

# **DAILY MCQs COMPILATION** *with* **EXPLANATIONS**

**JANUARY, 2025**

**NEXT IAS**

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# HISTORY, ART & CULTURE

1. What historical event led to the construction of Mubarak Manzil Palace?
  - (a) Akbar's ascension to the throne
  - (b) Victory at the Battle of Samugarh
  - (c) Treaty with the British East India Company
  - (d) Coronation of Shah Jahan
2. She was the first queen in India to fight against British rule and is also credited with using the suicide attack strategy for the first time in history. She was proficient in French, English, and Urdu.

Which of the following personalities has been described above?

- (a) Rani Lakshmibai
  - (b) Rani Durgavati
  - (c) Rani Chennamma
  - (d) Rani Velu Nachiyar
3. Bavan Kashi Subodh Ratnakar (The Ocean of Pure Gems) is the literary work of which of the following personalities?
  - (a) Mahadevi Verma
  - (b) Savitribai Phule
  - (c) Sarojini Naidu
  - (d) Jyotirao Phule
4. Consider the following pairs:

**Char Dham locations**

1. Yamunotri
2. Gangotri
3. Kedarnath
4. Badrinath

**Deities or features**

- Lord Shiva and one of the twelve Jyotirlingas  
Goddess Ganga  
Lord Vishnu  
Source of the Yamuna River

How many of the above pairs are correctly matched?

- (a) Only one pair
  - (b) Only two pairs
  - (c) Only three pairs
  - (d) All of the pairs
5. With reference to Guru Gobind Singh, which of the following statements is/are correct?
  1. He founded the Khalsa Panth in 1699 to create a spiritual and martial community.
  2. He compiled the Dasam Granth, a letter to Emperor Aurangzeb, which is a blend of courage and dignity.

Select the correct answer using the code given below:

- (a) 1 only
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2
6. With reference to the Konda Reddi Tribe, consider the following statements:
  1. It is a Particularly Vulnerable Tribal Group inhabiting the Godavari region of Andhra Pradesh.
  2. In 1973, the Mandal Commission set up a separate category for Primitive Tribal Groups (PTGs).

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

7. With reference to the classical languages in India, consider the following statements:

1. India has six classical languages — Tamil, Sanskrit, Telugu, Kannada, Malayalam, and Odia.
2. Tamil was the first language to be declared as the classical language in 2004.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

8. With reference to the Indus Valley Civilisation (IVC), which of the following statements is/are correct?

1. It encompassed around 2,000 sites across the territories of modern-day India, Pakistan, and Afghanistan during the Bronze Age.
2. It had a wider geographical area than the combined areas of its contemporary civilisations — Egyptian and Mesopotamian.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

9. The term “Girmit” is associated with the indentured labor system during British colonial rule. Which of the following best describes the meaning of the term “Girmit”?

- (a) A type of crop cultivated by Girmitiyas on foreign plantations  
(b) The ship used to transport Girmitiyas  
(c) A specific style of Indian cuisine developed in plantation areas  
(d) The indenture contract signed by laborers from British India

10. Etikoppaka dolls, recently seen in the news, are associated with which of the following states?

- (a) Rajasthan (b) Andhra Pradesh  
(c) Gujarat (d) Maharashtra

11. He coined the famous slogan ‘Jai Jawan-Jai Kisan’. He was posthumously awarded the Bharat Ratna, India’s highest civilian honor.

Which of the following personalities has been described above?

- (a) Jawaharlal Nehru (b) Chaudhary Charan Singh  
(c) Sardar Vallabhbhai Patel (d) Lal Bahadur Shastri

12. With reference to the Gangasagar Mela, which of the following statements is/are correct?

1. It is held in West Bengal, at the confluence of the Ganges River with the Bay of Bengal.
2. It is the second-largest religious gathering in India after the Kumbh Mela.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

13. Consider the following statements:

1. Nomadic communities are the partially nomadic and partially settled tribes, they migrate seasonally but also establish temporary settlements.

2. The tribes notified under the Criminal Tribes Act, 1871 were designated as the “de-notified” tribes post independence.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

14. He wrote Raja Yoga, and was a proponent of Vedanta.

Which of the following personalities has been described above?

- (a) Dayananda Saraswati (b) Rabindranath Tagore  
(c) Adi Shankaracharya (d) Swami Vivekananda

15. Makaravilakku festival, recently seen in the news, is an annual festival held in which of the following Indian states?

- (a) Tamil Nadu (b) Kerala  
(c) Andhra Pradesh (d) Karnataka

16. The Tirukkural, written by Thiruvalluvar, is divided into which of the following categories?

1. Aram (ethics)  
2. Porul (wealth)  
3. Ibam (love)  
(a) 1 and 2 only (b) 2 and 3 only  
(c) 1 and 3 only (d) 1, 2, and 3

17. With reference to the Tharu Community, which of the following statements is/are correct?

1. The Tharu community is an indigenous ethnic group residing in the Terai region of Nepal.  
2. The Tharu tribe was recognized as a Scheduled Tribe by the Government of India in 1967.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

18. ‘Kokborok’ is the official language of which of the following states?

- (a) Tripura (b) Sikkim  
(c) Arunachal Pradesh (d) Odisha

19. With reference to the Kuka movement, consider the following statements:

1. It was a Sikh religious movement, also known as the Namdhari Movement.  
2. Kuka Hira Singh and Lehna Singh founded the Namdhari Sect.  
3. The Movement was against the incidents of cow slaughter in the town.

How many of the statements given above are correct?

- (a) Only one (b) Only two  
(c) All three (d) None

20. Consider the following statements regarding Kalaripayattu:

1. Kalaripayattu is an ancient martial art that originated in Tamil Nadu.  
2. It is believed to have mythological connections with Lord Parasurama, an incarnation of Lord Vishnu.  
3. Kalaripayattu reached its peak popularity during the 14th to 16th centuries.

Which of the statements given above are correct?

- (a) 1 and 2 only (b) 2 and 3 only  
(c) 1 and 3 only (d) 1, 2, and 3

21. He was a prominent follower of Mahatma Gandhi and was also known as 'Frontier Gandhi'. He founded the Red Shirt movement and is also a recipient of the Bharat Ratna, India's highest honor.

Which of the following personalities has been described above?

- (a) Subhas Chandra Bose  
(b) Khan Abdul Ghaffar Khan  
(c) Sardar Vallabhbhai Patel  
(d) Maulana Abul Kalam Azad

22. With reference to the Praja Mandal Movement, consider the following statements:

1. The movement was against the British Raj to bring a responsible government.
2. The movement was led by Sardar Sewa Singh Thikriwala in Punjab.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

23. With reference to the Konark Temple, which of the following statements is/are correct?

1. The temple was constructed during the reign of king Narasimhadeva I of the Eastern Ganga dynasty.
2. The temple is also known as the White Pagoda.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

24. Which of the following temples was consecrated by Narayana Guru to challenge caste-based temple restrictions?

- (a) Aruvippuram Shiva Temple (b) Guruvayur Temple  
(c) Vaikom Mahadeva Temple (d) Brihadeshwara Temple

25. With reference to the Brihadeshwara Temple, which of the following statements is/are correct?

1. The temple was built by Rajendra Chola I.
2. The temple is a UNESCO World Heritage Site.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

26. He was elected as the President of the Indian National Congress twice, in 1938 and 1939. He formed the Forward Bloc, a political faction committed to radical change.

Which among the following personalities have been described above?

- (a) Netaji Subhash Chandra Bose (b) Dr. Bhimrao Ambedkar  
(c) Sardar Vallabhbhai Patel (d) Dadabhai Naoroji

- 27.** The Irular community, often in the news, is primarily known for which of the following activities?
- Traditional weaving and textile production
  - Snake catching and venom extraction
  - Farming and irrigation innovations
  - Fisherfolk and coastal conservation
- 28.** The Mannan community, recently seen in the news, is mainly found in which of the following states?
- Kerala
  - Maharashtra
  - Tamil Nadu
  - Andhra Pradesh
- 29.** Parakram Diwas is observed annually to commemorate the birth anniversary of which of the following personalities?
- Subhas Chandra Bose
  - Bhagat Singh
  - Sardar Vallabhbhai Patel
  - Dr. B.R. Ambedkar
- 30.** He founded the Tata Institute of Fundamental Research (TIFR), served as the first Chairman of the Atomic Energy Commission of India, and is known as the 'father of India's nuclear program.' Which of the following personalities has been described above?
- Sir C.V. Raman
  - Dr. Homi Jehangir Bhabha
  - Dr. Vikram Sarabhai
  - Dr. APJ Abdul Kalam
- 31.** Consider the following statements regarding Etikoppaka dolls:
- Etikoppaka dolls are made from a softwood called 'Ankudu Karra'.
  - The crafting technique of Etikoppaka dolls, known as 'Tharini,' received the Geographical Indication (GI) tag in 2017.
- Which of the above statements is/are correct?
- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2
- 32.** Lezim dance, recently seen in the news, is a folk dance of which of the following Indian States?
- Maharashtra
  - Rajasthan
  - Karnataka
  - Assam
- 33.** He wrote biographies on Mazzini, Garibaldi, Shivaji, and Swami Dayanand and authored "Unhappy India". Which of the following personalities has been described above?
- Bal Gangadhar Tilak
  - Lala Lajpat Rai
  - Bipin Chandra Pal
  - Vinayak Damodar Savarkar
- 34.** Consider the following statements regarding the Padma Awards:
- The Padma Awards were instituted in 1954.
  - They are conferred by the Prime Minister of India.
  - Padma Shri is the highest among the three categories of Padma Awards.
- Which of the statements given above is/are correct?
- 1 only
  - 1 and 2 only
  - 2 and 3 only
  - 1, 2, and 3

35. **Mundaka Upanishad** is a part of which of the following vedas?
- (a) Rigveda (b) Yajurveda  
(c) Samaveda (d) Atharvaveda
36. The Treaty of Lausanne (1924) is significant in Kurdish history because:
- (a) It established an independent Kurdish nation.  
(b) It divided Kurdish-populated areas among different Middle Eastern states.  
(c) It granted the Kurds autonomy within Iraq.  
(d) It was the first treaty signed between the Kurds and the Ottoman Empire.
37. Consider the following statements regarding Mahatma Gandhi:
1. He presided over the 1924 Belgaum Congress session, his only term as Congress president.
  2. His death anniversary is observed as Martyrs' Day.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
38. Muhammad Iqbal's famous work *Saare Jahan Se Achha* was adopted as a symbol of unity during India's independence struggle. He was given the title 'Poet Laureate of Asia' by which among the following?
- (a) Mahatma Gandhi (b) Jawaharlal Nehru  
(c) Sarojini Naidu (d) Rabindranath Tagore

### EXPLANATIONS

1. (b)

The Battle of Samugarh (1658) was a conflict in the Mughal succession war between Emperor Shah Jahan's sons. Aurangzeb emerged victorious, defeating his elder brother Dara Shikoh. To commemorate this significant triumph, Aurangzeb built Mubarak Manzil Palace, later known as Aurangzeb's Haveli. This palace symbolized his authority and marked a critical moment in his path to becoming the Mughal emperor.

2. (d)

**Context:** Prime Minister Narendra Modi paid tribute to **Rani Velu Nachiyar** on her birth anniversary.

**Rani Velu Nachiyar**

- Born in 1730, Rani Velu Nachiyar was the **first queen in India to fight against British rule.**
  - Known as "Veeramangai" (brave woman) by the Tamils.
- **Key Events in Her Life:** After her husband was assassinated, she spent eight years under the protection of Hyder Ali.
  - She prepared her army and planned to confront the British with her allies.
  - **Defeating the British:** In 1780, she defeated the British with the help of her army and allies, regaining her empire.
  - Her victory is considered an important chapter in India's freedom struggle.
- **Innovative Strategy:** Rani Velu Nachiyar is credited with using the suicide attack strategy for the first time in history.
- **Language Proficiency:** She was proficient in French, English, and Urdu.

- **Legacy:** Rani Velu Nachiyar is a symbol of bravery, empowerment, and the courage to fight against injustice. Her life continues to inspire generations.

### 3. (b)

**Context:** Prime Minister Narendra Modi paid tribute to Savitribai Phule, a pioneer in the field of education and social reform, on her birth anniversary.

#### About the Savitribai Phule

- **Birth:** On January 3, 1831, in Naigaon village of Maharashtra's Satara district.
- **Marriage:** In 1840, at the age of nine, she married **Jyotirao Phule**, who was just 13 at the time.
- **Education:** Formally recognised as **India's first female teacher**. In 1848, the couple established the **country's first school for girls** in Bhidewada, Pune.
- **Balhatya Pratibandhak Griha:** In **1863**, Jyotiba Phule and Savitribai began Balhatya Pratibandhak Griha, **India's first home dedicated to prohibiting infanticide**.
  - She also advocated inter-caste marriages, widow remarriage, and eradication of child marriage, sati, and dowry systems, among other social issues.
- In 1873, the Phules set up the **Satyashodhak Samaj** ('Truth-seekers' society'), a platform open to all, irrespective of their caste, religion or class hierarchies, with the sole aim of bringing social equity.
- **Literary works:** Kavya Phule (Poetry's Blossoms) in 1854 and Bavan Kashi Subodh Ratnakar (The Ocean of Pure Gems), in 1892.

### 4. (a)

**Context:** The Uttarakhand government inaugurated the winter Char Dham circuit to boost pilgrimage tourism in winter.

#### What is Char Dham?

- **Four sacred places** namely, **Gangotri, Yamunotri, Kedarnath and Badrinath** are collectively known as Char Dham.
- **Yamunotri:** Located in **Uttarkashi** district, the Yamunotri temple is situated in a narrow gorge near the source of the Yamuna River.
- **Gangotri:** Also in **Uttarkashi** district, Gangotri is dedicated to Goddess Ganga, revered as the most sacred river in India.
- **Kedarnath:** Situated in **Rudraprayag** district, Kedarnath is dedicated to Lord Shiva and is one of the twelve Jyotirlingas.
- **Badrinath:** Located in **Chamoli** district, Badrinath houses the Badrinarayan Temple, dedicated to Lord Vishnu.

#### Winter Char Dham

- **Due to heavy snowfall**, the Char Dham sites become inaccessible in winter and the presiding deities of these shrines are relocated to lower-altitude, popularly known as '**Winter Char Dham**'.
- The sites are as;
  - **Yamunotri** has its winter seat at **Kharsali** in Uttarkashi.
  - **Gangotri** is relocated to **Mukhba** in Uttarkashi during the winter.
  - **Badrinath** finds its winter abode at Pandukeshwar in **Chamoli**.
  - **Kedarnath** shifts to the Omkareshwar Temple in **Ukhimath**, Rudraprayag.

## 5. (a)

**Context**

- The 358th birth anniversary of Guru Gobind Singh is being celebrated across India On 6 January.

**About**

- **Guru Gobind Singh** was born on **Paush Shukla Saptami in 1666** in Patna Sahib, Bihar.
- He was the **son of Guru Tegh Bahadur**, the ninth Sikh Guru, who was martyred by Mughal Emperor Aurangzeb.
  - He became the **tenth** and final Guru of the Sikhs at the age of 9 after his father's death.
- He Passed away in **1708** at the age of 41 following a battle with Mughal forces.

**Role in Shaping Sikhism and Its Principles**

- **He founded the Khalsa Panth in 1699** to create a spiritual and martial community.
  - **The Khalsa identity** is marked by five articles of faith: Kesh, Kara, Kanga, Kachera, and Kirpan.
- **Sikh Literature:** He was a poet, philosopher, and spiritual leader.
  - He composed the **Dasam Granth**, a collection of hymns and poetry which covers topics of spirituality, ethics, and warfare.
  - He also compiled the **Zafarnama**, a **letter to Emperor Aurangzeb**, which is a unique blend of courage, philosophy, and dignity.

## 6. (a)

**Statement 1 is correct:** The Konda Reddi Tribe is a **Particularly Vulnerable Tribal Group** inhabiting the Papikonda hill range in the **Godavari region of Andhra Pradesh**.

- Their mother tongue is **Telugu**.
- Konda Reddies have their own institution of social control called '**Kula Panchayat**'.
- Each village has a traditional headman called '**Pedda Kapu**'.

**Statement 2 is not correct:** In 1973, the **Dhebar Commission** set up a separate category for **Primitive Tribal Groups (PTGs)**.

- **In 1975**, the Union identified 52 tribal groups as PTGs.
- **In 1993**, 23 more groups were added to the list. Later, in 2006, these groups were named PVTGs.
- PVTGs are a **more vulnerable group** among tribal groups in India.
  - These groups have primitive traits, geographical isolation, low literacy, zero to negative population growth rate and backwardness.
  - They are largely dependent upon hunting for food and a pre-agriculture level of technology.

## 7. (b)

**Statement 1 is not correct:** India had **six classical languages** — Tamil, Sanskrit, Telugu, Kannada, Malayalam, and Odia.

- Recently, the Union Cabinet has granted classical language status to **Marathi, Pali, Prakrit, Assamese, and Bengali**, increasing the classical languages to **eleven**.

**Statement 2 is correct:** Tamil was declared a classical language in **2004**, Sanskrit in **2005**, Kannada in **2008**, Telugu in **2008**, Malayalam in **2013**, and Odia in **2014**.

- All the Classical Languages are listed in the **Eighth Schedule of the Constitution**.

## 8. (c)

**Context:** Tamil Nadu Chief Minister M.K. Stalin has announced a \$1 million prize for experts or organisations that succeed in deciphering the scripts of the Indus Valley Civilisation (IVC) for everyone to understand.

**About**

- The IVC, also called the Harappan Civilisation, spanned 2,000 sites across 1.5 million sq. km. in the territories of modern-day India, Pakistan, and Afghanistan during the Bronze Age (3000-1500 BCE).
- It had a wider geographical area than the combined areas of its contemporary civilisations — Egyptian and Mesopotamian.

**Indus Valley Scripts**

- The script consists of pictorial symbols, with over 400 distinct signs identified. Symbols include representations of humans, animals, plants, and geometric shapes.
- However, for over 100 years, archaeologists, epigraphists, linguists, historians, and scientists have made over 100 documented attempts to decipher the Harappan writing system, but success remains elusive.

**9. (d)****Context**

- PM Modi inaugurated the 18th Pravasi Bharatiya Divas convention in Odisha.

**Who are Girmityas?**

- The Girmityas were indentured laborers from British India who were transported to work on plantations in the **19th and early 20th centuries**.
- Girmityas were sent to countries like Fiji, Mauritius, Seychelles, Réunion, South Africa, Trinidad and Tobago, British Guiana (now Guyana), Suriname, Malaysia, and Kenya.
- The laborers signed a **contract called a Girmity**, which bound them to work for a single employer at a fixed wage for a fixed period of **three–five years**.

**10. (b)****Context**

- To mark the 75 years of Republic day the invitation card for the “At home” reception held at Rashtrapati Bhavan invitees will receive a specially curated box of craft work from the five southern States.

**About**

- The craft products in the invitation box are all made in the southern States, have **GI (geographical indicator) tags**, and are drawn from the **“One District One Product”** scheme.
- The elements of the invitation include;
  - **A box made of bamboo weave with Kalamkari paintings**, an ancient art form using natural dyes, on it done by **Nimmalakunta artisans**,
  - **Etikopakka dolls from Andhra Pradesh**, made using the age-old Turned Wood Lacquerware, along with a bookmark made of **screw pine leaves** woven by artistes from **Kerala**.
  - **An Ikat-Pochampalli cover** (Ikat involves a complex dyeing process where yarns are resist-dyed before weaving, resulting in geometric patterns),
  - **A fridge magnet depicting Mysore’s Ganjifa art**, which involves intricate hand-painting with mythological themes, linked with the Dashavatara (ten incarnations of Vishnu),
  - **A handmade pouch of Kanjeevaram silk** from Tamil Nadu.

**11. (d)**

**Context:** January 11 marks the death anniversary of Lal Bahadur Shastri, a freedom fighter and former Prime Minister of India.

**Lal Bahadur Shastri (October 02, 1904 - January 11, 1966)**

- He joined Kashi VidyaPeeth, where he engaged with nationalists and intellectuals; earned the title “Shastri.”
- He participated fervently in the Salt March in 1930 and led several campaigns against British rule.
- Served as Prime Minister of India (1964-1966).
- He coined the famous slogan ‘Jai Jawan-Jai Kisan’.
- He was posthumously awarded the **Bharat Ratna**, India’s highest civilian honor, in 1966.

**12. (c)****Context**

- The organisers of the Gangasagar Mela have announced several new initiatives, including a certificate for pilgrims participating in the annual pilgrimage.

**About**

- The **Gangasagar Mela**, also known as the **Gangasagar Yatra**, is an annual Hindu religious festival held on **Sagar Island, West Bengal**, at the confluence of the Ganges River with the Bay of Bengal.
  - **Rituals** include the **Sacred bath** and **Deepdan** (offering of lamps).
- It is celebrated during **Makar Sankranti**, it is the **second-largest** religious gathering in India after the **Kumbh Mela**.
  - **Makar Sankranti** marks the Sun’s transition into Capricorn (Makara Rashi) and is considered highly auspicious in Hinduism.

**13. (b)**

**Statement 1 is not correct: Nomadic communities:** Communities that move frequently instead of settling in one place. They are often engaged in traditional occupations like herding, trading, or crafts.

- **Semi-nomadic Tribes:** Partially nomadic and partially settled, migrating seasonally but also establishing temporary settlements.

**Statement 2 is correct: Denotified tribes (DNTs):** Formerly classified as “**criminal tribes**” under the **Criminal Tribes Act, 1871** during British rule. The Act was repealed in 1952, and these communities were “**de-notified**.”

- While most DNTs are spread across the Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Classes (OBC) categories, **some DNTs are not covered in any of the SC, ST or OBC categories.**

**14. (d)**

Swami Vivekananda (1863–1902) was an Indian **Hindu monk, spiritual leader, and philosopher.**

- He was deeply influenced by his spiritual teacher, **Ramakrishna Paramahansa.**
- **Major Literary Work:**
  - **Raja Yoga (1896):** It focuses on meditation, concentration, and mental discipline as paths to self-realization.
  - **Jnana Yoga (1899):** Emphasizing self-inquiry and the realization of one’s true nature to attain liberation.

- **Karma Yoga (1896):** It discusses the philosophy of selfless action, stressing the importance of performing duties without attachment to the results.
- He was a proponent of **Vedanta**, a school of philosophy derived from the **Vedas**, and emphasized the idea of universal brotherhood and self-realization.
- His famous speech at the **Parliament of the World's Religions in Chicago** in **1893**, where he began with the greeting "Sisters and Brothers of America," is still widely remembered for its message of **religious tolerance, unity, and peace**.
- He founded the **Ramakrishna Mission in 1897**, an organization dedicated to social service, education, and the spread of Vedantic philosophy.

15. (b)

**In News:** The Travancore Devaswom Board is expecting around 1.5 lakh pilgrims at the Sannidhanam for the **Makaravilakku festival**.

**About Makaravilakku festival**

- It is an **annual festival** held at the Sabarimala temple in Kerala, India, dedicated to **Lord Ayyappa**.
- It coincides with **Makara Sankranti**, celebrated on January 14 this year.
- It marks the end of the two-month pilgrimage season (mid-November to Makara Sankranti).
- **Religious Significance:** The festival symbolizes Lord Ayyappa's manifestation and divine light (Makara Jyothi).
  - It represents faith, devotion, and the triumph of Lord Ayyappa over evil forces.

16. (d)

**In News:** 15th January is celebrated as Thiruvalluvar Day.

**About Thiruvalluvar**

- Thiruvalluvar was a renowned Tamil philosopher, poet, and thinker, believed to have lived in Mylapore, Chennai. His profound wisdom has made an indelible mark on Tamil literature and Indian thought.
- The Tirukkural addresses universal themes such as ethics, politics, economics, and love, showcasing his deep understanding of human nature and societal principles.
- Tirukkural: His work, "Tirukkural," is a collection of 1330 couplets offering profound insights into various aspects of life, including ethics (Aram), wealth (Porul), and love (Inbam).

17. (c)

**Context**

- The Tharu Cultural Museum in Morang district is organizing a weeklong Maghi Parva (Maghi Festival).

**Tharu community**

- The Tharu community is an **indigenous ethnic group** primarily residing in the **Terai region of Nepal** and the adjoining areas of **Uttar Pradesh, Bihar, and Uttarakhand** in India.
- They speak a language called **Tharu or Tharuhati**, which is part of the **Indo-Aryan language group**.
- The Tharu tribe was recognized as a **Scheduled Tribe** by the Government of India in **1967**.

18. (a)

**Context:** **Kokborok day** is celebrated by the Indigenous Tripuri people of the state of Tripura on **19th January each year**.

**About**

- **Significance:** It commemorates the rich cultural heritage, history, and linguistic contributions of the Kokborok language, which is the mother tongue of the Tripuri people.
- It was first recognised as an **official state language of Tripura in 1979.**

**19. (b)**

**Statement 1 is correct:** The **Kuka movement**, also known as the **Namdhari movement**, was a **Sikh religious movement** that emerged in the 19th century.

- The Namdharis were also known as “Kukas” because of their **trademark style of reciting the “Gurbani”** (Sayings/Teachings of the Guru).
- This style was in a **high-pitched voice** called “**Kook**” in Punjabi.

**Statement 2 is not correct: Leaders:** Satguru Ram Singh, Kuka Hira Singh and Lehna Singh.

- **Satguru Ram Singh:** He **founded the Namdhari Sect** on 12 April 1857 at Bhaini Sahib.
- He became a **secular chief of Kukas.**

**Statement 3 is correct: Immediate Reason:** On January 13, 1872, Namdharis led by Satguru Ram Singh, Kuka Hira Singh and Lehna Singh reached Malerkotla following an incident of **cow slaughter in the town.**

- The Namdharis had long been agitating for a **ban on cow slaughter.**

**20. (b)**

**In News:** Kalaripayattu has been relegated to the demonstration section for the **38th National Games** in Uttarakhand, scheduled to begin on January 28.

**Kalaripayattu**

- It is an ancient **martial art originating from Kerala**, India, but practiced worldwide.
  - The term “Kalari” in Malayalam refers to a traditional gymnasium where this martial art, known as Payattu, is taught.
- **Mythological Belief:** Some believe Kalaripayattu was introduced by **Lord Parasurama**, the sixth incarnation of **Lord Vishnu**, after reclaiming Kerala from the sea.
  - However, historians date its origin between 200 BCE and 600 CE, with its peak popularity between the 14th and 16th centuries.

**21. (b)**

**Context:** 20th January marks the death anniversary of Khan Abdul Ghaffar Khan.

**Khan Abdul Ghaffar Khan (1890-1988)**

- Born on February 6th, he was also called the **Frontier Gandhi.**
- As a young boy, he left his high school final exams, aspiring to join ‘The Guides’, a corps composed of Sikhs and Pathans.
- He met Mahatma Gandhi and entered politics in 1919 during the agitation over the Rowlatt Act.
- He founded the **Red Shirt movement** (Khudai Khitmatgar/ Servant of God) among the Pashtuns.
- Received **Bharat Ratna**, the highest Indian honour in 1987.

**22. (b)**

**Statement 1 is not correct: Praja Mandal Movement** was a **self-rule movement** against the **rulers of Punjab’s erstwhile princely states.**

- **Aim:** To protect the civil liberties of the masses, protest against oppressive taxes, seek reforms in the peasants' conditions, open educational institutions, and have a responsible government.

**Statement 2 is correct:** January 20 marks the death anniversary of **Sewa Singh Thikriwala**, who spearheaded the **Praja Mandal Movement in Punjab**.

- **Areas:** The movement was active in the Patiala, Nabha, Jind, Malerkotla and Faridkot princely states initially.

### 23. (a)

#### Context

- The President of Singapore, Tharman Shanmugaratnam visited the Sun Temple at Konark in Odisha's Puri district.

#### Konark Sun Temple

- **Deity:** Konark Sun Temple is a 13th-century CE temple dedicated to the Hindu Sun God Surya.
- **History:** The temple was constructed during the reign of king **Narasimhadeva I** of the **Eastern Ganga dynasty** about **1250 CE**.
- **Cultural Significance:** It was declared a **UNESCO World Heritage Site in 1984**. It remains a major pilgrimage site for Hindus, who gather here every year for the **Chandrabhaga Mela around the month of February**.
- **Other Names:** This temple was called the **"Black Pagoda"** in European sailor accounts because it looked like a great tiered tower which appeared black.
  - Similarly, the Jagannath Temple in Puri was called the **"White Pagoda"**.
- **Architecture:** The temple was designed in the shape of a huge **chariot** drawn by **7 horses** on **12 pairs (total 24)** of gorgeously **decorated wheels** at its base.

### 24. (a)

#### Context

- **The Narayana Guru Digital Research Resource Platform (NGDRRP)**, a comprehensive digital archive launched in 2023, is set to go fully online by May 2025.

#### Major Contributions

- **Temple Entry Movement:** Narayana Guru spearheaded efforts to ensure temple access for marginalized communities.
  - He consecrated the **Aruvippuram Shiva Temple in 1888**, challenging the orthodox norms that restricted temple entry based on caste.
- **Promotion of Social Equality:** He actively fought against untouchability, caste discrimination, and social evils, institutionalizing reforms through the **SNDP Yogam (Sree Narayana Dharma Paripalana Yogam)**.
- **Literary Contributions:** Texts like **Atmopadesa Satakam** and **Daiva Dasakam** reflect his philosophical insights and practical guidance for spiritual and ethical living.

### 25. (b)

**Context:** Historian Anirudh Kanisetti's book, **Lords of Earth and Sea: A History of the Chola Empire**, sheds light on facets of the Chola empire.

#### Contributions to Art and Architecture

- **Temple architecture:** The **Brihadeshwara Temple** (Thanjavur) is an architectural marvel built by Rajaraja Chola I and is a **UNESCO World Heritage Site**.
  - The **Gangaikonda Cholapuram Temple** and the Airavatesvara Temple are other iconic examples.

- **Bronze Sculpture:** The Cholas excelled in bronze casting, particularly the creation of **Nataraja sculptures**, which depict Lord Shiva as the cosmic dancer.

#### 26. (a)

Netaji Subhash Chandra Bose was a prominent Indian nationalist and leader who played a crucial role in the Indian independence movement.

- He was the **first person** to call Mahatma Gandhi “**Father of the Nation**”, in his address from Singapore.
- **Indian National Congress:**
  - He was elected as the President of the Indian National Congress twice, in **1938 and 1939**.
  - Ideological differences with Mahatma Gandhi led to his resignation and the formation of the **Forward Bloc**, a political faction committed to radical change.

#### 27. (b)

**Context:** Despite being the largest producer and consumer of antivenoms, India accounts for almost 50% of global snakebite deaths.

##### Antivenoms

- Antivenoms are purified antibodies designed to neutralize venoms or specific venom components.
- They are produced using antibodies generated by animals that have been injected with controlled doses of venom.

##### Irular Community

- The Irular people are **skilled snake-catchers** and can safely extract venom from snakes in controlled environments.
- Their expertise ensures a steady supply of high-quality venom for antivenom production in India.

#### 28. (a)

##### Context:

Raman Rajamannan, the head of the Mannan community and the only tribal king in Kerala, will participate in the Republic Day parade in Delhi.

##### About Mannan community

- It is mainly settled in the buffer zone area of the **Idukki Wildlife Sanctuary** at Kozhimala (Kerala), the hub of the tribe with 48 settlements ruled by a king.
- They maintain their unique customs, rituals, and a strong reverence for their traditional kingship.
- Mannankoothu is a unique tribal art form performed by the Mannan community.
  - It narrates the story from the classic tamil poem Chilapathikaaram.

