. On this basis, time is calculated according to longitude. As we move east from  $0^\circ$  longitude (Greenwich), the sun rises earlier, so the time increases by one hour for every  $15^\circ$ .

For example, Indian Standard Time is based on  **$82\frac{1}{2}^\circ$  East longitude**, which is **5 hours 30 minutes** ahead of Greenwich time. Conversely, time decreases as we move west.

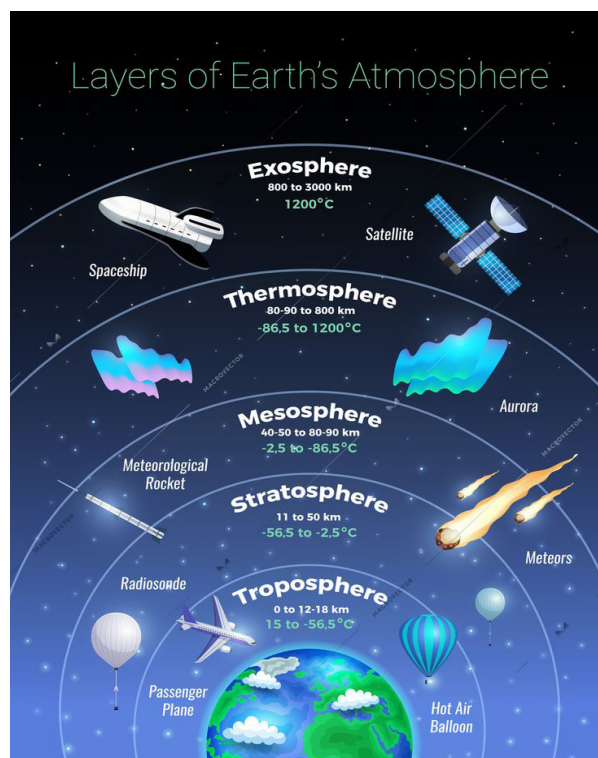
The  **$180^\circ$  meridian** is called the International Date Line because it is located directly opposite Greenwich Mean Time on Earth and is used to coordinate dates. When a traveler crosses this line from east to west, the date advances by one day, while when crossing from west to east, the date is set back by one day. However, this line is not completely straight; it is curved in some places for the convenience of islands and countries.

62. (b)

**The Troposphere** is the lowest and most important layer of the atmosphere. This layer directly affects animals, plants, and human life. Its average height is approximately **18 kilometers** at the equator and approximately 8 kilometers in the polar regions. The height of this layer varies according to geographic latitude and seasons.

The troposphere's primary characteristic is that its temperature decreases with increasing altitude. On average, the temperature decreases by approximately  $1^\circ\text{C}$  for every 165 meters of altitude. This is why it is called the "weather-making zone," because **all weather-related phenomena, including clouds, rain, storms, snowfall, and hurricanes, occur within this layer.**

The upper boundary of this layer is called the tropopause. Above this, the stratosphere begins. The troposphere has the highest air density, as approximately **75%** of the atmosphere's mass and 99% of its water vapor are found in this layer.



**Mesosphere:**

The mesosphere is the layer of the atmosphere located between the stratosphere and the thermosphere. Its altitude ranges from approximately **50 km to 80 km** above the Earth's surface. This layer is considered the third major layer of the atmosphere.

The most prominent feature of this layer is that the temperature decreases with increasing altitude. The upper boundary of the mesosphere, called the mesopause, is the coldest region of the atmosphere, where temperatures can reach approximately  $-90^{\circ}\text{C}$ .

Meteors in the mesosphere burn up upon entering the Earth's atmosphere, preventing them from reaching the Earth's surface. Therefore, it is sometimes called the "meteorite burning zone."

This layer is also scientifically important because atmospheric waves and acoustic waves are studied here.

**The stratosphere** is the second layer of the atmosphere, located above the troposphere and below the mesosphere. Its altitude ranges from approximately 12–50 km above the Earth's surface.

The most significant feature of this layer is that its temperature increases with increasing altitude, due to the presence of an **ozone layer**. The ozone layer absorbs harmful ultraviolet (UV) rays from the Sun and prevents them from reaching the Earth's surface. This is why the stratosphere is called a life-protecting layer.

**The ionosphere** is the uppermost layer of the atmosphere, extending from an altitude of approximately 80 km to 400 km. This layer is part of the thermosphere. It is named ionosphere because the molecules and atoms in the air here become ionized by the influence of ultraviolet (UV) and X-rays from the Sun.

This layer is of paramount importance in **radio communication**. When radio waves are sent upward from Earth, the ionosphere reflects them back to Earth's surface. This is why long-distance **wireless communication is possible**. **Pole lights** (Northern Lights (Aurora Borealis) in the northern hemisphere. Southern Lights (Aurora Australis) in the southern hemisphere) **originates in the ionosphere**. Therefore, **option (b) is incorrect**.

63. (c)

**The correct matching is:**

The Earth's atmosphere is essential for life because it contains various gases that perform different functions. The atmosphere contains the largest amount of **nitrogen (78%)**, which is essential for plants through the nitrogen cycle. This is followed by **oxygen (21%)**, which is essential for respiration and the foundation of animal life. **Argon (about 0.93%)** and other rare gases are also present. Small amounts of **ozone ( $\text{O}_3$ )** in the atmosphere protect the Earth from harmful ultraviolet rays from the Sun. **Carbon dioxide (about 0.03–0.04%)** is an important greenhouse gas that regulates temperature, but its excess contributes to global warming.

64. (c)

The energy that comes from the Sun to the Earth is called **solar radiation**, and it is a part of **electromagnetic radiation, which includes visible light, ultraviolet light, infrared, radio waves, etc**. Therefore, **statement 1 is correct**.

The Sun's energy is absorbed by the Earth's surface and atmosphere, and this energy continues to affect **the Earth's surface and atmosphere during the day and night cycle**. The Earth re-radiates the absorbed energy back into space, including infrared radiation (heat), this process also occurs at night. Therefore, **statement 2 is incorrect**.

The upper part of the Earth's atmosphere (such as the ozone layer) absorbs a significant portion of **the Sun's ultraviolet radiation, and also reflects some of the solar radiation back into space**. Therefore, **statement 3 is correct**.





65. (b)

The correct matching is:

Theory/treatise	- Propounder
Theory of the Geographical Pivot	- H.J. Mackinder
Cosmographia Universalis	- Sebastian Münster
Markeologia del Erdo Berklache	- Albrecht Penck
Human Geography	- Jean Brunns

British geographer **Sir H.J. Mackinder** presented the **theory of the geographical pivot** in 1904 in a paper titled “**The Geographical Pivot of History.**” It was later also called the Heartland Theory.

The **German scholar Sebastian Münster** (1488–1552) was a renowned cartographer, geographer, and humanist. He wrote the Latin treatise “**Cosmographia Universalis**” in 1544.

**Albrecht Penck**, a German geographer and geomorphologist, is regarded as one of the pioneers of modern geomorphology. In his famous work *Morphologie der Erdoberfläche* (Morphology of the Earth’s Surface, 1894), he emphasized the systematic study and classification of landforms. Penck highlighted that the development of landforms is influenced not only by the passage of time but also by external factors such as climate and internal forces like tectonic uplift.

**Jean Brunhes** (1869–1930) was a renowned French geographer. He particularly developed the field of “**Geography Humane**”/”**Human Geography.**” His treatise, *La Géographie Humaine* (Essai de classification positive, principes et exemples), was first published in 1910.

66. (b)

**Residual Mountains:** Mountains whose major portion has been eroded **by erosion** and currently exist only as remnants are called ‘**residual mountains**’.

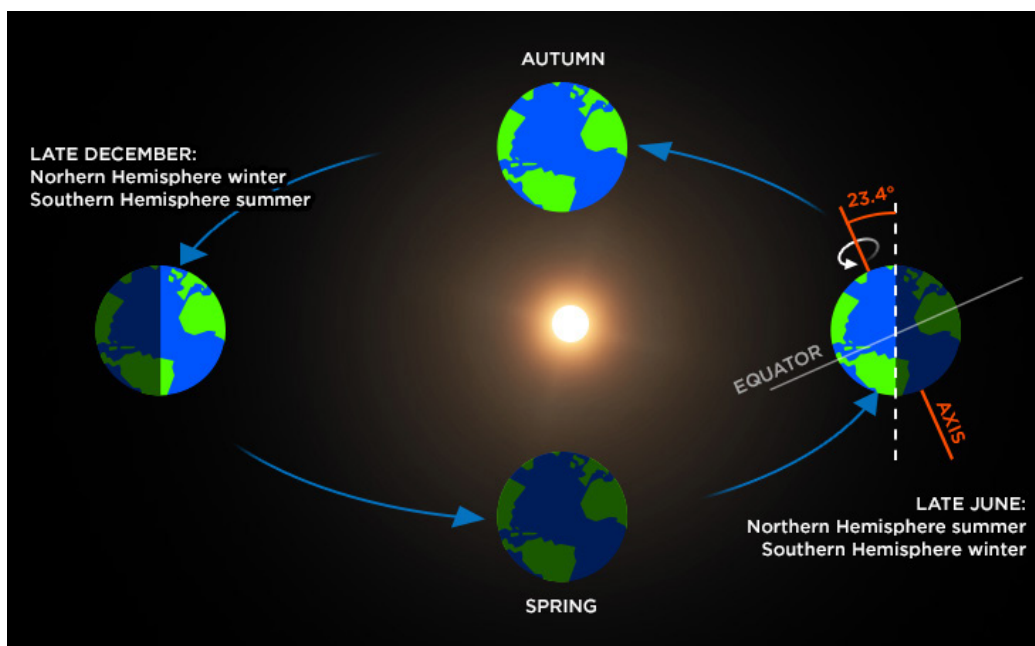
The **Aravalli**, in India, and the **Appalachian ranges** in the **United States** are examples of residual mountains.

**River Erosion:** Rivers flow continuously and erode the rocks in their path. Over time, these rivers cut the mountains into smaller pieces.

**Glacial Erosion:** Glaciers are also a powerful erosive force. These massive sheets of ice sculpt mountains and deepen them.

**Wind Erosion:** Wind also erodes mountains. Sand and dust particles in the air collide with rocks and wear them down.

67. (d)



The change in seasons is not due to the **Earth's rotation** on its axis, but to its **orbital** motion around the Sun and its tilt of 23.5°. This causes the distribution of sunlight in different hemispheres throughout the year, creating summer, winter, and other seasons.

Day and night are caused not by the Earth's rotation around the sun but by its rotation on its axis. The Earth rotates approximately once every 24 hours, causing one half of the Earth to face the Sun and experience daytime, while the other half, facing the Sun, experiences nighttime. **Therefore, both statements are false.**

68. (a)

**Dudhwa National Park (Uttar Pradesh)**

- Located in the Terai belt near the Nepal border in Uttar Pradesh.
- It forms part of the **Dudhwa Tiger Reserve** and is crucial for tiger conservation.
- Major wildlife species include **swamp deer (Barasingha), tigers, and reintroduced rhinos.**
- The park comprises marshlands, grasslands, and riverine habitats, making it ideal for biodiversity.
- Dudhwa NP has ongoing conservation projects for tigers and rhinos, ensuring species survival and ecological balance.

• **Keoladeo National Park (Rajasthan)**

- Situated in Bharatpur, Rajasthan, it is recognized as a **UNESCO World Heritage Site.**
- Keoladeo NP is a **man-made wetland and bird sanctuary**, created historically for waterfowl. o Hosts large numbers of **migratory birds**, including **pelicans, geese, and storks**, especially during winter.
- The park is significant for ornithological studies, environmental education, and ecological research.
- Its ponds, canals, and shallow lakes provide ideal habitats for both resident and migratory bird species.

• **Manas National Park (Assam)**

- Located on the India-Bhutan border in the Himalayan foothills.
- Recognized as a **UNESCO World Heritage Site, Tiger Reserve, and Elephant Reserve.**
- Distinctive species include **golden langur, pygmy hog, and roofed turtle.**
- Manas NP plays a critical role in biodiversity conservation and ecosystem protection.
- Its grasslands, forests, and river systems support both terrestrial and aquatic life.

• **Bandhavgarh National Park (Madhya Pradesh)**

- Situated in the Vindhyan ranges, famous for having the **highest tiger density in India.**
- Home to the historical **Bandhavgarh Fort**, giving it cultural and historical importance.
- Wildlife includes tigers, leopards, wild boars, and a variety of bird species.
- The park is a major center for wildlife tourism and ecological research.

69. (a)

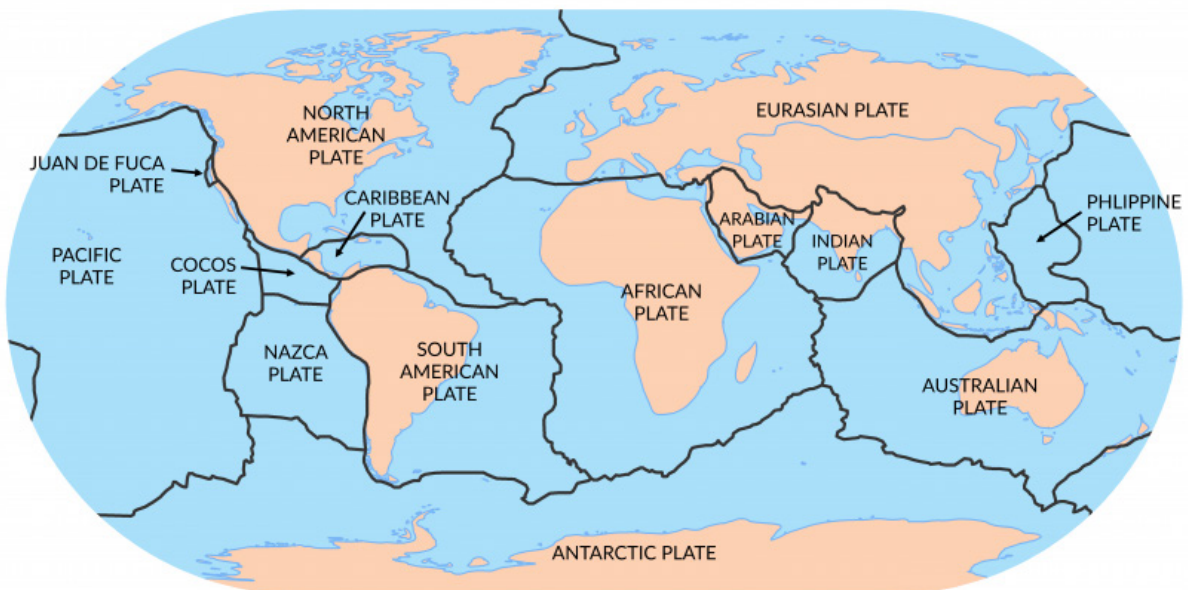
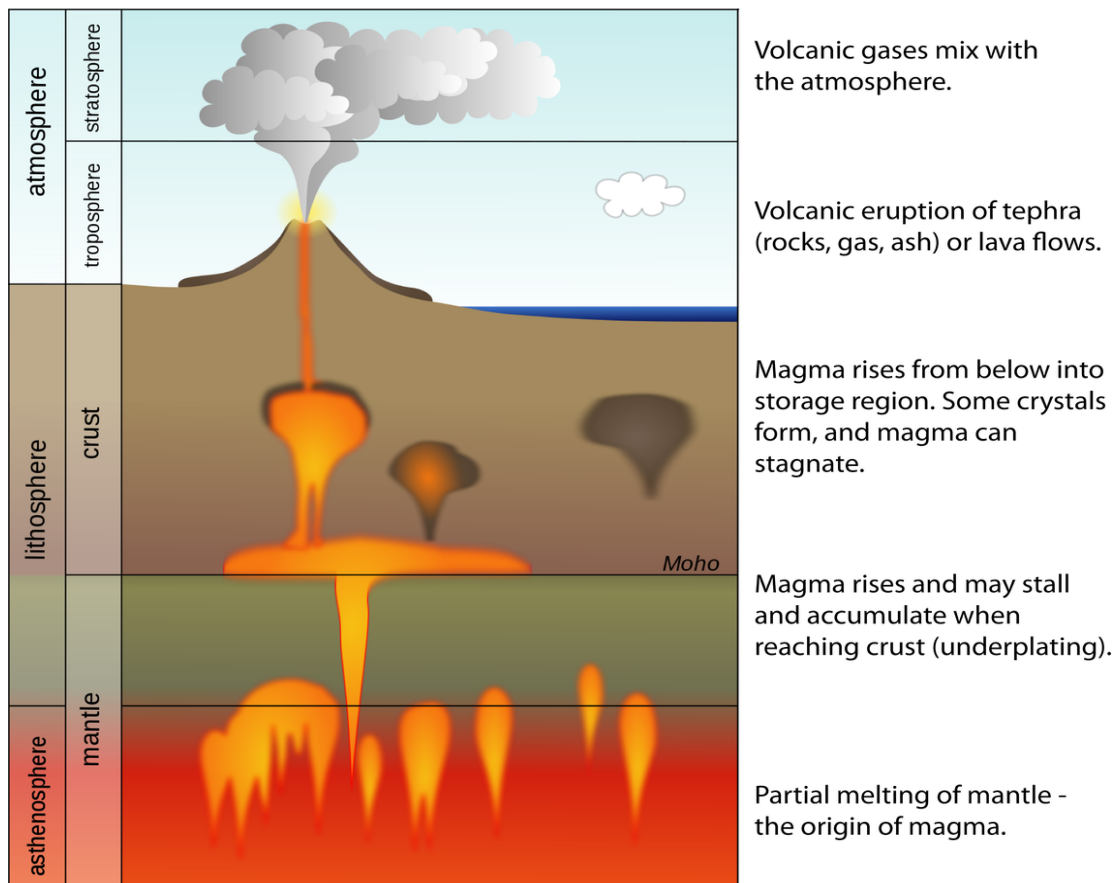
In 1967, **MacKenzie, Parker, and Morgan** combined various existing ideas and presented the Plate Tectonics Theory. According to this theory, **tectonic plates, or lithospheric plates, are large, unevenly shaped blocks of solid rock composed of continental and oceanic lithosphere.** Therefore, **statement 1 is correct.**

**The lithosphere includes the Earth's crust and the upper part of the mantle. Its thickness can range from approximately 5 to 100 kilometers beneath the oceans and up to 200 kilometers in continental regions.** Based on this fact, **it is clear that statement 2 is false.**

**Major (or Primary) Plates:** These are the **seven** largest plates that cover most of the Earth's surface, including the Pacific, North American, Eurasian, African, Antarctic, Indo-Australian, and South American Plates.

**Minor (or Secondary) Plates:** These are smaller plates, such as the Arabian Plate, Caribbean Plate, and Philippine Sea Plate.





