

# February 2024

# **NEXTIRS**



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### **HISTORY & CULTURE**

- 1. Religious ritual "Theyyam " recently seen in the news , it is related to
  - (a) Odisha
  - (b) Nagaland
  - (c) Kerala
  - (d) Sikkim
- 2. Lad Khan Temple in Karnataka, is associated with which of the following dynasties in India?
  - (a) Pallava dynasty
  - (b) Kakatiya dynasty
  - (c) Chalukya dynasty
  - (d) Chola dynasty
- 3. With reference to the *Attukal Pongala*, consider the following statements:
  - 1. It is dubbed as the Women's Sabarimala that symbolises the strength and power of women.
  - 2. It is dedicated to Kannaki, the heroine of the Chilappatikaram.
  - 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. He was one of the prominent leaders of the North Indian Bhakti movement. He taught removal of social divisions of caste and gender, and promoted unity in the pursuit of personal spiritual freedom. Which of the following personalities has been described above?
  - (a) Guru Ravidas
  - (b) Sankardev
  - (c) Chaitanya Mahaprabhu
  - (d) Namdev

5.

- "Sammakka Saralamma Jatara or Medaram Jatara", recently seen in the news, is related to:
  - (a) Karnataka
  - (b) Tamil Nadu
  - (c) Kerala
  - (d) Telangana
- 6. Rani Chennamma, is associated with which of the following revolts/rebellions during British India?
  - (a) Ahom Revolt
  - (b) Paika Rebellion
  - (c) Kittur Rebellion
  - (d) Pabna revolt
- 7. Which one of the following Indian States is associated with the 'Samakka Saralamma Jatara'?
  - (a) Odisha
  - (b) Chhattisgarh
  - (c) Tamil Nadu
  - (d) Telangana
- 8. With reference to the Khajuraho Group of Monuments, which of the following statements is/are correct?
  - 1. It was built by Pallava rulers during the 7th century.

2. The Temple of Kandariya Mahadev is one of the finest temples of the Khajuraho group. 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. With reference to the Muhammad Quli Qutb Shah, which of the following statements is/are correct?

- 1. He founded the city of Hyderabad on the banks of the Musi river.
- 2. He built the Golconda Fort in Hyderabad.

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. Terms like *'investment casting' and 'cire perdue'*, sometime appeared in the news, are related to:

- (a) Voting Methodology
- (b) Sculpture Casting
- (c) Plantation Technique
- (d) Investment Banking

#### 11. With reference to social reform movements, Consider the following pairs :

#### Movement Founder

- 1. Arya Samaj : Dayanand Saraswati
- 2. Prarthana Samaj : Debendranath Tagore
- 3. Brahmo Samaj : Raja Rammohan Roy

How many of the above pairs are correctly matched?

- (a) Only one pair
- (b) Only two pairs
- (c) All three pairs
- (d) None of the pairs

#### 12. With reference to the Swami Dayanand Saraswati, consider the following statements:

- 1. He promoted the idol worship and ritualistic practices in Hinduism.
- 2. He introduced the Shuddi Moverment.
- 3. He founded Arya Samaj in 1875 to counter then prevalent social inequities.

#### How many of the statements given above are correct?

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

#### 13. With reference to the Sri Chaitanya Mahaprabhu, consider the following statements:

- 1. He is a Vaishnavite saint from Bengal.
- 2. He was a contemporary to the Guru Nanak Dev.
- 3. He wrote the Shikshashtakam, a collection of eight prayers of devotion.
- How many statements given above are correct?
- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### 14. With reference to the Hastal Minar, consider the following statements:

- 1. It stands on a square platform with an octagonal body.
- 2. The design of the tower resembles the Qutub Minar of Delhi.

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 Sri Chaitanya Mahaprabhu, consider the following statements:

- 1. He is a Vaishnavite saint from Bengal.
- 2. He was a contemporary to the Guru Nanak Dev.
- 3. He wrote the Shikshashtakam, a collection of eight prayers of devotion.

How many statements given above are correct?

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

16. He is recognised as the conjoined avatar of Goddess Radha and Lord Krishna. He promoted Bhakti yoga and made the Hare Krishna Maha-mantra chanting widespread.

Which of the following personalities has been described above?

- (a) Adi Shankaracharya
- (b) Vallabhacharya
- (c) Ramanujacharya
- (d) Sri Chaitanya Mahaprabhu
- 17. Which among the following countries is the Partner Nation at the 37th Surajkund International Crafts Mela in Haryana?
  - (a) Uzbekistan
  - (b) Tanzania
  - (c) Thailand
  - (d) South Africa

### **EXPLANATIONS**

#### 1. (c)

In News: Theyyams were performed at Sree Kurumba Bhagavathi temple.

- Theyyam is a **religious ritual practiced** in northern **Kerala** and some parts of Karnataka.
- Theyyam, believed to have been derived from the word Daivam, meaning god
- It is based on the belief that immortal spirits enter into mortal bodies to perform a ritual dance of divine revelation.

#### 2. (c)

#### <u>Chalukya dynasty</u>

• The Chalukya dynasty was a Hindu dynasty that ruled large parts of southern and central India between the **6th and the 12th centuries.** 

• During this period, they ruled as three related yet individual dynasties. The earliest dynasty, known as the "Badami Chalukyas", ruled from Vatapi (modern Badami) from the middle of the 6th century. Architecture of Badami Chalukya

- The Chalukya style of architecture is called "Chalukyan architecture" or "Karnata Dravida architecture".
- Temple building activity of Chalukyas were concentrated within Aihole, Badami, Pattadakal and Mahakuta in modern Karnataka state.
- The building material used was locally found reddish-golden Sandstone.
  - The temple building activity of Badami Chalukya can be categorized into three phases:
    - The first phase includes cave temples like temples at Aihole and Badami.
    - The second phase includes the Lad Khan Temple, the Meguti Jain Temple etc.
    - The third phase of the mature phase includes the Sangamesvara Temple, Virupaksha Temple, Papanatha temple etc.