#### 29. (a)

**Context:** Parakram Diwas is observed annually on 23rd January to commemorate the birth anniversary of **Netaji Subhash Chandra Bose**.

##### About

- The first Parakram Diwas was held at **Victoria Memorial in Kolkata**.
  - The year 2022 saw the unveiling of a hologram statue of Netaji at India Gate, New Delhi;
  - and in 2023, 21 unnamed islands in the Andaman and Nicobar archipelago were named after the 21 Param Vir Chakra Awardees.

**Netaji Subhash Chandra Bose**

- He was a prominent Indian nationalist and leader who played a crucial role in the Indian independence movement.
- He was the **first person** to call Mahatma Gandhi “**Father of the Nation**”, in his address from Singapore.

**30. (b)**

**Context:** January 24 marks the death anniversary of Dr. Homi Jehangir Bhabha, the ‘father of India’s nuclear program.’

**Dr. Homi Jehangir Bhabha (1909 - 1966)**

- He was one of the first Indians to receive the Isaac Newton Studentship in 1933 after publishing his first scientific paper, “The Absorption of Cosmic Radiation”.
- He was the first Chairman of the Atomic Energy Commission of India.
- Founded and directed two of the institutions that would bring India into the nuclear age: the Tata Institute of Fundamental Research (TIFR) and the Atomic Energy Establishment, Trombay, later renamed the Bhabha Atomic Research Centre (BARC) in his honor.
- Awarded Padma Bhushan in 1954, the third-highest civilian award in India. He was also nominated for the Nobel Prize for Physics in 1951 and 1953–1956.

**31. (a)**

**In News:** The Republic Day celebrations at Kartavyapath in Delhi showcased Andhra Pradesh’s **Etikoppaka dolls**.

**About Etikoppaka Dolls**

- **Origin:** They are handcrafted in the Etikoppaka village of Andhra Pradesh, India.
- **Material:** These toys are primarily made from a softwood called ‘Ankudu Karra’ (also known as Ivory Wood).
- **Crafting Process:** The process involves meticulous carving, shaping, and painting.
- **Decorations:** Natural dyes extracted from plants, seeds, and leaves are used to paint the toys, resulting in a unique and eco-friendly finish.
- **Variety:** Etikoppaka toys encompass a wide range of creations, including animals, birds, dolls, and decorative items.
- **GI Tag:** The dolls received the GI tag in 2017, not the crafting technique ‘Tharini.’

**32. (a)**

**Lezim or lazium** is a folk dance form, from the **state of Maharashtra**.

- It gets its name after a **musical instrument- a unique wooden stick, with jingling cymbals** attached to it that the dancers carry while performing the dance.
  - Lizem was earlier traditionally used as an instrument in all folk dances but today it is **primarily used in Ganesha procession**.



- Traditionally, it was performed as a **sport by Maratha warriors** to build their **muscles and fitness drills in Maharashtra**.
  - Lezim folk dance originated in the year **1986**, when some of the communities started performing it.

**33. (b)**

India is remembering **Lala Lajpat Rai** on his 160th Birth Anniversary.

- Lala Lajpat Rai, born on January 28, 1865, in Dhudike, Punjab, was a prominent freedom fighter and social reformer. He was part of the “Lal Bal Pal” trio alongside Bal Gangadhar Tilak and Bipin Chandra Pal.
- He supported the Swadeshi movement during the anti-partition of Bengal. He was elected as the President of the Indian National Congress at the 1920 Calcutta session.
- He led a protest against the Simon Commission in 1928, where he was assaulted by British police, leading to his death.
- He supported the Shuddhi movement and founded Punjab National Bank, Lakshmi Insurance Company, and the Servants of the People Society. He Wrote biographies on Mazzini, Garibaldi, Shivaji, and Swami Dayanand and Authored “Unhappy India”.

**34. (a)**

**In News:** Libia Lobo Sardesai, a 100-year-old freedom fighter, recently honored with the Padma Shri for her pivotal role in Goa’s liberation movement.

**Statement 1 is correct:** The Padma Awards were indeed instituted in the year 1954.

**Statement 2 is not correct:** The Padma Awards are conferred by the President of India, not the Prime Minister.

**Statement 3 is not correct:** Padma Vibhushan is the highest among the three categories of Padma Awards, followed by Padma Bhushan and then Padma Shri.

**35.(d)**

**Mundaka Upanishad** is one of the ten principal Upanishads on which Sri Shankaracharya wrote commentary and is a **part of the Atharvaveda**.

- The name Mundaka literally means **‘head’ of the body**.
- The text is structured in **three Mundakas or “chapters,”** and it consists of dialogues between the **sage Angiras and his disciple Shaunak**.
  - The philosophical text explores the **nature of ultimate reality (Brahman)** and the relationship between the **individual soul (Atman) and the universal soul (Brahman)**.
- The central theme** of the Mundaka Upanishad revolves around the pursuit of knowledge that leads to liberation (moksha) and the distinction between higher and lower knowledge.

**36. (b)**

**In News:** India has sent humanitarian assistance to support residents of the Kurdistan region in Iraq.

The Kurds are one of the largest stateless ethnic groups in the world, with a population of around 30-40 million spread across Turkey, Iraq, Iran, Syria, and Armenia. They are predominantly Muslim (Sunni & Shia), with some Yazidis and Christians. The Treaty of Lausanne (1924) superseded the Treaty of Sèvres (1920), leading to the division of Kurdish lands among Turkey, Iraq, Iran, and Syria, preventing the formation of an independent Kurdistan.

**37. (c)**

**Context:** Prime Minister Narendra Modi paid homage to **Mahatma Gandhi** on his death anniversary.

**Martyr Day**

- **Mahatma Gandhi** is revered as the **Father of the Nation** and he was the architect of **India's freedom struggle**.
- He was the most prominent face of India's freedom movement.
- He was assassinated on January 30, 1948 by Nathuram Godse.
- The day has been observed as **Martyrs' Day**, also known as '**Shaheed Diwas**' or '**Sarvodaya Day**,' to honour him and countless others who sacrificed their lives for India's freedom.

**Do you Know?**

- Mahatma Gandhi presided over the **1924 Belgaum Congress session**, which was the only time he served as the Congress president.

**38. (c)**

**Context:** The **Beating Retreat Ceremony** at Vijay Chowk concluded with **Muhammad Iqbal's 'Saare Jahan Se Achha'**.

**Muhammad Iqbal**

- He is also known as **Allama Iqbal (a title given to Islamic scholars)**.
- Born in Sialkot, he was an **influential philosopher, poet, and politician**.
- He studied in Europe and later became a prominent figure in **Indian and Muslim philosophy**.
  - He is regarded as the ideological father of Pakistan, his work gained prominence in both India and Pakistan.
- **Sarojini Naidu** had called Iqbal the '**poet laureate of Asia**'.
- **Literary works** : His work, particularly '**Saare Jahan Se Achha**', was adopted as a symbol of unity during India's independence struggle.
  - He is awarded a knighthood for works like **Bang-e-Dara and Rumuz-e-Bekhudi**.
  - **Javidnama** is a spiritual journey under the guidance of Rumi.
  - '**Lab Pe Aati Hai Dua**' continues to be popular in schools.

# ECONOMY

1. With reference to the 'Financial Stability and Development Council (FSDC)', consider the following statements:

1. It is an umbrella group of regulators which gives an overview of the health of India's financial system.
2. It is chaired by the Governor of Reserve Bank of India (RBI).

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

2. With reference to the 'Green Banks', consider the following statements:

1. These are public, quasi-public, or non-profit financing entities.
2. They aim to bridge the gap between the high costs of green projects and the need for affordable financing.
3. They offer lower interest rates and longer loan terms in comparison to traditional commercial banks

How many of the above statements is/are correct?

- |               |                       |
|---------------|-----------------------|
| (a) One only  | (b) Two only          |
| (c) All three | (d) None of the above |

3. What is the primary objective of updating the Wholesale Price Index (WPI) in India?

- (a) To focus solely on agricultural goods.
- (b) To measure inflation at the consumer level.
- (c) To provide a more accurate measure of inflation at the producer level.
- (d) To align it with the Consumer Price Index (CPI).

4. Consider the following statements regarding coffee production in India:

1. India is the fifth-largest producer of Arabica coffee globally.
2. Robusta coffee accounts for the majority of India's total coffee production.
3. Coffee is traditionally grown in the rainforests of the Eastern Ghats.

Which of the statements given above is/are correct?

- |                  |                 |
|------------------|-----------------|
| (a) 1 and 2 only | (b) 2 only      |
| (c) 2 and 3 only | (d) 1, 2, and 3 |

5. Which of the following crops are covered under Minimum Support Price (MSP)?

- |           |              |
|-----------|--------------|
| 1. Cotton | 2. Wheat     |
| 3. Jute   | 4. Sugarcane |

Select the correct answer:

- |                      |                    |
|----------------------|--------------------|
| (a) 1 and 2 only     | (b) 2 and 3 only   |
| (c) 1, 2, and 3 only | (d) 1, 2, 3, and 4 |

6. Consider the following statements with reference to coffee production in India:

1. It requires a warm, wet climate and well-drained loamy soil.
2. Kerala is the largest producer of coffee in India.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

7. Consider the following pairs:

Sectors	Associated activities
1. Primary Sector	Mining & Quarrying
2. Secondary Sector	Electricity and Gas supply
3. Tertiary Sector	Defence services

How many of the above pairs are correctly matched?

- |               |              |
|---------------|--------------|
| (a) Only one  | (b) Only two |
| (c) All three | (d) None     |

8. With reference to the Organic Farming in India, consider the following statements:

1. India has the highest number of organic farmers in the world.
2. Sikkim is India's first fully organic state.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

9. With reference to the rat-hole mining, which of the following statements is/are correct?

1. In Northeast India, thick coal seams make rat-hole mining more economical than opencast mining.
2. The National Green Tribunal banned rat-hole mining in 2014 due to its hazardous nature.

Select the correct answer using the code given below:

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

10. With reference to the Credit-Deposit Ratio, consider the following statements:

1. It is used to assess a bank's liquidity by comparing its total loans to total deposit for the same period.
2. High Credit-Deposit Ratio suggests that the bank is more conservative, lending less and holding more reserves.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

11. Which of the following are potential impacts of rupee depreciation on the Indian economy?

1. It boosts exports by making Indian goods cheaper for foreign buyers.
2. It reduces the cost of servicing foreign currency debt for companies and the government.
3. It increases the cost of imports, leading to higher consumer prices and inflation.

Select the correct answer using the code given below:

- |                  |                  |
|------------------|------------------|
| (a) 1 and 2 only | (b) 1 and 3 only |
| (c) 2 and 3 only | (d) 1, 2 and 3   |

**12.** Which of the following is true about the National Turmeric Board?

1. It operates under the Ministry of Agriculture and Farmers' Welfare.
2. Its headquarters is located in Nizamabad, Telangana.
3. Palle Ganga Reddy is the first Chairperson of the board.

Choose the correct answer using the code given below

- |                  |                  |
|------------------|------------------|
| (a) 1 and 2 only | (b) 2 and 3 only |
| (c) 1 and 3 only | (d) 1, 2 and 3   |

**13.** With reference to the Trade Deficit, consider the following statements:

1. It measures only a country's total imports in goods exceeding its total exports.
2. India is a major importer of crude oil, which significantly contributes to its trade deficit due to rising global oil prices.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**14.** With reference to the World Trade Organization (WTO), consider the following statements:

1. It was established through the Marrakesh Agreement in 1994.
2. It facilitates global trade through agreements but doesn't mediate trade disputes.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**15.** Consider the following statements:

1. India is the largest producer of natural rubber globally, with Kerala contributing the highest share in the country.
2. The Rubber Board of India is a statutory body under the Ministry of Commerce and Industry.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**16.** With reference to the Securities Transaction Tax, which of the following statements is/are correct?

1. It is an indirect tax, charged on the purchase and sale of securities like stocks, mutual funds, and derivatives.
2. The Union Budget 2024-25 abolished the Securities Transaction Tax in India.

Select the correct answer using the code given below:

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**17.** With reference to the Minimum Support Price (MSP) in India, consider the following statements:

1. The K. Jha Committee (1963) recommended the implementation of MSP to protect farmers from market fluctuations.
2. The prices are announced at the beginning of the sowing season for crops.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

18. Consider the following statements:

1. Brazil is the world's largest coffee producer.
2. India is the 10th largest producer of coffee in the world.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

19. Consider the following statements:

1. India is the largest producer and exporter of the Jute in the World.
2. West Bengal, Bihar and Assam account for more than 90% of India's total production of Jute.

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

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

20. Which of the following statements regarding the Most Favored Nation (MFN) principle in international trade is NOT correct?

- (a) The MFN principle aims to ensure non-discrimination among trading partners.
- (b) It is enshrined in Article I of the General Agreement on Tariffs and Trade (GATT) 1994.
- (c) The MFN principle prohibits countries from granting any special trade advantages to any other country.
- (d) Regional Trade Agreements (RTAs) are considered exceptions to the MFN principle.

21. Consider the following statements:

1. The first GI tag in the country was given to the Darjeeling tea.
2. Tamil Nadu has the most GI-tagged products in India.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

22. Consider the following statements with reference to the tea industry:

1. India is the world's second-largest tea producer, after China.
2. West Bengal produces over 50% of India's tea, the highest in the country.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

### EXPLANATIONS

1. (a)

**Statement 1 is correct**

- **Financial Stability and Development Council (FSDC)** is an umbrella group of regulators which gives an overview of the health of India's financial system.

- It deals with issues relating to financial stability, financial sector development, inter-regulatory coordination, financial literacy, financial inclusion and macro prudential supervision of the economy including the functioning of large financial conglomerates.

**Statement 2 is not correct**

- **Chairman of FSDC: Union Finance Minister**
  - However, the **FSDC Sub-Committee** has been set up under the chairmanship of the Governor of RBI.
- **Members:** Heads of Financial Sector Regulators (RBI, SEBI, PFRDA, IRDA & FMC); Finance Secretary and Chief Economic Adviser etc.
  - It can invite experts to its meeting if required.

2. (c)

**Statement 1 is correct:** Green Banks are **mission-driven institutions** specifically designed to fund projects that contribute to climate change mitigation and adaptation.

- These are **public, quasi-public, or nonprofit financing entities** that leverage public and private capital to pursue goals for clean energy projects that reduce emissions.

**Statement 2 is correct:** These are designed to bridge the gap between the high costs of green projects and the need for affordable financing.

**Statement 3 is correct:** Traditional commercial banks often provide high-interest loans with short durations, which are not conducive to the long-term nature of green projects.

- Green Banks, on the other hand, offer lower interest rates and longer loan terms, making it easier for green projects to secure the necessary funding.

3. (c)

**In News:** The Indian government announced the formation of Ramesh Chand Committee to revise the country's Wholesale Price Index (WPI), with a new base year of 2022-23, replacing the current base year of 2011-12.

**About**

- The WPI has undergone revisions in the past, with the last update occurring in 2015 when the base year was changed from 2004-05 to 2011-12.
- The primary objective of updating the Wholesale Price Index (WPI) is to provide a more accurate representation of inflation at the producer level.
- Currently, the WPI focuses solely on goods, overlooking the service sector, which accounts for more than half of India's economic output.
- To address this limitation, the government plans to transition to a more inclusive Producer Price Index (PPI). This shift aims to capture a broader range of economic activity by incorporating both goods and services, ensuring a more comprehensive and precise measure of inflation.

4. (b)

**In News:** India's Coffee Export Surpasses USD 1 Billion For The First Time.

**Statement 1 is not correct:** India is a significant coffee producer, but not among the top five for Arabica. India is the eighth largest coffee producer globally in 2022-23 and Brazil is world's largest coffee producer.

**Statement 2 is correct:** Robusta coffee is the dominant variety grown in India. Robusta coffee accounts for around 72% of India's total coffee production.

**Statement 3 is not correct:** Coffee cultivation is concentrated in the Western Ghats region, particularly in Karnataka, Kerala, and Tamil Nadu. The largest producer, accounting for about 70% of India's total coffee production. It needs high altitude with ample rainfall and humidity.

5. (c)

Minimum Support Price (MSP) is a price fixed by the Government of India for certain agricultural products. The MSP is announced before the sowing season to provide a safety net for farmers and encourage crop production. Recommended by the Commission for Agricultural Costs and Prices (CACP) under the Ministry of Agriculture, final approval by the Cabinet Committee on Economic Affairs (CCEA).

- Crops covered under MSP include:
- Cotton
- Wheat
- Jute
- Paddy

(Note: Sugarcane is covered under Fair and Remunerative Price (FRP), not MSP). The FRP is the minimum price that sugar mills must pay sugarcane growers.

6. (a)

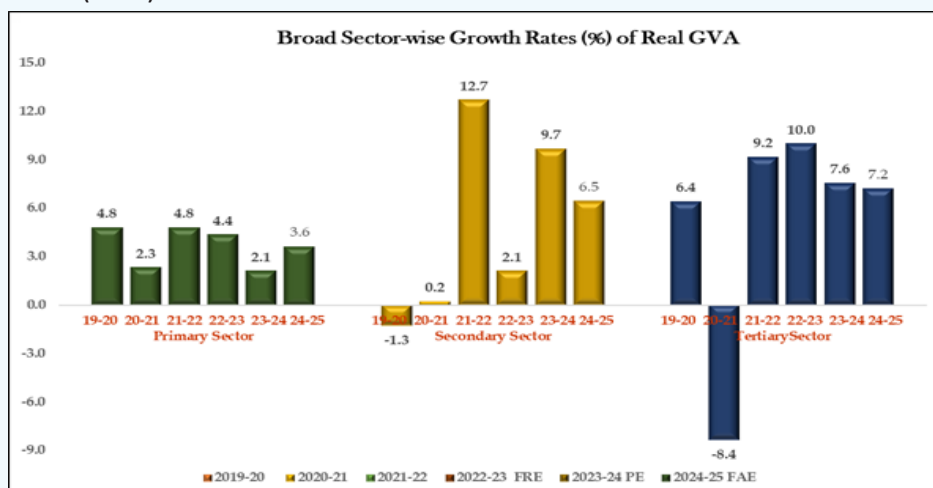
**Context:** Indian coffee exports reached a record high of over USD 1.684 billion in 2024, a 45% increase from USD 1.160 billion in 2023.

#### Coffee & Production in India

- Coffee is an important beverage used all over the world.
- It requires a **warm, wet climate** and well-drained loamy soil. Hill slopes are ideal for its growth.
- India produces Arabica (mild flavor, higher market value) and Robusta (strong flavor, used in blends).
- India became the **world's eighth-largest coffee grower in 2022-2023**.
- **Regional Production: Karnataka** is the largest producer (71%).
  - Kerala follows with 20%.
  - Tamil Nadu produces 5%, mainly in Nilgiri.
  - Smaller contributions come from Orissa and northeastern areas.

7. (c)

**In News :** The National Statistics Office (NSO) has released the First Advance Estimates of Gross domestic product (GDP) for FY 2024-25.



- **Primary Sector:** Agriculture, Livestock, Forestry & Fishing and **Mining & Quarrying**
- **Secondary Sector:** Manufacturing, Electricity, Gas, Water supply & Other Utility Services and Construction
- **Tertiary Sector:** Trade, Hotels, Transport, Communication and Services related to Broadcasting, Financial, Real Estate & Professional Services and Public Administration, Defence & Other Services

8. (c)

**Both the statements are correct:** India ranks at **4th place** in terms of **certified area** globally as per the report published by International Federation of Organic Agriculture Movements (IFOAM) Statistics 2022.

- **India ranks first** globally in terms of number of **farmers practicing organic farming**.
- **Sikkim** is India's first fully organic state, with implementing organic practices on around 75,000 hectares of agricultural land.

9. (b)

**Context:** Recently, a tragic incident occurred in Assam's Dima Hasao district, where several workers were trapped in a coal 'rat-hole' mine after it was flooded with water.

**About**

- Rat-hole mining is a method of extracting coal from narrow, horizontal seams, prevalent in Northeast India.
- The term "rat-hole" refers to the small, narrow pits dug into the ground, typically just large enough for one person to descend and extract coal using primitive tools like pickaxes, shovels, and baskets.
- Unlike in Chhattisgarh and Jharkhand, coal seams in Northeast India are **very thin**. It makes rat-hole mining more economically viable than opencast mining.
- However, this method of mining has faced severe criticism due to its hazardous working conditions, environmental damage, and numerous accidents leading to injuries and fatalities.
- In fact, the National Green Tribunal (NGT) **banned rat-hole mining in 2014**, and retained the ban in 2015. But the practice continues.

10. (a)

**Statement 1 is correct:** CD ratio or the loan-to-deposit ratio is used to **assess a bank's liquidity** by comparing its **total loans to total deposit for the same period**.

- Typically, the **ideal loan-to-deposit ratio is 80% to 90%**. A loan-to-deposit ratio of 100% means a bank loaned one dollar to customers for every dollar received in deposits it received.

**Statement 2 is not correct: High CDR:** Indicates that the bank is **actively lending**, which could lead to higher profitability but also higher risk if loan repayments are not met.

- If the ratio is too high, the lender does not have enough liquidity for unanticipated stress or sudden withdrawals of funds.
- **Low CDR:** Suggests that the bank is more conservative, lending less and holding more reserves, which reflect caution or an inability to find suitable lending opportunities.

11. (b)

**Context:** The Indian rupee has recently crossed the 86 mark against the US dollar, marking an all-time low.

**Impact of Rupee depreciation**

- **Exports and Imports:** While a weaker rupee can **boost exports** by making Indian goods cheaper for foreign buyers, it also **raises the cost of imports**, particularly essential commodities like oil and machinery.
- **Foreign Debt Servicing:** For companies and the government with significant foreign currency debt, a depreciating rupee **increases the cost of servicing** the debt, straining their financial positions.
- **Inflation:** The increase in import costs lead to higher consumer prices, impacting purchasing power and potentially leading to **overall inflation in the economy**.

**12. (b)**

**Context:** The Union Minister of Commerce & Industry inaugurated the **National Turmeric Board** in New Delhi.

- **Palle Ganga Reddy** has been announced as its **first Chairperson**.

**National Turmeric Board**

- **About:** It is a dedicated body established to promote turmeric cultivation, research, and exports, ensuring holistic growth in the turmeric sector.
- **Headquarters:** Nizamabad, Telangana.
- **Ministry:** Operates under the Ministry of Commerce and Industry.
- **Aim:** To enhance turmeric production.
  - Support farmers and improve their livelihoods.
  - Boost global exports of turmeric and value-added products.
- **Functions:** The Board will also look into creating **awareness on the essential and medical properties of turmeric**, ways to increase its yield and **boost logistics and supply chain** to foster trade into newer markets.

**13. (b)**

**Statement 1 is not correct:** Trade Deficit refers to a situation where a country's total imports exceed its total exports, **including goods and services**.

- **Merchandise Trade Deficit** is a specific type of trade deficit that **only concerns the balance of imports and exports** of physical **goods** (merchandise).

**Statement 2 is correct:** India is a major importer of crude oil, which significantly contributes to its trade deficit due to rising global oil prices.

**14. (a)**

**Statement 1 is correct:** WTO governs global trade rules and is the successor to the **General Agreement on Tariffs and Trade (GATT)** established after WWII.

- **Established: 1994 through the Marrakesh Agreement**, with 123 founding countries.

**Statement 2 is not correct: Significance of WTO:**

- Facilitates **global trade** through agreements.
- Mediates **trade disputes**.
- Supports **developing countries** in integrating with global trade.

**15. (b)**

**Context:** The **Rubber Board of India** has introduced two significant initiatives, **iSNR (Indian Sustainable Natural Rubber)** and **INR Konnect**, as part of its efforts to enhance India's rubber industry globally and boost domestic production.

**India's Rubber Industry**

- India is the **third-largest** producer of natural rubber globally, following Thailand (1st) and Indonesia (2nd). India is the fourth-largest consumer of natural rubber.
- **Kerala accounts for over 90%** of India's natural rubber production. Other states include Tamil Nadu, Karnataka, Tripura, Assam, and Meghalaya.

**About Rubber Board of India**

- **Brief:** The Rubber Board of India is a **statutory body** under the Ministry of Commerce and Industry.
  - Established under the Rubber Act, 1947, the board focuses on the development, promotion, and research of the rubber industry in India.
- **Headquarters:** Kottayam, Kerala.

16. (d)

**Context**

- The Securities Transaction Tax (STT) collection has surged by over 75%, reaching Rs 44,538 crore as of January 2025, compared to Rs 25,415 crore during the same period in 2024.

**What is Securities Transaction Tax (STT)?**

- STT is a type of tax that is charged on the **purchase and sale of securities** like **stocks, mutual funds, and derivatives** on recognized stock exchanges in India.
  - It is a **direct tax**, meaning that it is levied directly on the transaction value of securities.
- The STT was introduced in India in **2004** to replace the earlier system of imposing a tax on securities transactions called the "stamp duty."
- **The 2024** budget has increased the securities transaction tax (STT) on Futures & Options (F&O) of securities to **0.02 percent** and **0.1 percent** respectively.

17. (c)

**Minimum Support Price (MSP)** is a form of **market intervention by the Government** to insure agricultural producers against any sharp fall in farm prices.

- It primarily aims for *Income and Food Security, Incentivizing Production, and Market Stability*.

**Statement 1 is correct:** The **concept of MSP** in India has its roots in the **agricultural policies of the 1960s**, the period of severe food shortages.

- The **K. Jha Committee** recommended the implementation of MSP to protect farmers from market fluctuations.

**Statement 2 is correct:** The prices are **announced at the beginning of the sowing season for certain crops** on the basis of the recommendations of the **Commission for Agricultural Costs and Prices (CACP)**.

18. (a)

**Statement 1 is correct:** **Brazil** is the world's largest coffee producer, contributing about 40% of global production, **followed by Vietnam**.

**Statement 2 is not correct:** As per the Commerce and Industry Ministry, India is now the **seventh-largest coffee producer globally**, with exports reaching 1.29 billion dollars in the last financial year.

- This is nearly double the 719 million dollars worth of exports in 2020-21.
- India produces two **types of coffee: Arabica and Robusta**.
  - Coffee is predominantly an **export oriented commodity** and **65% to 70%** of coffee produced in the country is exported.

- **Areas:** Coffee is traditionally grown in the Western Ghats spread over **Karnataka, Kerala and Tamil Nadu**.
  - It is also grown in the nontraditional areas of **Andhra Pradesh and Odisha** as well as in the **North East states**.
- **Leading States:** Karnataka leads in coffee production, followed by Kerala and Tamil Nadu.

19. (a)

**Statement 1 is not correct:** India is the **largest producer** of jute followed by Bangladesh and China.

- However, in terms of acreage and trade, Bangladesh takes the lead accounting for three-fourth of the global jute exports in comparison to India's 7%.
- Most of the Jute is consumed domestically due to its vast domestic market demand, with an average domestic consumption of 90% of total production.

**Statement 2 is correct:** **West Bengal, Bihar and Assam** account for almost 99% of India's total production of Jute.

20. (c)

The MFN (Most Favored Nation) principle is a cornerstone of international trade, aiming to ensure fair and equitable treatment among trading partners.

The MFN principle dictates that if a country grants a special trade advantage (like a lower tariff or duty-free access) to one trading partner, it must extend that same advantage to all other WTO members. This prevents any form of discrimination in trade relations.

**Exceptions:** While the MFN principle promotes non-discrimination, it acknowledges certain exceptions:

**Regional Trade Agreements (RTAs):** Countries within a regional trade agreement (like a free trade agreement) can grant preferential treatment to each other without violating the MFN principle. This allows for deeper economic integration within specific regions.

**Generalized System of Preferences (GSP):** Developed countries can offer preferential tariff treatment to imports from developing countries under the GSP scheme.

21. (a)

**Statement 1 is correct:** A geographical indication (GI) is a **sign used on products** that have a **specific geographical origin** and possess qualities or a reputation that are due to that origin.

- GIs are part of the **intellectual property rights** that come under the **Paris Convention for the Protection of Industrial Property**.
- The first GI tag in the country was given two decades ago to the famous **Darjeeling tea**.

**Statement 2 is not correct:** **Uttar Pradesh** retains its position as the state with the most GI-tagged products in India, reaching a total of 75.

- **Tamil Nadu** follows behind with 58 GI products.

22. (a)

**Context:** India has become the largest importer of tea from Kenya, with imports rising by **288%**, from **3.53 million kg** (January-October 2023) to **13.71 million kg** during the same period in 2024.

**India's Tea Industry: Present Status**

- **Global Ranking:** India is the **second-largest tea producer** after China, contributing **21%** of global tea production.
- **Exports:**
  - India is the **fourth-largest exporter**, with a **12% global export share**.

- India's tea exports also increased from 184.46 million kg from January to October in 2023 to 209.14 million kg during the same phase in 2024.
- Top export destinations include the **UAE, Russia, Iran, U.S., and U.K.**
- **Domestic Market:**
  - Domestic consumption accounts for **80% of total production**, driven by India's tea-drinking culture.
- **Regional Production:**
  - **Assam produces 55% of India's tea**, making it the largest tea-producing state.
  - However, India's total tea production dropped by **50 million kg** in 2024, with Assam facing a loss of **20 million kg**.



# INDIAN POLITY & CONSTITUTION

1. Which of the following statements about a Private Member's Bill is correct?

1. It can be introduced by both ruling and opposition MPs.
2. Rejection of such a bill affects the stability of the government.
3. It requires a one-month notice before introduction.
4. Debate on such bills is generally scheduled for Mondays.

Select the correct answer using the codes below:

- |                      |                      |
|----------------------|----------------------|
| (a) 1 and 3 only     | (b) 2 and 4 only     |
| (c) 1, 2, and 3 only | (d) 1, 3, and 4 only |

2. The '*Right to Dissent*' in Indian Judiciary is interpreted as:

- |                        |                       |
|------------------------|-----------------------|
| (a) Natural rights     | (b) Legal rights      |
| (c) Fundamental rights | (d) None of the above |

3. Consider the following statements about the Tobacco Board of India:

1. It is a statutory body established under the Tobacco Board Act, 1975.
2. It functions under the Ministry of Agriculture & Farmers Welfare.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

4. Consider the following statements:

1. Right to Education (RTE) Act, 2009 guaranteed the free and compulsory education for children in the 6-14 age group in India.
2. New Education Policy 2020, proposed the 5+2+2+3 school structure in India.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

5. With reference to the NITI Aayog, consider the following statements:

1. It is led by the Prime Minister as the Chairperson.
2. It formulates and implements Five-Year Plans in the states with a focus on cooperative federalism.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

6. Consider the following statements:

*Statement-I:* The management and administration of Prisons falls exclusively in the domain of the respective State Governments in India.

*Statement-II: 'Prisons' is a State subject under the State List of the Seventh Schedule to the Constitution of India.*

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

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I.
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I.
- (c) Statement-I is correct but Statement-II is incorrect.
- (d) Statement-I is incorrect but Statement-II is correct.

7. With reference to the Office of Governor in India, consider the following statements:

- 1. The office of the Governor is defined in Articles 153 to 162 of the Indian Constitution.
- 2. He can continue to be a member of the Parliament or State Legislature.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

8. Which of the following statements about NITI Aayog is/are correct?

- 1. NITI Aayog replaced the Planning Commission in 2015.
- 2. The Prime Minister is the Chairperson of NITI Aayog.
- 3. NITI Aayog has the power to allocate funds to states.