70. (b)

State	2011 Literacy Rate (in percent)
Kerala	94.0
Mizoram	91.3
Goa	88.7
Tripura	87.2
Himachal Pradesh	82.8



**Lowest Literacy Rate (in percent):**

State	2011
Bihar	61.8
Arunachal Pradesh	65.4
Rajasthan	66.1
Jharkhand	66.4
Andhra Pradesh	67.0

71. (a)

**Five States with the Highest Sex Ratio:**

State	Sex Ratio (2011)
Kerala	1084
Tamil Nadu	996
Andhra Pradesh	993
Chhattisgarh	991
Meghalaya	989

**Five States with the Lowest Sex Ratio:**

State	2011
Haryana	879
Jammu and Kashmir	889
Sikkim	890
Punjab	895
Uttar Pradesh	912

**Union Territories with the Highest Sex Ratio:**

Union Territory	2011
Puducherry	1037
Lakshadweep	946
Andaman & Nicobar Islands	876

72. (d)

**Kaushambi – Sitapur – Hardoi– Raebareli – Unnao**

- As per Census 2011 data, the SC percentage is highest in **Kaushambi (34.72)**, followed by **Sitapur (32.26)**, **Hardoi (31.14)**, **Raebareli (30.58)** and **Unnao (30.52)**.
- According to the 2001 census, Scheduled Castes (SC) made up 21.1% of the state's total population, with their count at 35,148,377. By 2011, this population grew to 41,357,608, but their share of the state's total population slightly dropped to 20.69%. Nationally, the SC population accounts for 16.6% of the total population.



- Uttar Pradesh holds the highest number of Scheduled Caste individuals in the country. Within the state, the district with the highest SC population is Sitapur at 1,446,427, while Baghpat has the lowest at 149,060.
- In terms of percentage, **Kaushambi district has the highest percentage of SC population at 34.72%, whereas Baghpat has the lowest at 11.44%.**

[https://updes.up.nic.in/updes/data/dist\\_dev\\_indicator/dist\\_dev\\_indicators\\_2020.pdf](https://updes.up.nic.in/updes/data/dist_dev_indicator/dist_dev_indicators_2020.pdf)

73. (c)

**E > D > C > B > A**

**The five districts with the highest Scheduled Tribe (ST) population in decreasing order are: Sonbhadra, Ballia, Deoria, Kushinagar, and Lalitpur.**

**Scheduled Tribes-**

- According to the 2001 Census, the Scheduled Tribe population in the state was 1,07,963, accounting for 0.065% of the state's total population. By 2011, this number had risen to 11,34,273, representing 0.57% of the total population.
- The percentage of ST population in the total population of India is 8.6%.
- The sex ratio among the Scheduled Tribes of the state is 951 whereas in 2001 it was 934.
- District with the highest number of scheduled tribes:** Sonbhadra
- District with the lowest number of scheduled tribes:** Baghpat
- District with the highest number of scheduled tribes (in %):** Sonbhadra (20.67%)
- District with the lowest number of scheduled tribes (in %):** Baghpat (0.001%)

74. (a)

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

Institution	Location
Chandrashekhar Azad University of Agriculture and Technology	Kanpur
Sardar Patel University of Agriculture and Technology	Modipuram (Meerut)
Uttar Pradesh Agricultural Research Council	Lucknow
Uttar Pradesh Sugarcane Research Council	Shahjahanpur

**Some Other Important Agricultural Institutions:**

University Name	Location	Year Established	Additional Information
Chandrashekhar Azad University of Agriculture and Technology	Kanpur	1975	Oldest agricultural university in the state
Acharya Narendra Dev University of Agriculture and Technology	Kumarganj (Ayodhya)	1976	—
Sardar Patel University of Agriculture and Technology	Modipuram (Meerut)	2000	—
Banda University of Agriculture and Technology	Banda	2010	—





Sam Higginbottom University of Agricultural Technology and Sciences	Naini (Prayagraj)	1910	Granted State Deemed University status on 27 Dec 2016
Rani Lakshmi Bai National Agricultural University	Jhansi	—	Central university
Mahatma Buddha University of Agriculture and Technology	Kushinagar	Under Construction	—

Institution / Center	Location	Year Established / Additional Info
Uttar Pradesh Agricultural Research Council	Lucknow	—
Uttar Pradesh State Institute of Agricultural Management	Rehman Kheda, Lucknow	—
State Animal Welfare (Varna Shankar) Center	Bareilly	—
Potato Research Center	Babugarh, Hapur district	—
Uttar Pradesh Seed Development Corporation	Lucknow	2002
Center for Sugarcane Biotechnology	Shahjahanpur district	—
Uttar Pradesh Sugarcane Research Council	Shahjahanpur district	1976-77
Sugarcane Research Centers under Sugarcane Research Council	Muzaffarnagar, Gorakhpur, Gola (Kheeri)	—
Genda Singh Sugarcane Breeding and Research Center	Sewrahi, Kushinagar district	—
Lal Bahadur Shastri Sugarcane Farmers Institute	Lucknow	1975
International Rice Research Center	Varanasi	Branch of the International Rice Research Center, Philippines

75. (b)

**Districts with names different from the headquarters of Uttar Pradesh-**

- The headquarters of Amethi district is Gauriganj.
- The headquarters of Sant Kabir Nagar district is Khalilabad.
- The headquarters of Gautam Buddha Nagar district is Noida.
- The headquarters of Kaushambi district is Manjhanpur.
- The headquarters of Kushinagar district is Padrauna.
- Akbarpur Mati is the headquarters of Kanpur Dehat district.
- Naugarh is the headquarters of Siddharthnagar district.
- The headquarters of Sonbhadra district is Robertsganj.



- Orai is the headquarters of Jalaun district.
- Fatehgarh is the headquarters of Farrukhabad district.
- Pawansa is the headquarters of Sambhal district.
- The headquarters of Bhadohi district is Gyanpur.
- The headquarters of Ambedkar Nagar district is Akbarpur.

76. (d)

Mineral	Major Location
Coal	Sonbhadra
Rock Phosphates	Lalitpur
Limestone	Mirzapur
Glass Sand	Shankargarh (Prayagraj)

Uttar Pradesh ranks second in the country in terms of total limestone reserves. High-grade limestone is abundant in Guruma, Kanach, Babu Hari, and Rohtas areas of Mirzapur, as well as Kajrahat in Sonbhadra. These sources supply limestone to cement factories in Chunar, Kajrahat, Churk, and Dala.

- Bauxite, the primary ore of aluminium, is found in Banda, Chandauli, and Lalitpur districts of Uttar Pradesh.
- Talc, also known as alabaster, steatite, or soapstone, is found in reserves located in Hamirpur and Jhansi districts of Uttar Pradesh.

77. (c)

**A → B → C**

- The University of Allahabad has held a prestigious position among Indian universities for over a century. Established on 23rd September 1887, it is the fourth oldest university in India, after Calcutta, Bombay, and Madras Universities. The idea of a large Central College in Allahabad (now Prayagraj), which eventually evolved into a university, is credited to Sir William Muir, then Lieutenant Governor of the United Provinces. As a result of his initiative the foundation stone of the Muir Central College (named after him) was laid on Dec. 9 1873.

<https://www.allduniv.ac.in/p/16/history>

- Banaras Hindu University (formerly Benares Hindu University) is a collegiate, central, and research university located in Varanasi, Uttar Pradesh, and was founded in 1916. Banaras Hindu University (BHU) was formerly a college known as Central Hindu College. This institution was founded in Varanasi by Annie Besant in 1898.

<https://incarnateword.in/names/benaras-hindu-college-central-hindu-college>

- Founded as the Muhammadan Anglo-Oriental College in **1875** and granted university status in **1920**.

There are a total six Central Universities in the state.

University Name	Location
Allahabad University	Allahabad (Prayagraj)
Banaras Hindu University	Varanasi
Aligarh Muslim University	Aligarh
Dr. Bhimrao Ambedkar University	Lucknow
Rajiv Gandhi National Aviation University	Amethi
Rani Laxmi Bai Central Agricultural University	Jhansi



78. (a)

Folk Dance	Region
Kirtan Dance	Braj
Kathgodwa Dance	Purvanchal
Jogini Dance	Awadh
Pai Danda	Bundelkhand

**Folk Dances of Braj Region:**

- Kirtan Dance
- Ras Nritya
- Jhoola Nritya
- Mayur Dance
- Narasimha Dance
- Charkula Dance/Ghada Dance

**Folk dances of Bundelkhand region:**

- Khayal Dance
- Ghoda Dance
- Devi Dance
- Rai Dance
- Pai Danda
- Kanra Dance
- Diwari (Mauniya) or Baredi Dance



**Folk Dances of Purvanchal:**

- Dhobia Dance
- Kathgodwa Dance
- Kaharua Dance
- Godau Dance
- Natwari Dance

**Folk Dances of Awadh Region:**

- Jogini Dance
- Faruhai Dance
- Dhediya Dance
- Shaila or Shaira dance
- Karma Dance

79. (b)

The **Zonda wind in Argentina** blows northwest from the slopes of the Andes Mountains and is hot and dry, not cold. This wind occurs primarily in the summer and often causes fires and droughts, **so this statement is not true.**

The **Santa Ana winds in California** are hot, dry, and dusty. These winds are especially active in the winter and can contribute to the spread of forest fires, **so this statement is true.**



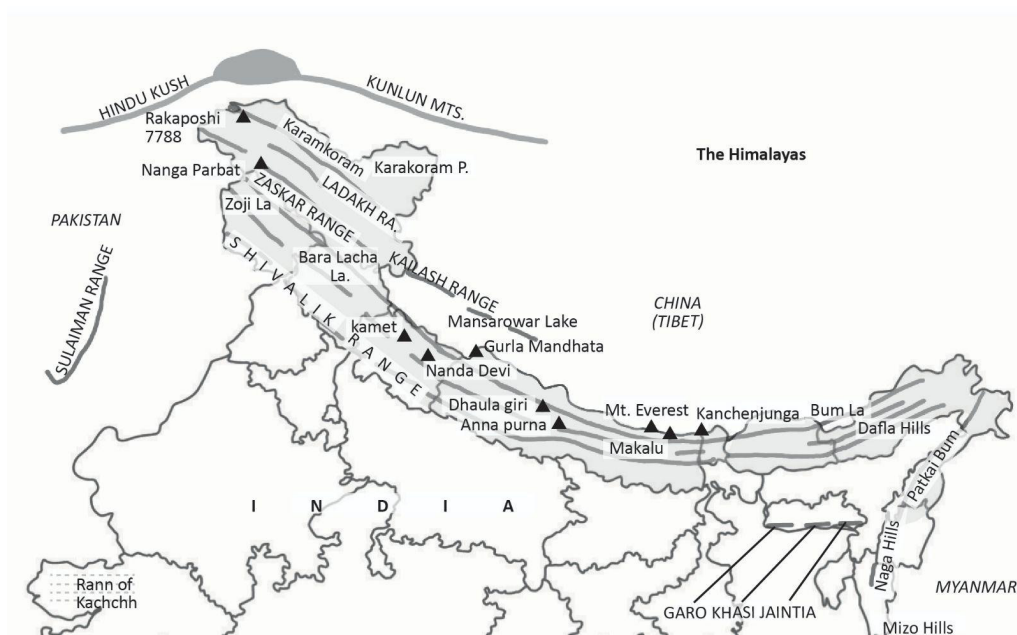
Name of Wind	Nature (Cold/Warm, Dry/Moist)	Region
<b>Warm Winds</b>		
<b>Chinook (Snow Eaters)</b>	<b>Hot, dry</b>	<b>Eastern slopes of the Rocky Mountains (USA &amp; Canada)</b>
<b>Foehn</b>	<b>Hot, dry</b>	<b>The Alps (Europe)</b>
Loo	Hot, dry	Northern plains of India and Pakistan
Sirocco	Hot, moist (becomes moist over sea)	Sahara Desert to Mediterranean Sea & Southern Europe
Harmattan (Guinea Doctor)	Hot, dry	West Africa, from Sahara Desert
Santa Ana	Hot, dry	Southern California, USA
<b>Khamsin</b>	<b>Hot, dry</b>	<b>Egypt (a type of Sirocco wind)</b>
Solano	Hot, moist	Sahara to the Iberian Peninsula
Nor'wester	Warm, dry	East coast of New Zealand's South Island
Brickfielder	Hot, dry	Southern Australia
Simoom	Hot, dry, dusty	Sahara, Arabian Desert
<b>Cold Winds</b>		
Mistral	Cold, dry, high-velocity	France, from the Alps to the Mediterranean Sea through the Rhone valley
Bora	Cold, dry	From Hungary to North Italy/Adriatic Sea region
Blizzard	Cold, snow-laden, violent	Tundra region, often associated with snowstorms
Pampero	Cold, severe squalls	Argentina and Uruguay, particularly Rio de la Plata area
Purga	Cold	Russia (especially Siberian steppes)
Punas	Cold, dry	Western side of Andes Mountains
Karaburan (Black Storm)	Cold, dusty (winter); Hot, dry (summer)	Central Asia
Katabatic winds	Cold (descending air)	Over cooled slopes or ice fields (e.g., Greenland, Antarctica)
Southerly Buster	Cold	Sydney, Australia (rapidly arriving cold front)

80. (d)

### 1. Karakoram Range

**The Karakoram Range** is one of the northernmost and highest ranges of the Himalayas. It lies north of the Ladakh Range and extends across India, Pakistan, and China. The Karakoram region contains some of the world's highest peaks, including K2. In addition, several major glaciers, such as the Siachen Glacier, are found here. This region has a harsh climate due to its altitude and cold.





## 2. Ladakh Range

**The Ladakh Range** extends north of the Zaskar Range and lies primarily between the Indus and Shyok Rivers. This mountain range demarcates the plateau terrain and arid climate of the Ladakh region. The Ladakh Range was formed by plate tectonic activity in the Himalayas and serves as a transition zone between the Karakoram and Zaskar ranges.

## 3. Zaskar Range

**The Zaskar Range** is located in the Indian Union Territory of Ladakh. It extends primarily across a wide area between Ladakh and Kashmir and is considered part of the Himalayan Inner Mountain Range. The Zaskar Range is a relatively high and rugged plateau range, stretching between rivers and valleys.

## 4. Dhauladhar Range

**The Dhauladhar Range** is located in Himachal Pradesh and is part of the mountain range near the Punjab and Himachal Pradesh border. This range is primarily known for tourism, trekking, and natural beauty. The Dhauladhar peaks are often snow-capped, and this region is included in the central Himalayan ranges.

In order from north to south, the Karakoram Range - Ladakh Range - Zaskar Range - Dhauladhar Range

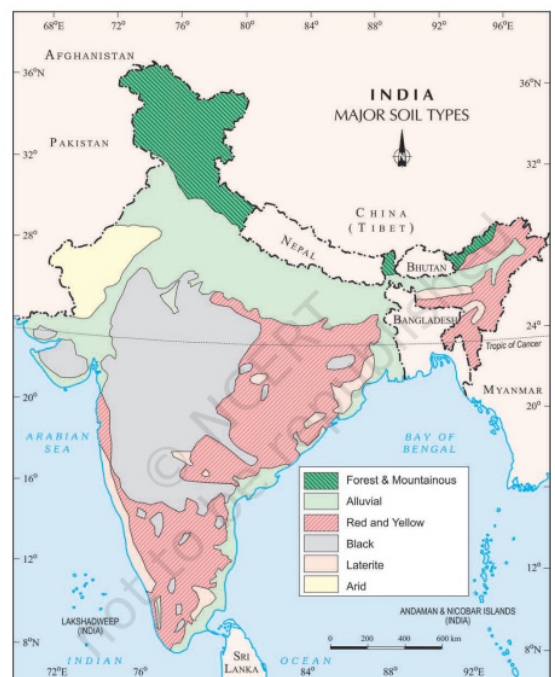
81. (c)

**Alluvial soil** is found especially in the plains of the Ganges, Brahmaputra, and their tributaries. This soil is fertile and suitable for major crops such as rice, wheat, sugarcane, and millet. Alluvial soil is widely distributed in North India and Northeast India, which is why this soil covers the largest area in India.

**Desert/Arid Soil** is found in abundance in the Thar Desert of Rajasthan and other arid regions. This soil is less suitable for agriculture due to water scarcity and high temperatures.

**Saline Soil** is commonly found in some areas of Rajasthan, Gujarat, and western Uttar Pradesh. This soil forms when salts accumulate in the soil due to poor drainage and excessive irrigation. In Kerala, due to heavy rainfall and good drainage, saline soil does not form.

**Alkaline Soil** is found primarily in the coastal plains of the Yamuna and Ganga. This soil contains more salt and alkaline elements, which affects its fertility.





82. (c)

The **Aravalli Range** begins in Palanpur in Gujarat and extends to Rajasthan, Haryana, and finally Delhi. This mountain range extends in a southwest-to-northeast direction in western India. The Aravalli Range has relatively low slopes and lacks sharp peaks, as it is very ancient and has lost much of its height over time due to erosion and denudation.

The Aravalli Range is estimated to be approximately 570 million years old. It is considered one of the oldest mountain ranges on Earth. Due to its antiquity, it has undergone extensive erosion and wear, leading to the accumulation of soil and sediment on its slopes.

The Aravalli Range originated in the Precambrian era, a period when the Earth's early crust and plateaus were developing. The **Aravalli Mountains** were formed as a result of ancient geological processes, such as plate tectonic activity and plate collision.



83. (b)

- The **1972 Stockholm Conference was the UN Conference on the Human Environment**. It led to the establishment of **UNEP (United Nations Environment Programme)**, not the UNFCCC.
- The UNFCCC (United Nations Framework Convention on Climate Change) was adopted at the Rio Earth Summit in 1992, and entered into force in 1994.
- The Conference of Parties (CoP) to UNFCCC is an annual meeting.
- CoP-28 (2023) was held in Dubai, UAE.
- CoP-29 (2024) is scheduled for Baku, Azerbaijan.
- COP-30 is scheduled to be held from **November 10 to 21, 2025, in Belém, Brazil**.

84. (b)

- UNFCCC deals with climate change (Paris Agreement, Kyoto Protocol, etc.), not biodiversity.
- The Kunming-Montreal Global Biodiversity Framework is the outcome framework of CBD COP-15, directly linked to the CBD.

**About Kunming-Montreal Global Biodiversity Framework (GBF):**

- Adopted in December 2022 at COP-15 of the Convention on Biological Diversity (CBD), held in Montreal, Canada (hosted by Canada, chaired by China).
- It replaces the earlier Aichi Biodiversity Targets (2010-2020).
- **Aim:** A global plan to halt and reverse biodiversity loss by 2030.
- **Key targets (often called the “30×30 target”):**
  1. Protect 30% of land and 30% of oceans by 2030.
  2. Restore 30% of degraded ecosystems.
  3. Reduce the rate of introduction of invasive alien species by 50%.
  4. Cut food waste by 50%.



- 5. Ensure \$200 billion per year funding for biodiversity conservation from public and private sources.
- Ramsar Convention (1971) deals specifically with wetlands of international importance.
- Bonn Convention (Convention on Migratory Species, 1979) focuses on migratory species.

**85. (b)**

The Global Biofuel Alliance (GBA) was launched at the G20 New Delhi Summit in 2023 under India's Presidency, with the aim of fostering international collaboration on sustainable biofuels. It represents a major step in clean energy diplomacy, similar to India's earlier leadership in the International Solar Alliance.

**Note:** Launched at G20, 2023 under India's Presidency.

**86. (b)**

**COP-26, Glasgow (2021)**

**COP-26, Glasgow (2021):** Prime Minister Narendra Modi launched the LiFE Mission here, calling for individual and community-led sustainable lifestyles to fight climate change. This became a global initiative supported later at COP-27.