#### 3. (c)

#### Statement 1 is correct:

- Attukal Pongala: It is a renowned religious event held annually at the Attukal Bhagavathy Temple in Thiruvananthapuram, Kerala and falls on the **ninth day** of the annual ten-day festival.
  - o It is dubbed as the **'Women's Sabarimala'**, symbolising the strength and power of women.
- It involves women preparing a sweet pudding of rice, jaggery, grated coconut, ghee, and banana in earthen pots.

#### Statement 2 is correct:

- It is **dedicated to Kannaki**, the heroine of the Chilappatikaram.
- The ritual can **only be performed by women**, and the streets of the city are known to be jam-packed with faithful devotees during the time of the festival.

#### 4. (a)

#### Guru Ravidas

- A great Saint, philosopher, poet, and social reformer of the **15th century**, Guru Ravidas is well-known for his contributions to the Bhakti Movement.
- Guru Ravidas is popularly known by different names like Raidas, Rohidas, and Ruhidas. He was born in 1377 CE in Seer Govardhanpur in Uttar Pradesh. Since his birth, Guru Ravidas devoted his life to advocating for human rights and equality. He was a revered poet and a renowned philosopher. Notably, a few of his compositions were also included in Guru Granth Sahib Ji. His place of birth is now known as Shri Guru Ravidass Janam Asthan.
- He is one of the most famous personalities of the nirguna sampradaya (sant parampara) and was one of the prominent leaders of the North Indian Bhakti movement. He taught removal of social divisions of caste and gender, and promoted unity in the pursuit of personal spiritual freedom.

#### 5. (d)

#### Sammakka Saralamma Jatara or Medaram Jatara

- It is a festival of honouring the goddesses celebrated in the state of **Telangana**, India. This Jatara is known for witnessing one of the largest gatherings of people in the world.
- People offer Bangarm (jaggery).
- The rituals related to the Goddesses are entirely conducted by Koya tribe priests, in accordance with Koya customs and traditions.
- It is believed that after Kumbha Mela, the Medaram jatara attracts the largest number of devotees in the country.
- 6. (c)

#### **Kittur Rebellion**

#### Rani Chennamma

- Chenamma was born in **1778,** in Kagati, present-day Belagavi district in Karnataka.
- She was married to Raja Mallasarja of Kittur, who ruled the province until 1816.
- After Mallasarja's death his eldest son, **Shivalingarudra Sarja**, ascended the throne.
  - Before his death in 1824, Shivalingarudra adopted a child, **Shivalingappa**, as the successor.
- However, the British East India Company refused to recognise Shivalingappa as the successor of the kingdom under the 'doctrine of lapse'.

#### The Kittur Rebellion

- John Thackery, the British official at Dharwad, launched an attack on Kittur in 1824.
- The Kittur army, under the leadership of Rani Chennamma, retaliated and Thackeray was killed and Rani **Chennamma emerged victorious**.
- However, the British army again attacked the Kittur Fort and captured it. Rani Chennamma and her family were imprisoned and jailed at the fort in Bailhongal, where she **died in 1829**.

#### 7. (d)

**In News :** Recently, the **Telangana health department** has issued an advisory to devotees planning to attend the Sammakka-Saralamma Jatara in **Mulugu district** of the state.

- <u>Samakka Saralamma Jatara</u>: It is one of the largest tribal festivals in the world celebrated in the Indian State of **Telangana**.
  - It is also known as **Medaram Jatara** that is held **every two years**.
- It begins with the arrival of the deities from the forest to a spot for a period of 10-12 days.
- More than one crore devotees offer prayers and gift **'bangaram'**, which is pure jaggery, to the deities. Historical Significance:
- It commemorates the brave fight of a mother-daughter duo, Sammakka and Saralamma, against the Kakatiya rulers who imposed taxes on the tribal people during a period of drought in the 12th century.
- The Koya community constructed this temple as a token of gratitude.

#### 8. (b)

#### Statement 1 is not correct and Statement 2 is correct.

#### News

• Recently, the 50th edition of the famous **Khajuraho Dance Festival** began in Madhya Pradesh.

#### Khajuraho Group of Monuments

- The temples at Khajuraho were built during the **Chandella dynasty**, which reached its apogee between **950 and 1050**.
- Only about 20 temples remain; they fall into three distinct groups and belong to two different religions Hinduism and Jainism. They strike a perfect balance between architecture and sculpture.
- The Temple of Kandariya is decorated with a profusion of sculptures that are among the greatest masterpieces of Indian art.

#### 9. (a)

#### Statements 1 is correct and Statements 2 is not correct. Muhammad Quli Qutb Shah

- Muhammad Quli Qutb Shah was the fifth sultan of the Qutb Shahi dynasty of Golkonda.
- He founded the city of Hyderabad on the banks of the **Musi river** in **1590** and built the Charminar.
- During his reign, the dynasty reached the zenith of its material and cultural life.

#### <u>Golconda Fort</u>

- The fort was originally **built by Kakatiya ruler Pratāparudra** in the 11th century out of mud walls.
- It was ceded to the Bahmani Kings from Musunuri Nayaks during the reign of the Bahmani Sultan Mohammed Shah I, during the first Bahmani-Vijayanagar War.

• Following the death of Sultan Mahmood Shah, the Sultanate disintegrated and Sultan Quli, who had been appointed as the Governor of Hyderabad by the Bahmani Kings, fortified city and made it the capital of the Golconda Sultanate.

#### 10. (b)

#### The Lost-wax Casting Method:

- It is a time-tested technique used for creating intricate metal sculptures.
- It is also known as 'investment casting' or 'precision casting' or 'cire perdue'

#### Process:

- A detailed solid wax model of the figure is created, and then a clay mould is made around the wax model.
  - The mould is heated, causing the wax to melt and drain away, hence the term 'lost-wax'.
- Molten metal (often bronze, but can also be silver, gold, brass, or copper) is poured into the now empty clay mould.
- Once the metal cools, the clay mould is broken to reveal the cast sculpture.
- This method of casting has been used since the days of the Cholas.