Select the correct answer using the code below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2, and 3

9. With reference to the Central Information Commission (CIC), which of the following statements is/are correct?

- 1. It is a statutory body, constituted under the Right to Information Act, 2005.
- 2. It consists of a Chief Information Commissioner and not more than five Information Commissioners.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

10. With reference to Section 152 of Bharatiya Nyaya Sanhita (BNS), which of the following statements is/are correct?

- 1. It criminalises acts that endanger the sovereignty, unity, and integrity of India.
- 2. The provision has a clear definition of "sedition," leaving no room for misuse.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

11. Which of the following are members of the Selection Committee for appointing the Chief Election Commissioner (CEC) under the Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023?

- 1. Prime Minister

2. Leader of the Opposition in the Lok Sabha
3. Chief Justice of India

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**12.** With reference to the Tax devolution, consider the following statements:

1. It refers to the distribution of tax revenues between the central government and the state governments.
2. Article 280 provides for the establishment of a Finance Commission.
3. The 15th finance commission, under the chairmanship of N K Singh has revised tax devolution to current 42%.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**13.** With reference to the '*Review Petition in the Supreme Court of India*', consider the following statements:

1. The Constitution of India grants the Supreme Court the power to review its own judgments or orders.
2. Anyone aggrieved by a ruling can file a review petition, not just parties to the case.
3. Review petitions are always heard by the same Constitutional Bench that delivered the original judgment.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**14.** With reference to the '*Digital Personal Data Protection Act, 2023 (DPDP Act)*', consider the following statements:

1. Individuals are granted rights to access, correct, and erase their personal data.
2. It establishes a Data Protection Board to oversee compliance, address grievances, and impose penalties for violations.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**15.** In which of the following cases, the right to food was recognized as a fundamental right in India?

- (a) People's Union of Civil Liberties vs Union of India
- (b) M. C. Mehta vs Union of India
- (c) R.C. Cooper vs Union of India
- (d) Avinash Mehrotra vs Union of India

- 16.** Consider the following statements regarding the State Public Service Commission (SPSC):
1. The SPSC is governed under Part XIV of the Indian Constitution.
  2. The Chairperson of the SPSC is appointed by the President of India.
  3. The maximum term of the Chairperson is 6 years or until the age of 62, whichever is earlier.

Which of the statements given above is/are correct?

- (a) 1 only (b) 1 and 3 only  
(c) 2 and 3 only (d) 1, 2, and 3

- 17.** After the Comptroller and Auditor General of India (CAG) submits the audit reports to the President of India, which of the following committees examines them in Parliament?

- (a) Committee on Estimates (b) Public Accounts Committee  
(c) Committee on Public Undertakings (d) Finance Committee

- 18.** With reference to the Central Pay Commission, which of the following statements is/are correct?

1. The Commission is usually chaired by a retired Supreme Court judge.
2. It is typically set up once every decade and its recommendations are binding.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

- 19.** Consider the following statements regarding Nautor Land:

1. Nautor land refers to government-owned wasteland allotted to individuals for productive use, subject to approval by competent authorities.
2. The nautor land policy was first introduced in Himachal Pradesh in 1932 under the rule of Maharaja Hari Singh.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

- 20.** With reference to the Budget Session, which of the following statements is/are correct?

1. The term 'Budget' is mentioned in Article 112 of the Indian Constitution.
2. It is the longest and one of the most important sessions of the Indian Parliament.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

- 21.** Consider the following statements:

1. First Administrative Reforms Commission (ARC) has recommended two-tier machinery consisting of Lokpal and Lokayuktas in India.
2. Jurisdiction of Lokpal currently covers any society or trust or body that receives foreign contributions above ₹10 lakh.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

**22.** With reference to the Food Corporation of India (FCI), consider the following statements:

1. It is a statutory body set up under the Food Corporation's Act of 1964.
2. It operates under the Ministry of Food Processing Industries.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**23.** *Article 44* of the Indian Constitution deals with which of the following?

- (a) Restricts fundamental rights during martial law.
- (b) Empowerment of Village Panchayats.
- (c) Protection of India's cultural heritage and history.
- (d) Uniform Civil Code.

**24.** With reference to the '*Election Commissioners (ECs) of Election Commission of India*', consider the following statements:

1. They hold terms of five years, or up to the age of 65 years, whichever is earlier.
2. ECs can be removed from office in like manner and on like grounds as a judge of the Supreme Court.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**25.** Consider the following statements:

1. Article 224A allows the Chief Justice of a High Court to request retired judges to temporarily perform judicial duties.
2. Ad-hoc judges' appointments do not require the President's approval.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**26.** Consider the following statements regarding the Whip:

1. A whip refers to an order to members of a party in the House to abide by a certain direction of the party.
2. It is not mentioned in the constitution but is considered a parliamentary convention.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**27.** Consider the following statements:

1. The role of the Governor as Chancellor of State universities is mandated by the Indian Constitution.
2. The Punchhi Commission has suggested that Governors should avoid statutory roles like Chancellor to preserve the dignity of their office.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

28. With reference to the constitutional provisions related to public health in India, consider the following statements:

1. Public health and sanitation are listed under the Concurrent List of the Seventh Schedule.
2. The Right to Health is interpreted as part of the Right to Life under Article 21.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

### EXPLANATIONS

1. (a)

**Statement 1 is correct:** It can be introduced by both ruling and opposition MPs. Any MP who is not a minister can introduce a Private Member's Bill.

**Statement 2 is not correct:** Unlike a Government Bill, the rejection of a Private Member's Bill does not imply a lack of confidence in the government and does not affect its stability.

**Statement 3 is correct:** It requires a one-month notice before introduction.

**Statement 4 is not correct:** Debate on such bills is generally scheduled on Fridays.

2. (c)

Dissent in the judiciary is a vital aspect of a democratic society, reflecting the **diversity of thought** and the **independence of the judicial system**.

- In India, judicial dissent has played a crucial role in shaping the legal landscape, often highlighting the dynamic interplay between law, politics, and society.
- The **right to dissent** is a **fundamental right** and an **essential part of democracy** in India, protected by **Article 19(1) of the Constitution** of India.
- It can be traced back to landmark cases such as **ADM Jabalpur v. Shivkant Shukla (1976)**, where Justice H.R. Khanna's dissenting opinion emphasized the importance of fundamental rights even during a state of emergency.

3. (a)

**Context:** The Tobacco Board has undertaken several strategic initiatives to ensure the sustainability and growth of the tobacco industry.

#### About Tobacco Board of India

- **Statutory Body:** Established under the Tobacco Board Act, 1975.
- **Ministry:** Ministry of Commerce & Industry.
- **Functions:** Enhances the export of tobacco varieties, especially Flue-Cured Virginia (FCV) tobacco.
  - Manages FCV tobacco production and distribution to meet domestic and export demands.
  - Maintains quality standards and supports farmers in meeting export requirements.

4. (a)

**Statement 1 is correct: Right to Education (RTE) Act, 2009:** Guarantees free and compulsory education for children in the 6-14 age group, focusing on quality education and no discrimination.

**Statement 2 is not correct: New Education Policy 2020:**

- Emphasis on early childhood care and education (ECCE), particularly for children up to 6 years.
- Encourages multi-disciplinary learning at the school and higher education levels.

- Introduction of a **5+3+3+4 school structure** (5 years of foundation, 3 years of preparatory, 3 years of middle, and 4 years of secondary education).
- Focus on critical thinking, creativity, and problem-solving rather than rote learning.

5. (a)

**Statement 1 is correct:** NITI Aayog (National Institution for Transforming India) is a government think tank established in **2015**.

- **Aim:** It replaced the Planning Commission, aiming to focus on more **contemporary challenges like sustainable development, policy innovation, and governance reforms**.
- **Composition:** It is led by the Prime Minister as the Chairperson, with the Vice-Chairperson and CEO leading the executive functions.

**Statement 2 is not correct:** The erstwhile planning commission, formulated and implemented Five-Year Plans.

- While the NITI Aayog does not formulate Five-Year Plans, it focuses on long-term policy.

6. (a)

**In News:**

- Recently, the Union Home Ministry has amended the **Model Prison Manual (2016) and the Model Prisons and Correctional Services Act (2023)** to address and eliminate caste-based discrimination within prisons across the country.

**Both the statements are correct, and Statement-II is the correct explanation for Statement-I.**

- **'Prisons' is a State subject** under the **State List of the Seventh Schedule** to the Constitution of India.
- The management and administration of Prisons falls **exclusively in the domain of the State Governments**, and is governed by the **Prisons Act, 1894** and the **Prison Manuals of the respective State Governments**.

7. (a)

**Statement 1 is correct: Constitutional Provisions:** The office of the Governor is defined in **Articles 153 to 162 of the Indian Constitution**.

**Statement 2 is not correct: Eligibility:** Citizen of India and has completed the age of thirty-five years.

- **Not a member of the Parliament and State Legislature.**
- Shall not hold any other office of profit.

8. (a)

**Statement 1 is correct:** NITI Aayog was formed on January 1, 2015, replacing the Planning Commission which had been in existence since 1950.

**Statement 2 is correct:** The Prime Minister of India is the ex-officio Chairperson of NITI Aayog.

**Statement 3 is not correct:** Unlike the Planning Commission, which had a significant role in allocating funds to states, NITI Aayog does not have the authority to directly allocate funds. NITI Aayog focuses on fostering cooperative federalism, encouraging state-led development initiatives, and providing policy recommendations to the government.

9. (a)

**Context:** The Supreme Court has criticized the persistent delay by the Centre in appointing Information Commissioners.

- The Central Information Commission (CIC) has eight vacancies in the posts of the Information Commissioners.

**About the Central Information Commission (CIC)**

- It is a statutory body, constituted under the Right to Information Act, 2005.
- It consists of a Chief Information Commissioner and not more than ten Information Commissioners.
- They are appointed by the President.
- The Headquarters of CIC is in New Delhi.

**10. (a)****Context**

- The Rajasthan High Court, in *Tejender Pal Singh v. State of Rajasthan* (2024), cautioned against the misuse of Section 152 of the Bharatiya Nyaya Sanhita (BNS) to suppress legitimate dissent.

**About Section 152 BNS**

- Section 152 **criminalises acts** that endanger the **sovereignty, unity, and integrity** of India.
  - It covers secession, armed rebellion, subversive activities, and acts encouraging separatism.
- However, the provision lacks a clear definition of what constitutes “**endangerment**,” leaving room for broad interpretation by enforcement authorities.

**Issues with Section 152**

- The BNS does not formally use the term ‘**sedition**’ and the **absence of precise definitions** makes the law vulnerable to misuse.
- The ambiguity mirrors concerns previously raised under **Section 124A (sedition)** of the IPC.

**11. (a)**

**Context:** Traditionally, the successor to the Chief Election Commissioner (CEC) has been the next senior most Election Commissioner.

- Rajiv Kumar, the current CEC, will leave office on February 18.

**About**

- The Chief Election Commissioner And Other Election Commissioners (Appointment, Conditions of Service And Term of Office) Act, 2023, allows for a wider selection pool.
- **Sections 6 and 7 of the Act** require the Ministry of Law to set up a Search Committee chaired by the Law Minister to prepare a panel of five names for the Selection Committee.
  - **Selection Committee:** The Selection Committee, comprising the **Prime Minister**, a Cabinet minister, and the **Leader of the Opposition in the Lok Sabha**, can select from this panel or consider other candidates.

**12. (a)**

**Statement 1 and 2 are correct:** Tax devolution refers to the **distribution of tax revenues** between the **central government and the state governments**.

- **Objective:** To promote fiscal federalism, strengthen the financial autonomy of state governments, and empower them to meet the needs of their respective populations.
- **Article 280** of the Indian Constitution **mandates the creation of the Finance Commission**, which determines the formula for devolution of taxes.
  - The central government collects taxes (like income tax, GST, etc.) and a portion is shared with the states based on the **Finance Commission’s recommendations**.

**Statement 3 is not correct:** The **15th finance commission**, under the chairmanship of **N K Singh** has revised tax devolution and **brought it down to 41% from 42%**.

- So the current tax devolution to states stands at **41% till 2026**.

13.(c)

**In News:** Recently, a **five-judge Bench of the Supreme Court**, headed by Justice B.R. Gavai, rejected petitions seeking a review of a judgment which refused to legalise same-sex marriage in India.

**Statement 1 is correct**

- **Review Petition in the Supreme Court of India** is filed under **Article 137 of the Constitution of India**, which grants the Supreme Court the power to review its own judgments or orders.
  - This power is however **subject to the Rules made by the Supreme Court (under Article 145)**, as well as the provisions of any law enacted by Parliament.

**Statement 2 is correct**

- **Review Petition in the Supreme Court of India:** It is a **legal remedy** available to a party who seeks to challenge a judgment or order passed by the Supreme Court.
  - Anyone aggrieved by a ruling can file a review petition, not just parties to the case.

**Statement 3 is correct**

- Review petitions are always heard by the same Bench that delivered the original judgment.
  - If judges on the original Bench have retired, the Chief Justice will use his/her discretion to replace them.

14. (c)

**Statement 1 is correct**

- **Under the Digital Personal Data Protection Act, 2023 (DPDP Act), individuals (referred to as 'Data Principals')** are granted **Data Principal Rights** like rights to access, correct, and erase their personal data.
  - They can also nominate representatives to exercise these rights on their behalf.

**Statement 2 is correct**

- The Act establishes the **Data Protection Board of India** to oversee compliance, address grievances, and impose penalties for violations.
  - The board functions as a digital office, streamlining its operations.

15. (a)

**Context:** The Right to Food in India faces challenges due to inefficiencies in the Public Distribution System (PDS), hindering equitable access to essential food grains.

**Recognition of the Right to food**

- The right to food is recognized in the **Universal Declaration on Human Rights** and the **International Covenant on Economic, Social and Cultural Rights (ICESCR)**.
- **In India**, the right to food was recognized as a fundamental right under **Article 21** of the Constitution in the case of **People's Union of Civil Liberties vs Union of India**.

16. (b)

Recently, the Vice President addressed the 25th National Conference of Chairpersons of State Public Service Commissions (SPSC).

**About State Public Service Commission**

- **Role and Function:** Conducts examinations for appointments to state services.
  - Advises on recruitment, promotions, transfers, and disciplinary actions in state public services.
- **Constitutional Provisions:** SPSCs are governed by **Articles 315-323 under Part XIV** of the Indian Constitution.

- These provisions outline the structure, powers, and functions of Public Service Commissions for the Union and States.
- **Appointment of Chairperson and Members:** Appointing Authority is the Governor of the State (Article 316).
  - The Chairperson serves a term of **6 years or until they reach the age of 62 years**, whichever is earlier.
- **Removal from Office:** The Chairperson can be removed by the President of India on the following grounds:
  - Adjudged Insolvent, engages in employment outside their official duties, Mentally unsound and in case of proved misbehaviour.

### 17. (b)

**Context:** The Comptroller and Auditor General of India (CAG) gained political attention after its report on the renovation costs of the office and residence of former Delhi Chief Minister.

#### Audits Reports Submitted by CAG to the President of India

- Comptroller and Auditor General (CAG) of India submits **three audit reports** to the President of India (Article 151).
  - **Audit report on appropriation accounts:** This report shows how the legislature-granted money was allocated to different heads of expenditure and grants. It also verifies if the money was spent for the intended purpose.
  - **Audit report on finance accounts:** This report shows the annual receipts and expenditures of the country.
  - **Audit report on public undertakings:** This report covers the finances and expenditures of various Public Sector Undertakings (PSUs).
- After receiving the reports, the President lays them before both houses of Parliament. **The Public Accounts Committee (PAC)** then examines the reports and submits its findings to Parliament.

### 18. (a)

**Context:** The Prime Minister has approved the constitution of the **8th Pay Commission**.

#### About

- It will benefit about **50 lakh employees** and **65 lakh pensioners** of the Union government and the minimum basic salary of a government employee can go up to Rs 51,480, up from the current minimum salary of Rs 18,000.
- The Central Pay Commissions are typically set up **once every decade** to evaluate and recommend modifications to pay scales, allowances and benefits for central government employees, considering various economic indicators including inflation.
  - These recommendations are **not binding**, but the government usually accepts them.
- **Since 1947**, seven Pay Commissions have been constituted, with the last one implemented in **2016**, whose term concludes on December 31 this year, paving the way for the implementation of the 8th Pay Commission from January 1 next year.
- The Pay Commission is usually chaired by a retired **Supreme Court judge**.
  - The Seventh Pay Commission was headed by Justice A.K. Mathur.

### 19. (a)

**Statement 1 is Correct:** Nautor land is government wasteland allocated to individuals for cultivation or other productive purposes with proper authorization.

**Statement 2 is not correct:** The nautor land policy originated in Jammu and Kashmir under Maharaja Hari Singh in 1932, not Himachal Pradesh. Himachal Pradesh adopted the policy later in 1968.

20. (b)

**Context:** The Budget Session of Parliament will convene on January 31.

**About**

- The session will begin with President Droupadi Murmu's address to a joint session of Parliament. The Budget will be presented on February 1.
- The Indian Constitution **does not** use the term "Budget". Instead, **Article 112** of the Constitution uses the phrase "Annual Financial Statement" for the same.
- The Budget Session is the **longest** and one of the most important sessions of the Parliament.
- The primary focus of the Budget Session is the presentation, discussion, and passing of the Union Budget, which outlines the government's revenue and expenditure plans for the upcoming fiscal year.

21. (c)

**In News:** Recently, media reports highlighted that **Lokpal, India's anti-corruption ombudsman**, has ordered investigations in 24 cases over the past five years, granting prosecution sanction in six of them.

**Statement 1 is correct**

- In India, the **ombudsman** is known as **Lokpal (Protector of People)** or **Lokayukta (People's Appointee)**.
- **First Administrative Reforms Commission (ARC)** in 1966 recommended **two-tier machinery** consisting of **Lokpal and Lokayuktas** to redress the grievances of the public.

**Statement 2 is correct**

- The jurisdiction of the Lokpal includes **all categories of public servants** within and outside India, including the **Prime Minister except on: Allegations of corruption relating to *international relations, security, the public order, atomic energy and space.***
- It covers any society or trust or body that **receives foreign contributions** above ₹10 lakh.

22. (a)

**Context**

- Recently, the Government announced a significant revision in the **Open Market Sale Scheme (Domestic) [OMSS(D)]** Policy for the year 2024-25.
  - The scheme involves the periodic sale of excess food grains (wheat and rice) from the central pool by the Food Corporation of India (FCI).

**Food Corporation of India (FCI)**

- It is a **statutory body** set up under the Food Corporation's Act of 1964.
- It operates under the **Ministry of Consumer Affairs, Food & Public Distribution**.
- **Objectives:** It aims to safeguard farmers' interests through effective price support operations.
  - Ensures the distribution of foodgrains across the country.
  - Maintains adequate operational and buffer stocks of foodgrains to secure National Food Security.

23. (d)

**A Uniform Civil Code refers** to the provision of one law for the entire country, applicable to all religious communities, in their personal matters such as marriage, divorce, inheritance, adoption, etc.

- **Aim:** To replace the existing diverse personal laws that vary based on religious affiliations.

**Article 44** contained in **part IV** of the Constitution says that the state “shall endeavor to secure for the citizens a uniform civil code throughout the territory of India”.

- **Part IV of the Constitution** outlines the **Directive Principles of State Policy**, which, while not enforceable or justiciable in a court of law, are fundamental to the country’s governance.

24. (d)

**In News:** India is celebrating the **15th National Voters Day** on January 25, 2025, commemorating **75 years of Election Commission of India (ECI)** dedicated service to the nation.

- **Election Commission of India** is an autonomous, independent and constitutional authority responsible for administering **Union and State election processes** in India. It administers elections to the **Lok Sabha, Rajya Sabha, State Legislative Assemblies in India, and the offices of the President and Vice President.**

**Statement 1 is not correct**

- The President of India appoints Chief Election Commissioner (CEC) and Election Commissioners (ECs).
- **Tenure: Six Years (not five)**, or Up to the age of 65 years (whichever is earlier).
- **Salary & Emoluments:** Same status and receive salary and perks as available to **Judges of the Supreme Court of India.**

**Statement 2 is not correct**

- CEC or an EC may, at any time, by writing under his hand addressed to the President, resign his office.
- The CEC can be removed from office in like manner and on like grounds as a judge of the Supreme Court.
- The **other ECs shall not be removed from office** except on the **recommendation of the CEC.**

25. (a)

**Context**

- The Supreme Court has recommended the appointment of ad-hoc judges in High Courts to address the growing pendency of criminal appeals.

**Provisions for Ad-Hoc Judges**

- Ad-hoc judges are temporary judges appointed to the judiciary for a specific tenure to address issues like case backlogs or vacancies.
- **Article 224A of the Indian Constitution**, enables the Chief Justice of a High Court to request retired High Court judges to temporarily perform judicial duties.
  - Such appointments require the **President’s approval.**
- **Memorandum of Procedure (MOP):** It outlines the process for appointing ad-hoc judges, introduced after the establishment of the **Collegium system in 1998.**

26. (c)

**Context**

- Vice President Jagdeep Dhankhar’s recent statement that party whips curtail an MP’s freedom of expression by enforcing a party line has sparked a debate.

**What is Whip?**

- A whip refers to an order **to members of a party in the House** to abide by a certain direction of the party.

- Political parties issue whips to their MPs to either vote for or against the bill, depending on their party line.
  - Once the whip is issued, the MPs from each party will **necessarily have to obey the whip** or else risk losing their seat in Parliament.
- The term is derived from the old **British practice of “whipping in”** lawmakers to follow the party line.
- **It is not mentioned in the constitution** but is considered a parliamentary convention.
- Parties appoint a senior member from among their House contingents to issue whips — this member is called a **chief whip**, and he/ she is assisted by **additional whips**.

## 27. (b)

### In Context

- The role of the Governor as Chancellor of State universities has been a subject of debate.

### Governor’s Role in the Universities

- The role of the Governor as Chancellor of State universities is inherited from British colonial rule and **not mandated** by the Indian Constitution.
- The role was initially created to restrict university autonomy, allowing Governors to maintain direct control over universities, especially in appointing Vice-Chancellors and approving university decisions.

### Insights from Commissions:

- Various commissions (**Rajamannar, Sarkaria, Venkatachaliah, Punchhi**) have critiqued the Governor’s role, recommending reforms like political neutrality, clearer roles, and greater university autonomy.
- The **Punchhi Commission** specifically suggested that Governors should avoid statutory roles like Chancellor to preserve the dignity of their office.

## 28. (b)

### Health and the Indian Constitution

- **State List (List II, Schedule VII):** Public health, sanitation, hospitals, and dispensaries.
- **Concurrent List (List III, Schedule VII):** Family welfare, population control, medical education, and prevention of food adulteration.
- **Article 263:** Establishes the Central Council of Health and Family Welfare for policymaking in health and family welfare matters.
- **Right to Health:** Interpreted by the judiciary as part of the Right to Life (Article 21).



# GEOGRAPHY

1. The Red Sea connects to which of the following seas and oceans?

- (a) The Mediterranean Sea and the Atlantic Ocean
- (b) The Arabian Sea and the Indian Ocean
- (c) The Black Sea and the Pacific Ocean
- (d) The Caspian Sea and the Indian Ocean

2. Which of the following are major tributaries of the Teesta River?

- |                 |                 |
|-----------------|-----------------|
| 1. Lachung Chhu | 2. Rangit River |
| 3. Zemu Chhu    | 4. Kameng River |

Select the correct answer using the codes below:

- |                      |                      |
|----------------------|----------------------|
| (a) 1, 2, and 3 only | (b) 2, 3, and 4 only |
| (c) 1, 3, and 4 only | (d) 1, 2, 3, and 4   |

3. Trinidad and Tobago has recently declared a state of emergency. It is located in which of the following Oceans?

- |                   |                    |
|-------------------|--------------------|
| (a) Indian Ocean  | (b) Atlantic Ocean |
| (c) Pacific Ocean | (d) Arctic Ocean   |

4. Which of the following are the bordering countries of the Red Sea?

- |            |                 |
|------------|-----------------|
| 1. Egypt   | 2. Saudi Arabia |
| 3. Yemen   | 4. Iran         |
| 5. Eritrea |                 |

Select the correct answer using the code given below:

- |                        |                      |
|------------------------|----------------------|
| (a) 1, 2, 3 and 5 only | (b) 1, 3 and 4 only  |
| (c) 2, 4 and 5 only    | (d) 1, 2, 3, 4 and 5 |

5. Which of the following are the bordering countries of Ecuador?

- |             |             |
|-------------|-------------|
| 1. Guyana   | 2. Colombia |
| 3. Suriname | 4. Peru     |

Select the correct answer using the code given below:

- |                      |                      |
|----------------------|----------------------|
| (a) 1 and 3 only     | (b) 2 and 4 only     |
| (c) 1, 2, and 3 only | (d) 1, 3, and 4 only |

6. What is an artesian aquifer?

- (a) A layer of rock that filters surface water into the ground.
- (b) Groundwater confined under pressure between impermeable layers of rock.
- (c) A shallow water table found in arid regions.
- (d) A naturally occurring reservoir of surface water.

7. With reference to Andaman and Nicobar Islands, which of the following statements is/are correct?
1. Ten Degree Channel separates the Andaman Islands in the north from the Nicobar Islands in the south.
  2. Saddle Peak is the highest peak in the Andaman and Nicobar Islands.

Select the correct answer using the code given below:

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |
8. Recently, '3 Kilo Area,' which was in the news in the context of rat-hole mining, is located in:
- |               |                     |
|---------------|---------------------|
| (a) Meghalaya | (b) Jammu & Kashmir |
| (c) Mizoram   | (d) Assam           |
9. Which of the following scales measures small to medium earthquakes based on seismic wave amplitude?
- |                    |                    |
|--------------------|--------------------|
| (a) Fujita Scale   | (b) Richter Scale  |
| (c) Mercalli Scale | (d) Beaufort Scale |
10. Which of the following statements is true regarding seismic waves?
- Body waves travel through the Earth's interior and are faster than surface waves.
  - Body waves travel slower than surface waves and cause more damage.
  - Surface waves travel through the Earth's interior and arrive before body waves.
  - Surface waves travel at the same speed as body waves but cause less damage.
11. With reference to the Pulicat Lake, which of the following statements is/are correct?
1. It is the second-largest brackish water lake in India, after Chilika Lake.
  2. It stretches across the Andhra Pradesh-Tamil Nadu border, with over 90% of the lake's area situated in Tamil Nadu.

Select the correct answer using the code given below:

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |
12. Consider the following statements:
1. Germany has the highest number of dams in the world.
  2. In India, Gujarat has the maximum number of large dams.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |
13. With reference to the 'Polar Vortex', consider the following statements:
1. It is a large area of high-pressure and cold air that swirls around the Earth's polar regions.
  2. A strong and stable polar vortex keeps the jet stream traveling in a circular path around the planet.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**14.** Consider the following countries:

- |           |                 |
|-----------|-----------------|
| 1. Sudan  | 2. Libya        |
| 3. Jordan | 4. Saudi Arabia |

Which of the following countries shares a land border with Egypt?

- |                  |                     |
|------------------|---------------------|
| (a) 1 and 2 only | (b) 2, 3 and 4 only |
| (c) 2 and 3 only | (d) 1, 2, 3 and 4   |

**15.** With reference to the Sex Ratio in India, consider the following statements:

1. The sex ratio is defined as the number of female births per 1000 male births.
2. As per the Census 2011, Kerala has the highest Sex Ratio in the country.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**16.** Which methodology was used in the revised calculation of India's coastline length?

- (a) Straight-line measurement approach
- (b) Satellite-based linear approximation
- (c) Incorporation of geomorphological features like bays, estuaries, and inlets
- (d) Tidal line measurement

**17.** Which of the following statements about the Gulf of Mexico is/are correct?

1. The Gulf of Mexico is connected to the Atlantic Ocean via the Straits of Florida and to the Caribbean Sea through the Yucatán Channel.
2. It is shared by the United States, Mexico, and Cuba.

Select the correct answer using the code given below:

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**18.** With reference to the Yarlung Tsangpo river, which of the following statements is/are correct?

1. It originates in Tibet, and enters Arunachal Pradesh, where it is known as the Siang.
2. In Assam, it is joined by tributaries such as Dibang and Lohit, and is called the Brahmaputra.

Select the correct answer using the code given below:

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**19.** Consider the following countries:

- |            |             |
|------------|-------------|
| 1. Eritrea | 2. Libya    |
| 3. Chad    | 4. Ethiopia |

Which of the following countries shares borders with Sudan?

- |                  |                     |
|------------------|---------------------|
| (a) 1 and 2 only | (b) 2, 3 and 4 only |
| (c) 2 and 3 only | (d) 1, 2, 3 and 4   |

**20.** What are Sada plateaus in the Konkan region primarily composed of?

- |                              |  |
|------------------------------|--|
| (a) Basaltic rock formations | (b) Alluvial soil deposits               |
| (c) Granite rock structures  | (d) Lateritic plateaus formed by erosion |

- 21.** With reference to the Inter-Tropical Convergence Zone (ITCZ), consider the following statements:
1. It is a belt of high pressure around the Earth, typically located near the equator.
  2. It plays a key role in global weather patterns, especially in tropical regions, influencing rainfall, monsoons, and seasonal weather changes.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

- 22.** Which of the following statements is/are correct about the Kerch Strait?

1. It connects the Sea of Azov to the Caspian Sea.
2. It separates the Crimean Peninsula from the Krasnodar region of Russia.
3. It is a key shipping route for energy and trade in the Black Sea region.

Select the correct answer using the code given below:

- |                  |                  |
|------------------|------------------|
| (a) 1 and 2 only | (b) 2 and 3 only |
| (c) 1 and 3 only | (d) 1, 2, and 3  |

- 23.** Diego Garcia Island, recently seen in the news, is located in which of the following Oceans?

- |                    |                   |
|--------------------|-------------------|
| (a) Atlantic Ocean | (b) Pacific Ocean |
| (c) Indian Ocean   | (d) Arctic Ocean  |

- 24.** What is Hydroclimate Whiplash?

- (a) A phenomenon characterized by sudden and extreme fluctuations between wet and dry weather conditions.
- (b) A process involving the rapid melting of polar ice caps due to climate change.
- (c) A weather condition where hurricanes and cyclones occur simultaneously.
- (d) A phenomenon where droughts are prolonged over decades due to global warming.

- 25.** The Siachen Glacier is located in which of the following mountain ranges?

- |                     |                      |
|---------------------|----------------------|
| (a) Zaskar Range    | (b) Pir Panjal Range |
| (c) Karakoram Range | (d) Ladakh Range     |

- 26.** Consider the following statements regarding the Musi River:

1. The Musi River originates in the Ananthagiri Hills of Telangana and is a tributary of the Krishna River.
2. Osmansagar and Himayatsagar reservoirs, formed on the Musi River, serve as major water sources for Hyderabad.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

- 27.** With reference to the Bharathapuzha River, which of the following statements is/are correct?