**COP-27, Sharm El-Sheikh (2022):** The Sharm el-Sheikh Implementation Plan was adopted here, focusing on finance, adaptation, and loss & damage. LiFE Mission was discussed, but it was not launched here.

**G20 Summit:** G20 deals mainly with economic cooperation and global finance. While sustainability discussions happen, LiFE Mission was not proposed here.

At Paris, the Paris Agreement was adopted to limit global temperature rise well below 2°C (preferably 1.5°C).

**87. (b)**

**5 MMT by 2030**

- **The National Green Hydrogen Mission (NGHM)**, launched by the Government of India in January 2023, aims to make India a global hub for the production, utilization, and export of green hydrogen.
- **Target:** Production of 5 million metric tonnes (MMT) of green hydrogen per year by 2030. This will be supported by development of renewable energy capacity of about 125 GW. The mission also aims to reduce 50 MMT of CO<sub>2</sub> emissions annually and create about 6 lakh jobs.

**88. (c)**

- The Union Budget 2025-26 reflects the government's vision of "Sabka Vikas", focusing on inclusivity and shared prosperity. By quoting Gurajada Appa Rao, the Finance Minister stressed that true progress lies in uplifting people across regions and classes.
- The four engines of growth — Agriculture, MSMEs, Investment, and Exports — serve as the backbone of this inclusive vision, ensuring that farmers, small businesses, innovators, and exporters all contribute to India's journey toward Viksit Bharat.
- The fiscal deficit for 2025-26 is actually pegged at 4.4% of GDP (not 6.8%), which shows fiscal discipline alongside welfare priorities. This approach reflects a balance between developmental inclusivity and macroeconomic stability, aiming to empower farmers, youth, women, and middle-class households while keeping India globally competitive.

**89. (a)**

Recently the Minister of Road Transport and Highways announced a FASTag-based annual pass priced at Rs 3,000 for "hassle-free-highway travel". The FASTag-based passes will be effective from August 15 2025. Such a pass will be valid for one year or 200 trips, whichever comes earlier.



**FASTAG-BASED ANNUAL PASS: Passing through one toll plaza will be counted as one Trip.**

**FASTag:**

- It is an electronic toll collection system managed by the National Payments Corporation of India (NPCI) and the National Highways Authority of India (NHAI).
- It uses Radio Frequency Identification (RFID) technology to communicate with scanners installed at toll plazas.
- Once the car crosses a toll plaza, the requisite toll amount is automatically deducted from a bank account or a prepaid wallet linked to the FASTag.

90. (d)

**1, 2 and 3 only**

**Income Tax Relief for Middle Class:**

- Budget 2025–26 revised slabs under the new regime.
- No tax up to ₹12 lakh (general taxpayers).
- Salaried taxpayers with income up to ₹12.75 lakh benefit from a ₹75,000 standard deduction.
- This ensures wider relief for the middle class, though government loses ~₹1 lakh crore revenue.

**TDS/TCS Rationalization:**

- TDS limit on rent raised from ₹2.4 lakh → ₹6 lakh.
- For senior citizens, TDS exemption on interest doubled (₹50,000 → ₹1 lakh).
- **Aim:** reduce compliance burden and encourage voluntary compliance.

**Customs Relief on Medicines:**

- To support healthcare affordability, 36 essential life-saving drugs (cancer, rare & chronic diseases) fully exempted from Basic Customs Duty.
- Additionally, 37 medicines + 13 new drugs under patient assistance programmes exempted if supplied free.

**Make in India – Industrial Policy:**

**Contrary to Statement 4, actual policy was:**

- To rectify inverted duty structure and promote “Make in India”, BCD on Interactive Flat Panel Display (IFPD) increased to 20% and on Open cells reduced to 5%. Further to promote manufacture of Open cells, BCD on parts of Open Cells stands exempted.

91. (a)

The Uttar Pradesh government, led by CM Yogi Adityanath, presented its ninth budget on 20 February 2025, amounting to ₹8,08,736.06 crore, a 9.8% increase from last year. Finance Minister Suresh Khanna announced new schemes worth ₹28,478.34 crore, with focus on infrastructure, education, health, social security, and economic growth.

- **Receipts:** ₹7,79,242.65 crore (Revenue receipts ₹6,62,690.93 crore; Capital receipts ₹1,16,551.72 crore). Tax revenue share: ₹5,50,172.21 crore (own tax ₹2,95,000 crore + central share ₹2,55,172.21 crore).
- **Expenditure:** ₹8,08,736.06 crore (Revenue account ₹5,83,174.57 crore; Capital account ₹2,25,561.49 crore).
- **Deficit:** After accounting receipts and expenditure, fiscal deficit is ₹29,493.41 crore.

92. (b)

- PM Kusum Yojana → linked to farmer welfare (solar pumps).
- Lakhpati Mahila Yojana → empowers women (income generation).



- Swami Vivekananda Yuva Sashaktikaran Yojana → digital empowerment (smartphones/tablets).
- UP Startup Samvad and Expo → promotes innovation & startups.

**UP Budget 2025-2026 : Important features****Farmer Welfare & Agriculture**

- ₹79,500 cr to 3 crore farmers under **PM-Kisan**, ₹496 cr insurance under **PM Fasal Bima**.
- 22,089 solar pumps via **PM Kusum**; ₹2.73 lakh cr sugarcane payments since 2017.
- Major irrigation projects to benefit 6.77 lakh farmers; modernization of 6,600 tube wells.
- ₹50 cr mini kits, ₹251 cr Seed Park, ₹124 cr natural farming, ₹509 cr solar pumps.

**Women & Child Development**

- 96 lakh rural families under **State Rural Livelihood Mission**.
- **BC Sakhi Yojana**: 39,556 women handled ₹31,103 cr.
- 31 lakh women under **Lakshpati Mahila Yojana**; 2 lakh became lakshpati.
- ₹2,980 cr Nirashrit Mahila Pension, ₹700 cr **Kanya Sumangala Yojana**, ₹4,119 cr nutrition programs.

**Employment & MSME**

- 49.86 lakh devices under **Swami Vivekananda Yojana**; coaching via **Abhyudaya Yojana**.
- **Mukhyamantri Yuva Udyami Vikas Abhiyan**: ₹1000 cr for youth self-employment; Yuva Swarojgar Yojana: ₹225 cr allocation.
- 27.4 crore MGNREGA mandays; 42% women participation.
- 96 lakh MSMEs provide jobs to 1.65 crore; ₹2.5 lakh cr loans distributed.

**Health & Education**

- 80 medical colleges (44 government run), 2 AIIMS; 10,000 new UG/PG seats.
- **Ayushman Bharat**: 5.13 cr cards; 22,681 Arogya Mandirs.

**680 Kasturba schools upgraded; ₹2,000 cr for school infrastructure; Rani Lakshmi Bai Scooty schemes ₹400 cr.**

**Infrastructure & Industry**

- MoUs worth ₹36 lakh cr; expressways, Defence Corridor, AI City, Cyber Park.
- 8 Data Centre parks.
- 16 airports (5 international soon); RRTS corridor operational; 17 lakh PMAY-Urban houses built.

**Rural & Social Development**

- **Zero Poverty UP Abhiyan**: ₹250 cr; regional development: Purvanchal ₹575 cr, Bundelkhand ₹425 cr.
- **Panchayati Raj**: digital libraries, cremation sites, gyms/stadiums; forestry university ₹50 cr; 35 cr saplings target.
- Tourism ₹400 cr; sports ₹223 cr; livestock ₹2,000 cr; free food grains for 3.6 cr families.

93. (a)

1. **Stone Yard Devotional: Charlotte Wood**, one of Australia's most acclaimed contemporary novelists, published Stone Yard Devotional in 2024. The novel explores themes of spirituality, silence, and the retreat from worldly life, set against the backdrop of a convent. The book received wide critical appreciation and was shortlisted for major literary prizes including The Booker.
2. **Creation Lake: Rachel Kushner**, an American writer, best known for The Flamethrowers and The Mars Room, released Creation Lake in 2024. This novel deals with themes of identity, environment, and human survival in challenging conditions. The work has been noted for its experimental structure and bold narrative voice. Creation Lake has already featured prominently in literary discussions and has been highlighted in 2024 literary prize lists and reviews.



3. **Orbital:** British author **Samantha Harvey** published *Orbital* in 2023. The novel takes readers into the intimate world of astronauts aboard the International Space Station, using a single day in orbit to reflect on humanity, interconnectedness, and our fragile planet. With its poetic and innovative narrative style, *Orbital* stood out among recent literary works and went on to win the 2024 Booker Prize, bringing Harvey international acclaim. Critics lauded it for blending scientific detail with philosophical depth, making it both a literary and intellectual achievement.
4. **The Safekeep:** *The Safekeep* is the debut novel of Dutch author **Yael van der Wouden**, published in 2024. Set in the post-war Netherlands, the story revolves around themes of secrets, repression, desire, and the shadow of history. Its intense psychological narrative and bold exploration of sexuality and power dynamics captured significant critical attention. The book was shortlisted for the 2024 Booker Prize.

94. (c)

- Udaipur was awarded the Ramsar Wetland City Accreditation In January 2025, recognizing its exemplary efforts in wetland conservation and sustainable urban management. Presented during the Swachh Vayu Sarvekshan Awards and Wetland Cities Recognition Ceremony organized by the Environment Ministry, this honour places Udaipur, the “City of Lakes”, among a select group of global wetland cities. With 91 Ramsar sites covering 1.36 million hectares, India now leads Asia in wetland conservation
- Wetlands, described by the Ramsar Convention as the “kidneys of the environment”, act as natural filters, controlling floods, absorbing pollutants, supporting biodiversity, and sustaining cultural and economic livelihoods.
- The accreditation process evaluates cities on wetland protection policies, community involvement, integration with urban planning, biodiversity conservation, and sustainable livelihoods. Udaipur met these criteria through long-term lake restoration, active citizen participation, and eco-tourism promotion.
- **About the Swachh Vayu Sarvekshan 2025:** It assessed 130 cities under the National Clean Air Programme (NCAP). Eleven cities were recognized for significant improvements in air quality and sustainable practices, with Indore topping the list, followed by Jabalpur, Agra, Surat, Amravati, and Dewas.

95. (d)

**International Day of Education (24 January 2025):** Observed under the theme “**AI and education: Preserving human agency in a world of automation**”, this day highlights the role of education in enabling individuals and communities to navigate, understand, and influence technological change. It raises critical questions about safeguarding human intention and agency amid the rapid advancement of computer- and AI-driven systems.

**International Day of Women and Girls in Science (11 February 2025):** Celebrated with the theme “**Unpacking STEM Careers: Her Voice in Science**”, the day underscores the importance of full and equal access of women and girls to STEM fields. It emphasizes their leadership and diverse contributions in science, crucial for innovation, sustainable development, and addressing global challenges.

**International Day of Forests (21 March 2025):** Marked with the theme “**Forests and Food**”, this day highlights the vital link between forests and global food security, nutrition, and livelihoods. Forests not only provide resources like fruits, nuts, and seeds but also support agriculture by enriching soil, safeguarding water resources, and hosting pollinators essential for food systems.

**World Day Against Child Labour (12 June 2025):** Observed under the theme “**Progress is clear, but there’s more to do: let’s speed up efforts!**”, the day recognizes global achievements in reducing child labour since 2000 while urging accelerated action to meet the SDG 8.7 target by 2025. It stresses governments’ and communities’ responsibility to intensify efforts in identifying, rescuing, and rehabilitating children in labour, ensuring their health, education, and well-being.





96. (b)

**Operation Kaveri (April 2023):** Launched by the Government of India to evacuate Indians from conflict-hit Sudan, where fighting had broken out between the Sudanese Armed Forces (SAF) and the Rapid Support Forces (RSF). Using IAF C-130J aircraft and an Indian Navy ship, Indians were moved from Port Sudan to Jeddah, Saudi Arabia, and then flown back to India. The operation symbolized resilience, named after the Kaveri River.

**Operation Karuna (May 2023):** A humanitarian relief mission to assist Myanmar after Cyclone Mocha. India dispatched essential relief materials—food, tents, medicines, water pumps, generators, clothes, and hygiene items—via INS Shivalik, INS Kamorta, and INS Savitri to Yangon. It reflected India’s commitment to regional humanitarian assistance.

**Operation Ajay (October 2023):** Initiated by the Government of India to facilitate the return of Indians from Israel amid the West Asia conflict. By special evacuation flights, 1,309 Indian nationals, 14 OCI cardholders, and 20 Nepalese citizens were safely brought back.

**Operation Sindhu (June 2025):** Launched to evacuate Indians from Iran and Israel during escalating tensions in West Asia. Between 18–26 June, 4,415 people were rescued, including 3,597 from Iran and 818 from Israel, using 19 evacuation flights (including 3 IAF C-17 aircraft). Evacuations were coordinated through Armenia, Turkmenistan, Jordan, and Egypt, with over 1,500 women and 500 children among the returnees. The operation, guided by PM Narendra Modi, highlighted India’s strong commitment to citizens’ safety abroad and close cooperation with host governments.

97. (c)

**Exercise Ekuverin 2025** was the 13th edition of the annual joint military exercise between the Indian Army and Maldives National Defence Force (MNDF), held from 2–15 February 2025 in the Maldives. Named “Friends” in Dhivehi, the 14-day drill focused on counter-insurgency, counter-terrorism, and joint humanitarian assistance and disaster relief (HADR) operations. The exercise aims to enhance interoperability, strengthen defence cooperation, and bolster bilateral ties. Initiated in 2009, Ekuverin alternates annually between India and the Maldives, involving platoon-level contingents from both nations.

**Exercise Vajra Prahar** is an annual special forces exercise between the Indian Army Special Forces and the US Army Green Berets, held alternately in India and the US. The 15th edition, conducted in November 2024 at Idaho’s Orchard Combat Training Centre, focused on desert and semi-desert operations, joint planning, reconnaissance, and Unmanned Aerial Systems (UAS) integration. The exercise fosters interoperability, tactical exchange, and mutual trust between the two forces.

**Exercise Orion** is a multinational exercise hosted by France against the backdrop of the Russia-Ukraine conflict. It involves France’s Army, Navy, Air Force, and NATO allies including Germany, Greece, Italy, Netherlands, UK, Spain, and the US. Marking the first overseas deployment of Indian Rafale aircraft, the exercise enhances IAF capabilities, interoperability with foreign forces, and provides exposure to best practices in multinational wargaming, reflecting India’s growing strategic importance.

**List of some Joint Defence exercises**

Service	Exercise/Operation Name	Participating Countries	Description/Location
Indian Army	Ex AUSTRALIA HIND	Australia	-
	Ex SAMPRITI	Bangladesh	-
	Ex HAND IN HAND	China	-
	Ex SHAKTI	France	-
	Ex GARUDA SHAKTI	Indonesia	-



Service	Exercise/Operation Name	Participating Countries	Description/Location
	Ex PRABAL DOSTYK	Kazakhstan	-
	Ex KHANJAR	Kyrgyzstan	-
	Ex EKUVERIN	Maldives	-
	Ex NOMADIC ELEPHANT	Mongolia	-
	IMBEX	Myanmar	-
	Ex SURYA KIRAN	Nepal	-
	AL NAGAH	Oman	-
	Ex INDRA	Russia	-
	Ex LAMITIYE	Seychelles	-
	Ex MITRA SHAKTI	Sri Lanka	-
	Ex MAITREE	Thailand	-
	Ex AJEYA WARRIOR	UK	-
	Ex YUDHABHYAS	USA	-
	Ex VAJRA PRAHAR	USA	-
<b>Indian Navy</b>	MALABAR	India, USA, Japan, Australia	Quad-nation naval exercise
	Varuna	India, France	Bilateral naval exercise
	La Perouse	India, Australia, USA, France, Japan, UK	Multinational naval exercise
	Sea Dragon	India, USA, Japan, Canada, South Korea	Multinational maritime exercise
	Konkan	India, UK	Bilateral naval exercise
	AIME & IMDEX	India, ASEAN Countries	Maritime exercise with ASEAN nations
	Bright Star	India, 34 Countries	Multinational exercise
	SALVEX	India, USA	Salvage exercise
	SLINEX	India, Sri Lanka	Bilateral naval exercise



Service	Exercise/Operation Name	Participating Countries	Description/Location
	Samudra Shakti	India, Indonesia	Bilateral naval exercise
	Al-Mohed Al-Hindi	India, Saudi Arabia	Bilateral naval exercise
	India - France - UAE Trilateral	India, France, UAE	Trilateral naval exercise
	India - France - UAE Trilateral PASSEX	India, France, UAE	Trilateral passing exercise
	KOMODO	India, Multiple (36 Countries)	Multinational naval exercise
	AUSINDEX	India, Australia	Bilateral naval exercise
	SIMBEX	India, Singapore	Bilateral naval exercise
<b>Indian Navy (HADR/SAR)</b>	Operation Kaveri	-	Evacuation of Indian nationals from Sudan, Red Sea
	Operation Karuna	-	HADR to Myanmar post-Cyclone Mocha, Yangon, Myanmar
	Brahmapuram Firefighting Assistance	-	Firefighting assistance at Brahmapuram solid waste treatment plant, Kochi, India
<b>Indian Air Force</b>	Ex Veer Guardian	India, Japan	First air exercise between India and Japan
	Ex PASSEX with France	India, France	Joint exercise with French fighter aircraft, Indian Ocean Region
	Ex Desert Flag-8	India, UAE	First participation of Tejas in an international air exercise, Al-Dhafra, UAE
	Ex Cobra Warrior	Multinational (UK-led)	Multinational air exercise, UK
	Ex Cope India	India, USA, Japan (observer)	Joint exercise with USAF, AFS Kalaikunda & Panagarh, India
	Ex Orion	Multinational (France-led)	Multinational exercise, France
	Ex INIOCHOS	India, Greece	First air exercise between India and Greece, Greece
	Ex Bright Star	India, Egypt	Joint exercise with Egypt,



98. (b)

**Budget Estimates 2025-26**

**Total receipts and total expenditure, excluding borrowings, are estimated at ₹34.96 lakh crore and ₹50.65 lakh crore, respectively.**

- Net tax receipts are estimated at ₹28.37 lakh crore.
- **The fiscal deficit is estimated at 4.4 percent of GDP.**
- Gross market borrowings are estimated at ₹14.82 lakh crore.
- Capex expenditure is estimated at ₹11.21 lakh crore (3.1 percent of GDP) in FY 2025-26.
- **Fiscal Deficit: ₹15,68,936 crore (4.4% of GDP)**
- **Revenue Deficit: ₹5,23,846 crore (1.5% of GDP)**
- **Effective Revenue Deficit: ₹96,654 crore (0.3% of GDP)**
- **Primary Deficit: ₹2,92,598 crore (0.8% of GDP)**

99. (d)

**The services sector emerged as the largest shareholder of FDI equity in FY 2024-25, attracting 19% of total inflows, followed by computer software and hardware (16%), trading (8%), and telecommunications (7%).**

- FDI in the services sector increased by 40.77% to US\$9.35 billion from US\$6.64 billion in the previous year.
- India is also becoming a hub for foreign direct investment in the manufacturing sector, which is projected to grow by 18% to reach US\$19.04 billion in FY 2024-25 from US\$16.12 billion in FY 2023-24.
- **Maharashtra accounted for the highest share (39%) of total FDI equity inflows in FY 2024-25, followed by Karnataka (13%) and Delhi (12%).**

Among source countries, **Singapore led with a 30% share, followed by Mauritius (17%) and the United States (11%).**

100.(a)

- The Uttar Pradesh government, under Chief Minister Yogi Adityanath, presented its ninth budget for the financial year 2025-26 in the state assembly on February 20, 2025.
- Finance Minister **Suresh Khanna unveiled a budget of Rs. 8,08,736.06 crore, which marks a 9.8 per cent increase from the previous year.**
- In line with the Yogi government's previous Budgets, this one also focused on infrastructure, education, health, social security, and economic growth, with specific allocations for various sectors.