#### 11. (b)

### Pair 1 and 3 are correctly matched and Pair 2 is not correctly matched. <u>Arya Samaj</u>

- Dayanand Saraswati formed the Arya Samaj at Bombay in 1875.
- It was a Hindu reforms movement, meaning "society of the nobles".
- The purpose of the Samaj was to move the Hindu religion away from the fictitious beliefs.
- 'Krinvanto Vishwam Aryam'' was the motto of the Samaj, which means, "Make this world noble".
- The Samaj directs its members to condemn ritualistic practices like idol worship, pilgrimage and bathing in holy rivers, animal sacrifice, offering in temples, sponsoring priesthood etc.
- The Samaj launched programs to support widow remarriage in the 1880s.

#### <u>Prarthana Samaj</u>

- Prarthana Samaj was founded by **Atmaram Pandurang** on 31 March 1867 when Keshub Chandra Sen visited Maharashtra, with an aim to make people believe in one God and worship only one God.
- It became popular after Mahadev Govind Ranade joined.

#### <u>Brahmo Samaj</u>

• Brahmo Samaj, is a reform movement within Hinduism, founded in Calcutta in 1828 by Raja RamMohan Roy.

#### 12. (b)

Statement 1 is not correct: Maharishi Dayanand Saraswati, was born on February 12, 1824 in Tankara, Gujarat.

- He opposed idol worship and ritualistic practices that he believed deviated from the true teachings of the Vedas.
  - He promoted the worship of a formless, attributeless God.

**Statement 2 and 3 are correct:** The Shuddhi Movement was introduced to bring back the individuals to Hinduism who were either voluntarily or involuntarily converted to other religions like Islam or Christianity.

• He was a **social reformer** who founded **Arya Samaj in 1875** to counter then prevalent social inequities.

#### 13. (c)

#### All the Statements are correct. About Sri Chaitanya Mahaprabhu

- Chaitanya Mahaprabhu belongs to the **15th century**, and according to his disciples he is recognised as the **conjoined avatar of Goddess Radha and Lord Krishna**.
- **Bengal's Vaishnavism** was greatly impacted by Sri Chaitanya Mahaprabhu's approach to Krishna worship, which combined dancing, bhajan-kirtan, and other forms of kirtan.
- He promoted **Bhakti yoga** and made the **Hare Krishna Maha-mantra** chanting widespread.
- Mahaprabhu also wrote the Shikshashtakam, a collection of eight prayers of devotion.
- He was a contemporary to the Guru Nanak Dev.

#### 14. (c)

Hastsal Minar: It is known as the Mini Qutub Minar, is a minaret tower located in Hastsal village in West Delhi, India. It was built in 1650 by Mughal emperor Shah Jahan.

#### Statement 1 is correct:

• **Design:** The tower stands tall at 17 metres tall on a raised platform, with a reducing diameter. It stands on a square platform with an octagonal body.

#### Statement 2 is correct:

- It was constructed using lakhori bricks and clad with red sandstone. It was originally a five-storey tower, topped with a domed Chhatri pavilion.
- The design of the tower resembles the Qutub Minar of Delhi.

#### 15. (c)

#### All the Statements are correct.

#### About Sri Chaitanya Mahaprabhu

- Chaitanya Mahaprabhu belongs to the **15th century**, and according to his disciples he is recognised as the **conjoined avatar of Goddess Radha and Lord Krishna**.
- **Bengal's Vaishnavism** was greatly impacted by Sri Chaitanya Mahaprabhu's approach to Krishna worship, which combined dancing, bhajan-kirtan, and other forms of kirtan.
- He promoted **Bhakti yoga** and made the **Hare Krishna Maha-mantra** chanting widespread.
- Mahaprabhu also wrote the Shikshashtakam, a collection of eight prayers of devotion.
- He was a contemporary to the Guru Nanak Dev.

#### 16. (d)

#### About Sri Chaitanya Mahaprabhu

- According to his disciples he is recognised as the conjoined avatar of Goddess Radha and Lord Krishna.
- **Bengal's Vaishnavism** was greatly impacted by Sri Chaitanya Mahaprabhu's approach to Krishna worship, which combined dancing, bhajan-kirtan, and other forms of kirtan.
- He promoted **Bhakti yoga** and made the **Hare Krishna Maha-mantra** chanting widespread.
- Mahaprabhu also wrote the Shikshashtakam, a collection of eight prayers of devotion.

#### 17. (b)

**News:** Recently, the President of India inaugurated the 37th Surajkund International Crafts Mela in Haryana.

#### About

- The Mela is organized by the Surajkund Mela Authority & Haryana Tourism in collaboration with Union Ministries of Tourism, Textiles, Culture and External Affairs.
- It showcases the richness and diversity of the handicrafts, handlooms and cultural fabric of India, & is the largest crafts fair in the world.
- For the 37th Surajkund International Crafts Mela, the state of **Gujarat** has been chosen as the **Theme State** and **Tanzania** as the **Partner Nation**.



### ECONOMY

- **1.** With respect to the Financial Stability and Development Council (FSDC), consider the following statements:
  - 1. It aimed to oversee the financial regularities mainly in the banking sector.
  - 2. It is an executive body constituted under the Executive Order by the Ministry of Finance.
  - 3. The Finance Secretary is the Chairman of the FSDC.

Which of the statements given above are correct?

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

#### 2. The WTO's 13th Ministerial Conference (MC13) recently took place in which of the following cities?

- (a) Rio De Janeiro, Brazil
- (b) Cape town, South Africa
- (c) New Delhi, India
- (d) Abu Dhabi, United Arab Emirates.

#### 3. With reference to the Bitcoin, consider the following statements:

- 1. It was introduced in 2009 by an anonymous creator known as Satoshi Nakamoto.
- 2. It's the world's first decentralized cryptocurrency, using blockchain technology to secure and verify transactions.

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. With reference to the Treasury Bills (T-bills), which of the following statements is/are correct?
  - 1. T-bills are long term debt instruments issued by the Government of India.