1. The river originates from the Anamalai Hills.
2. It is the second longest river in Tamil Nadu after Periyar.

Select the correct answer using the code given below:

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

- 28.** With reference to the Gulf of Aden, which of the following statements is/are correct?
1. It is located between Yemen on the Arabian Peninsula and Somalia in the Horn of Africa.
  2. It connects the Arabian Sea to the Red Sea through the Bab el-Mandeb Strait.
- Select the correct answer using the code given below:
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
- 29.** Lake Naivasha, recently seen in the news, is located in which of the following countries?
- (a) Tanzania (b) Kenya  
(c) Uganda (d) Ethiopia
- 30.** The Nord Stream is a major subsea gas pipeline system spanning approximately 1,200 km, designed to carry gas from Russia to Europe through which of the following Seas?
- (a) North Sea (b) Mediterranean Sea  
(c) Baltic Sea (d) Black Sea
- 31.** Consider the following pairs:
- | <i>Hydroelectric Projects</i> | <i>Rivers</i> |
|-------------------------------|---------------|
| 1. Kishanganga                | Ravi          |
| 2. Ratle                      | Chenab        |
| 3. Dulhasti                   | Jhelum        |
| 4. Baglihar                   | Satluj        |
- How many of the above pair(s) is/are correctly matched?
- (a) Only one (b) Only two  
(c) Only three (d) All four
- 32.** Consider the following statements regarding the Panama Canal:
1. It is an artificial waterway connecting the Atlantic Ocean with the Pacific Ocean.
  2. More than 20% of global trade flows through the Panama Canal, making it one of the world's most critical maritime routes.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
- 33.** Dhanauri Water Body, recently seen in the news, is located in which state of India?
- (a) Punjab (b) Haryana  
(c) Uttar Pradesh (d) Rajasthan
- 34.** With reference to the *Wallace Line*, a line that separates the flora and fauna of Asia from Australasia, consider the following islands:
1. Bali
  2. Sumatra
  3. Java
  4. Lombok
  5. Sulawesi
  6. Papua
- Which of the above two islands are separated by *Wallace Line*?
- (a) 2 and 5 (b) 1 and 4  
(c) 5 and 6 (d) 3 and 4

**35.** With reference to the Greenland, consider the following statements:

1. It is the world's largest island and almost 80% of it is covered by the ice cap and glaciers.
2. It is an autonomous province of France.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**36.** With reference to the Victoria Lake, consider the following statements:

1. It is the second largest lake of the African Continent.
2. Tanzania, Uganda, and Kenya are the bordering counties of the Lake.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**37.** With reference to the magnetic field of earth, consider the following statements:

1. It is generated by the movement of molten iron and nickel in the inner core of earth.
2. It plays a vital role in protecting the planet by trapping charged particles in the Van Allen Belts.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**38.** Which of the following best describes "Bombogenesis"?

- (a) The steady movement of a cyclone over the ocean.
- (b) The midlatitude cyclone that rapidly intensifies.
- (c) The rise of the sea surface caused by the gravitational pull of the moon.
- (d) The climate patterns in the Pacific Ocean that can affect weather worldwide.

**39.** Consider the following statements regarding the Teesta River:

1. It originates from the Pangong Tso Lake in Ladakh.
2. The Teesta River is a left-bank tributary of the Brahmaputra.
3. The river flows through Sikkim, West Bengal, and Bangladesh before joining the Brahmaputra.
4. The Rangit River is a major tributary of Teesta.

Which of the above statements are correct?

- |                      |                      |
|----------------------|----------------------|
| (a) 1 and 2 only     | (b) 3 and 4 only     |
| (c) 2, 3, and 4 only | (d) 1, 2, and 4 only |

**40.** Point Nemo, also known as the Oceanic Pole of Inaccessibility, is located in:

- |                   |                    |
|-------------------|--------------------|
| (a) Arctic Ocean  | (b) Atlantic Ocean |
| (c) Pacific Ocean | (d) Indian Ocean   |

**41.** The Potomac River drains into which of the following water bodies?

- |                    |                    |
|--------------------|--------------------|
| (a) Gulf of Mexico | (b) Chesapeake Bay |
| (c) Atlantic Ocean | (d) Hudson Bay     |

42. With reference to Atmospheric Rivers, consider the following statements:

1. They occur only in the Pacific Ocean and impact only North America.
2. The “Pineapple Express” is a well-known atmospheric river that brings moisture from the tropical Pacific to the western United States.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) Only 1       | (b) Only 2          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

### EXPLANATIONS

1. (b)

**Context:** Iran has rejected the accusations by the United States and Britain about Tehran’s role in escalating tensions in the Red Sea.

#### About

- The Red Sea is a semi-enclosed inlet of the Indian Ocean, located between Africa and Asia.
- It connects to the **Arabian Sea** and the **Indian Ocean** through the Gulf of Aden and the Bab el Mandeb Strait.
- The eastern borders of the Red Sea are formed by Yemen and Saudi Arabia, while the northern and western borders are shared by Egypt, Sudan, Eritrea, and Djibouti.

2. (a)

#### Geographical Features of Teesta River

**Length:** Approximately 400 km long. A right-bank tributary of the Brahmaputra River, flowing through India and Bangladesh.

**Major Tributaries:** Lachung Chhu, Chakung Chhu, Zemu Chhu, Rangit River.

**Origin:** The river originates as Chhombo Chhu from a glacial lake named Khangchung Chho, located in Sikkim.

**Flow Path:** The river flows through Sikkim and North West Bengal in India before entering Bangladesh, where it merges with the Brahmaputra.

3. (b)

**Context:** Trinidad and Tobago has declared a state of emergency due to a surge in violence, including gang-related shootings.

#### About Trinidad and Tobago

- **Capital:** Port of Spain
- **Location:** Southernmost Caribbean island nation, situated:
  - northeast of Venezuela
  - south of Grenada
  - In the **Atlantic Ocean**
- **Geographic Features:**
  - **Rivers:** Ortoire River, Caroni River, Nariva River
  - **Mountains:** Northern Range (Trinidad)
  - **Highest Peak:** El Cerro del Aripo (940 meters)

4. (a)

**In News :** Iran’s UN envoy rejected US and British accusations regarding Tehran’s role in escalating tensions in the Red Sea, calling them “baseless and politically-motivated.”

**About**

- Red Sea is a semi-enclosed inlet of the Indian Ocean, located between Africa and Asia.
- It is connected to the Arabian Sea and the Indian Ocean via the Gulf of Aden and the Bab el Mandeb Strait.
- The bordering countries are **Egypt, Saudi Arabia, Yemen, Sudan, Eritrea**, and Djibouti.

5. (b)

**In News:** Ecuadorian President Daniel Noboa has declared a 60-day state of emergency in seven provinces and three municipalities due to escalating internal unrest and armed conflict.



**Ecuador** is situated in western South America, bordering the Pacific Ocean at the Equator, between **Colombia** and **Peru**.

- Situated on the Equator, from which its name derives
- **Capital** : Quito
- **Highest point:** Mount Chimborazo

6. (b)

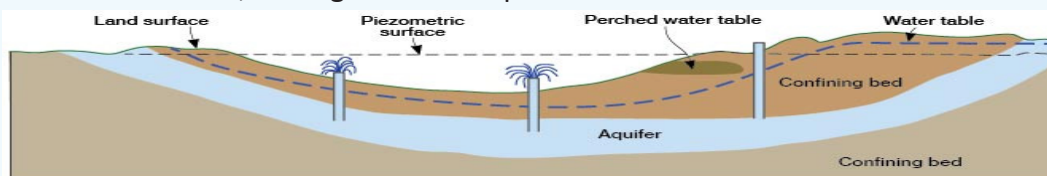
**In News:** Jaisalmer witnessed a unique natural event when artesian water began gushing to the surface, providing a striking example of artesian conditions.

**What is Artesian Condition?**

- An artesian condition occurs when groundwater is confined under pressure between layers of impermeable rocks, creating what is known as an artesian aquifer.

**Factors Leading to Artesian Condition**

- **Confined Aquifer:** Water is trapped between layers of impermeable rock, making it difficult for water to escape.
- **Pressure Gradient:** The natural geological pressure from the weight of overlying rock layers creates the internal pressure within the aquifer.
- **Rupture or Drilling:** When the confining layer is punctured, such as through drilling, the built-up pressure is released, forcing the water upward.



7. (c)

**Context**

- The Union Shipping Ministry has proposed a major expansion of the ₹72,000 crore mega-infrastructure project on Great Nicobar Island.

**Andaman and Nicobar Islands**

- This archipelago is composed of more than 500 big and small islands, which are divided into two distinct groups of islands – **The Andaman Islands and the Nicobar Islands**.

- **'Ten Degree Channel'** separates the Andaman Islands in the north from the Nicobar Islands in the south.
- Most of these islands have a volcanic base and are made of tertiary sandstone, limestone, and shale.
  - **The Barren and Narcondam islands**, north of Port Blair, are volcanic islands.
  - Some of the islands are fringed with coral reefs.
- **Saddle Peak (737 m)** in North Andaman is the highest peak in the Andaman and Nicobar Islands.

8. (d)

**In News:**

- Recently, a tragic incident occurred in the **3 Kilo area of Umrangso in Dima Hasao district of Assam**, where several workers became trapped in a coal mine due to flooding, which has brought the dangerous practice of 'rat-hole' mining back into the spotlight.

9. (b)

**Context**

- Recently a strong earthquake with a magnitude of 7.1 struck in western China near Nepal.

**Measuring Earthquakes**

- The earthquake events are scaled either according to the **magnitude or intensity** of the shock.
- **Richter Scale:** Measures small to medium earthquakes based on seismic wave amplitude.
- **The intensity scale**, named after **Mercalli**, considers the visible damage caused by the event.

10. (a)

**Context**

- Recently a strong earthquake with a magnitude of 7.1 struck in western China near Nepal.

**Seismic Waves**

- Seismic waves are **energy waves generated by an earthquake** that travels through the Earth's layers, causing ground shaking.
- They are mainly classified into two types: **body waves and surface waves**.
  - **Body Waves:** These waves travel through the interior of the Earth. They are faster and arrive before surface waves during an earthquake.
  - **Surface waves** travel along the Earth's surface and are slower than body waves but cause the most damage due to their larger amplitude.

11. (a)

**Context:** The flamingo festival will celebrate the arrival of migratory birds, especially flamingos, to **Pulicat Lake and Nelapattu Bird Sanctuary**, both important ecological sites located in Andhra Pradesh.

**About Pulicat Lake**

- Pulicat Lake is the **second-largest brackish water lake in India**, after Chilika Lake in Odisha. It plays a crucial role in supporting migratory birds and maintaining regional biodiversity.
- Pulicat Lake spans across the **Andhra Pradesh-Tamil Nadu border**, with 96% of the lake's area located in **Andhra Pradesh**.
- The lake serves as a key feeding and breeding ground for migratory birds, including flamingos, pelicans, and various other species.

### About Nelapattu Bird Sanctuary

- Nelapattu is the **largest breeding site for spot-billed pelicans (*Pelecanus philippensis*) in Southeast Asia**. It is one of the most important bird sanctuaries in the region.
- Situated about 20 km north of Pulicat Lake, it is also located on the Andhra Pradesh-Tamil Nadu border.

12. (d)

**Both the statements are not correct: Statement 1 is not correct:** India has 4,407 large dams, the third highest number in the world after China and the USA.

**Statement 2 is not correct:** Maharashtra has the maximum number of large dams followed by Madhya Pradesh and Gujarat.

13. (b)

**In News:** Recently, the United States has experienced one of the most severe winter storms in over a decade, largely attributed to the polar vortex.

**Statement 1 is not correct**

- **Polar Vortex** is a large area of **low-pressure and cold air** that swirls around the **Earth's polar regions**.

**Statement 2 is correct**

- When the polar vortex is strong and stable, it keeps the jet stream (a narrow band of strong wind in the upper atmosphere) traveling in a circular path around the planet. It helps maintain a separation between cold air in the north and warm air in the south.
- However, when the polar vortex weakens, it can cause the jet stream to become wavy and meandering.

14. (a)

**News:** In Egypt, archaeologists have unearthed significant finds near Luxor, including parts of a temple linked to Queen Hatshepsut.

**About: Egypt**

- Egypt is located in northeastern Africa, with an extension in the Sinai Peninsula.
- It is bordered by the Mediterranean Sea to the north, **Sudan** to the south, the Red Sea to the east, and **Libya** to the west.
- It has the largest, most densely settled population among the Arab countries.



15. (b)

**Statement 1 is not correct: The Sex ratio at birth** is defined as the number of female births per 1000 male births.

- **The sex ratio** is the measure of the **number of females per 1,000 males in a given population**.
- **In the question sex ratio is asked however, in the option definition of sex ratio at birth is given.**

**Statement 2 is correct: Census 2011:**

- The sex ratio at all India levels was **943** and the same for **rural and urban areas** are **949 and 929 respectively**.
- The sex ratio for the **0-19 age group** was **908** while that of the **60+ age group** was **1033**.
- The sex ratio was **highest in Kerala** (1084) followed by Puducherry (1037) and **lowest in Daman & Diu** (618) followed by Dadar & Nagar Haveli (774) and then Chandigarh (818).

**16. (c)**

**In News:** India's coastline expanded by almost half in just over five decades - from 7,516km in 1970 to 11,098km in 2023-24.

**About**

- **Major Changes:**
  - States like **Bengal, Gujarat and Goa added significantly** to their shoreline while **Puducherry shrunk by 10.4%**.
  - **Gujarat's recalculated coastline almost doubled** from 1,214km in 1970 to 2,340km in the past 53 years.
  - **Bengal's** was the **highest increase in percentage terms** during this period - up 357% from 157km to 721km.
  - Nationally, the coastline increase compared to 1970 data stands at **47.6%**.

**Gujarat** retains its position as the state with the longest coastline, Tamil Nadu has overtaken Andhra Pradesh based on the new survey.

- **Reason for Increase:** It is attributed primarily to using a **new methodology** to measure India's maritime parameter.
  - Older methods relied on **straight-line distance measurements**.
  - The scientifically updated approach is developed by the **National Maritime Security Coordinator**.
  - It incorporates the measurement of **complex coastal formations** such as bays, estuaries, inlets, and other geomorphological features.

**17. (c)****About Gulf of Mexico**

- The Gulf of Mexico is a large body of water that borders the southeastern and southern United States, as well as Mexico and Cuba.
- Connected to the Atlantic Ocean via the Straits of Florida. Linked to the Caribbean Sea through the Yucatán Channel.
- The Gulf is shared by the United States, Mexico, and Cuba, with overlapping economic zones.
- **Major Draining Rivers:** Mississippi River, Rio Grande
- **Importance:** Rich in oil, natural gas, seafood and a large continental shelf.
  - Crucial for shipping routes and tourism industries.

**18. (c)****Context**

- China has approved the construction of the world's largest hydropower project on the Yarlung Tsangpo (or Zangbo) river in Tibet.

**Yarlung Tsangpo ( Zangbo) river**

- It **originates in Tibet**, and enters **Arunachal Pradesh**, where it is known as the **Siang**.

- In **Assam**, it is joined by tributaries such as **Dibang and Lohit**, and is called the **Brahmaputra**.
- The river then enters **Bangladesh**, and makes its way to the Bay of Bengal.

19. (d)

**News:** An estimated 3.2 million children under the age of five are expected to face acute malnutrition this year in war-torn Sudan, according to the United Nations Children's Fund (UNICEF).

**About: Sudan**

- It lies at the crossroads of Sub-Saharan Africa and the Middle East, facing the Red Sea.
- It shares its border with seven countries: the Central African Republic, **Chad**, Egypt, **Eritrea**, **Ethiopia**, **Libya**, and South Sudan.
- The White and Blue Niles meet in Khartoum, its capital, merging to become the Nile River, which flows all the way to the Mediterranean via Egypt.
- For most of its independent history, the country has faced substantial internal conflict.
  - Under the terms of the Comprehensive Peace Agreement in 2005, South Sudan seceded from Sudan in 2011 and became the 54th independent state of Africa.



20. (d)

**Context**

- The Konkan region, nestled between the Arabian Sea and the Western Ghats, is renowned for its unique geographical features **Sada**.

**About**

- **Sada are flat-topped lateritic plateaus** formed by centuries of erosion.
  - Mostly barren, they flourish with endemic flora during monsoons.
  - Traditional rice and millet (Nanchani) are cultivated without chemicals.
- **Natural groundwater recharge system:** The porous lateritic soil retains rainwater, ensuring year-round freshwater availability.
- **Ecological Significance:** These habitats support vulnerable species like the **Indian flapshell turtle** and wildlife such as leopards, jackals, and migratory birds.
- **Threats:** Development projects, laterite mining, and land-use changes for orchards and residential areas threaten the Sada.
  - Its classification as '**wasteland**' in the Wasteland Atlas further endangers this fragile ecosystem.

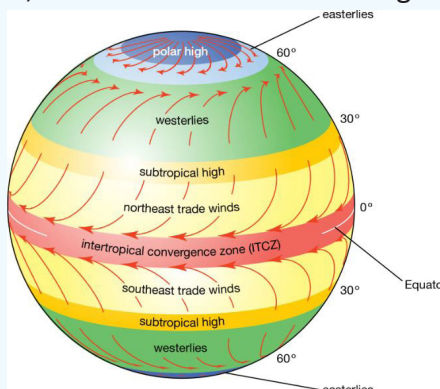
21. (b)

**Statement 1 is not correct:** ITCZ is a belt of **low pressure** around the Earth, typically located near the equator, where the trade winds from the Northern and Southern Hemispheres converge.

- Its position shifts slightly with the seasons, based on the position of the sun.

**Statement 2 is correct: Weather Characteristics:** The ITCZ is known for heavy rainfall, thunderstorms, and high humidity due to the warm air rising, leading to condensation and cloud formation.

- **Significance:** It plays a key role in global weather patterns, especially in tropical regions, influencing rainfall, monsoons, and seasonal weather changes.

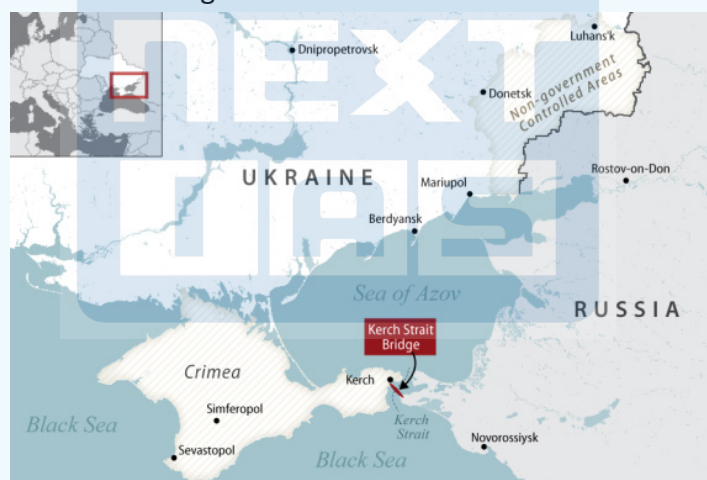


22. (b)

**Statement 1 is not correct:** The Kerch Strait connects the Sea of Azov to the Black Sea, not the Caspian Sea.

**Statement 2 is correct:** The Kerch Strait separates the Russia-occupied Crimean Peninsula from the Krasnodar region of Russia.

**Statement 3 is correct:** The Kerch Strait is an important global shipping route, particularly for energy and trade in the Black Sea region.



23. (c)

**Context:** Fishermen were detained near **Diego Garcia island** for crossing the maritime boundary and poaching.

#### Diego Garcia

- It is the largest and southernmost island of the **Chagos Archipelago**, located in the central Indian Ocean.
- It consists of a V-shaped cay.
- It was discovered by the Portuguese in the early 16th century.
- It is part of the British Indian Ocean Territory.

#### Do you know?

- The Chagos Archipelago is located approximately 2,200 km north-east of Mauritius. It covers an area of 60 km<sup>2</sup>.



24. (a)

**In News:** Wildfires have devastated Los Angeles and surrounding areas, driven by rare meteorological conditions exacerbated by global warming and **Hydroclimate Whiplash**.

Hydroclimate whiplash describes the increasingly frequent and intense swings between periods of extreme drought and periods of heavy rainfall and flooding.

**Key characteristics:**

These transitions between wet and dry conditions occur suddenly and dramatically. This phenomenon is strongly linked to climate change, which intensifies the water cycle.

25. (c)

**About Siachen Glacier**

- The Siachen Glacier is a **Piedmont glacier**, which spreads out on a plain at the base of mountains. It is the world's second-longest non-polar glacier after the **Fedchenko Glacier in Tajikistan**.
- It is located in the **Karakoram Range**, between the **Saltoro Ridge to the west and the main Karakoram Range to the east**.
- The glacier originates near **Indira Col West**, marking the boundary between Central Asia and the Indian subcontinent.
- The glacier feeds the **Nubra River, which is a tributary of the Shyok River**. The Shyok River is part of the larger Indus River system.
- India took control of the glacier under Operation **Meghdoot (1984)**, preempting Pakistan's plans to occupy it.

26. (c)

**In News:** The **Musi River Historic Buildings** in Hyderabad, Telangana, have been included in the prestigious **2025 World Monuments Watch** by the **World Monuments Fund (WMF)**.

**About**

- **2025 World Monuments Watch:** It is a biennial program by the **World Monuments Fund (WMF) (New York based non-profit organization)** that seeks to raise awareness and mobilize action for the preservation of cultural heritage under threat due to challenges like climate change, urbanization, and natural disasters.
- **Musi River:** The River originates in the Ananthagiri Hills in Rangareddy district, Telangana. It is one of the major tributaries of the Krishna River.
  - The river flows into the Osmansagar and Himayatsagar reservoirs, which were constructed to control flooding and serve as drinking water sources for Hyderabad.

27. (a)

**Context**

- In a tragic incident, members of a family drowned in the **Bharathapuzha river** at Cheruthuruthy.

**About**

- The Bharathapuzha River, also known as the **Nila River or Ponnani River**, is the **second longest river** in Kerala after Periyar.
- **Length:** 209 km (Approx).
- **Origin:** Anamalai Hills, Tamil Nadu.
- **Tributaries:** Gayathripuzha, Kannadipuzha, Kalpathipuzha, Thuthapuzha.
- **Drainage Area:** Covers parts of **Kerala and Tamil Nadu**.
- **Significance:** Houses several ancient temples along its banks, including the Thiruvilwamala Temple.
  - Known for the **Kerala Kalamandalam**, a center for traditional arts located on its banks.

**28. (c)****Context**

- Rising threats in the Gulf of Aden, Red Sea, and East African waters have led the Indian Navy to enhance its presence and ensure secure sea routes.

**Gulf of Aden**

- It is a deepwater gulf located between **Yemen** on the **Arabian Peninsula** and Somalia in the Horn of Africa.
- It connects the **Arabian Sea** to the **Red Sea** through the **Bab el-Mandeb Strait**.

**29. (b)**

**Context:** Fishermen on Kenya's Lake Naivasha face challenges due to the invasive water hyacinth.

**About: Lake Naivasha**

- Lake Naivasha derives its name from the Maasai word for 'rough water' due to the sudden storms that are known to arise in the area. It is one of the two freshwater lakes in the Kenyan part of the Rift.
- The lake is designated as a **Ramsar site**, recognized internationally for its ecological importance.
- Lake Naivasha, known for its hippos and flamingos, is a haven for birdwatchers, hosting over 400 bird species.

**30. (c)**

**Context:** The Nord Stream subsea pipeline leaks released an estimated  $465 \pm 20$  thousand metric tons of methane into the atmosphere.

**About Nord Stream Pipeline**

- **About:** The Nord Stream is a major subsea gas pipeline system spanning approximately 1,200 km under the **Baltic Sea**, designed to transport natural gas from Russia to Europe.
- **Key Features:** Gas originates from the Bovanenkovo oil and gas condensate deposit in Western Siberia, Russia.
- **Components:** Nord Stream 1 completed in 2011 (Route from Vyborg in Leningrad Oblast, Russia, to Lubmin, Germany).
  - Nord Stream 2 completed in 2021 (Route from Ust-Luga in Leningrad Oblast, Russia, to Lubmin, Germany).

**31. (a)**

**In News:** Recently, the **Neutral Expert** appointed by the **World Bank** declared competence to decide on the differences between **India and Pakistan** regarding the hydroelectric projects **on the Indus and its tributaries**.

**Pair 1 is not correctly matched**

- **Kishanganga** hydroelectric project is located on **Kishanganga River**, a tributary of river **Jhelum** in Bandipora District of UT of Jammu & Kashmir.

**Pair 2 is correctly matched**

- **Ratle hydroelectric project** is on **Chenab River** in district **Kishtwar** of UT of Jammu & Kashmir.

**Pair 3 and 4 are not correctly matched**

- **Baglihar Stage- I and Dulhasti** both are located in **Doda** of UT of Jammu & Kashmir on **Chenab river**.

**32. (a)**

**Context:** Panama has raised concerns at the United Nations over the U.S. President Donald Trump's threat to reclaim the Panama Canal.

**About: Panama Canal**

- Panama Canal, is an artificial **82-km waterway** that connects the **Atlantic Ocean** with the **Pacific Ocean** by providing a shortcut through the **Isthmus of Panama**.
- The **Hay-Bunau-Varilla Treaty**, signed between the U.S. and Panama, granted the U.S. the authority to build, own, and control the Panama Canal.
- The construction of the Panama Canal began in 1904, and the first ship sailed through it in 1914. In 1999, the **U.S. handed over** the Canal to Panama.
- **Nearly 6% of global trade** (by value) passes through the canal, making it one of the world's most critical maritime trade routes.

**33. (c)**

**Context:** The National Green Tribunal (NGT) directed the Uttar Pradesh government to place on record the status of notifying the Dhanauri water body as a wetland.

**Dhanauri Water Body**

- It is nestled within the **floodplains of Yamuna Basin within 15 kms of River Yamuna**.
- It is located **near the Jewar Airport**.
- It is a **Sarus crane hotspot** which is **Uttar Pradesh's state bird** and is **vulnerable (IUCN Status)**.

**34. (b)**

**About Indonesia**

- World's largest archipelago, with more than 17,500 islands.
- **Latitudes and Longitudes:** 6° N to 11° S and from 9° to 141° E
- It bridges two continents, Asia and Australia/Oceania.
- The **five major islands:** Sumatra, Java, Kalimantan, Sulawesi, and Papua.
- **Wallace Line**, a line in between **Bali and Lombok** that separates the flora and fauna found throughout Asia from those unique to Australasia, passes through the **Lombok Strait**.

**35. (a)**

**Statement 1 is correct: Location:** It lies between the **Arctic and Atlantic oceans**, east of the Canadian Arctic Archipelago.

- It is the **world's largest island**, with a population just over 56,000.
- **Almost 80%** of it is covered by the ice cap and glaciers.

**Statement 2 is not correct:** Greenland was once a Danish colony and is now an **autonomous province of Denmark**, autonomy extended in **2009**.

- It has self-government and its own parliament.
- This does not include foreign and security policy or currency policy.

36. (b)

**Statement 1 is not correct:** **Victoria Lake** is the **world's largest tropical lake**. It's also the **largest lake in Africa**, and the **second-largest freshwater lake** in the world by surface area (after Lake Superior in North America).

**Statement 2 is correct:** It is located in **East Africa**, spanning towards the borders of **three countries: Tanzania, Uganda, and Kenya**.



37. (b)

**In News:** Recently, scientists have released a **new model** tracking the **position of the magnetic north pole**, revealing it is now **closer to Siberia** than it was **five years ago** and is **continuing to drift toward Russia**.

**Statement 1 is not correct**

- **Earth's Magnetic Field** is **generated by the movement of molten iron and nickel** in its **outer core** (*not inner core, because it is solid*).
- It forms a protective shield (**magnetosphere**), which **deflects harmful solar radiation and cosmic rays** (high-energy particles).

**Statement 2 is correct**

- **Magnetosphere (Earth's Protective Shield)** is **Earth's first line of defense against solar wind and cosmic radiation**.
- It plays a vital role in protecting the planet by **trapping charged particles in the Van Allen Belts**, doughnut-shaped zones around Earth.
- Variations in the solar wind can lead to **geomagnetic storms**, influencing everything from satellite operations to power grids on Earth.

38. (b)

Storm Éowyn, a powerful "bomb cyclone," brought severe winds to the British Isles, especially Ireland and Scotland.

- This intense storm has been compared to historic events like the Great Storm of 1987 and Storm Eunice in 2022.

**Bomb Cyclone** is a term used by meteorologists and it occurs when a **midlatitude** (the latitudes between the tropics and polar regions) cyclone rapidly intensifies, or strengthens, over a 24 hour period.

- This intensification is represented by a **drop in millibars**, a measurement of pressure used in meteorology.
  - This intensification happens when a cold air mass collides with a warm air mass, such as over warm ocean waters.
- It is also known as **Bombogenesis**.

39. (b)

**In News:** The Union Ministry of Environment, Forest and Climate Change (MoEF&CC) has approved the proposal for rebuilding the Teesta-III dam, despite concerns over its design and stability.

**Statement 1 is not correct:** The Teesta River originates from Tso Lhamo Lake in North Sikkim, not Pangong Tso.

**Statement 2 is not correct:** It is a right-bank tributary of the Brahmaputra.

**Statements 3 and 4 are correct:** It flows through Sikkim, West Bengal, and Bangladesh, and the Rangit River is its major tributary.

40. (c)

**Context:** In the ongoing voyage for global circumnavigation by two Indian Navy women officers under Navika Sagar Parikrama-II, they have successfully passed through Point Nemo.

**About**

- Point Nemo, located in the **South Pacific**, is the Oceanic Pole of Inaccessibility — the most remote location on Earth, situated approximately 2,688 kilometres from the nearest landmass.
- Its extreme remoteness makes it notable, with the closest human presence often being aboard the International Space Station (ISS) orbiting above.
- Additionally, Point Nemo serves as a decommissioned spacecraft cemetery, where space agencies have intentionally directed defunct satellites and space stations to re-enter Earth's atmosphere and fall into the ocean, minimising the risk to human populations.

41. (b)

**In News:** A passenger jet and a Black Hawk helicopter collided in midair and crashed into the Potomac River in the US.

The Potomac River in the Mid-Atlantic region of the United States flows from the Potomac Highlands in West Virginia to Chesapeake Bay in Maryland.

42. (b)

**In News:** The Atmospheric River named "Pineapple Express" heads for North America. Pineapple Express is a type of atmospheric river that transports warm, humid air from Hawaii to the U.S. West Coast.

**Statement 1 is not correct:** Atmospheric rivers (ARs) are not restricted to the Pacific Ocean; they occur globally, impacting regions like South America, Europe, and Asia. ARs are part of the larger extratropical cyclone system, moving heat and moisture from the tropics toward the poles. Typically found within low-level jets (strong winds in the lower atmosphere).

**Statement 2 is correct:** The "Pineapple Express" is a well-known atmospheric river that transports moisture from Hawaii to the U.S. West Coast, leading to heavy rainfall.