**Budget Estimates**

- The size of the presented budget is Rs. 8,08,736.06 crore.
- The budget includes new schemes worth Rs. 28,478 crore 34 lakh (Rs. 28,478.34 crore).

**The following allocations are allocated to various sectors:**

- **Infrastructure development: 22% of the total budget (highest)**
- **Education: 13%**
- **Agriculture and allied services: 11%**
- **Medical and health: 6%**
- **Social security programs: 4%**

101.(a)

**Key provisions in the Uttar Pradesh Budget 2025-26:**

- Education and Higher Education:
- 13% of the budget allocated for education.



- 25 crore rupees for 22 new primary schools.
- 300 crore rupees for the PM Shri scheme.
- 454 crore rupees for digital libraries (in villages).
- 10 crore rupees for polytechnic smart classrooms.
- Girl students will benefit in higher education; meritorious girl students will be given scooties under the Scooty Scheme.
- Guru Gorakshanath Ayush University (to be completed in 2025).
- **Announcement of State Medical Colleges in Ballia and Balrampur**

102.(b)

**India-UK Comprehensive Economic and Trade Agreement (CETA) signed in July 2025. Key highlights of the agreement are as follows:**

#### **Trade in goods**

- **Near-total tariff elimination:** The UK will eliminate tariffs on approximately 99% of Indian tariff lines, giving duty-free access to a wide range of goods.
- **Key Indian export gains:** Sectors that are expected to benefit include textiles, leather goods, marine products, gems, jewelry, chemicals, and engineering products.
- **Indian safeguards:** India will gradually reduce tariffs on UK exports, covering 89.5% of its tariff lines. Sensitive sectors for India, such as dairy, certain cereals and millets, and specific essential oils, are protected.
- **Rules of origin:** The agreement simplifies rules of origin, allowing exporters to self-certify product origins and reducing paperwork.

#### **Trade in services and mobility**

- **Services market access:** The UK offers deeper market access for India's service exports, covering sectors such as IT, financial services, education, and healthcare.
- **Professional mobility:** The agreement facilitates the temporary movement of Indian professionals to the UK. It includes a specific visa quota for professionals like chefs and yoga instructors.
- **Double Contribution Convention (DCC):** Indian workers and their employers on temporary assignments in the UK for up to three years are exempted from social security contributions.
- **Mutual recognition of qualifications:** There is a commitment to pursuing Mutual Recognition Agreements (MRAs) for professional qualifications in areas like nursing, accountancy, and architecture.

#### **Digital trade**

- **Data flow:** CETA permits cross-border data flows with safeguards and avoids mandatory data localization requirements.
- **Source code protection:** It includes provisions to protect proprietary software and does not require companies to disclose their source code.
- **Digital trade facilitation:** The agreement promotes electronic trade facilitation, digital certification, and paperless trade processes.

#### **Other key areas**

- **MSME support:** The pact includes provisions to support Micro, Small and Medium Enterprises (MSMEs), such as reducing tariffs on advanced manufacturing equipment, and introduces a dedicated MSME contact point.
- **Environmental cooperation:** CETA incorporates commitments to promote sustainable production practices, green growth, and cooperation on clean technologies.
- **Strategic goals:** The agreement, guided by the "India-UK Vision 2035," seeks to double bilateral trade to over \$100 billion by 2030 and deepen cooperation across various sectors including technology, defense, and education.





**103.(d)**

Union Finance and Corporate Affairs Minister Smt. Nirmala Sitharaman, while presenting the Union Budget 2025-26 in Parliament today, February 1, 2025, said that **50,000 Atal Tinkering Labs will be established in government schools over the next five years** to instill a spirit of curiosity and innovation in children and promote scientific thinking.

- The Union Budget also proposes to provide broadband connectivity to all government secondary schools and primary health centers in rural areas under the BharatNet project.

**Atal Innovation Mission**

- The Atal Innovation Mission (AIM) was launched by NITI Aayog on **February 24, 2016, to promote innovation and entrepreneurship in India.**
- Under AIM, Atal Tinkering Labs (ATLs) have been established across the country for hands-on training and application of technology.

**Main Objectives**

- **Fostering innovation and creativity:** Inspiring students to think, create, and realize new ideas.
- **Experiential learning in STEM (Science, Technology, Engineering, and Mathematics):** Teaching students science and technology through practical and hands-on learning.
- **Developing problem-solving skills:** Enabling students to find creative solutions to real-world problems.
- **Preparing for the future:** Providing students with the technological skills and mindset necessary to meet future challenges.

**104.(b)**

**2 only**

- Fundamental Duties in India are inspired by the Constitution of the erstwhile USSR, not Japan.
- They were added by the 42nd Constitutional Amendment Act, 1976 based on the Swaran Singh Committee.
- Japan's Constitution inspires the concept of Procedure Established by Law, not duties.
- Originally, 10 Fundamental Duties were added in 1976 (Part IV-A, Article 51A).
- The 11th Duty was inserted by the 86th Constitutional Amendment Act, 2002.
- It makes it a duty of parents/guardians to provide opportunities for education to children aged 6–14 years, aligning with Article 21-A (Right to Education).

**According to Article 51 A, it shall be the duty of every citizen of India:**

- (a) To abide by the Constitution and respect the National Flag and the National Anthem;
- (b) To cherish and follow the noble ideas which inspired our national struggle for freedom;
- (c) To protect the sovereignty, unity and integrity of India;
- (d) To defend the Country;
- (e) To promote the spirit of common brotherhood amongst all the people of India;
- (f) To preserve the rich heritage of our composite culture;
- (g) To protect and improve the natural environment;
- (h) To develop the scientific temper and spirit of enquiry;
- (i) To safeguard public property;
- (j) To Strive towards excellence in all spheres of individual and collective Activity.
- (k) Who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years (86 Amendment Act, 2002).

**105.(c)**

**Both A and R are true, and R is the correct explanation of A**



### When States Make a Request:

- If two or more state legislatures pass resolutions, Parliament can legislate on a State List matter.
- Such a law applies only to those states but can be adopted later by other states through a resolution.
- Only Parliament can amend or repeal such a law (not the concerned states).
- Passing a resolution = state legislature surrenders power → Parliament alone can legislate on that matter.

### Examples:

- Prize Competition Act, 1955
- Wild Life (Protection) Act, 1972
- Water (Prevention and Control of Pollution) Act, 1974
- Urban Land (Ceiling and Regulation) Act, 1976
- Transplantation of Human Organs Act, 1994

### During President's Rule

- When the President's Rule is imposed, Parliament can legislate on State List matters for that state.
- Laws made during the President's Rule remain in force even after it ends.
- Such laws can later be repealed, altered, or re-enacted by the state legislature.

106.(a)

### National Emergency (Article 352)

- Declared by the President when the security of India or a part is threatened by war, external aggression, or armed rebellion.
- Must be approved by both Houses of Parliament within 1 month.
- If Lok Sabha is dissolved, the proclamation survives 30 days from the first sitting after reconstitution, provided Rajya Sabha has approved in the meantime.
- Once approved, Emergency continues for 6 months and can be extended indefinitely with Parliament's special majority every 6 months.

### During Emergency:

- The Centre becomes all-powerful; States come under its control.
- Parliament can legislate on State List matters.
- Such laws become inoperative 6 months after the Emergency ends.
- The President can issue ordinances on State subjects if Parliament is not in session.

Feature	Article 358	Article 359
<b>Fundamental Rights Affected</b>	Automatically suspends the six Fundamental Rights under Article 19 (freedom of speech, assembly, movement, etc.).	Allows the President to suspend the enforcement of any Fundamental Rights specified in the Presidential Order, except Articles 20 and 21.
<b>Grounds for Application</b>	Applicable only during a National Emergency declared on the grounds of war or external aggression.	<b>Applicable during a National Emergency declared on any of the grounds:</b> war, external aggression, or armed rebellion.
<b>Action Taken</b>	The rights under Article 19 are automatically suspended as soon as the emergency is declared. No separate order is required.	The suspension of the right to move the courts is not automatic. It requires a separate Presidential Order to be passed.



<b>Nature of Suspension</b>	Suspends the Fundamental Right itself (Article 19).	Suspends the enforcement of the Fundamental Right, not the right itself. The right remains in existence, but the remedy to enforce it in court is suspended.
<b>Immunity of Laws</b>	Gives protection to laws and executive actions inconsistent with Article 19 only if they are related to the emergency. This is a post-44th Amendment change.	Gives protection to laws and executive actions inconsistent with the specified Fundamental Rights only if they are related to the emergency.
<b>Duration of Suspension</b>	Lasts for the entire duration of the emergency.	Can be for the entire duration of the emergency or for a shorter period specified in the Presidential Order.
<b>Geographical Scope</b>	Extends to the entire country.	Can extend to the whole or any part of the country.
<b>44th Amendment Changes (1978)</b>	Restricted its scope to only war or external aggression. Immunity is only for laws related to the emergency.	Prohibited the suspension of enforcement of Articles 20 and 21. Limited immunity to laws related to the emergency.

107.(d)

#### Qualifications for Election as President of India:

##### Eligibility:

- Citizen of India.
- Minimum 35 years of age.
- Qualified for election as a Lok Sabha member.
- Must not hold an office of profit under Union, State, local, or public authority.
- **Exceptions:** Sitting President, Vice-President, Governor, and Ministers.

##### Nomination Requirements:

- At least 50 proposers and 50 seconders.
- **Security deposit:** ₹15,000 with RBI.
- Deposit forfeited if candidate fails to secure 1/6th of total votes polled.

##### Changes in 1997:

- Proposers/seconders raised from 10 each → 50 each.
- Security deposit increased from ₹2,500 → ₹15,000.
- **Aim:** Discourage non-serious candidates.

#### Impeachment of the President of India:

**Grounds:** 'Violation of the Constitution' (not explicitly defined).

**Initiation:** Either House of Parliament; charges signed by 1/4 members of that House; 14 days' notice to the President.

##### Procedure:

- The impeachment resolution is passed by 2/3 majority of total membership of that house.
- Resolution sent to the other House for investigation; the President has the right to appear and be represented.
- If the other House sustains charges with 2/3 majority, the President is removed from office from the date of resolution.



**Nature:** Quasi-judicial process in Parliament.

**Participation:**

- **Nominated members** can participate in impeachment.
- **Elected state/UT legislators** do **not** participate in impeachment.
- **History:** No President has been impeached so far.

108.(c)

**Parliamentary Committees** Parliament is assisted by committees appointed/elected by the House or nominated by the Speaker/Chairman. They work under their direction and submit reports accordingly.

**Committees are of two types:**

- **Standing Committees** – Permanent, constituted annually/periodically, work continuously.
  - Financial Committees
  - Department-related Standing Committees (24)
  - Committees of Enquiry
  - Scrutiny & Control Committees
  - Business Committees
  - House-keeping/Service Committees
  - **Adhoc Committees** – Temporary, dissolved after completing assigned tasks.

**Financial Committees**

- **Public Accounts Committee (PAC)**
  - **Members:** 22 (15 Lok Sabha + 7 Rajya Sabha).
  - Examines government expenditure & accounts.
  - Chairperson usually from opposition (Lok Sabha).
- **Estimates Committee**
  - **Members:** 30 (all from Lok Sabha, elected annually).
  - Suggests alternative policies for efficiency & economy.
  - Recommends administrative reforms.
- **Committee on Public Undertakings (COPU)**
  - **Members:** 22 (15 Lok Sabha + 7 Rajya Sabha).
  - Examines accounts & functioning of PSUs.
  - scrutinizes reports of the Comptroller and Auditor General (CAG) on PSUs.

109.(a)

Articles **124 to 147** in **Part V** of the Constitution relate to the **organisation, independence, jurisdiction, powers, and procedures** of the Supreme Court. These aspects can also be regulated by **Parliament**.

**Appointment of Judges**

- Supreme Court judges are appointed by the President. The **Chief Justice** is appointed after consultation with Supreme Court and High Court judges as deemed necessary. Other judges are appointed by the President in consultation with the **Chief Justice** and other judges considered necessary. Consultation with the Chief Justice is **mandatory** for appointing judges other than the CJI.

**Tenure of Supreme Court Judges:**

- No fixed tenure in the Constitution.
- Hold office till 65 years of age (age decided as per Parliament's provision).
- Can resign by writing to the President.
- Can be removed by the President on Parliament's recommendation.

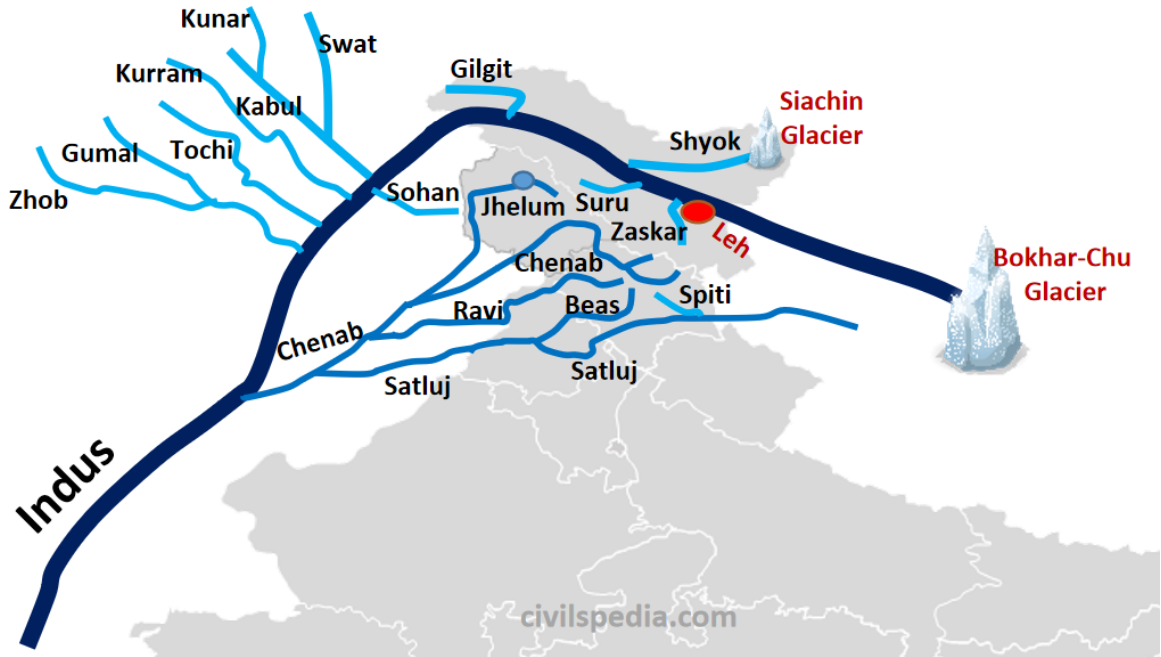


Article	Provision
<b>Article 124</b>	Establishment and Constitution of the Supreme Court, including the number of judges, their appointment, qualification, and removal.
<b>Article 125</b>	Deals with the salaries, allowances, and other conditions of service of Supreme Court judges.
<b>Article 126</b>	Appointment of an Acting Chief Justice in case the Chief Justice of India's office is vacant or they are unable to perform their duties.
<b>Article 127</b>	Appointment of ad hoc judges for a temporary period to make up the quorum of the Supreme Court judges.
<b>Article 128</b>	Attendance of retired judges at the sittings of the Supreme Court.
<b>Article 129</b>	<b>States that the Supreme Court shall be a court of record and have the power to punish for contempt of itself.</b>
<b>Article 130</b>	Specifies the seat of the Supreme Court, which is Delhi, but allows for other locations with the President's approval.
<b>Article 131</b>	<b>Covers the original jurisdiction of the Supreme Court, particularly for disputes between the Union and states or among states.</b>
<b>Article 132</b>	Deals with the appellate jurisdiction of the Supreme Court in appeals from High Courts concerning constitutional matters.
<b>Article 133</b>	Covers the appellate jurisdiction of the Supreme Court in civil matters.
<b>Article 134</b>	Addresses the appellate jurisdiction of the Supreme Court in criminal matters.
<b>Article 134A</b>	Specifies the certificate for an appeal to the Supreme Court from a High Court.
<b>Article 136</b>	Grants the Supreme Court the discretionary power to grant "Special Leave to Appeal" from any judgment or order of any court or tribunal.
<b>Article 137</b>	Empowers the Supreme Court to review its own judgments or orders.
<b>Article 139A</b>	Gives the Supreme Court the power to transfer certain cases from one High Court to another or withdraw cases from High Courts.
<b>Article 141</b>	<b>Declares that the law laid down by the Supreme Court is binding on all courts within the territory of India.</b>
<b>Article 142</b>	Grants the Supreme Court the power to pass decrees and orders necessary for doing complete justice in any case.
<b>Article 143</b>	Confers advisory jurisdiction on the Supreme Court, allowing the President to consult it on legal questions.
<b>Article 144</b>	Mandates that all civil and judicial authorities in India must act in aid of the Supreme Court.
<b>Article 145</b>	Gives the Supreme Court the power to make rules for regulating its practice and procedure.
<b>Article 146</b>	Addresses the officers and servants of the Supreme Court and its expenses.
<b>Article 147</b>	Provides for the interpretation of the Constitution in a chapter.





110.(d)



1. **Gilgit River** The Gilgit River originates in the **Gilgit-Baltistan** region of Pakistan and joins the Indus River. This river is fed by the snow and glaciers of the Himalayas. The Gilgit River is one of the most important tributaries of the Indus and its waters contribute significantly to the Indus.
2. **Shigar River** The Shigar River is also a tributary of the Indus. It originates in the Karakoram region and joins the Indus River, merging with the Gilgit River. The Shigar River carries water from the glaciers of the Karakoram region into the Indus.
3. **Chenab River** Formed by the confluence of the Chandra and Bhaga rivers at Tandi in the Lahaul and Spiti district of Himachal Pradesh. Flows through the Jammu region of Jammu and Kashmir before entering Pakistan's Punjab province. Joins the Sutlej River to form the Panjnad, which then merges with the Indus River.
4. **Kabul River** The Kabul River originates in the mountainous regions of Afghanistan, enters Pakistan, and joins the Indus River. This river also augments the Indus' water flow and is important for irrigation, hydroelectricity, and other human activities.

The Kailash mountain range is located in Tibet, and the Indus River originates from the Bokharchu glacier located in this range. It is the westernmost of the Himalayan rivers in India.