2. They are zero coupon securities and pay no interest.

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. With reference to Organic farming in India, which of the following statements is/are correct?
  - 1. India occupies first place at global level in organic farming.
  - 2. Madhya Pradesh has the largest area under organic certification 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
- **6.** With reference to the National Programme for Organic Production (NPOP), which of the following statements is/are correct?
  - 1. It is a third party certification programme for organic products in India.

2. It is under the Ministry of Commerce and Industry for development of the export market. 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
- **7.** With reference to India's Smartphone Exports in the last decade (2010-2020), which of the following statements is/are correct?
  - 1. India's smartphone exports rose from 1% to 12% in the last decade.
  - 2. India's share of exports has grown in UAE and Germany in the last decade.

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

- 1. It is a statutory body established by an Act of Parliament.
- 2. It is chaired by the Governor of the Reserve Bank of India (RBI).
- 3. The FSDC is responsible for setting the monetary policy of the country.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) None

#### 9. Which of the following countries are members of the European Free Trade Association (EFTA)?

- 1. Liechtenstein
- 2. Switzerland
- 3. Finland
- 4. Norway

Select the correct answer using the code given below:

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

#### **10.** Consider the following statements:

- 1. Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application.
- 2. UPI enabled transactions with single click—in which the customer needs to enter MPIN followed by OTP to make a transaction.
- 3. UPI allows both financial as well as non-financial transactions.

How many of the above statements are correct?

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

#### **11.** With reference to Unified Payments Interface (UPI), which of the following statements is/are correct?

- 1. It is an Indian instant payment system developed by the National Payments Corporation of India (NPCI).
- 2. Recently, India has launched its UPI in Sri Lanka and Mauritius.

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. With reference to Peer-to-peer (P2P) lending, consider the following statements :

- 1. P2P connects borrowers and lenders with the help of traditional financial institutions like banks.
- 2. Any person including an individual, a body of individuals, a HUF, a firm, a society or any artificial body, a company can participate in the P2P lending platform.
- 3. There's a higher risk of borrowers defaulting on loans in P2P compared to traditional institutions. 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. Consider the following statements:

- 1. The Monetary Policy Committee was constituted under the Reserve Bank of India Act, of 1934.
- 2. The RBI governor is the ex-officio chairman of the Monetary Policy Committee.
- 3. The meetings of the MPC are mostly held quarterly and constitute four members, half of them appointed by the Government of India.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 only
- (c) 1 and 3 only
- (d) 1, 2 and 3
- 14. With reference to the 'Bharat Rice' which was recently launched by the Union government, consider the following statements:
  - 1. It is launched under the National Food Security Mission of the Ministry of Agriculture & Farmers Welfare.
  - 2. It provides rice directly to consumers at subsidised rates.
  - 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 Payment Aggregators, consider the following statements :

- 1. The non-bank payment aggregators require authorisation from the RBI to operate.
- 2. They process payments themselves, similar to traditional banks.
- 3. Merchants need separate merchant accounts with individual banks for each payment method offered through the aggregator.

Which of the statements given above are correct?

- (a) 1 only
- (b) 1 and 2 only

(c) 3 only

(d) 2 and 3

#### 16. With reference to the World Trade Organisation, consider the following statements:

- 1. It is the only international organisation dealing with the global rules of trade.
- 2. The General Council is the highest-level decision-making body of the WTO.

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
- 17. A higher Tax to GDP ratio generally implies:
  - (a) Lower tax burden on the economy.
  - (b) Strong economic growth.
  - (c) Inefficient tax collection.
  - (d) Decreased government revenue.
- 18. Which of the following statements about Micro, Small and Medium Enterprises (MSMEs) in India is correct?
  - (a) An enterprise with an investment of Rs. 90 lakh and a turnover of Rs. 5 crore is classified as a Small enterprise.
  - (b) An enterprise with an investment of Rs. 12 crore and a turnover of Rs. 40 crore is classified as a Small enterprise.
  - (c) An enterprise with an investment of Rs. 50,000 and a turnover of Rs. 2 lakh is classified as a Medium enterprise.
  - (d) An enterprise with an investment of Rs. 1 crore and a turnover of Rs. 5 crore is classified as a Micro enterprise.
- 19. With reference to the Unified Payments Interface (UPI), which of the following statements is/are correct?
  - 1. UPI was launched by the National Payments Corporation of India (NPCI) in 2016.
  - 2. Recently India has launched UPI in France.

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
- 20. With reference to the 'Fiscal Responsibility Budget Management (FRBM) Act, 2003' consider the following statements:
  - 1. It provides provisions to improve the management of public funds.
  - 2. It says that the Macroeconomic Framework Statement is mandatory to publish on an annual basis.

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

#### 21. With reference to National Payments Corporation of India (NPCI), consider the following statements:

- 1. It was established by the Reserve Bank of India (RBI) and Indian Banks' Association (IBA) in 2008.
- 2. It is a "Not for Profit" Company under the Companies Act.

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 indicators are used for calculating the *Indian Multidimensional Poverty Index* (*MPI*):

- 1. Maternal Health
- 2. Bank Accounts
- 3. Standard of living
- 4. Education

Select the correct answer using the codes given below.

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

#### 23. The primary objective of introducing Payment Banks in India was to:

- (a) Offer credit facilities to Micro, small and medium enterprises(MSMEs).
- (b) Facilitate large-scale investments in the financial sector.
- (c) Provide basic banking services to the unbanked and underbanked population.
- (d) Act as investment banking intermediaries for the agriculture sector.

#### 24. Which of the following features is NOT characteristic of Payment Banks in India?

- (a) Accepting deposits up to a specific limit.
- (b) Providing loans and credit facilities.
- (c) Issuing demand drafts for various financial transactions.
- (d) Facilitating bill payments and mobile banking services.

#### 25. Which among the following are *not* the key components of the Union Budget currently?

- 1. Revenue Budget
- 2. Plan Expenditure
- 3. Tax Proposals
- 4. Capital Budget

#### Choose the correct answer using the codes given below:

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

#### 26. With reference to the *Interim Budget*, consider the following statements:

- 1. It is a temporary budget that is presented by the government in an election year.
- 2. There is no constitutional provision for it.