# GOVERNMENT SCHEMES/ INITIATIVES

1. Who chairs the National Ganga Council under which the National Mission for Clean Ganga (NMCG) operates?  
(a) President of India (b) Union Minister of Jal Shakti  
(c) Prime Minister of India (d) Director General of NMCG
2. Which of the following best describes Project VISTAAR?  
(a) A mission to develop state-of-the-art monsoon forecasting systems.  
(b) A digital platform to enhance agricultural extension services and connect farmers with start-up innovations.  
(c) An initiative to promote organic farming across India.  
(d) A scheme to provide direct cash support to farmers.
3. Which among the following are the benefits associated with the Open Network for Digital Commerce (ONDC)?
  1. Suitable Platform for small businesses.
  2. Inclusivity for e-Commerce.
  3. Growth of startups.Select the correct answer using the code given below:  
(a) 1 and 2 only (b) 2 and 3 only  
(c) 1 and 3 only (d) 1, 2 and 3
4. Which of the following key components is included in the Great Nicobar Project?  
(a) Construction of a nuclear power plant  
(b) Missile testing lab facility  
(c) International Container Transshipment Terminal (ICTT)  
(d) Establishment of thermal power plant
5. The 'Back to Village' program is a public outreach initiative launched by which of the following?  
(a) Jammu and Kashmir (b) Rajasthan  
(c) Bihar (d) Himachal Pradesh
6. Which of the following statements are correct regarding the PM Young Achievers Scholarship Award Scheme for Vibrant India (PM-YASASVI)?
  1. Only tribal students are targeted under the scheme.
  2. The annual family income limit for students to be eligible is 5 Lakh Rupees.
  3. UPSC conducts the YASASVI Entrance Test for the selection of beneficiaries.How many of the above statements are correct?  
(a) Only one (b) Only two  
(c) All three (d) None

7. Maiya Samman Yojana, recently seen in the news, is an initiative launched by which of the following state governments?
- (a) Haryana (b) Bihar  
(c) Jharkhand (d) Uttar Pradesh
8. Consider the following statements with reference to the Pravasi Bharatiya Divas:
1. It was first organised in 2003 on the recommendations of a High-Level Committee on Indian Diaspora, headed by Atal Bihari Vajpayee.
  2. The theme for Pravasi Bharatiya Divas 2025 is 'Diaspora's Contribution to a Viksit Bharat.'
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
9. Which of the following initiatives aims to bridge language barriers in India through AI-based multilingual support?
- (a) Bhashini Project  
(b) Digital India Initiative  
(c) BharatNet Project  
(d) Pradhan Mantri Gramin Digital Saksharta Abhiyan
10. The BHARATPOL portal is designed to;
- (a) Enhance disaster management coordination  
(b) Improve crime control measures and investigations  
(c) Manage cyber security threats only  
(d) Support health and welfare schemes
11. With reference to the EmpowHER Biz initiative, consider the following statements:
1. It is a collaboration between Women Entrepreneurship Platform (WEP) and India's largest 24/7 convenience retail chain.
  2. The program targets women entrepreneurs from all states in India.
  3. It focuses on providing mentorship and training in retail management for participants.
- Which of the above statements are correct?
- (a) 1 and 2 only (b) 2 and 3 only  
(c) 1 and 3 only (d) 1, 2, and 3
12. With reference to the *Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY)*, consider the following statements:
1. It provides a health cover for primary and secondary care hospitalization.
  2. All senior citizens aged 60 and above are covered under it, regardless of their income.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
13. With reference to the '*PM-KUSUM*', consider the following statements:
1. It aims to enhance energy security for farmers in India.
  2. It has a provision of setting up decentralized grid connected renewable energy power plants on barren land.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

14. With reference to the Fast Track Immigration – Trusted Traveller Programme (FTI-TTP), consider the following statements:

1. It is an initiative of the Ministry of Civil Aviation (MoCA).
2. The program initially covers Indian citizens and OCI cardholders, with plans to extend it to foreign travelers in later phases.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

15. With reference to the SVAMITVA Scheme, which of the following statements is/are correct?

1. It is a Central Sector Scheme under the Ministry of Rural Development.
2. It provides Record of Rights (RoR), granting legal recognition to property owners in inhabited rural areas.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

16. Which of the following statements regarding the Sukanya Samriddhi Yojana (SSY) is **NOT** correct?

- (a) SSY is a small savings scheme exclusively for the benefit of girl child.
- (b) The scheme aims to encourage parents to save for their daughters' future education and marriage expenses.
- (c) The account can be opened in the name of a girl child only by her father.
- (d) The interest earned on the SSY account is tax-free.

17. With reference to the 'Beti Bachao, Beti Padhao (BBBP)' Scheme, consider the following statements:

1. It has provision of direct benefit transfer (DBT) through Sukanya Samriddhi Account.
2. Non-Resident Indian (NRI) citizens do not possess eligibility for the BBBP scheme.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

18. Consider the following statements regarding the Deep Ocean Mission:

1. It is a Central Sector Scheme implemented by the Ministry of Science & Technology.
2. Samudrayaan is a key project under the mission.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

19. Which of the following Regulated Entities (REs) are covered under The Reserve Bank - Integrated Ombudsman Scheme, 2021?

1. Public Sector Banks
2. Foreign Banks
3. Regional Rural Banks
4. Credit Information Companies

Select the correct answer using the code given below:

- (a) 1 and 2 only (b) 2, 3 and 4 only  
(c) 1, 3 and 4 only (d) 1, 2, 3 and 4

20. Which of the following statements about eCoO 2.0 is correct?

1. It is a platform for issuing Certificates of Origin (CoO) for both preferential and non-preferential trade.
2. It is administered by the Ministry of Finance.
3. (a)adhaar-based e-signing is a key feature of eCoO 2.0.

Choose the correct answer using code given below:

- (a) 1 and 2 only (b) 1 and 3 only  
(c) 2 and 3 only (d) 1, 2, and 3

21. With reference to the 'PM Surya Ghar Scheme', consider the following statements:

1. It covers one crore households by the end of 2030.
2. The household must be an Indian citizen to avail the scheme.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

22. The Unified Pension Scheme (UPS ) was recommended as an alternative to the National Pension System (NPS) by a panel led by

- (a) D. B. Shekatkar (b) K. Radhakrishnan  
(c) T. V. Somanathan (d) R. M. Lodha

### EXPLANATIONS

1. (c)

#### National Mission for Clean Ganga (NMCG)

- **Establishment:** Registered in 2011 under the Societies Registration Act, 1860.
- Functions under the Ministry of Jal Shakti.
- **Role:** Initially acted as the implementation arm of the National Ganga River Basin Authority (NGRBA).
  - After 2016, it operates under the National Ganga Council, **chaired by the Prime Minister**.
- **Legal Framework:** NGRBA was constituted under the Environment Protection Act (EPA), 1986.
  - Replaced by the National Ganga Council in 2016.
- **Objective:** Conservation and rejuvenation of the River Ganga.
  - Follows a river basin approach for sustainable management.

2. (b)

**In News:** The Indian Institute of Technology (IIT) Madras has partnered with the Ministry of Agriculture and Farmers' Welfare on **Project VISTAAR (Virtually Integrated System to Access Agricultural Resources)**.

#### Project VISTAAR

- **About:** A digital platform developed to transform agricultural extension services by providing farmers with access to critical information and innovative solutions from start-ups in agriculture and allied sectors.

- **Key Features:**

- **Enhanced Agricultural Extension Services:** Offers advisory support on crop production, marketing, value addition, and supply chain management.
- **Integration with Agri-Startups:** Incorporates a database of over 12,000 agri-startups, enabling farmers to adopt cutting-edge technologies and solutions.
- **Accessible and Timely Information:** Ensures farmers receive timely, contextual, and accurate information to make informed decisions.

## 3. (d)

**What is the ONDC Project?**

- It was launched in **2022** by the Department of **Promotion of Industry and Internal Trade (DPIIT)**, Ministry of Commerce.
- **Aim:** To **provide equal opportunities to MSMEs** to thrive in digital commerce and democratize e-commerce.
- It **promotes open networks for all aspects** of exchange of goods and services over digital or electronic networks.
  - Currently, there are partners like Paytm, Meesho, Magicpin, Mystore, Craftsvilla, and Spice Money, which act as online storefronts, allowing users to order food or any other product from a business listed on the ONDC platform.

**Significance of ONDC**

- **Suitable Platform for small businesses:** Small businesses would be able to use any ONDC compatible applications instead of being governed by specific platform centric policies.
  - This will provide multiple options to small businesses to be discoverable over network and conduct business.
- **Inclusivity for e-Commerce:** ONDC is expected to make e-Commerce more inclusive and accessible for consumers.
  - Consumers can potentially discover any seller, product or service, thus increasing freedom of choice for consumers.
- **Growth of startups:** By facilitating scalable and cost-effective e-commerce through the open protocol, ONDC will empower startups to grow collaboratively.

## 4. (c)

**Context**

- The Union Shipping Ministry has proposed a major expansion of the ₹72,000 crore mega-infrastructure project on Great Nicobar Island.

**The Great Nicobar project**

- **Implementing authority:** The project is being implemented by the Port Blair-based Andaman and Nicobar Islands Integrated Development Corporation Ltd (**ANIIDCO**).
- **The Project involves** developing an **International Container Transshipment Terminal (ICTT)**, an international airport, township development, and a **450 MVA gas and solar-based power plant** on the island.
  - The site for the ICTT and power plant is **Galathea Bay** on the southeastern corner of Great Nicobar Island, where there is no human habitation.

## 5. (a)

**Context:** In a groundbreaking move for good governance, Haryana's Chief Minister Nayab Singh Saini has directed top officials to connect directly with the people.

**About**

- The CM instructed Deputy Commissioners and SPs to spend one night every month in a village within their jurisdiction, engaging with locals to understand their challenges firsthand.
- Officers must report their visits monthly to the Chief Secretary's office. Weekly public grievance meetings are also being mandated to ensure every voice is heard.
- One such initiative, the '**Back to Village**' program of **Jammu and Kashmir** was also a good governance model where administrative officials get the grassroots level feedback from the general public.
- Frequent visits of officials provide valuable insights into the concerns and challenges of the villages.

**6. (d)**

Punjab opened scholarship portal for **OBC, EBC, DNT students under PM YASASVI scheme**.

- The PM Young Achievers Scholarship Award Scheme for Vibrant India (PM-YASASVI) was launched by the Ministry of Social Justice and Empowerment.
- Candidates are selected through the YASASVI Entrance Test (YET) conducted by NTA.
- It is open to Other Backward Classes (OBC), Economically Backward Classes (EBC), and Denotified Tribes (DNT) students with family income up to ₹2.5 lakh.
- It is aimed at uplifting students from Other Backward Classes (OBC), Economically Backward Classes (EBC), and Denotified Tribes (DNT) by providing them with access to quality education during their formative years.

**7. (c)**

**Context:** Jharkhand CM Hemant Soren transferred ₹1,415.44 crore to 56.61 lakh women under the **Maiya Samman Yojana**.

**About Maiya Samman Yojana**

- The scheme increased the amount from ₹1,000 to ₹2,500 per woman aged 18 to 50.
- The scheme requires women to have bank accounts, bringing millions of women into the formal banking system.

**Importance**

- The cash transfer is described as a transformative boost to women's household income, especially in rural areas.
  - Research shows women-directed cash transfers improve family health, education, and nutrition.
  - The government aims to involve women in economic activities to promote the state's economic growth.

**8. (b)**

**Context:** Over 3,000 delegates from 70 countries have arrived in Odisha for the 18th Pravasi Bharatiya Divas, a grand celebration of India's global diaspora.

**About**

- The event was first organised in 2003 on the recommendations of a High-Level Committee on Indian Diaspora, headed by **LM Singhvi**.
- The term 'diaspora' broadly refers to Non-Resident Indians (NRIs), who are Indian citizens, and Persons of Indian Origin (PIOs), including Overseas Citizens of India (OCI), who are foreign nationals.
- Celebrated on January 9, Pravasi Bharatiya Divas honors the invaluable contributions of the overseas Indian community to India's growth and commemorates the historic return of Mahatma Gandhi from South Africa in 1915—a moment that shaped the nation's destiny.

- This year's theme is 'Diaspora's contribution to a Viksit Bharat.' As part of the program, the prestigious Pravasi Bharatiya Samman Awards will also be presented.

### 9. (a)

The Bhashini Project was launched in 2022 under the Ministry of Electronics and Information Technology (MeitY) and is part of the National Language Translation Mission (NLTM). It is an AI-based language translation tool designed to offer multilingual support for Indian languages. The project aims to bridge language barriers by providing content and services in speech and text to citizens in their native languages.

### 10. (b)

#### Context

- The Union Home Minister inaugurated the BHARATPOL portal developed by the Central Bureau of Investigation (CBI) in New Delhi.

#### BHARATPOL Portal

- BHARATPOL, or **Broadcast Hub for Assistance and Real-Time Action against Transnational Crimes**, is a technological platform created to facilitate real-time coordination between central and state agencies and the International Criminal Police Organization (INTERPOL).
- It is designed to speed up investigations and improve crime control measures by providing a structured and secure interface for data sharing.

### 11. (c)

**Statement 1 is correct:** EmpowHER Biz is a collaboration between Women Entrepreneurship Platform (WEP) and New Shop, India's largest 24/7 convenience retail chain. The WEP was established in 2018 by NITI Aayog, transitioned to a public-private partnership in 2022.

**Statement 2 is not correct:** The program targets women from specific regions, including Delhi NCR, Punjab, Rajasthan, Uttar Pradesh, Haryana, Madhya Pradesh, and Gujarat, not all states in India.

**Statement 3 is correct:** The program focuses on mentorship and training in retail management, digital tools, financial literacy, and business development.

### 12. (d)

**In News:** Recently, Odisha has officially joined the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY) by signing of MoU between the **National Health Authority (NHA)** and Odisha's Department of Health and Family Welfare.

- The scheme will be implemented in convergence with **Odisha's existing Gopabandhu Jan Arogya Yojana (GJAY)**.

#### Statement 1 is not correct

- Ayushman Bharat PM-JAY aims to:
  - reduce the financial burden on poor and vulnerable groups arising out of catastrophic hospital episodes.
  - ensure access to quality health services.
  - provide a health cover of up to ₹5 lakh per family per year for **secondary and tertiary care hospitalization**.
- However, it does not provide primary care hospitalisation.

#### Statement 2 is not correct

- Recently, the Union Cabinet approved a major **expansion of AB PM-JAY**. It includes **all senior citizens aged 70 and above** (not 60 and above) are entitled to receive health coverage, regardless of their income.

13. (c)

**In News:** As Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM) scheme approaches its target year in 2026, it is evident that the scheme requires recalibration to meet its ambitious goals.

**Statement 1 is correct**

- **PM-KUSUM** was launched by the **Ministry of New and Renewable Energy (MNRE)** aimed at **enhancing energy security for farmers** and promoting the use of renewable energy in the agricultural sector in India.
- It seeks to achieve multiple objectives, including reducing the dependency on diesel in the farm sector, increasing farmers' income, and contributing to India's renewable energy targets.

**Statement 2 is correct**

- **Component A of PM-KUSUM** envisioned as setting up of **10,000 MW of Decentralized Grid Connected Renewable Energy Power Plants** on barren land.
  - Installation of small solar power plants with capacities ranging from **500 kW to 2 MW**.

14. (b)

**Statement 1 is not correct: First Launched:** At the Indira Gandhi International (IGI) Airport in New Delhi in 2024.

- **Nodal Agency:** The Bureau of Immigration under the Ministry of Home Affairs.

**Statement 2 is correct:** Registered travellers will be able to scan their boarding pass and passport at airport e-gates.

- After biometric authentication, the gates will automatically open, granting immigration clearance.

It will be implemented in **two phases**. The first will cover Indian citizens and OCI cardholders and in the second phase, foreign travellers will be covered.

15. (b)

**Context**

- Prime Minister Shri Narendra Modi, will preside over the e-Distribution of SVAMITVA Property Cards on 18th January 2025.

**SVAMITVA Scheme**

- The SVAMITVA Scheme (**Survey of Villages Abadi and Mapping with Improvised Technology in Village Areas**) was launched on 24th April, 2020 (National Panchayati Raj Day).
- It is a Central Sector Scheme under the **Ministry of Panchayati Raj**.
- **The scheme aims** to provide legal ownership records to rural property owners by issuing Property Cards, thereby enhancing rural governance and financial inclusion.

**Implementation of the scheme**

- **Accurate Land Demarcation:** The scheme ensures precise demarcation of land parcels in rural areas using **drone technology and Geographic Information System (GIS) tools**, reducing disputes over land boundaries.
- **Property Ownership Rights:** It provides **Record of Rights (RoR)** through SVAMITVA Property Cards, granting legal recognition to property owners in inhabited rural areas (Abadi).

16. (c)

The Sukanya Samriddhi Yojana (SSY) is a government-backed savings scheme designed to encourage parents to invest in their daughters' future. This scheme, a key component of the "Beti Bachao, Beti Padhao" initiative, aims to improve the status of girls in India by promoting their education and financial security.

The SSY account can be opened by either parent or the legal guardian of a girl child (below 10 years of age). This scheme offers several benefits, including tax deductions on contributions and tax-free interest earned. The account matures after 21 years or when the girl child turns 21 years old, whichever is later.

### 17. (b)

**In News:** Marking the **10th anniversary of the Beti Bachao, Beti Padhao (BBBP)** scheme, the Prime Minister remarked that it had become transformative, and drew participation from people across all walks of life.

#### About the Beti Bachao, Beti Padhao

- **Launched Year:** In 2015;
- **Ministries:** Women and Child Development, Health and Family Welfare and Education (formerly Human Resource Development).
- **Implementation:** By States with 100% Central Assistance;
  - There is **no provision of direct benefit transfer (DBT)**.

#### Eligibility

- The family should have a girl child below 10 years of age.
- There should be a **Sukanya Samriddhi Account or SSA** which has been opened in any Indian bank, in the name of the girl child in the family.
- The girl child should be a **resident Indian**.
  - Non-Resident Indian (NRI) citizens do not possess eligibility for the BBBP scheme.

### 18. (b)

**Context:** India is preparing to deploy its first human-operated underwater submersible as part of the **Deep Ocean Mission**.

#### Deep Ocean Mission

- The Deep Ocean Mission, launched on September 7, 2021, by the Ministry of Earth Sciences.
- It is a Central Sector Scheme approved by the Cabinet.
- **A key project** under this mission, **Samudrayaan**, focuses on developing the **MATSYA 6000 manned submersible**.
- The mission also includes the deployment of the Ocean Mineral Explorer (OMe 6000), an Autonomous Underwater Vehicle (AUV) used for deep-sea mineral exploration.

### 19. (d)

**In News :** The Reserve Bank of India's Integrated Ombudsman Scheme (RB-IOS) saw a significant rise in complaints during the year ending March 2024, with a 32.81% increase, reaching a total of 934,355 complaints.

The following REs of RBI are covered under the RB-IOS, 2021:

- **Banks:** All commercial banks, including **public and private sector banks, foreign banks**, small finance banks, payment banks, **regional rural banks**, and both scheduled and non-scheduled primary (urban) co-operative banks with deposits of ₹50 crore or more.
- **NBFCs:** Non-Banking Financial Companies (excluding housing finance companies) with an asset size of ₹100 crore or more, and those authorized to accept deposits or have customer interactions.
- **System Participants:** Payment system participants, both banks and non-banks, regulated by RBI. This includes entities issuing Prepaid Payment Instruments (PPIs) and facilitating transactions through services like NEFT, RTGS, IMPS, UPI, Bharat Bill Payment System, Bharat QR Code, \*99# mobile transactions, and Aadhaar Enabled Payment System (AePS).
- **Credit Information Companies:** All credit information companies registered under the Credit Information Companies (Regulation) Act, 2005.

## 20. (b)

The eCoO 2.0 system is an enhanced digital platform designed for issuing Certificates of Origin (CoO), which verify the origin of exported goods. This platform offers seamless access to both preferential and non-preferential CoOs, ensuring compliance with global trade requirements. The system is managed by the **Directorate General of Foreign Trade (DGFT)** under the **Ministry of Commerce and Industry, Government of India**.

**Key Features of eCoO 2.0**

- **Multi-User Access:** Exporters can authorize multiple users under a single Importer Exporter Code (IEC).
- **Aadhaar-Based e-Signing:** Offers flexibility through Aadhaar-based e-signatures along with digital signature tokens for document authentication.
- **Back-to-Back Certificates of Origin:** Facilitates certifications for re-export or transshipment of non-Indian-origin goods based on validated documentation.

## 21. (b)

**In News:** Recently, the Union Minister for New and Renewable Energy announced that the **PM Surya Ghar Scheme** has achieved a milestone with 8.5 lakh households (about 8.5%) installing rooftop solar connections.

**Statement 1 is not correct:**

- **'PM Surya Ghar: Muft Bijli Yojana'** was launched by the Ministry for New and Renewable Energy (MNRE) with the aim to provide free electricity to households by facilitating the installation of rooftop solar panels.
- **Target of the Scheme:**
  - By March 2025: To exceed 10 lakh,
  - By October 2025: Doubling reaching 20 lakh,
  - **March 2027: 1 crore households.** (*not by the end of 2030*).

**Statement 2 is correct:**

- **Eligibility criteria for the scheme are:**
  - **The household must:**
    - ♦ be an Indian citizen;
    - ♦ own a house with a roof that is suitable for installing solar panels;
    - ♦ have a valid electricity connection;
    - ♦ not have availed any other subsidy for solar panels.

## 22. (c)

**Context:** The Finance Ministry notified the Unified Pension Scheme (UPS) for workers covered by the National Pension System (NPS), effective from April 1, 2025.

**Unified Pension Scheme(UPS)**

- The UPS was recommended as an alternative to the NPS by a panel led by former Finance Secretary **T.V. Somanathan**.
- The Pension Fund Regulatory and Development Authority (PFRDA) will determine the mechanism for retirees opting for the UPS, addressing top-up amounts relative to their NPS payouts.
- It will offer employees an assured pension of **50% of their average basic pay** over the last 12 months before retirement, for a minimum service of 25 years.
- **Additional Benefits:** The UPS includes a family pension of 60% of the government worker's pension upon their death, a lumpsum superannuation payout, and gratuity benefits.



# DEFENSE/ INTERNAL SECURITY

1. Visakhapatnam, Mormugao, Imphal and Surat ships are part of which of the following projects of the Indian Navy?
- (a) Project 75 (b) Project 15 A  
(c) Project 15 B (d) Project-17A
2. With reference to the Bhargavastra, which of the following statements is/are correct?
1. It can detect medium to large UAVs up to 100 kilometres.
  2. It can be mounted on mobile platforms, enabling rapid deployment and adaptability to diverse operational terrains.
- Select the correct answer using the code given below:
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
3. With reference to the Army Day, which of the following statements is/are correct?
1. The day commemorates the appointment of General Sam Manekshaw as the first Commander-in-Chief of the Indian Army.
  2. The theme for Army Day 2025 is 'Samarth Bharat, Saksham Sena.'
- Select the correct answer using the code given below:
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
4. With reference to the India- Bangladesh Border, which of the following statements is/are correct?
1. Bangladesh shares the largest land border with India among all its neighbouring countries.
  2. As per the 1975 Joint India-Bangladesh Guidelines for Border Authorities, no defence structures can be built within 300 yards from the zero line of the border.
- Select the correct answer using the code given below:
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
5. Consider the following pairs:
- | <b>Exercises</b>    | <b>Countries</b> |
|---------------------|------------------|
| 1. Agni Warrior     | Thailand         |
| 2. Bold Kurukshetra | Singapore        |
| 3. Sampriti         | Bhutan           |
| 4. Ekuverin         | Maldives         |
- How many of the above pairs are correctly matched?
- (a) Only one (b) Only two  
(c) Only three (d) All fours

6. With reference to the Central Reserve Police Force (CRPF), consider the following statements:
1. It was established originally as the Crown Representative's Police in 1939 in response to unrest within the princely state of India.
  2. It is responsible for both internal and external security and defence of India.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
7. Consider the following statements regarding the Pralay missile:
1. It is a surface-to-surface short-range ballistic missile (SRBM).
  2. The missile has a range of 150-500 km .
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
8. Consider the following statements regarding the Pinaka Rocket Systems:
1. It is a long-range artillery system capable of striking targets up to 75 kilometers away.
  2. Azerbaijan became the first export customer for the indigenously developed Pinaka system.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
9. With reference to the SANJAY - The Battlefield Surveillance System (BSS), consider the following statements:
1. It has been developed by the Indian Army with the help of Germany.
  2. It will monitor the land border and prevent intrusions.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
10. 'Al Najah and Naseem Al Bahr' are the defence exercises between India and which of the following countries?
- (a) Saudi Arabia (b) United Arab Emirates (UAE)  
(c) Qatar (d) Oman

### EXPLANATIONS

1. (c)

#### Project 15 B:

- These are the next-generation stealth guided-missile destroyers which are follow-on classes of the weapon intensive P15A (Kolkata Class) Destroyers.
- The four ships of the Project are christened after major cities from all four corners of the country, viz. **Visakhapatnam, Mormugao, Imphal and Surat.**

2. (b)

#### Context

- India has successfully tested the Bhargavastra, its first micro-missile system designed to counter swarm drones.

**About**

- **Enhanced Radar Capabilities:** The radar can detect medium to large UAVs up to **10 kilometres** and small drones up to **6 kilometres away**, making it effective against a wide range of aerial threats.
- **Electro-Optical/Infrared (EO/IR) System:** The system ensures precise detection of **low Radar Cross-Section (RCS) targets**, enhancing the missile's ability to counter stealth threats.
- **Versatile Deployment:** Bhargavastra can be mounted on **mobile platforms**, enabling rapid deployment and adaptability to diverse operational terrains, including high-altitude regions.

**3. (b)**

**In News:** The **77th Army Day** was celebrated in India with a theme of “**Samarth Bharat, Saksham Sena**”.

**About Army Day**

- It is celebrated on January 15 each year to **honor General (later Field Marshal) KM Cariappa**, the first Commander-in-Chief of the Indian Army.
- On this day in 1949, **Gen Cariappa took over the command of the Indian Army from General Sir FRR Bucher**, the last British Commander-in-Chief, marking the transition to an independent Indian Army.
- Gen Cariappa is also known for leading Indian forces to victory in the India-Pakistan 1947 war.

**5. (a)****Context**

- India summoned the Bangladesh Acting High Commissioner to India over security measures at the border.

**Reasons for India-Bangladesh Border Disputes**

- As per the **1975 Joint India-Bangladesh Guidelines** for Border Authorities, no defence structures can be built within **150 yards** from the **zero line** of the border.
  - India does not consider wire fencing a defence structure, while **Bangladesh** and **Pakistan** do.

**India- Bangladesh Border**

- India and Bangladesh share **4,096.7 km** of border, the largest land border India shares with any of its neighbours.
- **States Sharing Border:** West Bengal (**2,216.7 km**), Assam, Meghalaya, Tripura, Mizoram.
- **Fencing:** Along the India-Bangladesh border, covering all eastern states including West Bengal, 3,141 kilometers have been fenced out of a total of 4,156 km.

**5. (b)**

**Pairs 2 and 4 are correctly matched, however pairs 1 and 3 are not correctly matched.**

- Military Exercises between India and Singapore:
  - Exercise Agni Warrior and Bold Kurukshetra (Army);
  - Exercise SIMBEX (Navy); and
  - Joint Military Training (Air Force)
- **Exercise Ekuverin:** Between the Indian Army and the Maldives Army
- **Exercise Sampriti:** Between the Indian Army and the Bangladesh Army

**6. (a)**

**Statement 1 is correct: Origin:** Established originally as the Crown Representative's Police in 1939, it stands as one of the oldest central paramilitary forces.

- In response to escalating political turmoil and unrest within the princely state of India.

**Statement 2 is not correct:** The CRPF is the premier central police force of the Union of India entrusted with maintaining internal security.

• **Key roles of CRPF:**

- **Law and Order:** Assists in maintaining peace during protests, riots, and elections.
- **Counter-Insurgency Operations:** Engages in operations against armed insurgents, terrorists, and extremist groups, especially in areas like Jammu & Kashmir and the Northeast.
- **Disaster Response:** Provides aid during natural disasters.

7. (c)

**Statement 1 is correct:** Pralay is indeed a surface-to-surface short-range ballistic missile (SRBM) developed by the Defence Research and Development Organisation.

**Statement 2 is correct:** Pralay has a range of 150-500 km and is equipped with advanced navigation and avionics systems for improved accuracy and maneuverability.

8. (a)

**Context:** The Indian Army has set a Rs 10,200 crore order for ammunition related to the Pinaka multi-launch artillery rocket system.

**About**

- The Pinaka MBRL system was developed by the **Defence Research and Development Organisation (DRDO) of India**.
- The system is named after “**Pinaka**,” a **mythical weapon used by Lord Shiva**.
- It is a long-range artillery system capable of striking targets up to 75 kilometers away.
- The Pinaka MBRL is capable of launching a salvo of **12 rockets in 44 seconds**, which makes it an effective weapon for quickly overwhelming enemy defenses.
- **Armenia** became the first export customer for the indigenously developed Pinaka with interest expressed by several countries in the system.

9. (b)

**Statement 1 is not correct:** It has been **indigenously & jointly developed** by the **Indian Army and Bharat Electronics Limited (BEL)**.

- These systems will be inducted to the Indian Army in three phases in **2025**.
- **Features:** SANJAY is an automated system which **integrates the inputs from all ground and aerial battlefield sensors**.
  - The BSS is equipped with **state-of-the-art sensors and cutting-edge analytics**.

**Statement 2 is correct:** It will **monitor the vast land borders**, prevent intrusions, assess situations with unparalleled accuracy and prove to be a force multiplier in Intelligence, Surveillance & Reconnaissance

- It will enhance battlefield transparency and transform the future battlefield through a Centralised Web Application.
- It will provide inputs to Command & Army Headquarters, and the Indian Army Decision Support System.

10. (d)

**India and Oman** conduct regular biennial bilateral exercises between all three services.

- **Army exercise:** Al Najah
- **Air Force exercise:** Eastern Bridge
- **Naval Exercise:** Naseem Al Bahr



# INTERNATIONAL RELATIONS

1. Consider the following Countries:

- |              |                 |
|--------------|-----------------|
| 1. Indonesia | 2. Argentina    |
| 3. Ethiopia  | 4. Saudi Arabia |

Which of the following are members of BRICS?

- |                  |                     |
|------------------|---------------------|
| (a) 1 and 2 only | (b) 1, 3 and 4 only |
| (c) 3 and 4 only | (d) 1, 2, 3 and 4   |

2. Consider the following countries:

- |               |              |
|---------------|--------------|
| 1. Iran       | 2. Venezuela |
| 3. Kazakhstan | 4. Iraq      |

Which of the above are the members of the Organization of the Petroleum Exporting Countries (OPEC)?

- |                  |                      |
|------------------|----------------------|
| (a) 1 and 2 only | (b) 1, 2, and 4 only |
| (c) 2 and 3 only | (d) 1, 2, 3 and 4    |

3. Consider the following statements:

1. India and Indonesia were among the founding leaders of the Non-Aligned Movement.
2. Indonesia is the largest trading partner of India in the ASEAN region.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

4. Consider the following statements regarding the Gulf Cooperation Council (GCC):

1. It is a political and economic alliance of six Middle Eastern countries.
2. Established in 1981, the GCC rotates its presidency every six months.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

5. Which among the following countries are a part of the Minerals Security Partnership (MSP)?

- |              |           |
|--------------|-----------|
| 1. Australia | 2. China  |
| 3. India     | 4. Mexico |

Select the correct answer using the code given below:

- |                  |                     |
|------------------|---------------------|
| (a) 1 and 2 only | (b) 1, 3 and 4 only |
| (c) 1 and 3 only | (d) 1, 2, 3 and 4   |

## EXPLANATIONS

1. (b)

**In News:** **Indonesia** has officially joined BRICS as the 11th member effective from January 2025.

- The inclusion of Indonesia marks another step in expanding BRICS' influence among emerging economies.

**About BRICS**

- **Definition:** BRICS is an intergovernmental informal grouping of emerging economies aimed at fostering cooperation and enhancing their global influence.
- **Members:** Brazil, Russia, India, China (these are founding members); South Africa joined in 2010; Iran, UAE, Egypt, **Ethiopia, and Saudi Arabia** joined in 2024.
  - **Argentina** was initially expected to join in 2024 but later opted out.
- **Background:** The first BRIC Summit was held in Russia in 2009.

2. (b)

**Context:** The Organization of Petroleum Exporting Countries (OPEC) has forecast the global oil demand will grow by 1.43 million barrels per day (bpd) in 2026.