111.(d)

- **Gandhi Sagar Project** The Gandhi Sagar Project is one of the major water projects built on the **Chambal River**. This dam is located on the border of **Rajasthan and Madhya Pradesh** and was constructed primarily for irrigation and water storage purposes. The Gandhi Sagar Dam's reservoir provides water for agriculture in the surrounding areas. This project is the first stage of a three-stage dam and **hydroelectric system built on the Chambal River**.
- **Rana Pratap Sagar Project** The Rana Pratap Sagar Project is located **downstream of the Gandhi Sagar Dam**. This project primarily serves hydroelectric power generation and irrigation. The electricity generated here is supplied to the surrounding areas and also helps regulate the flow of the Chambal River.
- **Jawahar Sagar Project** The Jawahar Sagar Dam Project is also **built on the Chambal River**. This dam is located downstream of the Rana Pratap Sagar and Gandhi Sagar projects. It was constructed for hydroelectric power generation and irrigation. This project is the third stage of a "three-stage chain project" built on the Chambal River.



- The **Chambal River** originates in the **Vindhya Range**, just south of Mhow in western Madhya Pradesh. Flowing in a north-northeasterly direction through Madhya Pradesh, it then passes into Rajasthan, forming part of the boundary between Rajasthan and Madhya Pradesh before turning southeast to join the **Yamuna River** in Uttar Pradesh. The Chambal flows through **three Indian states**—Madhya Pradesh, Rajasthan, and Uttar Pradesh—and is the **largest river in Rajasthan**. Its total length is about **960 km (600 miles)**.
- The **Chambal basin** is enclosed by the Vindhya ranges on the south, east, and west, while its northwestern boundary is marked by the **Aravalli Range**. The river and its tributaries drain the **Malwa region** of northwestern Madhya Pradesh, while its tributary, the **Banas River**, rising in the Aravallis, drains southeastern Rajasthan.
- The main tributaries of the Chambal are the **Banas and Mej** (left bank), and the **Parbati, Kali Sindh, and Shipra** (right bank). Along its course, the river is controlled by several dams, including the **Gandhi Sagar Dam, Rana Pratap Sagar Dam, and Jawahar Sagar Dam**.

112.(c)

The correctly matched pair is:

(Canal Project)	(Location)
<b>Ghataprabha Canal Project</b>	<b>- Karnataka</b>

- Located on the Ghataprabha River, a tributary of the Krishna River, primarily in the districts of Belagavi and Bagalkot.
- The project involves the construction of a dam (the Raja Lakhamagouda reservoir at Hidkal) and a canal network, including the Ghataprabha Right Bank Canal, to provide irrigation facilities.
- It is a significant multipurpose project, having both irrigation and hydroelectric components.

**Ukai Canal Project - Gujarat**

- Based on the Ukai Dam, built on the Tapi River in Gujarat.
- Known as Vallabh Sagar, it is the second-largest reservoir in Gujarat after Sardar Sarovar.
- The project serves multiple purposes, including irrigation, flood control, and power generation, using a canal system to reach farmlands.

**Nira Canal Project - Maharashtra**

- Located on the Nira River, a tributary of the Bhima River, primarily benefiting areas in the Pune and Satara districts of Maharashtra.
- The project includes dams like the Nira Deoghar Dam and an extensive network of canals and pipelines.
- It is primarily an irrigation project, with recent work focusing on upgrading the distribution network to improve water supply to agricultural areas.

**Jawai Project - Rajasthan**

- Involves the construction of the Jawai Dam across the Jawai River, a tributary of the Luni River, in the Pali district of Rajasthan.
- It is the largest man-made dam in Western Rajasthan and a crucial source of irrigation and drinking water for the Pali and Jalore districts.
- The project was built by Maharaja Umaid Singh of Jodhpur, with construction completed in 1957.

**Major Canal Systems for Irrigation in India**

1. **Indira Gandhi Canal** – One of the largest canal systems in India, it irrigates the arid districts of **Ganganagar, Bikaner, Jodhpur, and Jaisalmer** in Rajasthan.
2. **Triveni Canal** – Serves the irrigation needs of parts of **Bihar**.
3. **Sarda Canal** – An important canal in **Uttar Pradesh**, used extensively for irrigation.
4. **Eden Canal** – Constructed from the **Damodar River**, it supports irrigation in **West Bengal**.
5. **Tilpara Dam Canal** – Originating from the **Tilpara Barrage** on the Mayurakshi River, it irrigates regions of **West Bengal**.



113.(c)

- **India's western coast is narrower than the eastern coast.** Rice is cultivated extensively in the river valleys of the eastern coast, while rice is grown relatively less on the western coast.
- **Rice production is indeed higher on the eastern coast of India than on the western coast, as the eastern coastal plains are wider, more fertile, and nourished by large river deltas such as those of the Godavari, Krishna, and Mahanadi, which provide ideal conditions for paddy cultivation.**
- However, the reason that the eastern coast receives more rainfall than the western coast is incorrect, because in reality the western coast gets heavier rainfall due to the Southwest Monsoon and the Western Ghats. Thus, while the **assertion is true, the reason given is false.**

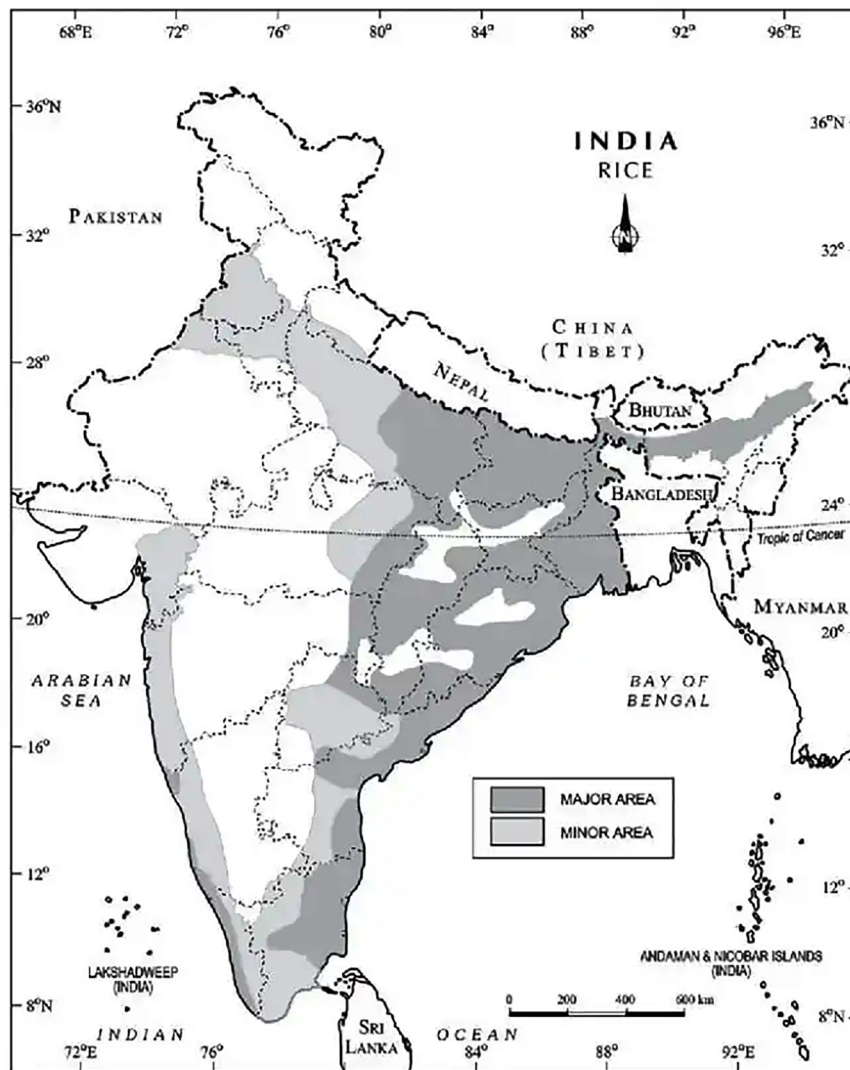


Fig. 3.3 : India - Distribution of Rice

### About Rice

- Most people in India eat rice as a staple food. **India is the second-largest producer of rice** in the world after China and the largest rice exporter globally.
- Rice is a **Kharif crop** that requires high temperatures above 25°C and high humidity with annual rainfall above 100 cm.

114.(d)

### What is Monsoon?

The word “monsoon” is derived from the Arabic word “mausim,” meaning “season.”

The term “monsoon” refers to a seasonal wind pattern characterised by significant changes in wind direction and associated precipitation.



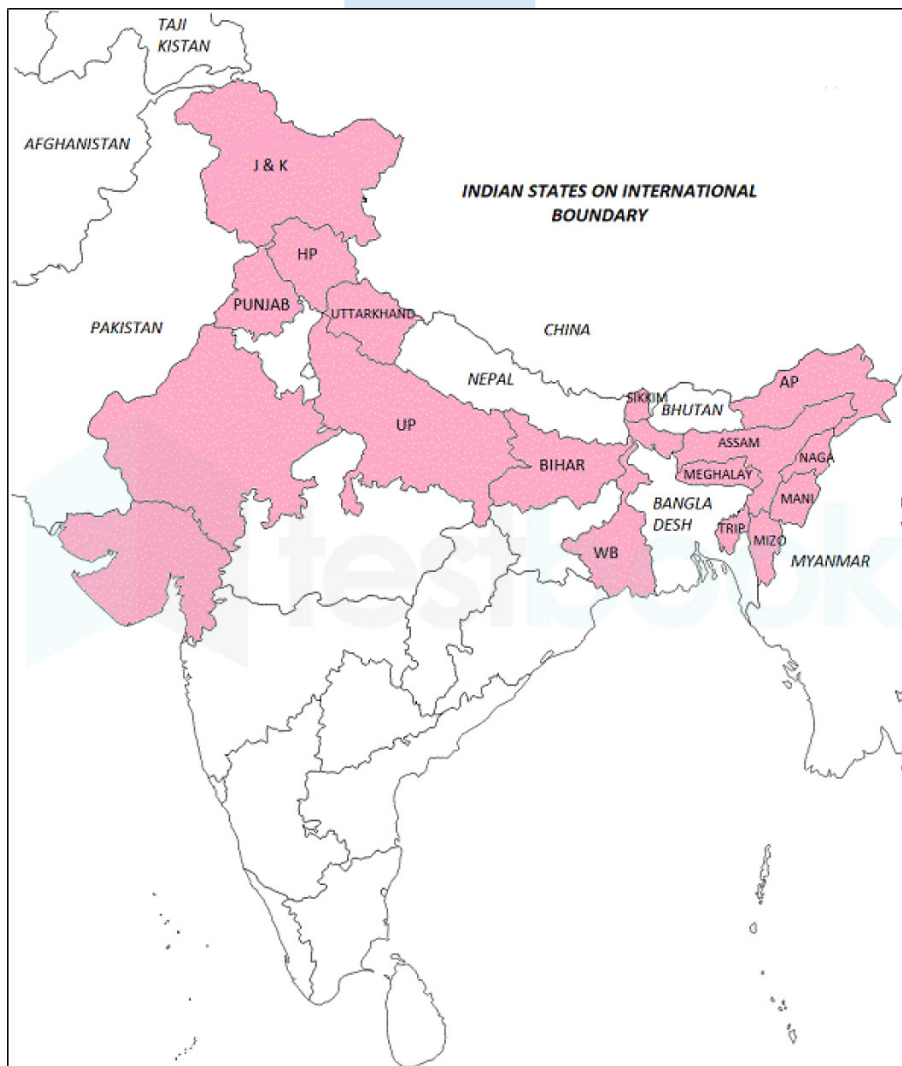
**Factors affecting the Indian monsoon:** A high-pressure area is found over the Indian Ocean at approximately **20° south latitude, east of Madagascar**. The intensity and location of this high-pressure area influences the Indian monsoon.

- The **Tibetan Plateau** becomes very hot during summer, which creates strong vertical wind currents and a low-pressure area at the surface of the Tibetan Plateau.
- The displacement of the **western jet stream** northward across the Himalayas and the presence of the tropical easterly jet stream over the Indian peninsula during summer also influence the Indian monsoon.
- Changes in pressure conditions over the **Southern Indian Ocean (near Madagascar)** also affect the monsoon.
- The **El Niño weakens** the monsoon while La- NINA strengthens the monsoon..

**115.(b)**

The Indian states that share a border with **Bhutan are Arunachal Pradesh, Assam, West Bengal, and Sikkim**, while **Meghalaya** shares a border with Bangladesh. Assam has the longest border with Bhutan (267 km). This is followed by Arunachal Pradesh (217 km), West Bengal (183 km), and Sikkim (32 km).

- **States bordering Pakistan and Afghanistan:** Gujarat, Punjab, Rajasthan, and Jammu and Kashmir.
- **States bordering China:** Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh, and Jammu and Kashmir.
- **States bordering Nepal:** Uttarakhand, Uttar Pradesh, Bihar, West Bengal, and Sikkim.
- **States bordering Bhutan:** Sikkim, West Bengal, Arunachal Pradesh, and Assam.
- **States bordering Myanmar:** Arunachal Pradesh, Nagaland, Mizoram, and Manipur.
- **States bordering Bangladesh:** West Bengal, Assam, Meghalaya, Tripura, and Mizoram.



116.(b)

The correct matching pair is:

Iron ore mining center	-	Country
Russia	-	Magnitogorsk
Normandy	-	France
Sweden	-	Kiruna
Russia	-	Kuzbas
Ukraine	-	Krivoi

Therefore, option (b) is not correctly matched.

#### Important Iron Ore Mines in India

- India has rich iron ore deposits, with the main producing states being Odisha, Jharkhand, Chhattisgarh, and Karnataka.
- Bailadila Iron Ore Mines:** Located in the Dantewada district of Chhattisgarh, this is a significant complex containing the Kirandul and Bacheli complexes.
- Barbil-Koira Valley:** Found in the Kendujhar and Sundargarh districts of Odisha, this area is known for its rich Hematite deposits.
- Joda Mine:** Located in the Keonjhar district of Odisha, it is a key mining area for iron ore.
- Noamundi Iron Ore Mine:** Situated in the West Singhbhum district of Jharkhand, this mine is operated by Tata Steel.

**Kiriburu and Meghahatuburu Mines:** Also in Jharkhand, these are important centers for iron ore production.

#### Important Iron Ore Mines in the World

- The world's largest iron ore operations are primarily concentrated in countries like Brazil and Australia.
- Serra Norte Mining Complex:** Located in Pará, Brazil, this is one of the world's largest mining complexes, primarily operated by Vale.
- Carajas Serra Sul S11D Project:** Also in Brazil, this project is part of the larger Carajas operation and is a massive surface mine.
- Australian Mines:** Australia is a top iron ore producer, with major mines in the Pilbara region, including the Mt Newman Joint Venture, Jimblebar Hub, the Area C Mine, the South Flank Project, and the Greater Tom Price Mine.

117.(d)

The continent of Africa is separated from the continent of Asia by the **Red Sea, the Suez Canal, and the Bab-el-Mandeb Strait**.

It is noteworthy that the Suez Canal connects the Red Sea to the Mediterranean Sea and separates the Sinai Peninsula of Egypt from the continent of Africa. Port Said is located at the northern end of Suez City, and Port Suez is located at the southern end.

**Suez Canal:** A man-made waterway in Egypt that connects the Mediterranean Sea to the Red Sea, allowing ships to pass between Europe and Asia without circumnavigating Africa. You can find satellite and aerial images of the Suez Canal on Getty Images.

**Red Sea:** A semi-enclosed inlet of the Indian Ocean, located between the continents of Africa and Asia. Images of the Red Sea and its relation to the Suez Canal and Bab-el-Mandeb Strait can be viewed on Shutterstock.

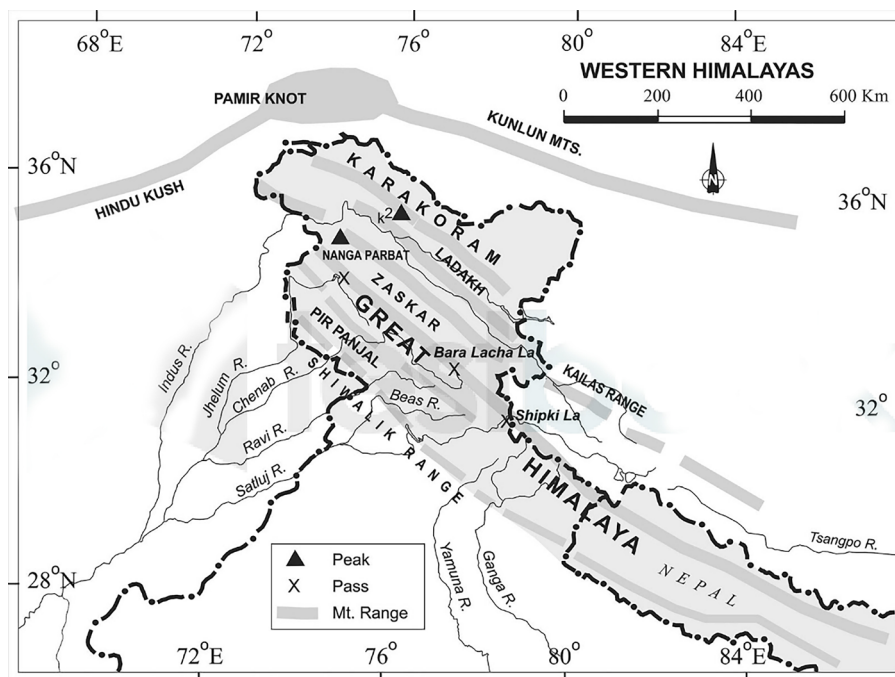
**Mozambique Channel:** The channel is a body of water that separates the island of Madagascar from the southeast African mainland. You can find images of the channel and surrounding areas on Shutterstock.





**Bab-el-Mandeb Strait:** A strategic strait that connects the Red Sea to the Gulf of Aden and the wider Indian Ocean. You can find maps and images of the Bab-el-Mandeb Strait on Shutterstock

118.(c)



- The **Trans-Himalaya** lies north of the main Himalayan mountain range, the Greater Himalayas. This region extends to the border of Ladakh and Tibet and represents a distinct structure distinct from the other Himalayan ranges. The altitude and topography of the Trans-Himalayas are influenced by harsh climate and arid conditions.
- The **highest peak** in the Trans-Himalayan range is **Godwin Austin (K2)**, also the highest peak in India, located in the **Karakoram mountain range**.

**Ranges of Trans Himalaya:** Ranges include the Karakoram, Ladakh, Zaskar, and Kailash mountain ranges.

**The Great Himalayas**, also known as the Inner Himalayas, Himadri, or Central Himalayas, are the highest and most continuous of the Himalayan mountain ranges. They extend for about 2,400 km and boast many of the world's tallest peaks.

**The Lower Himalayas**, also known as the Lesser Himalayas or Himachal, are a series of prominent ranges that lie between the **Greater Himalayas to the north and the Shivalik Hills to the south**. These ranges are characterized by rugged mountain systems with an average elevation between 3,500 and 4,500 meters.

**Major ranges of lower himalaya includes: Pir Panjal Range:** This is the longest and most significant range of the Lesser Himalayas, stretching from the Jhelum River in Jammu and Kashmir to the upper Beas River in Himachal Pradesh. It is also known for the famous passes like Pir Panjal and Banihal, which have road and railway tunnels connecting the Kashmir Valley with the rest of India.