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 government expenditure of Indian economy, consider the following statements:

- 1. The Capital expenditure in 2023-24 is more than double of 2020-21.
- 2. The total expenditure for the Health is staying below the 2% mark from 2022-23.

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. While recommending Minimum Support Prices (MSPs), the Commission for Agricultural Costs & Prices (CACP) considers which of the following factors?

- 1. Cost of production
- 2. Demand-supply situation
- 3. Trends in domestic and international prices
- 4. Inter-crop price parity

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

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

#### 29. Which one of the following statements best describes HSN Code?

- (a) A warning code issued for the incoming earthquake.
- (b) It is a 12 digit code akin to Aadhar for ration card holders.
- (c) A unique code allotted to every labour card holder.
- (d) It is a six-digit numerical code used to classify traded goods globally.

#### 30. With reference to HSN Code, consider the following statements:

- 1. It is a six-digit numerical code used to classify traded goods globally.
- 2. It was developed by the World Trade Organization (WTO) and is considered the global standard for naming goods.

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

#### 31. A Special Safeguard Mechanism (SSM), recently seen in the news, is related to which of the following?

- (a) Initiative by SEBI to safeguard the interests of small investors.
- (b) A protection offered by RBI to restructure Non-Performing Assets (NPAs) of public sector banks.
- (c) An IMF initiative to help countries on the verge of currency default.
- (d) A WTO exemption which allows developing countries to impose additional duties in the event of an abnormal surge in imports.

#### 32. With reference to the *Community Radio Stations (CRS) in India*, consider the following statements:

- 1. CRS are Public Service Radio set-up and operated by local communities.
- 2. In 2002, a policy was approved to grant a license for setting up CRS to well established educational institutions.

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. With reference to the Unified Payments Interface (UPI), which of the following statements is/are correct?
  - 1. UPI was launched by the National Payments Corporation of India (NPCI) in 2016.
  - 2. It is a system that powers multiple bank accounts into a single mobile application.

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
- 34. If a country is going through an economic recession, which among the following will be its most likely impact?
  - 1. Rise in unemployment
  - 2. Spurring Business activities
  - 3. Quantitative easing by Central Banks

Select the correct answer using the code given below:

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

#### 35. With reference to the Minimum Support Price (MSP), consider the following statements:

- 1. The Commission for Agricultural Costs & Prices recommends the MSP.
- 2. The Cabinet Committee on Economic Affairs (CCEA) takes the final decisions on MSP.
- 3. Copra and De-husked coconut are the items included in the mandated crops for MSP.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 2 only
- (d) 1, 2 and 3
- 36. National Commission on Farmers (NCF), 2006, recently seen in the news regarding farmers' protests, was headed by which one of the following?
  - (a) Bibek Debroy
  - (b) C Rangarajan
  - (c) Rohini Somanathan
  - (d) Dr M S Swaminathan
- 37. Which one of the following bodies/institutions is mandated to ensure effective price support operations for safeguarding the interests of the farmers and distributing foodgrains for a public distribution system?
  - (a) FCI
  - (b) APEDA
  - (c) APMCs
  - (d) CACP

### **EXPLANATIONS**

#### 1. (b)

**Option B is correct:** The Financial Stability and Development Council (FSDC) was constituted in December 2010. The FSDC was set up to strengthen and institutionalise the mechanism for maintaining financial stability, enhancing inter-regulatory coordination and promoting financial sector development. An apex-level FSDC is not a statutory body.

The membership of the FSDC is- The Finance Minister is the Chairman of the FSDC.

Members of FSDC include Heads of the Financial Sector Regulators listed below:

- Reserve Bank of India (RBI)
- Insurance Regulatory and Development Authority (IRDA)
- Securities and Exchange Board of India (SEBI)
- Pension Fund Regulatory and Development Authority (PFRDA)
- Other members are Finance Secretary, Chief Economics Advisor and Secretary of the Department of Financial Services.2.

#### 2. (d)

#### Abu Dhabi, United Arab Emirates.

#### WTO's Ministerial Conference (MC13)

- The topmost decision-making body of the WTO is the Ministerial Conference(MC).
- It usually meets every two years.
- Mandate: It brings together all members of the WTO, all of which are countries or customs unions and can take decisions on all matters under any of the multilateral trade agreements.
- The WTO's 13th Ministerial Conference (MC13) took place from 26 to 29 February 2024.
  - o Venue: Abu Dhabi, United Arab Emirates.
  - Agenda: Ministers from across the world will attend to review the functioning of the multilateral trading system and to take action on the future work of the WTO.

#### 3. (c)

Both the statements are correct: Bitcoin was introduced in 2009 by an anonymous creator known as Satoshi Nakamoto, is a decentralized, digital currency exchanged through a peer-to-peer network without centralized authorities.

- It's the **world's first decentralized cryptocurrency**, using **blockchain technology** to secure and verify transactions.
- The Bitcoin network is public and open-source, meaning anyone can participate.
- Bitcoin combines its network, cryptocurrency, and blockchain to record transactions transparently, prevent double spending, and ensure consensus via a process called "proof-of-work".

#### 4. (b)

#### Statement 1 is not correct and statement 2 is correct.

#### Treasury Bills (T-bills)

- T-bills, which are money market instruments, are short term debt instruments issued by the Government of India.
- They are **zero coupon securities** and pay no interest. Instead, they are issued at a discount and redeemed at the face value at maturity.
  - The difference between discount price and face value is earning for the investors.
- Presently they are issued in three tenors, namely, **91 day, 182 day and 364 day.**

5. (b)

#### Statement 1 is not correct and Statement 2 is correct.

#### Organic farming in India

- India occupies fifth place globally with a total area of 2.66 million hectares in organic farming.
- Madhya Pradesh has the largest area under organic certification followed by Maharashtra, Rajasthan, Gujarat and Karnataka.
- **Sikkim** is India's first fully organic state, with implementing organic practices on around 75,000 hectares of agricultural land.
- In 2022-23, India produced around 2.9 million metric tonnes of certified organic products like oil seeds, cereals and millets, cotton, pulses among others.
- The exports of India's organic products stood at \$708 million in 2022-23 and considering the global market size of around \$138 billion, there is a tremendous scope to increase the organic exports in the near future.
- 6. (c)

#### Both the Statements are correct.

#### Organic certifications systems in India

- National Programme for Organic Production (NPOP): It is under the Ministry of Commerce and Industry for development of the export market.
  - It is a **third party certification programme** where the production and handling of activities at all stages such as production, processing, trading and export requirements for organic products is covered.
- **Participatory Guarantee System (PGS-India):** In the operation stakeholders (including farmers/ producers) are involved in decision making and essential decisions about the operation of the PGS-India certification itself by assessing, inspecting and verifying the production practices of each other and collectively declaring produce as organic.
- It is under the Ministry of Agriculture and farmers Welfare for meeting the demand of the domestic market.