**About OPEC**

- The Organization of the Petroleum Exporting Countries (OPEC) was established in 1960 at the Baghdad conference.
- It is headquartered in Vienna, Austria.
- Currently, it has 12 members including **Iran, Iraq, Kuwait and Venezuela**.

**OPEC+**

- OPEC+ comprises OPEC members and other major oil producers (such as **Kazakhstan**, South Sudan).
- The OPEC+ was formed in **2016** after the adoption of the 'Algiers Accord' and 'Vienna Agreement'.
- OPEC+ represents around 40% of world oil production and its main objective is to **regulate** the supply of oil to the world market.

3. (a)

**Context:** The Indonesian President arrived in India as the chief guest for 76th India's Republic Day celebrations—the fourth leader from the Southeast Asian country to grace the occasion.

**India-Indonesia Relation & Significance**

- In 1951, India and Indonesia signed a **Treaty of Friendship** which aimed at perpetual peace and unalterable friendship.
- India and Indonesia were among the **five founding leaders** of Non-Aligned Movement (NAM) along with Yugoslavia, Egypt, and Ghana.
- Indonesia is the **second largest** trading partner of India in the ASEAN region (after Singapore).
  - Bilateral trade increased from \$4.3 billion in 2005-06 to \$38.84 billion in 2022-23 and \$29.40 billion in 2023-24.

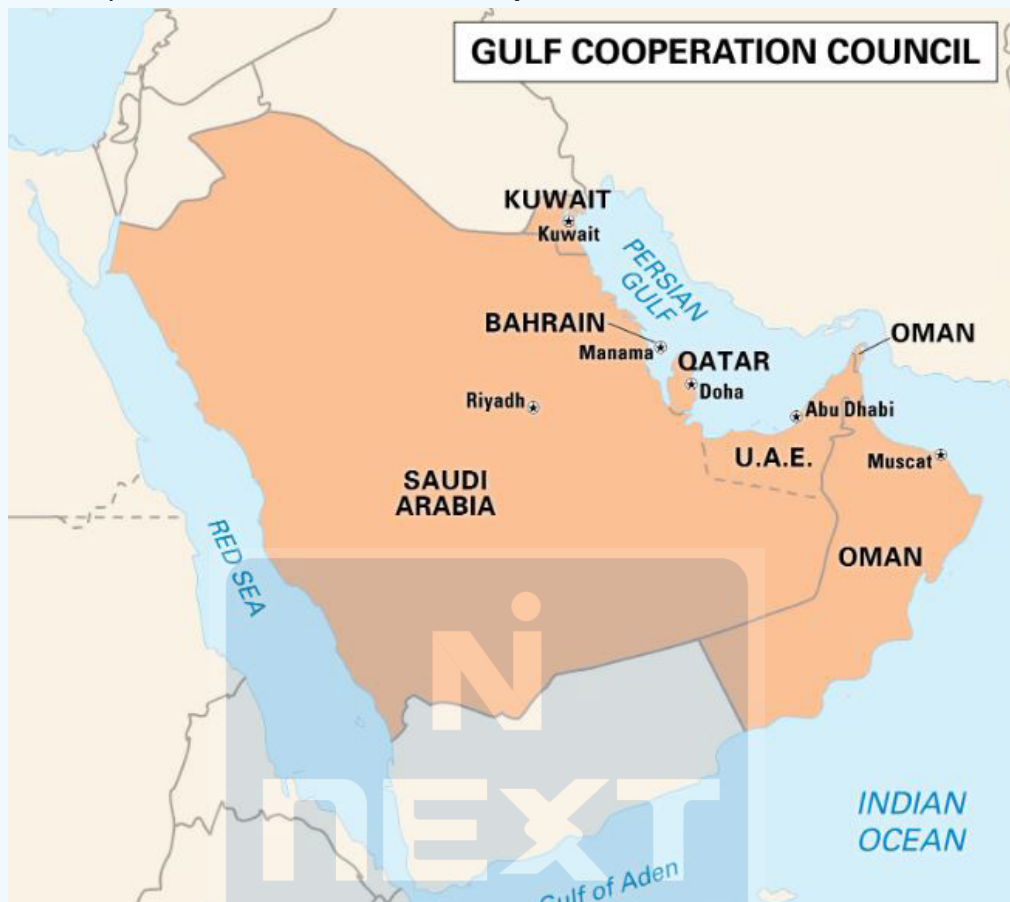
4. (a)

**Context:** The Commerce and Industry Minister of India is set to visit Oman, a key trading partner within the Gulf Cooperation Council (GCC).

**About GCC**

- It is a **political and economic alliance** of **six Middle Eastern countries**—Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman.

- It was established in **1981**.
- It aims to achieve unity among its members based on their common objectives and their similar political and cultural identities, which are rooted in Arab and Islamic cultures.
- The presidency of the council rotates **annually**.



5. (b)

**The MSP currently consists of 23 partners**, including Argentina, **Australia**, Canada, Estonia, Finland, France, Germany, Greenland, **India**, Italy, Japan, Kazakhstan, **Mexico**, Namibia, Norway, Peru, the Republic of Korea, Sweden, Ukraine, the UK, the US, Uzbekistan, and the EU (represented by the European Commission).

- It aims to **catalyse public and private investment** in critical mineral supply chains globally.
- India is already a member of the **Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development**, which supports the advancement of good mining governance.



# SCIENCE & TECHNOLOGY

1. Which of the following is correct regarding the New Glenn rocket developed by Blue Origin?
  - (a) It is a three-stage rocket designed for a deeper solar probe.
  - (b) It is a heavy-lift, two-stage rocket designed for Earth orbital missions.
  - (c) It is a single-stage rocket designed primarily for lunar exploration.
  - (d) It is a three-stage rocket developed for interplanetary missions.
2. With reference to Neutrinos, which of the following statements is/are correct?
  1. They are the second most abundant particle in the universe after photons.
  2. They are also known as ghost particles due to their minimal interactions with matter.Select the correct answer using the code given below:
  - (a) 1 only
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2
3. With reference to the Di-ammonium Phosphate (DAP), consider the following statements:
  1. It is a type of fertilizer that contains phosphorus and potassium, two essential nutrients for plant growth.
  2. It is the most commonly used fertilizer in India followed by Urea.Which of the statements given above is/are correct?
  - (a) 1 only
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2
4. Why is Methylcobalamin considered more effective than other forms of Vitamin B12?
  - (a) It is easier to synthesize.
  - (b) It is more bioavailable and better absorbed by the body.
  - (c) It is cheaper to produce than cyanocobalamin.
  - (d) It is a plant-based form of Vitamin B12.
5. Which of the following statements is not correct regarding Norovirus?
  - (a) It belongs to a family of small RNA viruses called Caliciviridae.
  - (b) It was first identified in China, in the 1970s.
  - (c) Its symptoms include vomiting, diarrhea, and nausea.
  - (d) None of the above.
6. With reference to the Nuclear Energy, consider the following statements:
  1. It is a zero-emission clean renewable energy source.
  2. It generates power through fission, which is the process of splitting uranium atoms to produce energy.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

7. Which of the following statements is not correct regarding Human Metapneumovirus (HMPV)?
- (a) First discovered in 2001, it belongs to the Pneumoviridae family.  
(b) Like Covid-19, it spreads through respiratory droplets when an infected person coughs or sneezes.  
(c) Currently, there is no vaccine or specific antiviral to treat HMPV.  
(d) None of the above.
8. With reference to the Compact Research Module for Orbital Plant Studies (CROPS) experiment, consider the following statements:
1. It is a collaboration between Indian Space Research Organisation (ISRO) and European Space Agency (ESA).
  2. It is part of a larger initiative to evolve ISRO's capabilities in sustaining flora in extraterrestrial environments.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

9. Osteoporosis is a disease that primarily affects which part of the body?
- (a) Lungs (b) Kidneys  
(c) Bones (d) Liver
10. Which of the following best describes the scientific method used in the Twigstats study?
- (a) Carbon dating to determine the age of fossils.  
(b) Isotope analysis for dietary reconstruction.  
(c) Radiometric analysis for geological dating.  
(d) Genomic sequencing combined with statistical modeling.
11. Consider the following statements about the Radio Access Network (RAN):
1. It connects user equipment to the core network via a radio link.
  2. It directly handles subscriber data and location information.
  3. Antennas, radios, and baseband units are its key components.

Which of the statements given above is/are correct?

- (a) 1 only (b) 1 and 3 only  
(c) 2 and 3 only (d) 1, 2, and 3

12. Consider the following statements:
1. A genome is the complete set of deoxyribonucleic acid (DNA) in an organism.
  2. In living organisms, genetic information is stored in long molecules of DNA called chromosomes.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

- 13.** Which of the following is true regarding conductive ink compared to traditional circuit construction methods?
1. It allows circuits to be printed directly onto various surfaces.
  2. It is less flexible and harder to implement in modern electronic devices.
  3. It requires extensive post-processing, making it less practical than copper-based circuits.
- Select the correct answer using the code given below:
- (a) 1 only (b) 2 and 3 only  
(c) 1 and 2 only (d) 1, 2, and 3
- 14.** With reference to the Purulia Observatory, consider the following statements:
1. It was established by the S N Bose Centre for Basic Sciences (SNBCBS) under the Department of Science and Technology (DST), India.
  2. It is located in Madhya Pradesh.
- Which of the statements given below is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
- 15.** With reference to the Trichophyton Indotineae, consider the following statements:
1. It is a viral pathogen that causes widespread and hard-to-treat skin infections.
  2. It is named after India and Nepal.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
- 16.** Autism Spectrum Disorder (ASD), recently seen in the news, primarily affects which of the following?
- (a) Cardiovascular functioning (b) Communication, behavior, and learning  
(c) Immune system regulation (d) Digestive processes
- 17.** What is the primary purpose of Space Docking Technology?
- (a) To assemble larger space modules by launching components separately and assembling them in orbit  
(b) To launch satellites into low Earth orbit (LEO)  
(c) To develop interplanetary propulsion systems  
(d) To test the safety of space missions
- 18.** With reference to the Zombie Deer Disease, consider the following statements:
1. It is a fatal neurological disorder commonly referred to as Chronic Wasting Disease.
  2. Within animals, it spreads through their saliva, urine, blood or faeces.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
- 19.** Consider the following statements about "Dark Oxygen":
1. It refers to the generation of oxygen in the absence of sunlight.
  2. Metallic nodules rich in manganese and iron play a crucial role in its production.
  3. The process of producing dark oxygen is driven by photosynthesis in deep-sea environments.

Which of the statements given above is/are correct?

- (a) 1 and 2 only (b) 2 and 3 only  
(c) 1 and 3 only (d) 1, 2, and 3

**20.** With reference to the DDT (dichlorodiphenyltrichloroethane), which of the following statements is/are correct?

1. It is used to control malaria and other insect-borne diseases.
2. The manufacture and Use of DDT was banned in India in 2010.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

**21.** Which of the following correctly describes a scramjet engine?

- (a) An air-breathing jet engine that uses rotating compressors to compress incoming air for combustion.
- (b) A jet engine that operates only at subsonic speeds using external fuel compression.
- (c) An air-breathing engine that uses forward motion to compress incoming air for combustion without rotating compressors.
- (d) A non-air-breathing jet engine designed for interplanetary missions.

**22.** With reference to the Black Hole, which of the following statements is/are correct?

1. It is an extremely dense object whose gravity is so strong that nothing can escape it.
2. The center of a black hole is known as the gravitational singularity.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

**23.** With reference to Rhodamine B, which of the following statements is/are correct?

1. It is used as a food additive in the manufacturing of various food items.
2. It has been approved by the Food Safety Standards Act, 2006 in serving food items.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

**24.** Consider the following statements regarding the Guillain-Barré Syndrome (GBS):

1. People of all ages can be affected, but it is more common in adults and in males.
2. It is a contagious disease, and its symptoms include diarrhea, abdominal pain, and nausea.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

**25.** With reference to the Kodaikanal Solar Observatory, which of the following statements is/are correct?

1. It is situated on the southern tip of the Palani Hills in Tamil Nadu.
2. The Evershed Effect, first discovered in 1909, at the Kodaikanal Solar Observatory.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

- 26.** Which of the following statements regarding Stargardt Disease is correct?
- It is an inherited eye disease that primarily affects peripheral vision.
  - It is caused by a mutation in the ABCA4 gene, affecting how the body processes Vitamin A.
  - The disease occurs due to the buildup of fatty material on the liver.
  - Effective treatment options are available to reverse the vision loss caused by the disease.
- 27.** Which of the following statements is true about Fentanyl?
- Fentanyl is a natural opioid derived from the opium poppy.
  - Fentanyl is 50-100 times more potent than morphine.
  - Fentanyl blocks pain signals by deactivating opioid receptors in the brain.
  - Fentanyl is less potent than heroin and is primarily used for recreational purposes.
- 28.** Paraquat, recently seen in the news, is primarily related to:
- Fertilizer
  - Herbicide
  - Fruit ripening agent
  - A butterfly species
- 29.** Consider the following statements regarding the piezoelectricity:
- It refers to the generation of an electrical charge in a solid material when mechanical stress is applied, and vice versa.
  - The piezoelectric effect is observed in materials that develop a net electric dipole moment.
- Which of the statements given above is/are correct?
- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2
- 31.** With reference to the DeepSeek, consider the following statements:
- It is a Chinese AI-powered chatbot.
  - It surpasses models developed by tech giants Google, Meta, and Anthropic in terms of overall quality.
- Which of the statements given above is/are correct?
- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2
- 32.** With reference to the *Liquid Propulsion System of ISRO*, consider the following statements:
- It is preferred over solid propulsion systems due to their higher efficiency, controllability, and ability to be restarted multiple times.
  - ISRO has integrated it into the Crew Module for the first uncrewed mission of the Gaganyaan project.
- Which of the statements given above is/are correct?
- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2
- 33.** Consider the following statements regarding Silicon Carbide (SiC):
- It is a naturally occurring compound found in moon soil.
  - Silicon Carbide has high thermal conductivity and excellent resistance to oxidation.
  - It is commonly used in the electrical and defense industries.
- Which of the statements given above is/are correct?
- 1 and 2 only
  - 2 and 3 only
  - 1 and 3 only
  - 1, 2, and 3

- 34.** With reference to the India's Navigation with Indian Constellation (NavIC), consider the following statements:
1. It is designed with a constellation of 7 satellites and a network of ground stations operating 24x7.
  2. It provides location accuracy better than 20 meters and timing accuracy better than 40 nanoseconds.
  3. NVS-01 is the first of the second-generation satellites, and for the first time, an indigenous atomic clock was flown in it.
- How many of the statements given above are correct?
- (a) Only one (b) Only two  
(c) All three (d) None
- 35.** Which of the following best describes Geosynchronous Transfer Orbit (GTO)?
- (a) It is used to position satellites into low Earth orbit for scientific research.
  - (b) It allows satellites to maintain a fixed position relative to the Earth's surface, crucial for communication and weather monitoring.
  - (c) It is primarily used for launching satellites into polar orbits for remote sensing.
  - (d) It is a type of orbit only used by military satellites.
- 36.** With reference to the Axiom Mission 4, consider the following statements:
1. It is a private spaceflight to the International Space Station (ISS).
  2. France, India and the USA are a part of the mission.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
- 37.** With reference to the Leprosy, consider the following statements:
1. India has set a target to eliminate leprosy by 2030.
  2. Jordan has become the first country in the world to eliminate leprosy in 2024.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
- 38.** With reference to the Human African Trypanosomiasis (HAT), consider the following statements:
1. It is also known as sleeping sickness, found only in sub-Saharan Africa.
  2. Guinea has successfully eliminated the Gambiense form of HAT.
  3. The rhodesiense form of the disease has been eliminated in Uganda only.
- How many of the statements given above are correct?
- (a) Only one (b) Only two  
(c) All three (d) None

### EXPLANATIONS

1. (b)

#### Context

- The Federal Aviation Administration (FAA) has granted Blue Origin a commercial space launch license for its New Glenn rocket.

**What is the New Glenn rocket?**

- New Glenn is a **heavy-lift, two-stage rocket** developed by Blue Origin.
  - It is named after **John Glenn**, the first American to orbit Earth.
- **Size and Design:** The rocket stands at 320 feet, and has a 7-meter-wide payload fairing.
- **The first stage** of the rocket is **reusable and powered by seven BE-4 engines**, which are **LNG-fueled** and produce over 3.8 million pounds of thrust.
- **The second stage** is powered by two BE-3U engines, using **liquid hydrogen** and oxygen, generating over 320,000 pounds of vacuum thrust.

2. (c)

**Context**

- Scientists are using two telescopes, part of the **Cubic Kilometre Neutrino Telescope (KM3NeT)**, to detect high-energy neutrinos, beneath the Mediterranean Sea.

**What are Neutrinos?**

- Neutrinos, discovered in **1959**, are tiny, **electrically neutral** subatomic particles, similar to electrons.
- They are the **second most abundant particles** in the universe after photons.
  - They rarely interact with matter, earning them the nickname **“ghost particles.”**
- Neutrinos pass through vast amounts of matter, with billions passing through a cubic centimeter of space every second.

3. (d)

**Both the statements are not correct: Di-ammonium Phosphate (DAP)** is a type of fertilizer that contains **phosphorus and nitrogen**, two essential nutrients for plant growth.

- Nano DAP contains **nanoparticles of Diammonium Phosphate (DAP)** which helps in better crop growth and yield.
- DAP is commonly used in agriculture to provide a **quick and readily available source of nutrients to plants**.
- It is the **second most commonly** used fertilizer in India after urea.

4. (b)

**In News: FSSAI** has provided guidelines for the use of methylcobalamin in food supplements and other products.

- **Banned in 2016**, ban lifted in 2021, but formal notification is still pending.

**Methylcobalamin**

- **About:** A naturally occurring form of Vitamin B12 found in foods like fish, meat, eggs, and milk.
  - Essential for DNA synthesis, red blood cell production, and nerve function.
- **Functions:** Helps in cell multiplication, blood formation, and protein synthesis.
  - Supports the nervous system and neurological health.
- **Uses:** Treats diabetic neuropathy (nerve pain).
  - Manages anemia caused by Vitamin B12 deficiency.
  - Helps in neurological conditions like Alzheimer's disease.
- **Why It Matters:** Many Indians are deficient in B12 due to vegetarian diets.
  - Methylcobalamin is more bioavailable and effective than other forms of B12.

5. (b)

**Context:** Recently a surge in the outbreak of Norovirus has been detected in parts of the United States.

**About**

- **Norovirus**, often called the **stomach flu** or **stomach bug**, is a highly contagious virus causing vomiting and diarrhea.
  - It leads to inflammation in the stomach or intestines, a condition known as **acute gastroenteritis**.
- **First identified in Norwalk, Ohio**, during the **1970s**, it is a leading cause of foodborne illnesses globally.
- **The norovirus** belongs to a family of small **RNA viruses** called **Caliciviridae**.
- **Transmission:** Norovirus spreads rapidly through multiple routes; **direct contact**, by consumption of contaminated food or liquids & aerosolised particles released by an infected person.
- **Symptoms:** vomiting, diarrhea, and stomach pain and nausea.

6. (b)

**Statement 1 is not correct:** Nuclear power is **not renewable energy** but it is a **zero-emission clean energy** source.

- **Statement 2 is correct:** It generates power **through fission**, which is the process of **splitting uranium atoms to produce energy**.
  - The heat released by fission is used to create steam that spins a turbine to generate electricity without the harmful by-products emitted by fossil fuels.

7. (d)

**Context:** The Union Health Ministry stated that it is closely monitoring the reported outbreak of Human Metapneumovirus (HMPV) in China.

**About HMPV (Human Metapneumovirus)**

- **Discovery:** First discovered in **2001**, the HMPV belongs to the **Pneumoviridae family** along with respiratory syncytial virus (RSV).
- **Transmission:** Like Covid-19, HMPV is spread through **respiratory droplets** when an infected person coughs or sneezes.
- **Symptoms:** Cough, fever, and shortness of breath, with potential complications like bronchitis and pneumonia.
- **Treatment:** Currently, there is **no vaccine or specific antiviral** to treat HMPV and most people rely on over-the-counter medications to relieve fever and pain.

8. (b)

**Statement 1 is not correct:** **CROPS** is conducted by the **Vikram Sarabhai Space Centre (VSSC)** to study **plant growth in microgravity conditions**.

**Statement 2 is correct:** It is part of a larger initiative to evolve ISRO's capabilities in sustaining flora in extraterrestrial environments, with future phases expected to focus on **longer-term plant growth in space**.

- The current experiment is designed to **last between five and seven days**, demonstrating seed germination and plant development up to the **two-leaf stage**.

9. (c)

**Context:** Osteoporosis, a silent disease that weakens bones, often goes unnoticed until a fracture occurs.

**About: Osteoporosis**

- It occurs when the balance between bone resorption and bone remodelling is disrupted, leading to decreased bone mass.

- It affects women and men of all races and ethnic groups. It can occur at any age, although the risk for developing the disease increases as one gets older. For many women, the disease begins to develop a year or two before menopause.
- Adequate calcium intake, regular physical activity, and avoiding smoking and excessive alcohol consumption are essential for preventing bone loss in young adults.

## 10. (d)

**Context**

- In a recent study published in Nature, researchers **used Twigstats** to analyze ancient genomes from Europe and reconstruct the region's high-resolution genomic history.

**What is Twigstats?**

- Twigstats is a **time-stratified ancestry analysis tool** designed to enhance the understanding of genetic history.
- It **utilizes statistical languages R and C++** to assist researchers in analyzing genetic data with greater precision.
- By focusing on recent mutations, Twigstats enables researchers to target specific historical periods, as these mutations offer clearer insights into events from those times.

## 11. (b)

**Statement 1 is correct:** The RAN's primary function is to provide wireless connectivity between user devices (like smartphones, tablets) and the core network of a cellular system. This connection is established through radio waves.

**Statement 2 is not correct:** While the RAN is involved in locating user devices, it doesn't directly handle subscriber data itself. Subscriber data is typically managed by the core network elements.

**Statement 3 is correct:** Antennas, radios, and baseband units are essential components of a RAN:

- Antennas: Transmit and receive radio signals.
- Radios: Handle the modulation and demodulation of signals for wireless transmission.
- Baseband units: Process the digital data that is transmitted over the radio link.

## 12. (c)

**In News:** Recently, the Prime Minister of India hailed the completion of the **Genome India Project**, calling it a 'historic step in the world of research' at **Genome India Data Conclave**, held at Vigyan Bhavan, New Delhi.

**Statement 1 is correct**

- A genome is the complete set of **deoxyribonucleic acid (DNA)** in an organism, **containing all the genetic information** necessary for the **development, functioning, and reproduction** of that organism.
- **Key components** of a genome are **DNA** (*a double-stranded molecule consisting of four types of bases: Adenine, Cytosine, Guanine, and Thymine*); **Genes** (*segments of DNA that code for proteins or functional RNA molecules*).

**Statement 2 is correct**

- In living organisms, genetic information is stored in long molecules of DNA called chromosomes.

## 13. (a)

**About Conductive Ink**

- Conductive ink is a special type of paint that contains **silver or carbon particles**, allowing it to conduct electricity.
- Unlike traditional circuits made with copper wires, this **ink enables circuits to be directly drawn onto various surfaces**.

- **Key Applications:**

- Repairing and enhancing circuits on printed circuit boards (PCBs)
- Flexible electronics such as foldable screens, keyboards, and windshield defrosters
- Used in RFID tags, wearable devices, sensors, displays, and solar panels
- Holds potential for interactive marketing and signage with touch-enabled features.

## 14. (a)

**Statement 1 is correct:** The Purulia Observatory is equipped with advanced telescopes and instruments, enabling researchers to conduct various astronomical observations. It was established by the S N Bose Centre for Basic Sciences (SNBCBS) under the Department of Science and Technology (DST), India.

**Statement 2 is not correct:** It is situated in Purulia district, West Bengal, not Madhya Pradesh.

## 15. (b)

**Statement 1 is not correct: Trichophyton indotineae:** It is a **fungal pathogen** that causes **widespread and hard-to-treat skin infections**.

- It is **resistant** to most anti-fungal medicines.

**Statement 2 is correct:** Japanese dermatologists, who had spotted the fungus in patients from India and Nepal, proposed in 2020 that this fungus should be considered a **new species and named Trichophyton indotineae**.

- The naming of the species is in line with a historical tradition of **linking new infectious agents to specific locations**.
- Examples are the Spanish flu, Delhi boil, Madura foot, West Nile virus, etc.

## 16. (b)

**Context:** Autism diagnoses in the United States have risen sharply since 2000, raising public concern about the factors driving its prevalence.

**Autism Spectrum Disorder (ASD)**

- **About:** It is a neurological and developmental condition affecting communication, behavior, interaction, and learning due to disruptions in brain signaling.
- **Causes:** Likely due to **genetic and environmental** factors, including maternal health and birth complications.
  - Genetic disorders (e.g., Fragile X syndrome) and environmental triggers (e.g., air pollution) may increase risk.
- **Prevalence :** The World Health Organization estimates global prevalence at 1%, up from 0.62% in 2012.
- **Treatments:** No cure; early diagnosis and intervention (before age 3) are key.
  - Supportive therapies include speech therapy, occupational therapy, social skills training, and individualized education plans.

## 17. (a)

**Context**

- ISRO launched the **PSLV-C60 mission**, carrying a pair of satellites for the **Space Docking Experiment (SpaDeX)** to demonstrate orbital rendezvous and docking.

**Space Docking Technology**

- Docking technology allows the assembly of larger space modules by **launching components separately and assembling them in orbit**.

- It is crucial for interplanetary missions where the spacecraft may exceed the payload capacity of current launch vehicles.

## 18. (c)

**Context:** A recent study has concluded that humans are not at significant risk of contracting the deadly **Chronic Wasting Disease (CWD)**, often referred to as **Zombie Deer Disease**.

#### Zombie Deer Disease

- It is a deadly, **neurological illness** that affects deer, elk, moose, reindeer, and muntjac.
  - It may also affect some other members of the Cervidae family.
- **Human Infection Risk:** CWD is caused by prions, infectious proteins, and there are concerns about the disease potentially jumping to humans, particularly through the consumption of infected meat.
  - However, no confirmed human cases have been reported.
- **Transmission :** Within animals, CWD prions spread through body fluids such as saliva, blood, urine, and feces, either by direct contact or environmental contamination.
  - Once present, prions remain infectious for years in soil, water, and plants.
- **Impact :** Infected animals may appear healthy for months or years, during which they can spread the disease. As the disease progresses, animals become debilitated and die.
  - The speed of progression varies by species and the animal's genetics.

## 19. (a)

**In News:** The recent discovery of “dark oxygen” production in the Clarion-Clipperton Zone challenges conventional understanding of oxygen generation, which has long been tied to photosynthesis requiring sunlight.

#### Key Findings

- Metallic nodules found 4,000 meters beneath the Pacific Ocean's surface generate oxygen through electrolysis.
- This process does not depend on sunlight, marking a paradigm shift in the understanding of oxygen generation.

## 20. (a)

#### Context

- Researchers from Sweden have discovered a method to reclaim infertile soil contaminated with **DDT (Dichloro-Diphenyl-Trichloroethane)** by mixing it with biochar.

#### About

- **Biochar** is an environmentally friendly material, akin to charcoal, that has the ability to **bind contaminants** such as DDT.
- This binding prevents the toxin from being absorbed by soil organisms, thus limiting its harmful impact.
- When mixed with soil, biochar **improves soil fertility** and helps mitigate the effects of pollution.

#### What is DDT?

- **DDT (dichlorodiphenyltrichloroethane)** is a chemical, first synthesized in 1874 and its insecticidal properties were discovered in 1939.
  - Though initially hailed as an effective pest control tool, its long-term use has resulted in serious environmental and health concerns.
- **Harmful effects:** DDT tends to accumulate in the fatty tissues of both humans and animals, leading to long-term exposure. DDT is a **persistent organic pollutant (POP)**.
  - It was **banned in the United States in 1972**.

- Some countries, primarily in **Africa**, still use DDT to control **malaria** and other **insect-borne diseases**.
- **Indian scenario:** India continues to produce and use DDT, primarily for controlling vector-borne diseases like malaria and dengue.
  - **Hindustan Insecticides Limited (HIL)** is the sole manufacturer of DDT in India.

## 21. (c)

**In News:** DRDO conducts Scramjet Engine Ground Test.

A scramjet engine is an air-breathing jet engine that relies on the vehicle's forward motion to compress incoming air for combustion, without the use of rotating compressors. This design is highly efficient at hypersonic speeds, where supersonic combustion occurs, making it suitable for advanced aerospace applications.

## 22. (c)

**Context**

- A team of researchers using NASA's James Webb Space Telescope (JWST) and the Chandra X-ray observatory has discovered a bizarre black hole.

**About**

- The newfound black hole, designated **LID-568**, is a **low-mass supermassive black hole** that existed just **1.5 billion** years after the Big Bang.
- The black hole was feeding on a surrounding cloud of matter at almost **40-times greater** than what astrophysicists thought was the upper limit.

**What is a Black Hole?**

- A black hole is an **extremely dense object** whose gravity is so strong that nothing, not even light, can escape it.
- **Characteristics:** A black hole **does not have a surface**, like a planet or star. Instead, it is a region of space where matter has collapsed in on itself.
  - This catastrophic collapse results in a huge amount of mass being concentrated in an incredibly small area.
- **Formation:** A black hole is formed when a really massive star runs out of fuel to fuse, blows up, leaving its core to implode under its weight to form a black hole.
  - The center of a black hole is a **gravitational singularity**, a point where the general theory of relativity breaks down, i.e. where its predictions don't apply.
  - A black hole's great **gravitational pull emerges as if from the singularity**.

## 23. (a)

**Context**

- In India, the rampant use of Rhodamine B in food items has raised significant health concerns.

**What is Rhodamine-B ?**

- **Rhodamine-B or RhB** is a chemical commonly used for dyeing in the textile, paper, leather, and paints industry as a coloring agent that helps in attaining the red and pink spectrum.
- In powdered form the chemical is **green in color** and upon being added to water, it turns pink.
- It is widely used as a food additive in the **manufacturing, packaging, import, and sale of various food items**.
- As per the **Food Safety Standards Act, 2006**, preparation, packaging, importing, selling and serving food items with Rhodamine-B in wedding ceremonies and other public events is a punishable offense.

- In early 2024, Tamil Nadu and Karnataka banned cotton candy and certain street foods after detecting the harmful dye Rhodamine B in samples.

24. (a)

**Context:** The recent Guillain-Barré Syndrome (GBS) outbreak in Pune, Maharashtra, has raised concerns.

**About: Guillain-Barré Syndrome (GBS)**

- It is a rare condition in which a person's immune system attacks the peripheral nerves.
- People of **all ages can be affected**, but it is more common in adults and in males.
- Symptoms include diarrhoea, abdominal pain, fever, nausea or vomiting.
- It is treatable and **not contagious**. Treatment typically includes supportive care along with certain immunological therapies.

25. (c)

**Context**

- To commemorate the 125th anniversary year of the **Kodaikanal Solar Observatory**, the **Indian Institute of Astrophysics (IIA)**, organized the conference on 'Sun, Space Weather, and Solar-Stellar Connections'.

**About**

- **Establishment:** The Kodaikanal Solar Observatory (KSO) was established on **1 April 1899**.
- **Location:** It is situated near **Kodaikanal, Tamil Nadu**, on the southern tip of the **Palani Hills**.
- **The Kodaikanal Tower Tunnel Telescope:** It features a 3-mirror Coelostat system comprising:
  - **Primary mirror (M1):** Tracks the Sun,
  - **Secondary mirror (M2):** Redirects sunlight downward,
  - **Tertiary mirror (M3):** Aligns the beam horizontally for solar observation.
- **Discovery of the Evershed Effect (1909):** KSO first detected the effect, which is the radial outflow of gas from sunspots, marking a major contribution to solar physics.