#### **Dhauladhar Range**

A part of the Lesser Himalayas, the Dhauladhar range rises from the north of Kangra and Mandi in Himachal Pradesh. Known as the 'White Range', it is characterized by its steep rise from the plains and dark granite formations. It is a significant water source, feeding rivers like the Beas and Ravi, and hosts hill stations like Dharamshala.

#### **Mussoorie Range**

This range is located in the Lesser Himalayas of Uttarakhand and is well-known for its prominent hill station, Mussoorie, and its distinctive "Dun" valleys. Situated between the Shivaliks and the Greater Himalayas, it is part of the Kumaon Himalayas, where it lies south of the Ganga-Yamuna rivers. It extends towards the southeast, where it is known as the Mahabharat Lekh in Nepal.



**Nag Tibba Range**

Also a part of the Lesser Himalayas, the Nag Tibba range is located in the Garhwal division of Uttarakhand. It contains Nag Tibba, which is the highest peak in the Lesser Himalayan region of Uttarakhand. The range is known as “Serpent’s Peak” and is significant for trekking and its religious importance to local communities.

**Mahabharat**

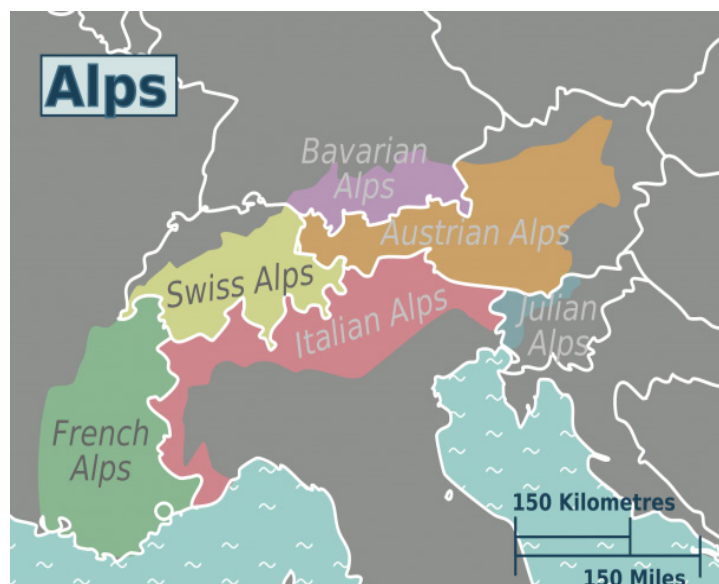
This range is the continuation of the Mussoorie range and is situated in southern Nepal, as a part of the Lesser Himalayas. It runs east to west, forming a notable physiographic barrier, and its peaks generally have elevations between 1,500 and 2,700 meters. It is characterized by steep southern escarpments and gentle northern slopes.

- **The Shivalik Hills**, also known as the Outer Himalayas, are **the southernmost and geologically youngest of the Himalayan ranges**. They are a series of parallel ridges and valleys that extend for about 2,400 km from the Indus River in the west to the Brahmaputra River in the east

119.(d)

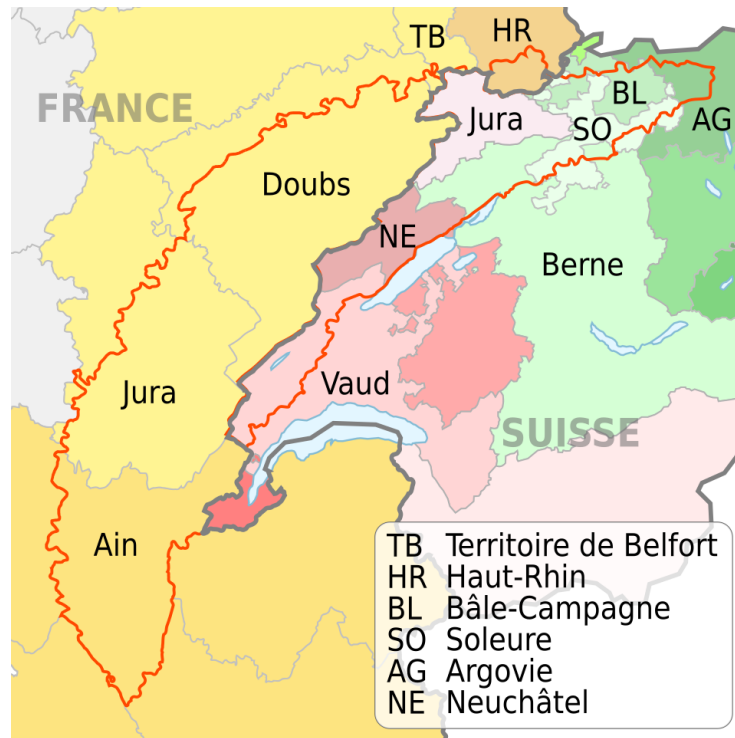
**1. Pyrenees Mountains**

**The Pyrenees Mountains** form the natural border **between France and Spain**. This mountain range is located on the southern border of France and extends from the Atlantic Ocean to the Mediterranean Sea. The Pyrenees Mountains were formed by plate tectonic activity and the region is filled with numerous valleys and high peaks.

**2. The Alps Mountains**

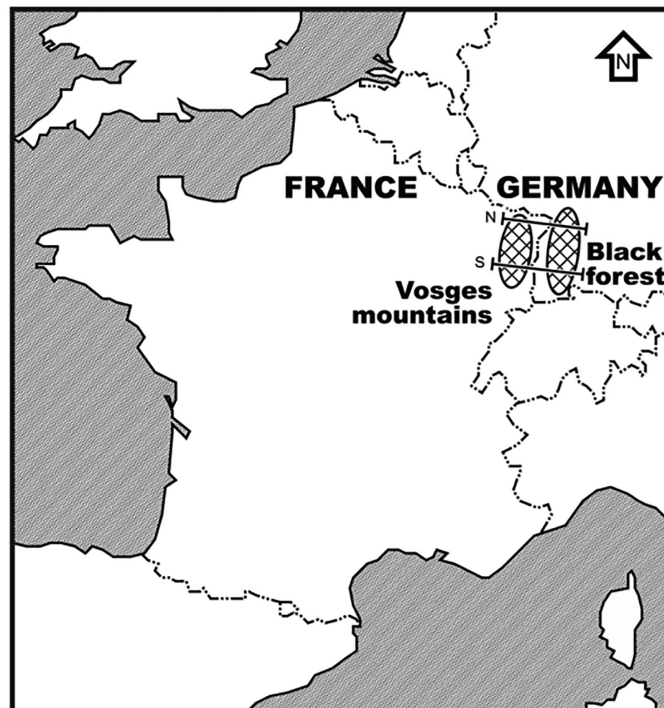
**The Alps Mountains** form the **border between France and Italy**. This mountain range is one of the most prominent mountain ranges in Europe and is located on the southeastern border of France. The Alps Mountains contain very high peaks and glaciers, which are important for Europe's climate and tourism.

### 3. Jura Mountains



**The Jura Mountains** form the **border between France and Switzerland**. These mountains are located primarily near the eastern border of France. The Jura Mountains are covered with grasslands and forests, and the region is famous for its wine and dairy products.

### 4. Vosges Mountains



**The Vosges Mountains** form the **border between France and Germany**. This mountain range is located in the northeastern part of France. The Vosges Mountains are relatively low-lying, but are known for their dense forests and tourism.



120.(c)

- The Morley–Minto Reforms, officially known as the **Indian Councils Act of 1909**, was introduced by the British Government—under Lord Morley (Secretary of State for India) and Lord Minto (the Viceroy)—in the aftermath of rising Indian nationalism, particularly following the Partition of Bengal in 1905.
- The reforms introduced a mix of limited concessions and divisive policies. The core provisions included the introduction of separate electorates for Muslims and an expansion of the legislative councils.

**Key Provisions:**

- **Separate Electorates for Muslims:** This was the most significant and controversial provision. The reforms introduced a system where seats were reserved for Muslims, and only Muslim voters could vote for candidates in these constituencies. This principle of **communal representation** was a deliberate ‘divide and rule’ policy that laid the groundwork for future communal politics and is often seen as a precursor to the partition of India. The statement that it **introduced the system of separate electorates for Muslims** is thus **correct**.
- **No Universal Adult Suffrage:** The reforms **did not grant universal adult suffrage**. Voting rights were severely restricted to a small percentage of the population based on strict criteria such as property ownership, income, or educational qualifications. The vast majority of the Indian population, including women, were excluded from the electoral process. The 2nd statement that it **granted universal adult suffrage in India** is therefore **incorrect**.
- **Expansion of Councils and Indian Participation:** The reforms significantly increased the number of members in the central and provincial legislative councils, allowing for **limited Indian participation**. For the first time, an Indian, Satyendra Prasanna Sinha, was appointed to the Viceroy’s Executive Council. While this was a symbolic step, the councils’ powers remained largely advisory, and the British retained a majority in the central council. The statement that it **expanded the size of councils and allowed limited Indian participation** is therefore **correct**.

Thus, the Morley-Minto Reforms were a complex piece of legislation that represented a dual policy. They offered limited concessions to Indian aspirations for self-governance by increasing participation in the councils, but simultaneously implemented a deeply divisive policy through separate electorates. The reforms’ primary aim was to curb the nationalist movement by creating new constituencies and divisions.

121.(d)

The **Home Rule League Movement** was one of the significant milestones in the history of India’s freedom struggle. It emerged during a crucial juncture, when nationalist politics was reviving after a period of repression following the **Swadeshi Movement (1905–1908)** and the split within the Congress between the Moderates and Extremists.

**1. Launch during the First World War**

The movement was launched during the **First World War (1914–18)**, at a time when Britain was deeply engaged in the war effort. Nationalist leaders saw this as an opportunity to demand concessions, since Britain needed Indian support. The leagues did not demand full independence; instead, their demand was **self-government within the British Commonwealth**, modeled somewhat on the dominion status enjoyed by countries like Canada or Australia. This makes **statement 1 correct**.

**2. Leadership of Tilak and Annie Besant**

**Two prominent leaders spearheaded the movement by establishing two separate Home Rule Leagues in 1916:**

- **Bal Gangadhar Tilak** founded his Home Rule League in April 1916 at Pune. His league was confined mainly to Maharashtra (excluding Bombay city), Karnataka, Central Provinces, and Berar.
- **Annie Besant**, a theosophist and educationist, set up her Home Rule League in September 1916 at Madras, working in areas such as Bombay city, Madras, Punjab, and parts of Central India. Both organizations worked in complementary fashion to spread political education and nationalist consciousness through public meetings, pamphlets, and newspapers. Thus, **statement 2 is also correct**.





### 3. Influence of the Irish Home Rule Movement

The very idea of “Home Rule” was borrowed from the **Irish nationalist struggle for Home Rule** within the United Kingdom. Annie Besant, who had earlier been associated with the Irish movement, directly transplanted this model into the Indian context. The structure, terminology, and political objectives of the Indian Home Rule League clearly reflected the Irish precedent. Hence, **statement 3 is correct**.

#### Outcome and Significance of the movement

The movement popularized the demand for **self-government** among masses beyond elite Congress circles. It revived nationalist activity after years of political passivity and prepared the ground for subsequent mass movements under Mahatma Gandhi. However, with the **Montagu Declaration of 1917** (promising gradual self-government) and the rise of Gandhian satyagraha, the Home Rule Leagues gradually declined.

The Home Rule League Movement stands as an important bridge between the early constitutional agitation of the Congress and the later mass-based Gandhian phase of the freedom struggle.

122.(b)

#### 1. Formation of the All-India Muslim League (1906)

The All-India Muslim League was founded on **30 December 1906** at Dhaka, during the annual session of the All India Muhammadan Educational Conference. Leaders like Aga Khan, Nawab Salimullah of Dhaka, and Nawab Mohsin-ul-Mulk played a role. Its primary aim was to safeguard the political rights of Muslims and initially it was loyal to the British crown. This was **the earliest event** among those listed.

#### 2. Annulment of Bengal Partition (1911)

The Partition of Bengal had been carried out in **1905** by Lord Curzon, provoking the Swadeshi and Boycott movements. However, owing to sustained protests and unrest, the British annulled the partition in **1911**. Bengal was reunited, but simultaneously the capital of British India was shifted from Calcutta to Delhi. This comes **after the Muslim League's formation**.

#### 3. Lucknow Pact (1916)

This historic agreement took place during the **Lucknow session of the Indian National Congress in 1916**. Under the leadership of Bal Gangadhar Tilak and Annie Besant, Congress and the Muslim League came together on certain constitutional reforms and mutual cooperation. This pact marked the height of Hindu-Muslim unity in the freedom struggle.

#### 4. Civil Disobedience Movement (1930)

Launched by Mahatma Gandhi with the **Dandi March (March 1930)**, the Civil Disobedience Movement was directed against the unjust salt laws and extended into a broader campaign of non-payment of taxes, boycotts, and mass protests. This was the **fourth in sequence**.

#### 5. Quit India Movement (1942)

The last major mass movement under Gandhi's leadership was launched in **August 1942**, in the midst of the Second World War. With the slogan “Do or Die,” it demanded immediate British withdrawal from India. Brutal repression followed, but the movement shook the colonial regime.

123.(d)

Mahatma Gandhi's **two-decade stay in South Africa (1893–1914)** was a transformative period in his life. He went as a young barrister but returned to India as a seasoned leader, having evolved the philosophy and techniques that would later define India's freedom struggle.

#### 1. Capacity of the Masses for Sacrifice

In South Africa, Gandhi led struggles against discriminatory laws targeting Indians, such as the **Asiatic Registration Act (1906)** and restrictions on immigration and trade. During these agitations, ordinary Indian laborers, traders, and professionals endured arrests, imprisonment, and economic hardship. Gandhi realized that the **masses, if properly mobilized, had immense strength and capacity to suffer and sacrifice** for a just cause. Hence, **statement 1 is correct**.





## 2. Unity Across Communities

South Africa was home to Hindus, Muslims, Parsis, and Christians among the Indian diaspora. Gandhi successfully brought them together under the banner of the **Natal Indian Congress (1894)** and subsequent satyagraha campaigns. He discovered that it was possible to **transcend religious, class, and gender divisions** by appealing to shared suffering and justice. This was a precursor to his later efforts in India, making statement **2 correct**.

## 3. Role of Leadership and Unpopular Decisions

As a leader, Gandhi often had to take decisions that were initially unpopular. For example, when he suspended or redirected satyagraha campaigns for strategic reasons, some followers disagreed. Yet Gandhi realized that **true leadership sometimes required going against immediate public opinion** if it was in the long-term interest of the struggle. Thus, statement **3 is correct**.

## 4. Evolution of New Techniques

In South Africa, Gandhi **formulated and experimented with satyagraha (truth-force or non-violent resistance)** for the first time. He used techniques like peaceful protest, non-cooperation, negotiation, and voluntary suffering on a limited scale. Importantly, he did so in a relatively small political arena without the entrenched opposition that he would later face in India. This helped him refine his **distinctive style of leadership** and strategy. Hence, statement **4 is also correct**.

Gandhi's South African experience was the **laboratory of his political ideas**. It shaped his philosophy of non-violence, leadership style, and faith in the collective strength of ordinary people. These lessons directly influenced his role in India's independence movement.

124.(c)

The **Chauri Chaura incident** was a turning point in India's freedom struggle as it tested the limits of Gandhian non-violence and reshaped the course of the **Non-Cooperation Movement (NCM)**.

### 1. Immediate Cause of Violence

On **4 February 1922**, a group of peasants and volunteers in Chauri Chaura (Gorakhpur district, United Provinces, present-day Uttar Pradesh) were participating in a demonstration as part of the **Non-Cooperation Movement**. Their demands included protesting against **high food prices, liquor shops, and oppressive practices of local authorities**. When the crowd marched to the local police station, the police first tried to disperse them and then opened fire, killing and injuring several protestors. Enraged, the crowd retaliated by setting fire to the police station, resulting in the death of **22 policemen**.

This confirms that the **immediate provocation was police firing on a peaceful protest**, making statement **1 correct**.

### 2. Gandhi's Response

Mahatma Gandhi, who had launched the Non-Cooperation Movement in **1920**, was deeply shocked by the incident. For him, non-violence was not merely a political strategy but a moral principle. The violent turn at Chauri Chaura convinced him that the masses were **not yet sufficiently disciplined to adhere to non-violent struggle**.

Consequently, Gandhi decided to **suspend the entire Non-Cooperation Movement at the national level**, despite opposition from leaders like C.R. Das and Motilal Nehru, who felt the movement had gained momentum. Gandhi's decision emphasized his unwavering commitment to non-violence and moral politics over immediate political gains. Thus, **statement 2 is correct**.

### 3. Significance of the Incident

- It highlighted the challenges of maintaining non-violent discipline in mass movements.
- Gandhi's suspension of the NCM caused widespread disappointment among nationalists, with many leaders questioning the strategy.
- However, it also reinforced Gandhi's role as a moral leader who prioritized ethical conduct in the freedom struggle.



- The incident also underlined the volatility of peasant discontent and the difficulty of channeling it into strictly peaceful forms of protest.

The **Chauri Chaura incident** exposed the tension between mass participation and Gandhian discipline. While it temporarily halted the momentum of the freedom movement, it also reaffirmed the principle of **non-violence as the cornerstone** of India's struggle for independence.

**125.(c)**

The **Simon Commission** occupies an important place in the history of India's constitutional development. Its arrival generated widespread political agitation and demonstrated the growing demand for Indian self-rule.

### **1. Background and Basis (Government of India Act, 1919)**

The **Government of India Act, 1919**, also called the **Montagu-Chelmsford Reforms**, introduced the system of **dyarchy in provinces** and promised gradual development of self-governing institutions. Importantly, the Act contained a clause stating that a **statutory commission** would be appointed **ten years after its implementation** to review the working of the constitutional reforms and suggest further changes. Accordingly, although the Commission was appointed in **1927** (two years ahead of schedule by the British Conservative Government), its establishment was indeed based on the **recommendation in the 1919 Act**. This makes **statement 1 correct**.

### **2. Composition of the Commission**

The Simon Commission consisted of **seven members of the British Parliament**, all of whom were Englishmen. It did not include a single Indian, which caused deep resentment across the political spectrum. The Commission was chaired by **Sir John Simon**, a well-known lawyer and politician. Hence, it was an **all-white, seven-member body chaired by Sir John Simon**. This makes **statement 2 correct**.

### **3. Reaction in India**

The absence of Indians in the Commission was seen as a deliberate insult to Indian self-respect. The Indian National Congress, the Muslim League, and other political groups united in **boycotting the Commission**. Across India, massive protests broke out under the slogan **"Simon Go Back."** Black flags were waved, strikes were organized, and public demonstrations reflected widespread anger.

During one such protest at Lahore in 1928, police lathi-charged demonstrators, leading to the injury of **Lala Lajpat Rai**, who later succumbed to his wounds. This further inflamed nationalist passions.

### **4. Significance**

- The Commission's rejection highlighted Indian unity against colonial arrogance.
- It eventually led to the **Nehru Report (1928)**, the first major Indian effort to draft a constitutional framework.
- The agitation also strengthened the demand for **complete independence (Purna Swaraj)**, formally declared in 1929.