#### 7.

#### Statement 1 is not correct and Statement 2 is correct.

#### <u>Context</u>

(b)

• India's smartphone exports rose from 1% to 2.5% in a decade.

#### **Background**

- At the global level China continues to dominate the export sector, by exporting half of the world's smartphones in 2022.
- However, Vietnam has eaten into its export share steadily over the years, taking over from South Korea as the second-biggest smartphone exporter.
- Both India and Vietnam had less than 1% export share before 2010.
  - By 2022, Vietnam's share rose to 12%, while India ranked seventh with a little over 2.5% export share.

#### India's position in smartphone exports sector

- Within India, **Tamil Nadu** leads smartphone exports with close to 38% of India's mobiles being sent out from Kancheepuram.
- Gautam Buddha Nagar of Uttar Pradesh and Kolar in Karnataka are other districts leading in smartphone exports.
- In UAE and Germany the world's third and fifth biggest smartphone importers India's share is growing with 13% and 5% respectively.

#### 8. (d)

#### All statements are not correct

#### Financial Stability and Development Council (FSDC)

- Set up in: December 2010, by an executive order.
- Aim: To strengthen and institutionalize the mechanism for maintaining financial stability, enhancing inter-regulatory coordination and promoting financial sector development.
- Parent body: Department of Economic Affairs, Ministry of Finance.
- FSDC Secretariat: Department of Economic Affairs.
- Chairman of the Council: The Finance Minister of India.
- **Members**: Heads of financial sector Regulators (RBI, SEBI, PFRDA, IRDA & FMC), Finance Secretary and/or Secretary, Department of Economic Affairs, Secretary, Department of Financial Services, and Chief Economic Adviser.
  - The Council can **invite experts to its meeting** if required.

#### • Functions:

- o To identify and address potential threats to financial stability,
- o To formulate and implement financial sector development policies,
- To coordinate the activities of financial sector regulators,
- To promote financial inclusion and literacy, and
- To advise the Government on financial sector matters.

#### 9. (c)

The European Free Trade Association (EFTA) is the intergovernmental organisation of Iceland, Liechtenstein, Norway and Switzerland.

• It was set up in **1960** for the promotion of free trade and economic integration between its members.

#### India-EFTA

- The India EFTA text is a broad-ranging agreement that has been negotiated between India and the European Free Trade Association (EFTA) since 2008.
- It aims to increase investment by these countries in India and reduce tariffs on a range of exports from these countries.

#### 10. (b)

#### Statement 2 is not correct and Statement 1 and 3 are correct.

#### About Unified Payments Interface (UPI)

• UPI is a system that **powers multiple bank accounts into a single mobile application** (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.

#### Key features:

- Immediate money transfer through mobile device round the clock 24\*7 and 365 days.
- Single Click 2 Factor Authentication: UPI enabled transactions with single click—in which the customer just needs to enter MPIN on the mobile phone to make a transaction.
  - This is unlike the existing payment systems where you have to enter card details, usernames, passwords, OTPs etc.

#### Products |:

- A. Financial Transactions: UPI supports the following financial transactions viz.
- **Pay Request:** A Pay Request is a transaction where the initiating customer is pushing funds to the intended beneficiary.
- **Collect Request:** A Collect Request is a transaction where the customer is pulling funds from the intended remitter by using Virtual ID.

- B. Non-Financial Transactions: UPI supports non-financial transactions viz.
- Mobile Banking Registration
- Generate One Time Password (OTP)
- Set/Change PIN, etc.

#### 11. (c)

#### Both the statements are correct.

#### News

• Recently, India has launched its **Unified Payments Interface (UPI) in Sri Lanka and Mauritius**. Besides this, RuPay card services were also launched in Mauritius.

#### About

- UPI is an Indian instant payment system developed by the National Payments Corporation of India (NPCI) in 2016.
- The interface facilitates inter-bank peer-to-peer (P2P) and person-to-merchant (P2M) transactions. It is used on mobile devices to instantly transfer funds between two bank accounts.
- RuPay is a global card payment network from India, with wide acceptance at shops, ATMs, and online.

#### 12. (b)

# Statement 1 is not correct and Statements 2 and 3 are correct. <u>Peer-to-peer (P2P) lending</u>

• P2P is a **financial system that connects borrowers and lenders directly**, bypassing traditional financial institutions like banks.

#### **RBI regulations**

- Any person including an **individual**, a body of individuals, a HUF, a firm, a society or any artificial body, a company can participate in the P2P lending platform.
- The P2P lending is regulated by the Master Directions for NBFC Peer to Peer Lending Platform issued by the RBI in 2017.

#### Benefits:

#### For borrowers:

- Potentially lower interest rates than traditional loans.
- More flexible loan terms and faster processing times.

#### For lenders:

- Potentially higher return on investment than traditional savings accounts.
- Diversification options to manage risk.

#### Challenges:

- Risk of default: There's a higher risk of borrowers defaulting on loans compared to traditional institutions.
- Limited regulation: P2P platforms may have less stringent regulations than banks, requiring careful selection.