26. (b)

**Option (a) is not correct:** Stargardt Disease primarily affects central vision, which is crucial for sharp and detailed activities like reading or recognizing faces. Peripheral vision is not significantly impacted.

**Option (b) is correct:** Stargardt Disease is an inherited genetic disorder caused by mutations in the ABCA4 gene. This gene regulates the metabolism of Vitamin A in the retina.

**Option (c) is not correct:** Defects in the gene lead to the accumulation of fatty material (lipofuscin) on the macula, disrupting vision.

**Option (d) is not correct:** There are currently no treatments available to reverse vision loss caused by Stargardt Disease. Research is ongoing, but as of now, the disease remains untreatable.

27. (b)

**About Fentanyl**

- It is a powerful **synthetic opioid** primarily used in medicine to treat severe pain, especially after surgery or for chronic pain in patients with tolerance to other **opioids**.
  - Opioids are a class of drugs that bind to opioid receptors in the brain and body, reducing the perception of pain.
- It is approximately **50-100 times more potent than morphine**. Fentanyl is more potent than heroin.

- However, **fentanyl is also illegally manufactured and sold for recreational use**. It is often mixed with heroin, cocaine, or methamphetamine and pressed into pills designed to look like prescription opioids, significantly increasing the risk of overdose.

28. (b)

**Context:** Paraquat was used recently in a high-profile murder case in Kerala.

#### About Paraquat

- Paraquat, also known as **paraquat dichloride** or **methyl viologen**, is one of the most widely used herbicides globally.
- It is primarily used to control weed growth and dry crops like cotton before harvest. However, it is **extremely toxic** and is banned in over 70 countries, including the European Union and China.
- The **WHO classifies paraquat** as a **Category 2 (moderately hazardous)** chemical.
- It **damages the body at a cellular level** and spreads rapidly, affecting vital organs like the lungs, kidneys, and liver.

30. (c)

**Context:** Recently, the author at IIT Kanpur, explained the role of piezoelectric materials in the functioning of stove lighters and their ability to create sparks.

#### Piezoelectricity

- Piezoelectricity is the generation of electrical charge in a solid material by an applied mechanical stress and vice versa.
- The piezoelectric effect is exhibited in materials that develop a net electric dipole moment.
  - In such materials, the dipole density or polarization changes in response to mechanical strain resulting in a net accumulation of charge.
- **Applications:** Piezoelectronics are crucial for energy conversion, sensing, and applications in energy harvesting, health monitoring, and more.

31. (c)

**Both the statements are correct:** China has developed DeepSeek AI models, DeepSeek-V3 and DeepSeek-R1.

- This has emerged as strong contenders in the global AI landscape, performing on par with **ChatGPT** and other leading AI systems.
- It was built at a **fraction of the cost of industry-leading models** like OpenAI - because it uses fewer advanced chips.
- Its base model DeepSeek-R1 appears to have been trained via accurate sources while **introducing a layer of censorship**.
- It surpasses models developed by tech giants Google, Meta, and Anthropic **in terms of overall quality**.

32. (c)

#### Statement 1 is correct

- Liquid propulsion systems use liquid propellants, such as **liquid oxygen (LOX)** and **liquid hydrogen (LH2)**, to generate thrust.
- These systems are **preferred over solid propulsion systems** due to their higher efficiency, controllability, and ability to be restarted multiple times.

#### Statement 2 is correct

- ISRO has integrated advanced liquid propulsion systems into the **Crew Module** for the first uncrewed mission of the Gaganyaan project.

- The **Crew Module Propulsion System (CMPS)** is a **bi-propellant** based **Reaction Control System (RCS)** designed for precise three-axis control (pitch, yaw, and roll) during the descent and re-entry phases.

33. (b)

**In News:** Researchers at IIT-Madras have achieved a significant breakthrough in **extracting silicon carbide (SiC)** from simulated lunar soil.

#### About Silicon Carbide

- It is a synthetic crystalline compound composed of **silicon (Si)** and **carbon (C)**.
- It is renowned for its hardness, thermal stability, and chemical resistance, making it a critical material across various industries.

34. (c)

**All three statements are correct:**

- NavIC is a **regional navigation satellite system** established by **Indian Space Research Organisation (ISRO)**.
  - NavIC was erstwhile known as **Indian Regional Navigation Satellite System (IRNSS)**.
- NavIC is designed with a constellation of **7 satellites** and a network of ground stations operating 24 x 7.
  - **Three satellites** of the constellation are placed in **geostationary orbit** and **four satellites** are placed in **inclined geosynchronous orbit**.
- **NavIC offers two services:** Standard Position Service (SPS) for **civilian users** and Restricted Service (RS) for **strategic users**.
  - It provides **location accuracy better than 20 meters** and **timing accuracy better than 40 nanoseconds** across the core service area.
- NVS Series are **five second-generation NavIC satellites** — **NVS-01 to NVS-05** and are **planned to enhance the existing constellation**.
  - **NVS-01**, the first of the second-generation satellites, was launched in **2023**.
  - For the first time, an indigenous **atomic clock was flown in NVS-01**.
- **NVS-02** will help improve NavIC's services, which are used for navigation, precision agriculture, emergency services, fleet management, and even mobile device location services.
  - It also has a precise atomic clock called the **Rubidium Atomic Frequency Standard (RAFS)** for accurate timekeeping.

35. (b)

**Context:** The Indian Space Research Organisation (ISRO) launched its historic **100th launch** from the Satish Dhawan Space Centre in Sriharikota.

#### About

- **GSLV F15** carried the **NVS-02 navigation satellite** placing it into a Geosynchronous Transfer Orbit.

#### Geosynchronous Transfer Orbit

- The GTO allows satellites to be positioned into **geostationary orbits**, where they can maintain a **fixed position relative to the Earth's surface**.
- This is crucial for **communication and weather satellites** that need to monitor specific areas continuously.

36. (a)

**Statement 1 is correct:** Axiom Mission 4 (or Ax-4) is a **private spaceflight to the International Space Station to be launched in April 2025**.

- **Duration:** Up to 14 days.

**Statement 2 is not correct: Countries: USA, India, Poland, and Hungary.**

- It is the first government-sponsored spaceflight in over 40 years for Poland & Hungary.
- **Objectives:** The astronauts will execute a mission that includes outreach, scientific, and commercial operations during their 14-day stay in orbit.

37. (b)

**Statement 1 is not correct:** The Union Health Ministry launched the **National Strategic Plan (NSP) and Roadmap for Leprosy (2023-27) in 2023**, to achieve zero transmission of leprosy by **2027**.

- The Sustainable Development Goal (SDG) 3.3 aims to end leprosy by **2030**.

**Statement 2 is correct:** The World Health Organization (WHO) declared **Jordan** as the first country in the world to eliminate leprosy in **2024**.

38. (b)

**Statement 1 and 2 are correct:**

- The World Health Organization (WHO) has announced that **Guinea** has successfully eliminated the **Gambiense form of Human African Trypanosomiasis (HAT)**.
  - HAT is caused by **trypanosome parasites** that are transmitted by **tsetse flies**.
  - Human African Trypanosomiasis is also known as **sleeping sickness**, HAT is found only in **sub-Saharan Africa**.
  - **So far, seven countries** have been validated by WHO for eliminating the **gambiense form of HAT**: Togo (2020), Benin (2021), Côte d'Ivoire (2021), Uganda (2022), Equatorial Guinea (2022), Ghana (2023), and Chad (2024).
- **Statement 3 is not correct:** The **rhodesiense form of the disease** has been eliminated in one country only, **Rwanda**, in 2022.

# ENVIRONMENT & ECOLOGY

1. Consider the following statements about Vembanad Lake:
  1. The lake is a Ramsar site and hosts the renowned Nehru Trophy Boat Race.
  2. It is the longest lake in India and the largest lake in Kerala.Which of the statements given above is/are correct?
  - (a) 1 only
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2
2. Which among the following is the primary principle behind the Miyawaki technique?
  - (a) Using genetically modified plants for rapid growth
  - (b) Growing monoculture forests for timber production
  - (c) Planting trees and shrubs close to one another to accelerate growth
  - (d) Planting trees in a single row to reduce competition
3. With reference to the Blue Flag Certification, consider the following statements:
  1. Greece has the highest number of Blue Flag Certification beaches in the world.
  2. Chandrabhaga beach of Odisha is the first in Asia to get the Blue Flag certification.
  3. The certification is updated annually, and locations must continue to meet the criteria to retain their Blue Flag status.How many of the statements given above are correct?
  - (a) Only one
  - (b) Only two
  - (c) All three
  - (d) None
4. Consider the following statements with reference to the Animal Welfare Board of India (AWBI):
  1. It was established in 1962 under the Prevention of Cruelty to Animals Act, 1960.
  2. The Board consists of 28 members, including 6 Members of Parliament.
  3. It was founded under the leadership of Rukmini Devi Arundale.Which of the statements given above is/are correct?
  - (a) 1 and 2 only
  - (b) 2 and 3 only
  - (c) 1 and 3 only
  - (d) 1, 2 and 3
5. Which of the following best describes the feeding mechanism of Utricularia?
  - (a) Absorption of nutrients from decaying organic matter.
  - (b) Entrapping prey through sticky leaves.
  - (c) Creating a vacuum-like suction to pull prey into bladder-like structures.
  - (d) Utilizing chemical attractants to lure prey into a pitcher-shaped trap.
6. With reference to the Hollongapar Gibbon Wildlife Sanctuary, consider the following statements:
  1. It is located in the Jorhat district of Assam.
  2. It is home to India's only gibbons, the Hoolock Gibbons.
  3. The sanctuary was declared a wildlife sanctuary in 1987.

Which of the statements given above is/are correct?

- (a) 1 and 2 only (b) 2 and 3 only  
(c) 1 and 3 only (d) 1, 2, and 3

7. With reference to the India's Nationally Determined Contribution (NDCs) Goals, consider the following statements:

1. India aims to reduce the emissions intensity of its GDP by 45% by 2030, compared to 2005 levels.
2. India also seeks to achieve 40% of its energy needs from non-fossil fuel sources by 2030.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

8. With reference to the Turmeric, which of the following statements is/are correct?

1. It is a flowering plant belonging to the ginger family, Zingiberaceae.
2. It is a perennial plant native to the African subcontinent.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

9. Which of the following statements about Simlipal National Park is correct?

1. It is one of India's largest biospheres.
2. It was recognized as a Biosphere Reserve by the Indian government in 1994.
3. It has the highest rate of black tiger sightings in the world.

Choose the correct answer using the code given below:

- (a) 1 and 2 only (b) 2 and 3 only  
(c) 1 and 3 only (d) 1, 2, and 3

10. Water Hyacinth (*Eichhornia crassipes*) is native to which of the following regions?

- (a) South America (b) Africa  
(c) North America (d) Asia

11. With reference to the Paris Agreement, consider the following statements:

1. It is a legally binding international treaty on climate change, adopted in 2015, at the COP21.
2. Any time after one year from the date on which this Agreement has entered into force for a Party, that Party may withdraw from this Agreement.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

12. With reference to the Ethanol Blending, consider the following statements:

1. It refers to the practice of mixing ethanol with gasoline to create a fuel mixture that can be used in internal combustion engines.
2. India has set a target of achieving 15% of Ethanol blending by 2025-26.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

- 13.** Which of the following best describes the Arctic-Boreal Zone (ABZ)?
- A region encompassing deserts and savannahs near the Arctic Circle.
  - A zone comprising tundra, boreal forests, and wetlands along the Arctic Circle in the Northern Hemisphere.
  - A tropical biome located near the equator.
  - A region dominated by grasslands and temperate forests in the Southern Hemisphere.
- 14.** With reference to the Sarus crane, consider the following statements:
- It is the state bird of Madhya Pradesh and is listed as Vulnerable on the IUCN Red list of threatened species.
  - It is the world's tallest flying bird.
- Which of the statements given above is/are correct?
- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2
- 15.** Blue Baby Syndrome is most commonly associated with contamination of drinking water by;
- Arsenic
  - Fluoride
  - Nitrates
  - Mercury
- 16.** Which of the following is true about the Kashmir Chinar (*Platanus orientalis*)?
- It is native to Greece and commonly found in the Eastern Himalayas.
  - The tree is evergreen and reaches a maximum height of 15 meters.
  - Char Chinar, an island in Dal Lake, is named after this tree.
  - Its wood is used for medicinal purposes and making dyes.
- Choose the correct answer using the code given below
- 1, 2, and 3 only
  - 1, 3, and 4 only
  - 2 and 4 only
  - 1 and 4 only
- 17.** With reference to the Coral Bleaching, consider the following statements:
- Corals are formed by multiple small, soft organisms known as polyps.
  - Coral bleaching occurs when corals expel the colourful algae living in their tissues.
- Which of the statements given above is/are correct?
- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2
- 19.** Which of the following statements about the Corpse Flower (*Amorphophallus titanum*) is correct?
- It is known for its sweet fragrance.
  - It is native to the tropical rainforests of Indonesia.
  - The plant blooms every year and lasts for several weeks.
  - It has the largest flowering structure of any plant in the world.
- Choose the correct answer using codes below:
- 1 and 2 only
  - 2 and 4 only
  - 1, 3, and 4 only
  - 2, 3, and 4 only
- 20.** Which among the following are the first Indian cities to join the global list of accredited wetland cities.
- Indore
  - Bhopal
  - Udaipur
  - Chennai

Select the correct answer using the code given below:

- (a) 1 and 3 only (b) 2 and 3 only  
(c) 1, 2, and 3 only (d) 1, 2, 3 and 4

**21. Consider the following statements with reference to Polar Bear:**

1. They are the largest bears in the world and top predators of the Arctic.
2. They are found only in Canada and the United States.
3. The IUCN Red List of threatened species classifies them as Endangered species.

How many of the above statements are correct?

- (a) Only one (b) Only two  
(c) All three (d) None

### EXPLANATIONS

**1. (c)**

**Context:** The Alappuzha district administration will conduct a mega plastic cleaning drive as part of the Vembanad lake rejuvenation project.

**About the Vembanad Lake**

- **Name & Location:** Locally known as **Vembanad Kayal**, it is the longest lake in India and the largest lake in Kerala (covering the districts of Alappuzha, Kottayam, and Ernakulam).
- **Rivers and Sea:** Formed from **four rivers** – the Meenachil, Achankovil, Pampa, and Manimala, the lake also has an outlet to the **Arabian Sea** in the west.
  - It serves as a major source of **freshwater** for the state but also has brackish water areas.
- **Ramsar site:** The lake is a **Ramsar site** and the second-largest wetland system in India, also housing the Kumarakom Bird Sanctuary.
- **Snake Boat Race:** It is a hub of backwater tourism in the state and hosts the renowned **Nehru Trophy Boat Race**, popularly known as the Snake Boat Race, in one of its sections.

**2. (c)**

**Context**

- The Prayagraj Municipal Corporation has utilized the Miyawaki technique to transform barren areas into lush green forests.

**Miyawaki Technique**

- **Origin:** The Miyawaki technique, Often referred to as the '**pot plantation method**', was developed by renowned Japanese botanist **Akira Miyawaki** in the 1970s.
  - It is a revolutionary method for creating **dense forests in small urban spaces**.
- **Principle:** It involves planting trees and shrubs close to one another to accelerate their growth.
  - **Plants grow 10 times faster** with this technique, making it a practical solution for urban areas.
- **Significance:** In urban areas, the method is known to have successfully converted barren, polluted lands into thriving green ecosystems, simultaneously managing industrial waste and curbing pollution.

**3. (b)**

**Statement 1 is not correct:** Foundation for Environment Education in Denmark (FEE) accords the globally recognized eco-label - Blue Flag certification.

- There are over 4000 Blue Flag certified beaches across the world, with **Spain leading with a total of 729 blue flag sites, followed by Greece**.

**Statements 2 and 3 are correct: India** has 13 such beaches, the **Chandrabhaga beach on the Konark coast of Odisha** is the **first in Asia to get the Blue Flag certification**.

- The certification is **updated annually**, and locations must continue to meet the criteria to retain their Blue Flag status.

4. (d)

#### Context

- The Animal Welfare Board of India (AWBI) and NALSAR University of Law, Hyderabad, have signed a memorandum of understanding to train animal welfare volunteers in animal care laws and procedures.

#### Animal Welfare Board of India (AWBI)

- It was established in 1962 under the **Prevention of Cruelty to Animals Act, 1960**.
- It was founded under the leadership of humanitarian **Rukmini Devi Arundale**.
- **Composition:** The Board consists of **28 members**, including 6 Members of Parliament (2 from **Rajya Sabha** and 4 from **Lok Sabha**).
- **Term of Office:** The term of office for members is **3 years**.
- **Functions:** It ensures the enforcement of animal welfare laws.
  - It provides grants to Animal Welfare Organizations.
  - It advises the Government of India on animal welfare issues.

5. (c)

Recently, rare carnivorous plant *Utricularia* (Bladderworts) were found in large numbers in Rajasthan's Keoladeo National Park, showcasing the park's rich wetland biodiversity.

#### About *Utricularia* (Bladderworts)

- **About:** Known for its tiny bladder-like structures called **utricles that trap prey**.
- **Mechanism:** The Hair-like projections near the bladder opening are sensitive to movement, triggering a vacuum-like action to suck in prey.
- **Prey:** Feeds on small organisms like protozoa, insects, larvae, mosquitoes, and even tadpoles.
- **Habitat:** Found in lakes, streams, and waterlogged soils, requiring aquatic or semi-aquatic conditions.

#### Significance

- Contributes to ecological diversity by controlling insect populations.
- Helps maintain balance by naturally regulating small organism populations.

6. (a)

**Context:** The Standing Committee of the **National Board for Wildlife** has approved oil and gas exploration in the eco-sensitive zone of the **Hollongapar Gibbon Wildlife Sanctuary**.

#### About Hollongapar Gibbon Wildlife Sanctuary

- **Location:** Situated in the Jorhat district, Assam.
  - It officially includes Dissoi Valley Reserve Forest, Dissoi Reserve Forest, and Tiru Hill Reserve Forest.
- **Establishment:** Declared a wildlife sanctuary in 1997.
- **Significance:** Home to India's only gibbons, the Hoolock Gibbons.
- Hosts Northeast India's only nocturnal primate, the Bengal Slow Loris.

7. (a)

**Statement 1 is correct: Emission Reduction:** India aims to reduce the emissions intensity of its GDP by **45% by 2030**, compared to 2005 levels.

**Statement 2 is not correct: Renewable Energy:** The country seeks to achieve **50%** of its energy needs from non-fossil fuel sources by 2030, with a target of installing 500 GW of renewable energy capacity.

- **Carbon Sink:** India plans to create an additional carbon sink of 2.5 to 3 billion tonnes of CO<sub>2</sub> equivalent through afforestation and reforestation efforts.
- India pledged to achieve **net-zero emissions by 2070** at the 26th Conference of the Parties (COP 26) in 2021.

8. (a)

**Context:** Union Minister of Commerce & Industry, inaugurated the **National Turmeric Board** in New Delhi.

#### About Turmeric

- **Turmeric (*Curcuma longa*)** is a flowering plant belonging to the ginger family, **Zingiberaceae**.
- It is a **perennial, rhizomatous, herbaceous** plant native to the **Indian subcontinent and Southeast Asia**.
  - Turmeric is also known as '**Golden Spice**'.
- **Geographical Condition:** Turmeric thrives in temperatures ranging between **20°C and 30°C** with high annual rainfall.
- Turmeric farmers are spread across 20 states, including **Maharashtra, Tamil Nadu, Andhra Pradesh, Telangana, Madhya Pradesh, and Meghalaya**.

9. (d)

#### Black Tigers

- **About:** Black tigers are not a distinct species or subspecies but a rare color variant of the Bengal tiger.
  - Their distinctive fur pattern arises from **melanism, a genetic condition (mutation)**. The white fur results from a lack of the pigment **pheomelanin**.
  - Melanistic tigers tend to grow faster and are often heavier than their non-melanistic counterparts.
- **Genetic Drift:** Geographic isolation has led to inbreeding within Similipal, where genetically related tigers have mated for generations, amplifying the mutation.
- **Black Tigers Beyond Similipal:** Found in captivity at Nandankanan Zoological Park, Bhubaneswar, Ranchi Zoo, Arignar Anna Zoological Park, Chennai

#### Similipal National Park

- Similipal is one of India's largest biospheres, designated as a tiger reserve under Project Tiger (1973).
- Named after the Simul tree (silk cotton), abundant in the region.
- Recognized as a Biosphere Reserve by the Indian government in June 1994.
- Added to UNESCO's Biosphere Reserve list in May 2009.
- Similipal has the world's highest rate of black tiger sightings, making it a significant habitat for this rare variant.

10. (a)

Water Hyacinth (*Eichhornia crassipes*) is **native to South America** and was introduced to Kenya in the 1980s as an ornamental plant.

- It is an **aquatic weed** common in waterbodies across **South Asia, including India**.

- It was introduced to India during the British colonial rule as an **ornamental aquatic plant**.
- It is considered the **most invasive aquatic plant species in the world**.

#### 11. (a)

**Statement 1 is correct:** Paris Agreement is a **legally binding international treaty** on climate change, adopted in **2015**, at the **COP21** to the United Nations Framework Convention on Climate Change (UNFCCC).

- It aims to **limit global warming to below 2 degrees Celsius** above pre-industrial levels, with efforts to limit the increase to 1.5 degrees Celsius.
- The Paris Agreement emphasizes **nationally determined contributions (NDCs)** and encourages all countries to take climate action.
  - Countries must **review and update their NDCs every five years** to enhance their efforts and increase ambition over time.

**Statement 2 is not correct:** **Article 28 of the Paris Agreement** lays out the procedure and timeline for a country's withdrawal from the treaty.

- Any time after **three years from the date on which this Agreement has entered into force** for a Party, that Party may withdraw from this Agreement by giving written notification.

#### 12. (a)

**Statement 1 is correct:** Ethanol blending refers to the **practice of mixing ethanol with gasoline** to create a fuel mixture that can be used in internal combustion engines.

- **There are a few common blends:**
  - **E10:** This is a mixture of 10% ethanol and 90% gasoline. It is the most common blend and is used widely in many countries.
  - **E15:** This blend contains 15% ethanol and 85% gasoline.
  - **E85:** This is a high-ethanol blend, consisting of 85% ethanol and 15% gasoline. It's used in flex-fuel vehicles designed to run on higher ethanol content.

**Statement 2 is not correct:** There is a significant increase in the overall ethanol blending percentage of India, rising from **1.53% in 2014** to an impressive **15% in 2024**.

- After achieving **15% ethanol blending in 2024**, the government set an ambitious target of achieving **20% blending by 2025-26**.

#### 13. (b)

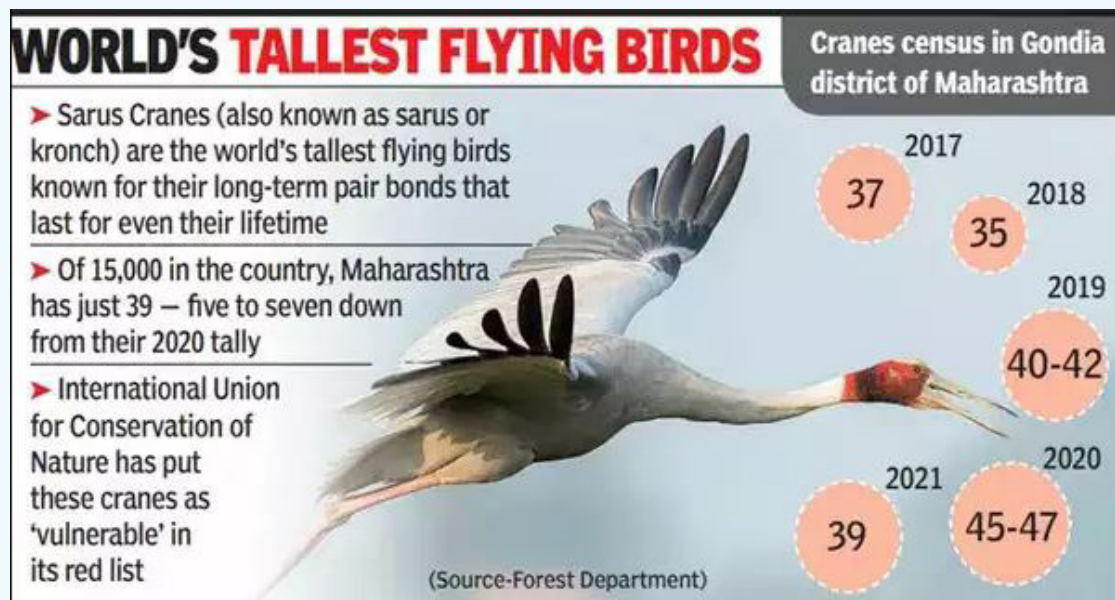
The Arctic-Boreal Zone (ABZ) is a vast ecological and geographical region that plays a critical role in Earth's climate system and biodiversity. The ABZ encompasses treeless tundra, boreal forests (taiga), and wetlands. It spans regions along the Arctic Circle in the Northern Hemisphere, including parts of North America, Europe, and Asia.

#### 14. (b)

**Statement 1 is not correct:** **Dhanauri Water Body** is nestled within the **floodplains of Yamuna Basin within 15 kms of River Yamuna**.

- It is a **Sarus crane hotspot** which is **Uttar Pradesh's state bird and is vulnerable (IUCN Status)**.

**Statement 2 is correct:** **Sarus Crane** is the world's tallest flying bird.



15. (c)

**Context**

- A report by the Food and Agriculture Organization of the United Nations (FAO), highlighted that the rise in nitrogen fertilizers has resulted in biodiversity loss and exacerbated climate change.

**Impacts of Nitrogen Pollution**

- Health Impacts:**
  - It causes **methemoglobinemia (blue baby syndrome)** in infants by reducing blood's oxygen-carrying capacity.
  - It is linked to **cancers, reproductive issues, and thyroid problems** from long-term nitrate exposure.
- Environmental Impacts:**
  - It leads to **eutrophication**, harmful algal blooms, and oxygen-depleted **"dead zones"** in water bodies.
  - It contributes to climate change through **nitrous oxide** emissions, **300 times** more potent than carbon dioxide.

16. (b)

**In News**

- The Jammu and Kashmir government has launched a **"Digital Tree Aadhaar"** program to conserve the iconic Chinar trees.

**About Kashmir Chinars (Platanus orientalis)**

- The **Kashmir Chinar (Platanus orientalis)**, native to Greece and Southern Europe, thrives throughout Kashmir, particularly in the **Eastern Himalayas**.
- It is famously associated with **Char Chinar**, an island on Dal Lake, Srinagar, named after the **four Chinar trees present there**.
- They can grow up to 30 meters tall, taking approximately 150 years to reach full height.

**Applications**

- Medicinal Use:** Various parts of the tree, such as bark and leaves, are used in traditional medicine.
- Wood:** The wood is prized for making interior furniture due to its durability and aesthetic appeal.

- **Dye Production:** The tree is also utilized in the preparation of natural dyes.
- **Cultural Significance:** The Chinar tree is often considered a symbol of Kashmir, deeply rooted in its history, culture, and natural beauty.

18. (c)

**Both the statements are correct:** Corals are **invertebrates** that belong to a large group of animals called **Cnidaria**.

- Corals are formed by **multiple small, soft organisms known as polyps**.
- They secrete a **rocky chalk-like (calcium carbonate) exoskeleton** around themselves for protection.
- **Coral reefs** are therefore created by **millions of tiny polyps forming large carbonate structures**.
- **Appearance:** Corals range in colour from **red to purple and even blue**, but are most commonly shades of **brown and green**.
  - Coral are bright and colorful because of microscopic algae called **zooxanthellae**.
- Coral bleaching occurs when **corals expel the colourful algae** living in their tissues.
  - Without these helpful algae, the **corals become pale** and are vulnerable to **starvation and disease**.
  - A bleached coral is not dead, but **ocean temperatures need to cool off for any hope of recovery**.

19. (b)

**In News:** A rare plant known as the corpse flower bloomed in Sydney for the first time in more than a decade.

Corpse Flower (*Amorphophallus titanum*) doesn't attract bees with a sweet fragrance. Instead, it emits a foul odor resembling rotting flesh to attract pollinators like flies and beetles. It is native to the tropical rainforests of Indonesia, it boasts the largest unbranched flowering structure in the plant kingdom. Its blooming period is infrequent and short-lived, lasting only a few days after years of dormancy.

20. (a)

**Indore and Udaipur** have become the **first two Indian cities** to join the **global list of accredited wetland cities**.

- **Sirpur Lake, a Ramsar Site in Indore**, has been recognised for water bird congregation and is being developed as a bird sanctuary.
- **Udaipur in Rajasthan** is surrounded by **five major wetlands**, namely, Pichola, Fateh Sagar, Rang Sagar, Swaroop Sagar, and Doodh Talai.
- It is part of the **Ramsar Convention**, and was approved during **COP12** held in the year **2015**.
- **Accreditation is granted to only those cities** which satisfy all the **six international criteria** including adopting measures for conservation of wetlands and their ecosystem services.
- **Aim:** To promote conservation and wise use of urban and peri-urban wetlands.
- **Validity:** It is valid for **6 years**, after which it must be renewed, providing that it continues to fill each of the 6 criteria.
- **The global list of 74 accredited wetland cities** comprises the **highest 22 from China** followed by nine from France.

21. (a)

**In News:** A recent study revealed that polar bear fur contains an **oily substance (sebum)** that helps them stay dry despite sliding on ice and diving into water.

**Statement 1 is correct** : Polar bears are the **largest bears in the world and top predators of the Arctic**.

- Their Latin name, **Ursus maritimus**, meaning “sea bear,” reflects their life spent predominantly on sea ice in the Arctic.