The **Simon Commission (1927)** was both a symbol of British disregard for Indian aspirations and a catalyst for the next stage of the nationalist movement. Both statements given in the question are correct.

**126.(a)**

### **Statement 1: Correct**

- Researchers at Raman Research Institute (RRI), Bengaluru demonstrated that the momentum-space spectral function (SPSF) can reveal a material's hidden topological properties.
- SPSF acts as a "quantum fingerprint", providing unique signatures of the material's electronic topology.
- This approach is significant because topological properties, such as those defining insulators and superconductors, are often invisible to conventional characterization techniques.

### **Statement 2: Correct.**

- Traditional methods like Angle-Resolved Photoemission Spectroscopy (ARPES) have been the standard for probing electronic dispersion and topological features.



- The SPSF-based method offers a simpler, more accessible, yet equally powerful alternative, allowing scientists to identify topological invariants such as winding numbers and Chern numbers without relying on complex ARPES setups.
- This could accelerate research in quantum computing, next-generation electronics, and energy-efficient systems.

**Statement 3: Incorrect.**

- The breakthrough is not limited to classical conductors or insulators.
- It is specifically relevant to topological materials, insulators, and superconductors whose exotic electronic behavior underpins quantum computing technologies and advanced electronics.
- By detecting hidden quantum properties, this method enhances understanding of materials critical for future high-tech applications.

**127.(c)**

**Mission LiFE (Lifestyle for Environment)**, launched by Prime Minister Narendra Modi in October 2022, is an India-led global mass movement to promote environmentally conscious lifestyles. Implemented by the **Ministry of Environment, Forest and Climate Change (MoEFCC)**, it seeks to mobilize at least one billion people globally by 2028 to adopt sustainable habits. The mission focuses on simple, everyday actions such as saving water and energy, reducing waste, avoiding single-use plastics, composting food waste, and promoting sustainable food systems. The overarching goal is to translate the idea of “Lifestyle for Environment” into a global movement for a sustainable future.

**PM SVANidhi (Prime Minister Street Vendor’s AtmaNirbhar Nidhi)** is a Central Sector micro-credit scheme launched on 1st June 2020 by the **Ministry of Housing and Urban Affairs (MoHUA)** to formalize street vendors, enhance their economic mobility, and strengthen their role in the urban informal economy. It provides collateral-free working capital loans of ₹10,000 (1st term), followed by ₹20,000 and ₹50,000, along with a 7% interest subsidy. To encourage digital transactions, vendors get cashback up to ₹100 per month.

**Mission Purvodaya**, implemented by the **Ministry of Steel**, is a government initiative aimed at transforming Eastern India, covering Bihar, Jharkhand, Odisha, West Bengal, and Andhra Pradesh, into a national growth engine. The program focuses on developing industrial clusters and infrastructure, particularly in the steel sector, with pilot steel hubs at Kalinganagar and Bokaro to harness the region’s mineral wealth. It also emphasizes strengthening logistics and connectivity through rail, road, and port projects within the twelve major steel zones, alongside industrial nodes of the Amritsar-Kolkata Industrial Corridor.

**SPARC (Scheme for Promotion of Academic and Research Collaboration)**, launched by the **Ministry of Education** and implemented by the Indian Institute of Technology (IIT) Kharagpur, is a program designed to foster collaboration between top Indian institutions and leading international universities. Its aim is to catalyze high-impact research by facilitating faculty and researcher exchanges, enabling international experts to work in Indian institutions and vice-versa. The scheme seeks to enhance the quality, productivity, and global relevance of Indian research and higher education, while leveraging shared knowledge and resources through such collaborations.

**128.(d)**

- On 29th July 2025, the Defence Research and Development Organisation (DRDO) successfully carried out user evaluation trials of the indigenous ‘Pralay’ missile system from Dr APJ Abdul Kalam Island (formerly Wheeler Island) off the Odisha coast.
- These were user evaluation trials, meaning the missile was tested in collaboration with the Indian Armed Forces to validate its operational effectiveness.
- The trials spanned two days, covering both minimum and maximum range capabilities, and the missile successfully followed its trajectory and hit designated targets.
- Pralay is not a surface-to-air missile. It is a solid-propellant, surface-to-surface quasi-ballistic missile system. Unlike surface-to-air systems (which target aircraft, drones, or missiles), Pralay is designed



to strike ground-based targets with high accuracy. It can carry different types of warheads, making it versatile for engaging diverse land-based targets such as enemy bases, radar installations, and communication hubs.

- Pralay is a product of India's indigenous defence ecosystem. It was jointly developed by key DRDO labs, namely- RCI (Research Centre Imarat), DRDL (Defence Research and Development Laboratory), and ASL (Advanced Systems Laboratory).
- The project also involved public-sector defence companies like Bharat Dynamics Limited (BDL) and Bharat Electronics Limited (BEL), along with several MSMEs, highlighting strong public-private partnership in defence R&D.

**129.(b)**

- The Axiom 4 mission is a private manned spaceflight to the International Space Station (ISS), conducted by Axiom Space in partnership with NASA and SpaceX. The mission is significant as it includes astronauts from India, Poland, and Hungary, marking the first government-supported ISS flights for these countries in over four decades. The mission aims to carry out scientific experiments and lay the groundwork for future space initiatives.
- Axiom 4 represents a joint effort between NASA, Axiom Space, and SpaceX, highlighting the growing role of private participation in human spaceflight.
- The crew were commanded by Peggy Whitson of USA and comprises Shubhanshu Shukla (India), , Slawoz Uznanski (Poland), and Tibor Kapu (Hungary).
- The astronauts will conduct a series of scientific studies on the ISS over approximately two weeks, focusing on technologies such as crop growth and cyanobacteria research.
- This mission is historic for India, Poland, and Hungary, as it marks the first time astronauts from these nations have visited the ISS through government-supported missions.
- The Axiom 4 mission seeks to strengthen international cooperation in human spaceflight and conduct critical scientific research aboard the ISS. Additionally, it serves as a stepping stone for India's Gaganyaan mission and the planned Indian Space Station, reinforcing India's growing presence in space exploration.

**130.(d)****India's Forest & Tree Cover (ISFR-2023 Highlights)**

- **Total Coverage:** 8,27,357 sq km (25.17% of geographical area) → Forest cover: 7,15,343 sq km (21.76%), Tree cover: 1,12,014 sq km (3.41%).
- **Increase since 2021:** +1,445 sq km (Forest: +156 sq km, Tree: +1,289 sq km).
- **Top States – Increase in Forest & Tree Cover:** Chhattisgarh (684), Uttar Pradesh (559), Odisha (559), Rajasthan (394).
- **Top States – Increase in Forest Cover:** Mizoram (242), Gujarat (180), Odisha (152).
- **Largest Forest & Tree Cover by Area:** Madhya Pradesh (85,724), Arunachal Pradesh (67,083), Maharashtra (65,383).
- **Largest Forest Cover by Area:** Madhya Pradesh (77,073), Arunachal Pradesh (65,882), Chhattisgarh (55,812).
- **Highest Forest Cover (% of area):** Lakshadweep (91.33%), Mizoram (85.34%), Andaman & Nicobar (81.62%).
- **States with >33% forest cover:** 19 states/UTs; 8 states/UTs >75% forest cover (Mizoram, Lakshadweep, A&N Islands, Arunachal Pradesh, Nagaland, Meghalaya, Tripura, Manipur).
- **Mangrove Cover:** 4,992 sq km.
- **Bamboo Area:** 1,54,670 sq km (+5,227 sq km since 2021).
- **Timber Potential (outside forests):** 91.51 million cum annually.
- **Carbon Stock:** 7,285.5 million tonnes (+81.5 million tonnes since last assessment).



- **NDC Target Status:** Carbon stock = 30.43 billion tonnes CO<sub>2</sub> eq; additional 2.29 billion tonnes since 2005 (target 2.5–3.0 billion tonnes by 2030).
- **Utility:** Provides critical data for policymakers, forest departments, researchers, civil society, and developmental planning.

131.(d)

**2025 Tennis Grand Slam Winners and Runners-Up**

Tournament	Category	Winner(s)	Runner-Up(s)
<b>Australian Open</b>	Men's Singles	Jannik Sinner	Alexander Zverev
	Women's Singles	Madison Keys	Aryna Sabalenka
	Men's Doubles	Harri Heliövaara / Henry Patten	Simone Bolelli / Andrea Vavassori
	Women's Doubles	Kateřina Siniaková / Taylor Townsend	Hsieh Su-wei / Jeļena Ostapenko
<b>French Open (Roland-Garros)</b>	Men's Singles	Carlos Alcaraz	Jannik Sinner
	Women's Singles	Coco Gauff	Aryna Sabalenka
	Men's Doubles	Marcel Granollers / Horacio Zeballos	Joe Salisbury / Neal Skupski
	Women's Doubles	Sara Errani / Jasmine Paolini	Anna Danilina / Aleksandra Krunic
<b>Wimbledon</b>	Men's Singles	Jannik Sinner	Carlos Alcaraz
	Women's Singles	Iga Świątek	Amanda Anisimova
	Men's Doubles	Julian Cash / Lloyd Glasspool	Rinky Hijikata / David Pel
	Women's Doubles	Veronika Kudermetova / Elise Mertens	Hsieh Su-wei / Jeļena Ostapenko
<b>US Open</b>	Men's Singles	Carlos Alcaraz	Jannik Sinner
	Women's Singles	Aryna Sabalenka	Amanda Anisimova
	Men's Doubles	Marcel Granollers / Horacio Zeballos	Joe Salisbury / Neal Skupski
	Women's Doubles	Gabriela Dabrowski / Erin Routliffe	Kateřina Siniaková / Taylor Townsend

132.(d)

- India won the 2025 Men's Hockey Asia Cup title by defeating South Korea 4-1 in the final held at the Rajgir Sports Complex in Bihar on September 7, 2025. India's victory in 2025 was their fourth Asia Cup title. Their previous win came in 2017 in Dhaka, where they defeated Malaysia 2-1 in the final. With this title India secured their qualification for the 2026 Men's Hockey World Cup.
- The ICC Champions Trophy 2025 was held in India as a One-Day International (ODI) tournament. The final saw India emerge victorious, defeating New Zealand under the captaincy of Rohit Sharma, who notably became the first captain to receive the Player of the Match award in a Champions Trophy final. This victory marked India's third ICC Champions Trophy title.





133.(b)

**Nobel Prize winners for 2023 and 2024**

Year	Category	Winner(s)	Contribution / Citation
2024	Physics	John J. Hopfield, Geoffrey Hinton	For foundational discoveries and inventions that enable machine learning with artificial neural networks
	Chemistry	David Baker	For computational protein design
		Demis Hassabis, John Jumper	For protein structure prediction
	Physiology or Medicine	Victor Ambros, Gary Ruvkun	For the discovery of microRNA and its role in post-transcriptional gene regulation
	Literature	Han Kang	For her intense poetic prose that confronts historical traumas and exposes the fragility of human life
	Peace	Nihon Hidankyo	For its efforts to achieve a world free of nuclear weapons and demonstrating through witness testimony that nuclear weapons must never be used again
	Economic Sciences	Daron Acemoglu, Simon Johnson, James A. Robinson	For studies of how institutions are formed and affect prosperity
2023	Physics	Pierre Agostini, Ferenc Krausz, Anne L'Huillier	For experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter
	Chemistry	Moungi Bawendi, Louis Brus, Aleksey Yekimov	For the discovery and synthesis of quantum dots
	Physiology or Medicine	Katalin Karikó, Drew Weissman	For their discoveries concerning nucleoside base modifications that enabled the development of effective mRNA vaccines against COVID-19
	Literature	Jon Fosse	For his innovative plays and prose which give voice to the unsayable
	Peace	Narges Mohammadi	For her fight against the oppression of women in Iran and her fight to promote human rights and freedom for all
	Economic Sciences	Claudia Goldin	For having advanced our understanding of women's labour market outcomes

134.(b)

The Corruption Perceptions Index is published by Transparency International, which ranks countries based on perceived levels of public sector corruption. The Global Remittances Inflow Report is published by the World Bank, providing estimates of remittance flows into countries based on national balance of payment



data. The Global Hunger Index is published by Concern Worldwide and Welt Hunger Hilfe, not the World Economic Forum, and the Global Peace Index is published by the Institute for Economics and Peace (IEP), not WIPO.

Index	Published By	India's Rank	Key Highlights / Specifications
<b>Climate Change Performance Index 2025</b>	Germanwatch, New Climate Institute, Climate Action Network	10th	Tracks GHG emissions, renewable energy, energy use, climate policy; covers 63 countries + EU
<b>Corruption Perceptions Index 2023</b>	Transparency International	93rd/180	Public sector corruption perception
<b>Energy Transition Index 2024</b>	World Economic Forum	63rd/120	Compares energy system performance & readiness
<b>Future Possibilities Index 2024</b>	Newsweek Vantage & Horizon Group	35th	Measures readiness for future global transformations
<b>Global Firepower Index 2025</b>	Global Firepower	4th	Compares 145 countries' conventional military capabilities
<b>Global Happiness Report 2024</b>	SDSN	126th	Based on survey & socio-economic data on happiness
<b>Global Hunger Index 2024</b>	Concern Worldwide, Welt Hunger Hilfe	105th/127	<b>Four indicators:</b> undernourishment, child stunting, wasting, mortality
<b>Global Innovation Index 2024</b>	WIPO	39th/133	Measures innovation-driven social & economic transformation
<b>Global Peace Index 2024</b>	IEP	116th/163	Measures societal safety, domestic/international conflict, militarization
<b>Global Remittances Inflow Report 2024</b>	World Bank	Top	India receives USD 129 billion (14.3% global)
<b>Global Soft Power Index 2024</b>	Brand Finance	29th	Measures national brand perceptions & influence
<b>Global Terrorism Index 2024</b>	Institute for Economics and Peace (IEP)	14th	Ranks 163 countries using incidents, fatalities, injuries, hostages
<b>Henley Passport Index 2025</b>	International Air Transport Authority (IATA)	85th	Ranks countries by visa-free destinations



Index	Published By	India's Rank	Key Highlights / Specifications
<b>Human Development Index 2023-24</b>	UNDP	134th/193	Assesses health, education, standard of living
<b>International Intellectual Property Index 2024</b>	U.S. Chamber of Commerce	42/55	Assesses intellectual property environment and innovation
<b>Logistics Performance Index 2023</b>	World Bank	38th	Assesses logistics efficiency & infrastructure
<b>QS World Future Skills Index 2025</b>	Quacquarelli Symonds (QS)	25th	Measures Skills Fit, Academic Readiness, Economic Transformation, Future of Work
<b>Rule of Law Index 2024</b>	World Justice Project	79th	Independent measure of rule of law
<b>Stockholm International Peace Research Institute (SIPRI) Report 2019-23</b>	Oxford University Press	Top arms importer	Measures volume of global arms transfers
<b>World Air Quality Report 2024</b>	IQAir	3rd	Delhi most polluted capital; AQI based on PM2.5, PM10, O3, NO2, SO2, CO
<b>World Competitiveness Index 2024</b>	IMD	39th	Assesses countries' long-term value creation capabilities
<b>World Economic Outlook 2024</b>	IMF	-	India growth projected 6.5%; global 3.3%
<b>World Liveability Index 2024</b>	Economist Intelligence Unit	Delhi & Mumbai: 141st	Assesses lifestyle & living standards across 173 cities
<b>World Press Freedom Index 2024</b>	RSF	162nd	Compares freedom of journalists/media across countries

135.(d)

The Fiscal Health Index (FHI), developed by NITI Aayog, evaluates the fiscal performance of 18 major Indian states based on GDP contribution, public expenditure, revenues, and fiscal stability. Odisha leads the ranking, followed by Chhattisgarh, Goa, Jharkhand, and Gujarat. The index uses CAG data for FY 2022-23 to provide an objective comparison of states' fiscal health, aiding transparency, accountability, and policy decisions.

**Objectives:**

- To provide a comparative analysis of fiscal health across Indian states through standardized metrics.
- To identify areas of strength and concern in states' fiscal management practices.



- To promote transparency, accountability, and prudent fiscal management through empirical assessment.
- To assist policymakers in making informed decisions aimed at enhancing fiscal sustainability and resilience.

**Key Indicators:**

- **Revenue Generation & Tax Buoyancy:** States' own revenues, non-tax revenue, and responsiveness of taxation to economic growth.
- **Debt Management:** Debt-to-GSDP ratio, interest burdens, and sustainability of debt portfolios.
- **Expenditure Management & Prioritization:** Efficiency in allocation, focus on capital expenditure, and adherence to fiscal discipline.
- **Fiscal Deficit Management:** Fiscal deficit as a percentage of GSDP and compliance with statutory limits.
- **Overall Fiscal Sustainability:** Composite evaluation of revenue, expenditure, deficit, and debt for long-term fiscal health.

**136.(a)**

- Balwant Rai Mehta Committee – 1957
- Ashok Mehta Committee – 1977
- G.V.K. Rao Committee – 1985
- P.K. Thungon Committee – 1988

**Panchayati Raj Committees:**

**Balwant Rai Mehta Committee (1957)**

- Examined **Community Development Programme (1952)** and **National Extension Service (1953)**.
- **Chairperson:** Balwant Rai G. Mehta
- **Report:** November 1957
- **Recommendation:** Establish **democratic decentralisation**, leading to **Panchayati Raj**.

**Ashok Mehta Committee (1977–78)**

- **Purpose:** Review and strengthen Panchayati Raj institutions.
- **Chairperson:** Ashok Mehta
- **Report:** August 1978
- **Recommendation:** 132 measures to **revive and improve** the declining Panchayati Raj system.

**G.V.K. Rao Committee (1985)**

- **Purpose:** Review administrative arrangements for Rural Development and Poverty Alleviation.
- **Chairperson:** G.V.K. Rao
- **Findings:** Development became **bureaucratised** and disconnected from Panchayati Raj, weakening local governance — termed **“grass without roots.”**

**L.M. Singhvi Committee (1986)**

- **Purpose:** Prepare a concept paper on **revitalising Panchayati Raj institutions** for democracy and development.
- **Chairperson:** L.M. Singhvi
- **Appointed by:** Rajiv Gandhi government.

**Thungon Committee (1988)**

- **Purpose:** Examine political and administrative structures at the **district level** for district planning.
- **Chairperson:** P.K. Thungon
- **Nature:** Sub-committee of the Consultative Committee of Parliament.



**Gadgil Committee (1988)**

- **Purpose:** Recommend ways to make **Panchayati Raj institutions more effective.**
- **Chairperson:** V.N. Gadgil
- **Constituted by:** Congress party.

**73rd Amendment Act (1992) – Significance**

- Added **Part IX** (“The Panchayats”) to the Constitution (**Articles 243 to 243-O**).
- Introduced **Eleventh Schedule** listing **29 functional items** of Panchayats.
- Includes provisions under **Article 243-G** for Panchayati Raj governance.

**137.(a)**

**1 and 3 only**

- In **1688**, the first **municipal corporation** in India was established at **Madras**. Lord Ripon’s **1882 Resolution**, known as the ‘**Magna Carta**’ of local self-government, earned him the title of **Father of Local Self-Government in India**.
- The **74th Constitutional Amendment Act (1992)** granted **constitutional status** to urban local bodies (municipalities) by adding **Part IXA** to the Constitution, recognizing them as **institutions of self-government**.