#### 13. (a)

#### About the Monetary Policy Committee (MPC):

- It is a committee of the Central Bank in India (Reserve Bank of India), headed by its Governor.
  - O The meetings of the MPC are held at least four times a year.
- Section 45ZB of the RBI Act, 1934 empowered the government to constitute a six-member MPC.

#### Composition of MPC:

• There are a total of six members in the committee, three members are from RBI itself and the rest of them are appointed by the Government of India.

#### • Members:

- RBI Governor (Chairperson);
- RBI Deputy Governor in charge of monetary policy;
- One official nominated by the RBI Board;
- The Government of India will propose three members [committee chaired by the Cabinet Secretary];
- O Members of the MPC will serve for four years and are not eligible for reappointment;
- The members of the Monetary Policy Committee are appointed for four years;

#### Functions:

- It is entrusted with the task of fixing the **benchmark policy interest rate (repo rate)** to contain inflation within the specified target level.
- The current mandate of the committee is **to maintain 4% annual consumer price index (CPI) inflation** within a band of **+/- 2%** until 31 March 2026.

#### 14. (b)

#### Statement 1 is not correct:

- Bharat Rice: It is a brand of rice launched by the Indian government to curb inflation in rice prices and prevent unscrupulous speculation.
- **Ministry**: The Union Minister of Consumer Affairs, Food and Public Distribution, launched 'Bharat Rice' brand

#### Statement 2 is correct:

• It aims to provide rice directly to consumers at subsidised rates, and plans to rope in e-commerce platforms to sell Bharat Rice.

Key Features:

- Price and Packaging: Bharat Rice is sold directly to consumers at ₹29 per kilogram12. It is available in 5 kg and 10 kg bags.
- Distribution: In the first phase, 5 lakh tonnes of rice have been allocated for retail sale under the 'Bharat Rice' brand through three agencies: NAFED, NCCF, and the Kendriya Bhandar.
- Quality: The rice held by the Food Corporation of India (FCI) contains more percentage of broken grain than the varieties available in the open market.
- Therefore, the government has asked the cooperatives to reduce the breakdown to less than 5% before packing under 'Bharat Rice'.

#### 15. (a)

#### Statement 2 and 3 are not correct.

#### Payment aggregators

- A payment aggregator is a **third-party service provider** that enables customers to make and businesses to accept payments online by **acting as middlemen**.
- They **do not process payments themselves but act as facilitators,** routing them to acquiring banks.
- Payment aggregators enable clients to accept various payment methods such as debit cards, credit cards, cardless EMIs, UPI, bank transfers, e-wallets, and e-mandates.
  - **Merchants only need one account with the aggregator**, which handles settlements with different payment methods.

#### Types:

#### 1. Bank Payment Aggregators:

- A bank payment aggregator facilitates online payments from different payment methods.
- Since it is operated by a bank, it **does not require further authorisation** from the Reserve Bank of India (RBI).

#### 2. Third-Party Payment Aggregators

- Third-party payment aggregators are **non-bank payment aggregators** and they **require authorisation** from the RBI to operate.
- Third-party payment aggregators take on the **technological and operational burdens** involved in managing payments from different payment methods.

#### 16. (a)

**In News:** The WTO's 13th Ministerial Conference with the aim to take place from 26 to 29 in Abu Dhabi (United Arab Emirates).

#### Statement 1 is correct:

- World Trade Organisation: It is the only international organization that regulates global trade and settles trade disputes among its member countries.
- It was established in 1995 as a successor to the General Agreement on Tariffs and Trade (GATT).
- The WTO's main functions are to facilitate trade negotiations, monitor trade policies, provide technical assistance and training, and cooperate with other international bodies.

#### Statement 2 is not correct:

- **Ministerial Conference:** It is the top-level decision-making body of WTO which usually meets every two years.
- General Council: It is normally composed of officials like ambassadors and heads of delegation in Geneva.
  - It meets several times a year at the WTO's headquarters in Geneva.
  - o It also meets as the Trade Policy Review Body and the Dispute Settlement Body.
  - Trade Related Intellectual Property Rights (TRIPS) Council: It is for the Goods, Services, and Intellectual Property, and it reports to the General Council.

#### 17. (b)

#### About Tax-to-GDP Ratio

- The tax-to-GDP ratio measures a **nation's tax revenue relative to the size of its economy.**
- Developed nations typically have higher tax-to-GDP ratios than developing nations.
- A higher ratio denotes a wider fiscal net and reduced dependence on borrowings, hence stronger economic growth.
  - Higher tax revenues mean a country can spend more on improving infrastructure, health, and education—keys to the long-term prospects for a country's economy and people.

#### 18. (d)

#### Micro, Small and Medium Enterprises (MSMEs)

- MSMEs are the **backbone of the Indian economy,** contributing significantly to its growth and development.
- **Criteria**: An enterprise shall be classified as a micro, small or medium enterprise on the basis of the following criteria, namely:
  - Micro enterprises: Investment up to Rs. 1 crore and turnover up to Rs. 5 crore .
  - Small enterprises: Investment up to Rs. 10 crore and turnover up to Rs. 50 crore.
  - Medium enterprises: Investment up to Rs. 50 crore and turnover up to Rs. 250 crore.

#### 19. (c)

#### Both the statements are correct.

#### <u>Context</u>

• India launched UPI at the iconic Eiffel Tower in France.

#### <u>About</u>

• NPCI International Payments (NIPL), a subsidiary of NPCI, partnered with French e-commerce and proximity payments provider, Lyra to ensure the acceptance of the UPI payment mechanism in France, starting with the Eiffel Tower.

#### What is Unified Payments Interface (UPI)?

- UPI was designed and launched by the National Payments Corporation of India (NPCI) in 2016.
- It is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.
- It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience.

#### 20. (c)

#### In News:

• Fiscal Responsibility Budget Management (FRBM) Act, 2003: It sets targets for the government to achieve fiscal stability. It proposed that revenue deficit, fiscal deficit, tax revenue and the total outstanding liabilities be projected as a percentage of gross domestic product (GDP) in the medium-term fiscal policy statement.