**Statements 2 and 3 are not correct** : Polar Bears occur at low densities throughout the circumpolar Arctic and are more abundant in shallower, ice-covered waters associated with the continental shelf

- The species is found in **Canada, Greenland/Denmark, Norway , Russian ,United States (Alaska)**.
- **IUCN Status : Vulnerable**

■■■■



# MISCELLANEOUS

1. Future of Jobs Report 2025, recently seen in the news, was released by which of the following?  
(a) United Nations (UN) (b) International Labour Organization (ILO)  
(c) World Economic Forum (WEF) (d) International Monetary Fund (IMF)
2. The Bibek Debroy Committee, recently seen in the news, is related to which of the following?  
(a) Minimum Support Price (b) Banking Mergers  
(c) Defence Modernization (d) Railway Reforms
3. With reference to the Beating Retreat Ceremony in India, consider the following statements:  
1. The ceremony is presided over by the Chief of Defence Staff.  
2. It was first held in the 1950s, during the state visit of Queen Elizabeth and Prince Philip.  
Which of the statements given above is/are correct?  
(a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
4. The Kampala Declaration, recently seen in the news, is related to which of the following?  
(a) Advancing agri-food systems (b) Promoting digital literacy  
(c) Enhancing healthcare infrastructure (d) Strengthening maritime cooperation
5. The case of Bachan Singh v. State of Punjab (1980), recently seen in the news, is related to which of the following?  
(a) Police Reform (b) Sedition Law  
(c) Transgenders (d) Death Penalty
6. Consider the following statements regarding the Annual Status of Education Report (ASER):  
1. It is a nationwide citizen-led household survey released by the Ministry of Education.  
2. It has been conducted annually since 2005.  
Which of the statements given above is/are correct?  
(a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
7. Consider the following International conventions:  
1. Convention on Psychotropic Substances  
2. Single Convention on Narcotic Drugs  
3. UN Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances  
What is the correct order of the adoption of the above conventions?  
(a) 1-2-3 (b) 2-1-3  
(c) 2-3-1 (d) 3-1-2

8. World Development Report 2024, recently seen in the news, is released by which of the following?
- (a) World Bank
  - (b) International Monetary Fund (IMF)
  - (c) United Nations Development Programme (UNDP)
  - (d) Organisation for Economic Co-operation and Development (OECD)
9. The 'Hotan Prefecture' (also known as Khotan), sometimes appeared in the news is in the context of:
- (a) Space Docking Experiment
  - (b) Point on Surface of Moon
  - (c) Mantle Beneath Reunion Hotspot
  - (d) Issue with India and China
10. Which one of the following international institutions is responsible for publishing the 'Global Estimates on International Migrant Workers' report?
- (a) International Organization for Migration (IOM)
  - (b) International Labour Organization (ILO)
  - (c) Organisation for Economic Co-operation and Development (OECD)
  - (d) United Nations Department of Economic and Social Affairs (UNDESA)
11. The 'Project 39A' in India, sometimes appeared in the media, is primarily related to:
- (a) Capital Punishment
  - (b) Submarines Acquisition
  - (c) Safeguarding Western Ghats
  - (d) Space Docking
12. What is the primary purpose of the Idate Commission in India?
- (a) To review and recommend policies for digital education.
  - (b) To study the financial relations between the Centre and States.
  - (c) To address socio-economic issues of nomadic and semi-nomadic communities.
  - (d) To evaluate and regulate the use of biometric data in governance.
13. World Economic Outlook, recently seen in the news, is released by which of the following?
- (a) World Bank
  - (b) World Economic Forum (WEF)
  - (c) International Monetary Fund (IMF)
  - (d) United Nations Development Programme (UNDP)
14. The Abraham Accord and Oslo Accord, recently seen in the news, are related to which of the following?
- (a) Peace agreements involving Israel
  - (b) Climate action plans in the Middle East
  - (c) Trade agreements in the Mediterranean region
  - (d) Regional military alliances
15. The report titled 'Fiscal Health Index (FHI) 2025,' recently seen in the news, was released by which of the following?
- (a) Ministry of Finance
  - (b) Reserve Bank of India
  - (c) Comptroller and Auditor General of India
  - (d) NITI Aayog

- 16.** What is the primary purpose of “hush money”?
- To silence a person regarding illegal, unethical, or immoral actions
  - To compensate for financial loss due to defamation
  - To bribe a government official
  - To pay for legal defense
- 17.** Recently, India’s first glass bridge over the sea was inaugurated in which of the following states?
- Kerala
  - Tamil Nadu
  - Gujarat
  - Maharashtra
- 18.** The ‘123 Agreement’, sometimes appeared in the news, is primarily in the context of:
- Combating Climate Change
  - Nuclear Energy Use
  - Issues of Human Rights
  - Arms Race in Outer Space
- 19.** Which of the following sports personalities were recipients of the Major Dhyan Chand Khel Ratna Award in 2024?
- Gukesh D
  - Harmanpreet Singh
  - Manu Bhaker
  - Renu Kohli
- Select the correct answer using the codes given below:
- 1, 2, and 3 only
  - 2, 3, and 4 only
  - 1 and 4 only
  - 1, 2, 3, and 4
- 20.** World Economic Situation and Prospects (WESP) report, recently seen in the news, was released by which of the following?
- United Nations (UN)
  - International Labour Organization (ILO)
  - International Monetary Fund (IMF)
  - World Economic Forum (WEF)
- 21.** Which of the following best describes the objective of the Net-Zero Banking Alliance (NZBA)?
- Promoting green bonds and sustainable investments.
  - Mobilizing private capital to achieve the UN Sustainable Development Goals (SDGs).
  - Aligning banking sector activities with the goals of achieving net-zero emissions by 2050.
  - Establishing carbon taxes for international financial institutions.
- 22.** Consider the following statements with reference to the World Braille Day:
- The day was adopted in 2018 by the United Nations General Assembly.
  - The Braille system was developed by Louis Braille for people with impaired hearing.
- Which of the statements given above is/are correct?
- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2
- 23.** The Carter Doctrine, announced in 1980, primarily aimed to:
- Contain the spread of communism in Southeast Asia.
  - Deter Soviet expansionism in the Persian Gulf region.
  - Resolve the ongoing Iranian hostage crisis.
  - Promote democracy and human rights in the Middle East.

24. Which among the following has been appointed as the new Chairman of the Indian Space Research Organisation (ISRO), succeeding Dr. S. Somanath?
- (a) Dr. K. Sivan (b) Dr. V. Narayanan  
(c) Dr. R. Shankar (d) Dr. A. N. Prakash
25. India's first organic fisheries cluster was launched in which of the following states?
- (a) Arunachal Pradesh (b) West Bengal  
(c) Sikkim (d) Andhra Pradesh
26. Which organization is responsible for the implementation and coordination of the ONOS initiative?
- (a) National Council of Educational Research and Training (NCERT)  
(b) All India Council for Technical Education (AICTE)  
(c) Information and Library Network (INFLIBNET)  
(d) Department of Science and Technology (DST)
27. He was an Indian mathematician and physicist known for his work on quantum mechanics and was awarded the Padma Vibhushan in 1954. Rabindranath Tagore dedicated his only book on science, *Visva-Parichay*, to him.  
Which of the following personalities has been described above?
- (a) C. V. Raman (b) Srinivasa Ramanujan  
(c) Satyendra Nath Bose (d) Jagadish Chandra Bose
28. Global Cybersecurity Outlook 2025, recently seen in the news, was released by which of the following?
- (a) United Nations Office on Drugs and Crime (UNODC)  
(b) International Monetary Fund (IMF)  
(c) International Telecommunication Union (ITU)  
(d) World Economic Forum (WEF)
29. The Business Ready (B-READY) Report is published by which of the following organizations?
- (a) International Monetary Fund (IMF)  
(b) United Nations Development Programme (UNDP)  
(c) Organisation for Economic Co-operation and Development (OECD)  
(d) World Bank
30. Binodini Dasi, recently seen in news, is associated with which of the following?
- (a) Indian independence movement  
(b) Bengali theatre and acting  
(c) Indian classical dance  
(d) Women's suffrage movement
31. Global Economic Prospects (GEP) report 2025, recently seen in the news, was released by which of the following?
- (a) International Monetary Fund (b) United Nations  
(c) World Bank (d) World Economic Forum

32. The Saraswati River is mentioned in which of the following?
- (a) Rigveda (b) Yajurveda  
(c) Samaveda (d) Atharvaveda
33. Which has become the first state of India to link forest ecosystems with Green GDP?
- (a) Jharkhand (b) Mizoram  
(c) Chhattisgarh (d) Madhya Pradesh
34. Consider the following statements:
1. Genetic Engineering Appraisal Committee (GEAC) is an apex body established under the Ministry of Science and Technology.
  2. Bt Cotton and Bt Brinjal are the only crops permitted for cultivation in India by the Genetic Engineering Appraisal Committee (GEAC).
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2
35. India's first-ever census of coastal and wader birds is being conducted by which of the following states?
- (a) Odisha (b) Gujarat  
(c) Maharashtra (d) Tamil Nadu
36. Community Notes recently seen in the news, is related to which of the following?
- (a) Mental Well Being (b) Cyber Bullying  
(c) Fact Checking (d) Crypto currency
37. Which among the following countries has launched the "Stargate Project" to strengthen its artificial intelligence (AI) capabilities?
- (a) India (b) U.S.A  
(c) Japan (d) Australia

### EXPLANATIONS

1. (c)

**Context:** The **Future of Jobs Report 2025** is released by the **World Economic Forum (WEF)**.

#### Key Takeaways

- **Job Disruption and Creation:** By 2030, 22% of jobs are expected to face disruption. 170 million new jobs will be created, driven by technological advancements and other factors.
- **Fastest Growing Jobs:** Employers are increasingly looking to automation and AI to reduce workforce size and upskill employees.
  - AI and big data skills will rise by 87%, followed by cybersecurity (70%).
- **Fastest Declining Jobs:** Roles such as postal service clerks, bank tellers, data entry clerks, cashiers, and telemarketers are expected to experience the greatest decline.
- **India-Specific Insights:** Digital access, geopolitical tensions, and climate change efforts will drive job trends in India.
  - There is significant investment in AI, robotics, autonomous systems, and energy technologies.

## 2. (d)

**Context:** The Budget, tabled in Parliament by the Finance Minister, is the Government's blueprint on expenditure, taxes it plans to levy, which affect the economy and lives of citizens.

**About**

- The Union Budget of India, referred to as the **annual Financial Statement in Article 112** of the Constitution of India, is the annual budget of the Republic of India, presented each year by the Finance Minister.
- The budget has to be **passed by the House** before it can come into effect on April 1, the start of India's financial year.
- After being presented separately for 92 years, the Railway budget was merged in the Union Budget in 2017 and presented together on the recommendation of the **Bibek Debroy Committee**.
  - The committee also recommended concessioning of commercial operation of train service like Rajdhani/Shatabdi to private parties.

## 3. (b)

**Statement 1 is not correct:** It is a ceremony that marks the **end of Republic Day festivities**.

- **Held on:** January 29, three days after Republic Day, at the Vijay Chowk, New Delhi.
- It features a musical performance by the bands of the Indian Army, Navy, Air Force, Delhi Police, and the Central Armed Police Force (CAPF).
- The ceremony is **presided over by the President of India**.

**Statement 2 is not correct:** It was first held in the **1950s**, during the **state visit of Queen Elizabeth and Prince Philip**.

- Since then, the ceremony has become an annual event to pay tribute to the valour and sacrifice of the Indian Armed Forces.

## 4. (a)

**Context:** The **Kampala Declaration** for Africa's agri-food systems from 2026 to 2035 was adopted in the Extraordinary African Union Summit on the **Comprehensive Africa Agriculture Development Program (CAADP)**.

**About**

- The new declaration is the successor to the **Malabo Declaration**.
- During the summit, African leaders endorsed the **ten-year CAADP action plan (2026–2035)**, outlining a detailed roadmap for transforming agriculture across Africa.

**Objectives of Kampala Declaration**

- **Intensifying sustainable food production**, agro-industrialization, and trade,
- **Boosting Investment and Financing** for Accelerated Agrifood Systems Transformation,
- Ensuring Food and Nutrition Security,
- Strengthening Agrifood Systems Governance.

## 5. (d)

**Context:** A sessions court in Kolkata sentenced Sanjoy Roy to life imprisonment for the rape and murder of a doctor at RG Kar Medical College and Hospital, rejecting demands for the death penalty.

**Bachan Singh v. State of Punjab, 1980**

- In *Bachan Singh*, the Supreme Court (SC) considered a challenge to the constitutionality of the death penalty.
- It **upheld the death penalty**, but said it should be imposed only in the “rarest of rare” cases where there is no possibility of reformation.
- The five-judge Constitution Bench did not specify the standards to determine whether the death penalty should be imposed, but laid down non-exhaustive lists of “aggravating” and “mitigating” circumstances for courts to consider while making the decision.

**6. (d)****In News**

- The Annual Status of Education Report (ASER) 2024 was released by the **Pratham Foundation**, a non-governmental organisation.

**Annual Status of Education Report (ASER)**

- The word **aser** means ‘impact’ in **Hindustani**.
- It is a **nationwide citizen-led household survey** that provides a snapshot of children’s schooling and learning in rural India.
  - It captures data from all children, including those who are not in school or are absent.
- It tracks children **aged 3 to 16 for schooling status**, and children aged **5 to 16** are tested for **basic reading and arithmetic abilities**.
- The survey is coordinated by ASER Centre and facilitated by the Pratham network.
- The first ASER survey was conducted in **2005** and repeated **annually for 10 years**.
- **2016 Onwards**: Shifted to an alternate-year model:
  - **Basic ASER Survey**: Conducted every alternate year to assess foundational learning in children.
  - **Gap Years**: Instead of a full survey, ASER explores specific age groups or new dimensions of children’s learning using a different research lens.

**7. (b)**

**In News:** In a significant move, the **Himachal Pradesh** government has **approved a pilot project** for the controlled cultivation of cannabis, aiming to harness its medicinal and industrial potential.

- Single Convention on Narcotic Drugs (1961);
  - India adopted the **Single Convention on Narcotic Drugs (1961)** in 1985, and places cannabis alongside drugs like heroin.
- Convention on Psychotropic Substances (1971) in Vienna; and,
- UN Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (1988).

**8. (a)**

**Context:** India is a **middle income country** despite being the world’s fifth-largest economy by nominal GDP, highlighting the issue of **Middle-income Trap**.

**Middle-income Trap**

- **The World Development Report 2024** by the World Bank — calls attention to the phenomenon of the “**middle-income**” trap.
- It is described as a situation where **countries struggle to attain high-income status**.
  - It was coined in **2007** by the World Bank to describe countries mostly in **Latin America and the Middle East** who, despite economic growth and falling poverty rates, were never able to become high-income countries.

## 9. (d)

## In News:

- Recently, India has witnessed **two significant incidents** of Chinese aggression along the China-India border:
  - Construction of a dam** on the **Yarlung Zangbo river** (known as the Brahmaputra river in India);
  - Creation of two new counties** in **Hotan Prefecture, also known as Khotan**, that incorporate the **territory of Ladakh**. It is located in the Xinjiang Uyghur Autonomous Region of China.

## 10. (b)

**In News:** Recently, the **International Labour Organization (ILO)** recently released its **fourth edition** of the '**Global Estimates on International Migrant Workers**' shedding light on the significant contributions and challenges faced by international migrants.

- It maps the current state of labour migration and the key characteristics of migrant workers in the world today.

## Other Major Reports by ILO

- World Employment and Social Outlook (WESO);
- Global Wage Report;
- World Social Protection Report;
- World Employment and Social Outlook for Youth.

## 11. (a)

## Context

- The recent conviction of Sanjay Roy for the rape and murder of doctor at **Kolkata's R G Kar Medical College and Hospital** has sparked widespread public outrage.
  - While the court sentenced Roy to life imprisonment, many are demanding the death penalty.

## About

- The **death penalty, aka capital punishment**, is the most severe form of legal penalty in India.
- Project 39A is inspired by Article 39-A** of the Indian Constitution, a provision that furthers the intertwined values of equal justice and equal opportunity by removing economic and social barriers which exclude vast sections of our society from effectively accessing justice.
- According to a report by **Project 39A**, **120 death sentences were awarded by trial courts in 2023** across the country, while **561 inmates remained on death row** by the end of the year.

## 12. (c)

## Context

- The **Development and Welfare Board for Denotified, Nomadic, and Semi-Nomadic Tribes (DWBDNC)** is making renewed efforts to implement the recommendations of the **Idate Commission** to address the **challenges** faced by these communities and improve their **socio-economic conditions**.

## Recommendations of the Idate Commission

- In **2014**, a National Commission for Denotified, Nomadic and Semi Nomadic Tribes was constituted under the Chairmanship of **Bhiku Ramji Idate** for a period of three years.
- The commission has given the following recommendations:
  - There is a need to identify challenges faced by the NTs, SNTs, and DNTs owing to the stigma imposed by the enactment of the **Criminal Tribes Act, 1871**.

- It also suggested the non-inclusion of DNTs/NTs/SNTs under the SC/ST/OBC and formulation of specific policies for the former, among many others.
- **Setting up a permanent commission** for Nomadic, Semi Nomadic, and Denotified Tribes (NTs, SNTs, and DNTs) in India.
- It stressed on taking measures to discern hurdles endured by the communities in availing basic facilities such as education, employment, health care, and legal documents, among others.

### 13. (c)

**Context:** In India, the economic growth is projected to be solid at 6.5 per cent in 2025 and 2026, the International Monetary Fund (IMF) has said in its latest World Economic Outlook (WEO) update.

#### Key Highlights

- The US economy is exceeding expectations with stronger domestic demand, while Europe faces sluggish growth and persistently high energy prices.
- According to the IMF report, where inflation is proving sticky, central banks are moving more cautiously in the easing cycle while keeping a close eye on activity and labour market indicators as well as exchange rate movements.
- The IMF forecast comes after the World Bank projected India's economy to grow by 6.7 per cent in the next fiscal year starting in April, slightly higher than in the current fiscal year, and continuing to top the growth tally.

### 14. (a)

#### Israel Palestine Conflict

- It is a decades long dispute between Israel and Palestine that began in the middle of the twentieth century when the **Jews** from various parts of the world were granted the homeland in present-day Israel by Britain.
- It is one of the world's longest conflicts where **Israel has occupied the West Bank and the Gaza Strip** which the **Palestine state claims**.
- With time, the countries around have normalized the ties with Israel through the **Abraham Accord, Oslo Accord, etc.**
- But **the deadlock still persists** and the world community is persistent in its effort to attain the **two-state solution**.



### 15. (d)

**Context:** NITI Aayog has released the report titled "Fiscal Health Index 2025."

#### About

- The report was topped by Odisha and provides a comprehensive assessment of the fiscal health of 18 major States, based on **five key sub-indices**: Quality of Expenditure, Revenue Mobilisation, Fiscal Prudence, Debt Index, and Debt Sustainability.

- The data used to calculate the Fiscal Health Index is sourced from multiple sources including the Comptroller and Auditor General (CAG) and Reserve Bank of India (RBI).
- It will serve as a critical tool for guiding state-level policy interventions to enhance fiscal governance, economic resilience, and national stability.

**16. (a)****Context**

- US President-elect Donald Trump has been spared from punishment over his criminal conviction stemming from the hush money case.

**About**

- Hush money refers to a **payment made to someone** in exchange for their silence regarding;
  - **Illegal, unethical, or immoral actions:** Such as criminal offenses or misconduct.
  - **Stigmatized behavior:** Actions that could damage personal or professional reputation.
  - **Defamation Prevention:** Money paid to placate a disgruntled adversary who may disclose embarrassing information, even if untrue, to avoid the harm and trouble of dealing with defamation claims.

**17. (b)**

**Context:** Tamil Nadu Chief Minister MK Stalin has inaugurated India's first glass bridge over the sea in Kanyakumari.

**About**

- The glass bridge spans 77 metres in length and 10 metres in width, connecting the 133 ft tall Saint Thiruvalluvar statue and the Vivekananda rock Memorial.
- Previously, tourists had to rely on ferry services to visit the two iconic monuments, often requiring multiple trips.
- With the new glass bridge, visitors can now enjoy a leisurely walk across the structure, significantly enhancing their experience and allowing for uninterrupted views of the surrounding seascape.
- Constructed at a cost of 37 crores, the bridge is built using state-of-the-art technology and is designed to withstand harsh marine conditions, including corrosion and strong sea winds.
- This ensures not only its durability but also the safety of those who traverse it, making it a reliable pathway for future generations.

**18. (b)**

**In News:** In a significant move aimed at bolstering the strategic partnership between the **United States and India**, the US has announced the **easing of restrictions** on Indian companies' access to nuclear technology.

- The bilateral 'Agreement for Co-operation between the Government of India and the Government of the United States of America concerning Peaceful Uses of Nuclear Energy' has been done in view of the requirement for the US side under **Section 123 of US Atomic Energy Act 1954**.
  - Hence it is also **popularly known as the 123 Agreement**.
- The Agreement aims **to end technology denial regimes against India** that have been in place for three decades and end India's nuclear isolation.
- It opened the doors for India to have civil nuclear cooperation as an equal partner with the USA and the rest of the world.

## 19. (a)

## In News

- The President of India recently presented the **National Sports Awards 2024**, honoring exceptional contributions to sports and adventure in India.

## Award Categories

- **Major Dhyan Chand Khel Ratna Award:**
  - India's highest sporting honor, established in **1991-92**.
  - Recognizes outstanding performance over a period of **four years**.
  - **Named After:** Major Dhyan Chand (1905–79), an iconic hockey legend who led India to **three consecutive Olympic gold medals** (1928, 1932, and 1936).
  - **2024 Awardees:**
    - ♦ **Gukesh D** (Chess)
    - ♦ **Harmanpreet Singh** (Hockey)
    - ♦ **Praveen Kumar** (Para-Athletics)
    - ♦ **Manu Bhaker** (Shooting)
- **Arjuna Award:**
  - Established in **1961** for **consistent performance** over the past **four years**.
  - **Named After:** Arjuna, the legendary warrior from the Indian epic *Mahabharata*.
  - **First Recipient:** **P.K. Banerjee** (Football).
- **Dronacharya Award:**
  - Instituted in **1985**, this is **India's highest honor for coaches**.
  - Awarded for **producing medal winners** at prestigious international events.
  - **Named After:** Dronacharya, the guru of Arjuna in *Mahabharata*.
  - **First Female Recipient:** **Renu Kohli** (Athletics).

## 20. (a)

**Context:** India's economy is forecasted to grow by 6.6% in 2025, according to the recently released United Nations World Economic Situation and Prospects (WESP) report.

## Key Highlights

- **Currency Pressure:** The Indian rupee has been under pressure due to the strong US dollar, hitting a low of 85.93 against the dollar and leading to a drop in foreign exchange reserves to \$640.28 billion.
- **Currency Depreciation:** Depreciation pressure on South Asian currencies is expected to ease due to monetary loosening in the US, making investments in the region more attractive.
- **Inflation and Policy Rates:** Easing inflationary pressures in South Asia have allowed most central banks to halt monetary tightening or continue reducing policy rates. The RBI has kept its policy rate at 6.5% since February 2023.

## 21. (c)

Net-Zero Banking Alliance (NZBA) is a global initiative convened by the UN Environment Programme Finance Initiative (UNEP FI). It aims to bring together leading global banks committed to aligning their lending, investment, and capital markets activities with net-zero greenhouse gas emissions by 2050. No Indian banks are currently members of the NZBA.

## 22. (a)

**Statement 1 is correct:** January 4 is marked as World Braille Day.

- The day was adopted in **2018** by the **United Nations General Assembly**.
- **Statement 2 is not correct:** The day is a tribute to **Louis Braille who was born on January 04 1809**, the visionary behind the **braille system**.
  - Due to an eye injury he was left completely blind at the age of 3.
- **Braille System:** It is used by both **blind and partially sighted people** worldwide to read books and periodicals.
  - It was accepted by the Institute in Paris in **1854**.

## 23. (b)

The Carter Doctrine was a direct response to the Soviet Union's invasion of Afghanistan in 1979. It signaled a shift in U.S. foreign policy towards a more assertive stance in the Persian Gulf, aiming to protect American interests, particularly access to oil, by deterring further Soviet advances in the region.

## 24. (b)

**Context:** The Union Government has appointed Dr. V Narayanan as the new Chairman of the Indian Space Research Organisation (ISRO).

**About**

- ISRO, the space agency of India, is involved in science, engineering and technology to harvest the benefits of outer space for India and the mankind.
- ISRO is a major constituent of the Department of Space (DOS), Government of India.
  - The department executes the Indian Space Programme primarily through various Centres or units within ISRO.

**Did you know?**

- ISRO was initially known as the Indian National Committee for Space Research (INCOSPAR), which was established by the Government of India in 1962, under the vision of Dr. Vikram Sarabhai.
- ISRO was formed on August 15, 1969, to expand the role of space technology and superseded INCOSPAR. The Department of Space (DOS) was created in 1972, and ISRO became a part of it.

## 25. (c)

Union Animal Husbandry and Fisheries Minister launched **the country's first organic fisheries cluster in Sikkim**.

- **Aim:** To sell antibiotic, chemical, and pesticide free organic fish in eco-conscious markets across the globe.
- **The organic fisheries cluster** focuses on an ecologically healthy fish farming system avoiding chemicals, antibiotics, and pesticides.
  - This also ensures **minimal environmental pollution** and **prevents damage to aquatic ecosystems**, contributing to sustainable fish production practices.
- The minister has also laid the foundations for 50 key projects under the **Pradhan Mantri Matsya Sampada Yojana (PMMSY)**, covering all northeastern states except Arunachal Pradesh and Mizoram.

26. (c)

ONOS aims to provide all students, faculty, researchers, and scientists in government-funded higher education institutions (HEIs) and R&D centers with free access to a vast collection of international scholarly journals and articles. INFLIBNET is an autonomous inter-university center under the UGC, is tasked with managing the subscriptions and ensuring seamless digital access to the journals under ONOS.

27. (c)

**Context:** The birth anniversary of Satyendra Nath Bose (1894-1974) was recently observed.

**About Satyendra Nath Bose**

- Born on January 1, he was an Indian mathematician and physicist known for his work on **quantum mechanics**.
- He developed the foundation for Bose-Einstein statistics (B-E statistics) and Bose-Einstein condensate (BEC).
- Boson, a class of particles that obey Bose statistics, is named after him.
  - In particle physics, a boson is a subatomic particle whose spin quantum number has an integer value (0,1,2 ...).

**Honours**

- Rabindranath Tagore dedicated his only book on science, **Visva-Parichay**, to Bose.
- He was awarded **Padma Vibhushan** in 1954.
- In 1958, he became a Fellow of the Royal Society.
- He was nominated as member of Rajya Sabha.

28. (d)

**Context:** The World Economic Forum (WEF) recently released **Global Cybersecurity Outlook 2025**.

**About Global Cybersecurity Outlook 2025**

- It is produced in collaboration with Accenture and it examines the cybersecurity trends that will affect economies and societies in the year to come.
- It explores major findings and puts a spotlight on the complexity of the cybersecurity landscape, which is intensified by geopolitical tensions, emerging technologies, supply chain interdependencies and cybercrime sophistication.

29. (d)

**Context**

- India is facing challenges in achieving good scores in the World Bank's Business Ready report.

**About**

- **The B-READY report**, launched by the **World Bank**, benchmarks the business environment and investment climate across economies.
- It evaluates regulatory frameworks, public services, and their effectiveness in facilitating business operations, **replacing the previous Ease of Doing Business Index**.

30. (b)

**Context**

- West Bengal Chief Minister announced that Kolkata's Star Theatre, a cultural institution of the city, would be renamed **Binodini Mancha or Binodini theatre**.

**About Binodini**

- Born in **1863** in a Kolkata suburb known for its red-light district, Binodini was among the first women in Bengal to join theatre professionally.
  - Despite societal challenges, she redefined the scope of female performance in Indian theatre.
- When Star Theatre was being built, a promise was made to name it "**B. Theatre**" in her honor, but it was ultimately named Star Theatre.
  - The first show performed there was **Dakshayajna**, starring Binodini.
- Despite her success, she voluntarily **withdrew from theatre in 1887**, just four years after the theatre's opening.
- Her autobiography, **Aamar Katha (1913)**, vividly narrates the challenges of caste, class, and patriarchy she faced.

**31. (c)****Context**

- The World Bank has released the **Global Economic Prospects (GEP) report 2025**.
  - It is a **flagship biannual publication** of the World Bank Group that examines trends and projections in the global economy. It emphasizes emerging markets and developing economies.

**About World Bank**

- It is an **international financial institution** that provides loans and grants to the governments of developing countries for the purpose of pursuing capital projects.
- It was established along with the **International Monetary Fund at the 1944 Bretton Woods Conference**.
- **It comprises two institutions:** the International Bank for Reconstruction and Development (IBRD), and the International Development Association (IDA).

**32. (a)**

**Context:** A continuous water eruption at a borewell drilling site in Jaisalmer, Rajasthan, has sparked claims of a subterranean Saraswati River beneath the desert landscape.

**About the Saraswati River**

- The river is mentioned over 80 times in the **Rigveda** and is believed to have dried up more than **5,000 years ago** due to climatic and tectonic shifts.
- It originated in the Himalayas and flowed through **Haryana, Rajasthan, North Gujarat, and Pakistan** before reaching the Gulf at the Western Sea, spanning approximately **4,000 km**.
- The river had **two branches—western and eastern**—that joined at Shatrana, 25 km south of Patiala.
  - The western branch, represented by the ancient Satluj, flowed through the channels of the present-day Ghaggar-Patialwali rivulets.
  - The eastern branch, supported by the Markanda and Sarsuti rivers, is now known as the Tons-Yamuna rivers.

**33. (c)**

**In News:** Chhattisgarh has become the **first state in India** to introduce a pioneering initiative linking the ecosystem services of forests to the **Green Gross Domestic Product (Green GDP)**.

**What is Green GDP?**

- **Green GDP is an economic indicator** that aims to measure the true economic performance of a country while considering the environmental impact of economic activity.
- **Green GDP:**
  - Subtracts the environmental costs of economic activity from traditional GDP.
  - Includes the value of environmental benefits, such as those provided by forests (clean air, water purification, biodiversity).

**34. (d)**

**In News:** The Union Ministry of Environment, Forest and Climate Change has introduced revised rules for the selection of experts on the Genetic Engineering Appraisal Committee (GEAC).

**Statement 1 is not correct:** The Genetic Engineering Appraisal Committee (GEAC) functions in the Ministry of Environment, Forest and Climate Change (MoEF&CC). As per Rules, 1989, it is responsible for the appraisal of activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle. The committee is also responsible for the appraisal of proposals relating to the release of genetically engineered (GE) organisms and products into the environment including experimental field trials.

**Statement 2 is not correct:** Currently, the only GM crops permitted for cultivation in India is Bt Cotton. But several cases of cultivation of illegal GM crops (Brinjal, Soyabean etc) have been reported from across states in the last few months. A GM crop has a gene artificially inserted into it from another species to give it some desired properties like – pest resistance, herbicide tolerance, drought resistance etc.

**35. (b)**

**Gujarat** is conducting the country's first-ever census of **coastal and wader birds** at the **Marine National Park** and Sanctuary in Jamnagar.

- It will be jointly organised by the **state forest department and the Bird Conservation Society of Gujarat**.
- **Waders Bird:**
  - They are also known as **shorebirds or sandpipers**, are a group of birds typically found in coastal habitats or wetlands.
  - They are characterized by **long legs, slender bodies, and often long bills**, which they use to forage for food like insects and worms.
- **Marine National Park:**
  - The Marine National Park and Marine Sanctuary in Gujarat is **India's first designated marine national park**.
  - Spanning the districts of Devbhoomi Dwarka, Jamnagar, and Morbi, it covers approximately 170 km of coastline and 42 islands.
  - This protected area in the **Gulf of Kutch** was established to conserve marine biodiversity and mangrove ecosystems.
  - The park is positioned along the **Central Asian Flyway (CAF)**.
    - ♦ It is a key migratory route for birds traveling, covering a large continental area of Eurasia between the Arctic and Indian Oceans and the associated island chains.

**36. (c)**

Meta will eliminate fact-checks posted by fact-checkers in the US, replacing them with a '**Community Notes**' system.

- Community Notes was first piloted as a programme called '**Birdwatch**' by Twitter in 2021.

- It is a **crowdsourced fact-checking model** that **allows** users to add facts and context below a specific post.
- A Community Note shows up below a post **only if enough contributors vote that the context it provides is helpful**.
- As a result, the **model is said to become better** as more users participate.

37. (b)

#### Context

- The United States has launched a significant initiative under the “Stargate Project” to strengthen its artificial intelligence (AI) capabilities.

#### What is Stargate?

- Stargate is a **\$500 billion** initiative designed to establish a comprehensive **artificial intelligence (AI) infrastructure** in the United States over the next **four years**.
  - It is a collaborative effort between **OpenAI, SoftBank, and Oracle**, with an initial \$100 billion investment.
- The project involves constructing **massive data centers** and campuses across the country to support the development and deployment of AI technologies at scale.
- Stargate is envisioned as a critical step toward re-industrializing the United States and enhancing its technological capabilities.