**Three Types of Municipalities:** The **74th Constitutional Amendment Act (1992)** provides for three kinds of municipalities in each state:

1. **Nagar Panchayat** – for a **transitional area** (rural to urban).
2. **Municipal Council** – for a **smaller urban area**.
3. **Municipal Corporation** – for a **larger urban area**.

**Joint State Public Service Commission (JSPSC):**

- The Constitution provides for the creation of a **Joint State Public Service Commission (JSPSC)** for **two or more states**.
- Unlike the **UPSC** and **SPSC**, which are constitutional bodies, a JSPSC is **statutory** and can be established by **an act of Parliament** at the request of the concerned state legislatures. For example, **Punjab and Haryana** had a JSPSC briefly after Haryana was carved out of Punjab in 1966.
- The **Chairman and members** of a JSPSC are appointed by the **President** and serve for **six years or until reaching the age of 62**, whichever is earlier. They can also be **suspended or removed by the President**.

**138.(b)**

- **The Sixth Schedule of the Constitution provides special provisions for the tribal areas in the four northeastern states of Assam, Meghalaya, Tripura, and Mizoram. The reasons for these special arrangements are as follows:**
- The tribal communities in Assam, Meghalaya, Tripura, and Mizoram have not fully assimilated into the lifestyles of the other populations in these states. These regions serve as anthropological examples, as the tribes here have largely retained their distinct culture, customs, and social practices. In contrast, tribal communities in many other parts of India have, to varying degrees, adopted the culture of the majority communities around them.
- Therefore, these northeastern tribal areas have been accorded a special status by the Constitution, providing them with sufficient autonomy for self-governance, so that they can preserve their traditional way of life and maintain their unique cultural identity.

**139.(c)**

- From 1950 until 15 October 1989, the Election Commission of India operated as a single-member body, consisting solely of the Chief Election Commissioner. Following the reduction of the voting age from 21 to 18 years, on 16 October 1989, the President (Not the Chief Election Commissioner)





appointed two additional Election Commissioners to ease the Commission's workload. Consequently, the Commission began functioning as a multi-member body with three Election Commissioners.

- In 1990, the posts of the two additional Commissioners were abolished, reverting the Commission to a single-member structure. Later, in October 1993, two Election Commissioners were reappointed, and since then, the Commission has continued to operate as a three-member body.
- The Chief Election Commissioner and the other two Election Commissioners enjoy equal powers, and their salaries, allowances, and other benefits are on par with those of a Supreme Court judge. In cases of disagreement among them, decisions are taken based on majority opinion.
- The tenure of the Election Commissioners is six years or until the age of 65, whichever is earlier. They may resign at any time, or they can be removed before the completion of their term under prescribed conditions.

140.(b)

Part	Subject	Articles
<b>Part I</b>	The Union and its Territories	1-4
<b>Part II</b>	Citizenship	5-11
<b>Part III</b>	Fundamental Rights	12-35
<b>Part IV</b>	Directive Principles of State Policy	36-51
<b>Part IVA</b>	Fundamental Duties	51A
<b>Part V</b>	The Union	52-151
<b>Part VI</b>	The States	152-237
<b>Part VII</b>	The States in Part B of First Schedule	238 [Repealed]
<b>Part VIII</b>	The Union Territories	239-242
<b>Part IX</b>	The Panchayats	243-243O
<b>Part IXA</b>	The Municipalities	243P-243ZG
<b>Part IXB</b>	The Co-operative Societies	243ZH-243ZT
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141.(b)

- The Attorney General of India is appointed by the President. To be eligible, the appointee must meet the qualifications required for appointment as a Supreme Court judge. Specifically, the person must be an Indian citizen and either have served as a judge of a High Court for at least five years, or have practiced as an advocate in a High Court for at least ten years, or be, in the opinion of the President, a person of recognized legal eminence.
- **The Constitution does not prescribe a fixed term for the Attorney General, nor does it provide a formal procedure for removal.** The Attorney General holds office at the pleasure of the President, meaning they may be removed at any time. **They may also resign at any time by submitting their resignation to the President.**
- By convention, the Attorney General tenders their resignation whenever the Council of Ministers resigns or is reconstituted, since their appointment is made on the recommendation of the government.

**Comparative Table: CAG, Attorney General of India, and Advocate General**

Aspect	Comptroller and Auditor General (CAG)	Attorney General of India (AG)	Advocate General (State)
<b>Constitutional Article</b>	Articles 148-151	Article 76	Article 165
<b>Appointment</b>	By the President of India	By the President of India, on the advice of the Union Cabinet	By the Governor of the State
<b>Qualifications</b>	Not prescribed in the Constitution (eligible persons include those with experience in auditing or accounts)	Qualified to be appointed as a Judge of the Supreme Court (i.e., 5 years as High Court Judge, 10 years as High Court advocate, or distinguished jurist)	Qualified to be appointed as a Judge of the High Court (i.e., 5 years as High Court Judge, 10 years as High Court advocate, or distinguished jurist)
<b>Tenure</b>	6 years or until the age of 65, whichever is earlier	During the pleasure of the President (no fixed term; conventionally resigns with change in government)	During the pleasure of the Governor (no fixed term; conventionally resigns with change in state government)
<b>Removal</b>	By the President after a joint address passed by both Houses of Parliament (address needs absolute majority in each House and two-thirds majority of total membership; on grounds like proven misbehavior or incapacity)	Not specified in Constitution; removal at President's pleasure (effectively by the government)	Not specified in Constitution; removal at Governor's pleasure (effectively by the state government)



Aspect	Comptroller and Auditor General (CAG)	Attorney General of India (AG)	Advocate General (State)
<b>Primary Functions</b>	<ul style="list-style-type: none"> <li>- Audit of accounts of Union and State governments, public sector undertakings, and other bodies</li> <li>- Compilation of accounts for Union and States</li> <li>- Reporting irregularities to Parliament/State Legislatures</li> <li>- Advisory role on accounting procedures</li> </ul>	<ul style="list-style-type: none"> <li>- Chief legal advisor to the Union Government</li> <li>- Represent Union Government in Supreme Court and other courts</li> <li>- Perform other legal duties assigned by the President</li> <li>- Right to audience in all courts in India</li> </ul>	<ul style="list-style-type: none"> <li>- Chief legal advisor to the State Government</li> <li>- Represent State Government in High Court and other courts</li> <li>- Perform other legal duties assigned by the Governor</li> <li>- Right to audience in all courts in the State and Supreme Court when representing the State</li> </ul>
<b>Independence</b>	<b>High independence:</b> Fixed tenure, difficult removal process, salary charged on Consolidated Fund of India, no executive control	<b>Moderate:</b> Appointed by executive, holds office at pleasure, but constitutional status and right to private practice (with restrictions) provide some autonomy	<b>Moderate:</b> Appointed by state executive, holds office at pleasure, but constitutional status and right to private practice (with restrictions) provide some autonomy
<b>Remuneration</b>	Fixed by Parliament; charged on Consolidated Fund of India (not subject to annual vote)	Fixed by Parliament; includes retainer fee and sumptuary allowance	Determined by the State Government; not fixed by Constitution
<b>Other Rights/ Privileges</b>	<ul style="list-style-type: none"> <li>- Right to address Parliament/State Legislatures on audit reports</li> <li>- No voting rights in legislatures</li> </ul>	<ul style="list-style-type: none"> <li>- Right to speak and participate in Parliament proceedings (no voting right)</li> <li>- Can receive briefs but not against the government</li> </ul>	<ul style="list-style-type: none"> <li>- Right to speak and participate in State Legislature proceedings (no voting right)</li> <li>- Can receive briefs but not against the state government</li> </ul>

142.(c)

- Article 243ZK of the Constitution of India requires that **elections for the board of a cooperative society be conducted before the expiry of the current board's term, ensuring** a smooth and uninterrupted transition of power. It also provides that the superintendence, direction, and control over the preparation of electoral rolls and the conduct of elections for cooperative societies shall be exercised by an authority or body designated under state law.



- Article 243ZM mandates the maintenance and audit of accounts of cooperative societies. It requires the state legislature to prescribe minimum qualifications for auditors, who must be appointed from a panel approved by the government. The audit must be completed within six months of the end of the financial year. For apex cooperative societies, the audit report must be presented to the State Legislature.
- Article 243ZI empowers the State Legislature to enact laws relating to the incorporation, regulation, and winding up of cooperative societies. Such laws must adhere to the principles of voluntary formation, democratic member control, economic participation of members, and autonomous functioning.
- Article 243ZS extends the provisions of Part IXB (which governs cooperative societies) to Union Territories. It clarifies that references to the State Legislature or the Administrator of a Union Territory with a Legislative Assembly shall be construed as references to the relevant Administrator or Legislative Assembly, as applicable.

**Articles Related to Cooperative Societies:**

Article	Provisions
243ZH	Definition
243ZI	Establishment of Cooperative Societies
243ZJ	Number of Board Members and Their Term of Office
243ZK	Election of Board Members
243ZL	Dissolution and Suspension of the Board and Interim Management
243ZM	Audit of Cooperative Societies' Accounts
243ZN	Convening of General Meetings
243ZO	Right of Members to Information
243ZP	Returns / Reports
243ZQ	Offences and Penalties
243ZR	Application to Multi-State Cooperative Societies
243ZS	Implementation in Union Territories
243ZT	Continuance of Existing Laws

**143.(a)**

**A. Futuhat-i-Firoz Shahi (Yahya bin Ahmad Sirhindi)**

This Persian chronicle records the achievements of Firoz Shah Tughlaq (r. 1351–1388 CE). It provides insights into his wars, administrative reforms, canal works, and building activities. Sirhindi wrote it in a concise style, making it a key source for the Tughlaq period.

**B. Mirat-i-Ahmadi (Ali Muhammad Khan)**

Written in the 18th century CE, it is a Persian history of Gujarat, but also provides information on the Marathas, Rohillas, and regional politics.

It reflects the decline of Mughal authority and the rise of provincial powers.

**C. Rajatarangini (Kalhana)**

A 12th-century Sanskrit text, composed much before the Delhi Sultanate, but highly valued in medieval historiography.



It narrates the history of Kashmir's rulers from ancient times till Kalhana's own period.

Although poetic, it combines myth, legend, and history, and is one of the earliest regional historical chronicles of India.

**D. Tabaqat-i-Nasiri (Minhaj-i-Siraj)**

Written in 1260 CE, it is a Persian chronicle dedicated to Sultan Nasir-ud-din Mahmud of Delhi. It gives detailed accounts of the early Delhi Sultans, especially the Mamluk dynasty. It also covers the Mongol invasions, Ghurid history, and administrative matters, making it a vital source for the 13th-century Delhi Sultanate.

**144.(b)**

**IBAT ALLIANCE**

Integrated Biodiversity Assessment Tool (IBAT) Alliance doubled its investment in biodiversity data from 2023 to 2024.

Founded: In 2008 at the IUCN World Conservation Congress.

It is a collaboration of four major global conservation organisations like BirdLife International, Conservation International, IUCN (International Union for Conservation of Nature) & UNEP-WCMC (United Nations Environment Programme World Conservation Monitoring Centre).

Mission: To provide data, tools, and guidance that help organizations act on biodiversity-related risks and opportunities.

Mandate: IBAT data help monitor progress towards international biodiversity goals, including those outlined in the Kunming–Montreal Global Biodiversity Framework (adopted in Dec 2022)

Headquarters: The UK

**145.(a)**

**Pioneer Stage (A–2):** Hardy organisms like lichens, mosses, and algae first colonize bare areas.

**Transitional Stage (B–3):** Shrubs and herbs appear, some trees start establishing; community becomes more complex.

**Seral Community (C–4):** Relatively stable but not the final stage; these are intermediate, self-perpetuating communities.

**Mature Stage (D–1):** Trees dominate; community is close to the climax stage.

**146.(a)**

State-wise list of major aluminium plants in India, presented in a table format.

State	Company	Location	Type of Plant
Odisha	National Aluminium Company (NALCO)	Angul	Smelter and Captive Power Plant
	National Aluminium Company (NALCO)	Damanjodi	Alumina Refinery
	Vedanta Aluminium	Jharsuguda	Smelter and Power Plant
	Vedanta Aluminium	Lanjigarh	Alumina Refinery
	<b>Hindalco Industries</b>	<b>Hirakud</b>	<b>Smelter and Power Plant</b>
	Hindalco Industries	Aditya (Lapanga)	Smelter and Captive Power Plant
Chhattisgarh	<b>Bharat Aluminium Company (BALCO) / Vedanta</b>	<b>Korba</b>	<b>Integrated Plant (Refinery, Smelter, Power)</b>





State	Company	Location	Type of Plant
<b>Uttar Pradesh</b>	<b>Hindalco Industries</b>	<b>Renukoot (Sonbhadra)</b>	<b>Integrated Plant (Refinery and Smelter)</b>
Jharkhand	Hindalco Industries	Muri	Alumina Refinery
<b>Tamil Nadu</b>	<b>Madras Aluminium Company (MALCO) / Vedanta</b>	<b>Mettur</b>	<b>Alumina Plant</b>
Kerala	Hindalco Industries	Alupuram (Ernakulam)	Extrusion Plant (Original smelter now closed)
Karnataka	Hindalco Industries	Belagavi (Belgaum)	Alumina Refinery
	Jindal Aluminium	Bengaluru	Extrusion Plant
Maharashtra	Hindalco / Novelis	Taloja (Raigad)	Downstream (Flat Rolled Products)
West Bengal	Indian Aluminium Co. Ltd. (INDAL) / Hindalco	Belur (Howrah)	Downstream (Original plant, now rolling)
Madhya Pradesh	Hindalco Industries	Mahan (Singrauli)	Smelter
Andhra Pradesh	Hindalco Industries	Kollur	Downstream (Foil Plant)

147.(a)

**Keibul Lamjao National Park (Manipur – A-1):**

- Located in Bishnupur district of Manipur, on the southern part of Loktak Lake.
- It is the world's only floating national park, formed by floating mass of vegetation called phumdis.
- Famous for Sangai deer (brow-antlered deer), the state animal of Manipur, also known as the “dancing deer.”
- Declared a national park in 1977.

**Nokrek National Park (Meghalaya – B-2):**

- Located near Tura Peak in West Garo Hills district.
- A UNESCO Biosphere Reserve (declared in 2009).
- Known for being one of the last habitats of the Red Panda in Northeast India.
- Also home to wild citrus species, considered the “gene sanctuary” of citrus fruits.

**Namdapha National Park (Arunachal Pradesh – C-3):**

- Located in Changlang district of Arunachal Pradesh.
- One of the largest protected areas in the Eastern Himalaya biodiversity hotspot.
- Unique because it is the only national park in India where all four big cats—Tiger, Leopard, Snow Leopard, and Clouded Leopard—are found together.
- Also rich in flora and fauna ranging from tropical rainforest to alpine meadows due to great altitudinal variation.

**Valley of Flowers National Park (Uttarakhand – D-4):**

- Located in Chamoli district, part of Nanda Devi Biosphere Reserve.
- Declared a UNESCO World Heritage Site in 2005.
- Famous for its alpine meadows, endemic high-altitude flowering plants, and scenic beauty.



- Known to host species like blue poppy, brahmakamal, and a variety of medicinal herbs.
- Seasonal park—usually open from June to October due to heavy snow cover in winter.

**148.(a)**

**A. Virupaksha Temple (A → 1)**

- The Virupaksha temple in Hampi is one of the oldest continuously used temples in South India, originally associated with the Chalukyas, but magnificently expanded under Vijayanagara rulers.
- Krishnadevaraya (1509–1529) built a towering gopuram (gateway tower) in 1510 CE to mark his coronation and his successful campaigns.
- Dedicated to Lord Shiva (Virupaksha), this temple became a central pilgrimage site of the Vijayanagara Empire.

**B. Hazara Rama Temple (B → 2)**

- This small but elegant temple was the private temple of the royal family at Vijayanagara.
- Its walls are covered with intricate bas-reliefs narrating the Ramayana — from Rama’s birth to the coronation (Pattabhisheka).
- The temple is called “Hazara Rama” (thousand Ramas) because of the numerous panels of Rama’s images.
- It is a masterpiece for understanding narrative sculpture in Vijayanagara art.

**C. Vittala Temple (C → 3)**

- The Vittala (or Vitthala) Temple, dedicated to a form of Lord Vishnu, is the grandest architectural achievement at Hampi.

**It is renowned for two unique features:**

- **Stone Chariot:** An iconic symbol of Hampi, carved entirely out of granite to resemble a temple chariot.
- **Musical Pillars:** 56 “SaReGaMa” pillars in the Ranga Mantapa which, when tapped, produce musical notes — a unique example of temple acoustics.
- Portuguese traveler Domingo Paes was astonished by its splendour.

**D. Krishna Temple (D → 4)**

- Built by Krishnadevaraya in 1513 CE after his successful Odisha campaign.
- It was constructed to house the image of Balakrishna (infant Krishna), brought from Udayagiri in Odisha.
- The temple is noted for its beautiful carvings and pillars; the carvings of elephants and yali (mythical creatures) are particularly famous.
- This temple reflects the Vijayanagara tradition of rulers celebrating military victories through temple-building and endowments.

**Correct Code:** A-1, B-2, C-3, D-4

**149.(b)**

- Definition of a “disaster” in the National Disaster Management Act, 2005 states that a disaster means a “catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man-made causes.
- The National Disaster Management Act, 2005 designates the Ministry of Home Affairs as the nodal ministry for steering the overall national disaster management.
- The National Disaster Management Act, 2005, does indeed lay down various civil and criminal liabilities for violating its provisions.



**The NEC is composed of senior officials from various ministries and agencies involved in disaster management, including:**

1. Home Secretary (Chairperson)
2. Secretaries from key ministries like Defense, Finance, Health, Agriculture, Water Resources, etc.
3. Representatives from relevant agencies like the National Disaster Response Force (NDRF), Indian Meteorological Department, Geological Survey of India (GSI), etc.
4. The Chief of Integrated Defense Staff of the Chiefs of Staff Committee, ex-officio, is also a member.

**150.(a)**

**Statement 1 – Correct.** The Ashta Pradhan Mandal (Council of Eight) was Shivaji's advisory body, consisting of civil and military heads: Peshwa (Prime Minister), Amatya (Finance), Sachiv (Secretary), Mantri (Chronicles), Senapati (Military), Sumant (Foreign Affairs), Nyayadhish (Justice), and Panditrao (Ecclesiastical).

**Statement 2 – Incorrect.** Shivaji did not abolish jagirdari entirely; instead, he minimized its use. His land revenue system was based on Khat system (measuring land and fixing revenue) – it was closer to Ryotwari but not a full-fledged Ryotwari system.

**Statement 3 – Correct.** Shivaji established a strong navy to protect the Konkan coast, building naval bases at Sindhudurg, Vijaydurg, and Kolaba. This made the Marathas a rare power in medieval India with naval strength.

**Statement 4 – Incorrect.** Shivaji did not prohibit watans. In fact, the system of hereditary offices and rights (watandari) continued, though he tried to regulate and reduce their misuse.

Thus, only statements 1 and 3 are correct.