#### Statement 1 is correct:

- It provides the provisions for required flexibility for RBI to:
  - o deal with inflation;
  - improve the management of public funds;
  - o strengthen fiscal prudence and reduce fiscal deficits;

#### Statement 2 is correct:

- It made mandatory to place annually:
  - Union Budget documents;
  - o Medium Term Fiscal Policy Statement;
  - Macroeconomic Framework Statement; and
  - o Fiscal Policy Strategy Statement in the Parliament.
- It requires the Union government to contain its fiscal deficit to just 3% of the nominal GDP.
- However, barring 2007-08, India has never met this target.

#### 21. (c)

**Statement 1 is correct -** National Payments Corporation of India (NPCI) is an **umbrella organisation** for operating retail payments and settlement systems in India, established by **Reserve Bank of India (RBI) and Indian Banks' Association (IBA) in 2008** under the provisions of the Payment and Settlement Systems Act, 2007.

**Statement 2 is correct** - It has been incorporated as a **"Not for Profit" Company** under the provisions of Section 25 of **Companies Act 1956** (now Section 8 of Companies Act 2013), with an intention to provide infrastructure to the entire Banking system in India for physical as well as electronic payment and settlement systems.

#### 22.

(d)

**In News:** Recently, the Union Finance Minister informed that nearly 25 crore people have been raised from multi-dimensional poverty in the last 10 years.

- Multidimensional Poverty Index (MPI): Globally, the MPI uses 10 indicators covering three main areas:
  - Health includes nutrition and child & adolescent mortality indicators.
  - Education includes years of schooling and school attendance indicators.
  - **Standard of living** includes six household-specific indicators: housing, household assets, type of cooking fuel, access to sanitation, drinking water, and electricity.

- The Indian MPI has two additional indicators:
  - Maternal Health (under the health dimension) and;
  - Bank Accounts (under the standard of living dimension).

#### Multidimensional Poverty in India Since 2005-06:

- It is published by NITI Aayog with technical inputs from the United Nations Development Programme (UNDP) and the Oxford Policy and Human Development Initiative (OPHI).
- It uses indicators covering three main areas: health, education, and standard of living.

#### 23. (c)

Promote financial inclusion by providing basic banking services to the unbanked and underbanked population

#### Payments Banks:

- Payments banks in India are a relatively new type of financial institution introduced in 2014.
- They were set up on the recommendations of the **Dr Nachiket Mor committee**, which was set up to study **'Comprehensive financial services for small businesses and low income households'**.

#### • Aim:

- To provide basic banking services to the **unbanked and underbanked population**, primarily focusing on digital payments and remittances.
- To widen the spread of payment and financial services to small business, low-income households, migrant labour workforce in a secured technology-driven environment.
- With payments banks, RBI seeks to increase the penetration level of financial services to the remote areas of the country.

#### 24. (c)

#### Payments Banks:

• Payments banks in India are a relatively new type of financial institution **introduced in 2014** on the recommendations of the **Dr Nachiket Mor committee.** 

#### Key Features:

- Limited Services: Unlike traditional banks, payments banks cannot offer loans, credit cards, or issue demand drafts.
- They primarily focus on:
  - Accepting **deposits up to ₹200,000**.
    - It can accept demand deposits in the form of savings and current accounts and the received deposits can be invested in secure government securities only in the form of Statutory Liquidity Ratio (SLR).
  - **Remittance services, mobile payments** and other banking services like **ATM/debit cards**, net banking and third party fund transfers.
  - o Providing debit cards and mobile banking services.
  - Prohibition: Payment Banks are prohibited from offering loans, credit cards, and issuing demand drafts.

#### 25. (b)

#### Union Budget includes the following key components:

- **Revenue Budget:** This section details the government's **estimated revenue from various sources such as taxes, non-tax revenues and capital receipts.** It shows how much money the government plans to earn from taxes, non-tax revenues, and other sources.
- Capital Budget: This section details the government's proposed spending on various capital projects such as infrastructure development, capital investment in public sector enterprises, and other long-term investments. It shows how much money the government plans to spend on long-term projects like building new roads, bridges, and airports.

- Fiscal Deficit: The budget also includes an estimate of the fiscal deficit, which is the difference between the government's total expenditure and its total revenue. The government aims to reduce the fiscal deficit to maintain financial stability.
- Tax Proposals: The budget also includes proposals for changes in tax laws and tax rates, which can have a significant impact on businesses and individuals.
- The Plan and Non-Plan classification were done away with from fiscal 2017-18. A broad understanding over the years has been that Plan expenditures are good and Non-Plan expenditures are bad resulting in skewed allocations in the Budget. This needed to be corrected to give greater focus to Revenue and Capital classification of Government expenditure.

#### 26. (c)

**In News:** Recently, the Union Finance Minister presented the interim budget for 2024-25 to show the fiscal position, and growth prospects of the Indian economy.

#### Statement 1 is correct:

- Interim Budget: It is a temporary budget that is presented by the government in an election year.
  - In an election year, the incumbent Government cannot present a full Budget as there may be a change in the executive after the polls.

#### Statement 2 is correct:

• The Interim Budget is also known as a 'Vote on Account'. There is no constitutional provision for it.

#### 27. (c)

In News: There are concerns over GDP, expenditure cuts, and Fiscal deficit etc in the recently presented Interim Union Budget for the 2024-25.

- All government expenditure can be divided into **two broad categories**:
  - Revenue expenditure to meet daily needs such as fuel bills, salaries, etc. and;
  - Capital expenditure to make productive assets such as roads, schools, bridges, ports, etc.

#### Statement 1 is correct:

- There is a clear advantage for the broader economy when the government ramps up **Capital** expenditure.
  - Every **Rs 100 spent on capex leads to a Rs 250 increase in GDP**. On the other hand, the revenue expenditure returns **less than Rs 100**.
- The Capex is set as Rs 10 lakh crore in the Budget 2023-24 more than double the Rs 4.39 lakh crore of 2020-21.
  - However, **Revised Estimates (RE)** show that this **Capex target was not met in the current year** it stands at Rs 9.5 lakh crore.

#### Statement 2 is correct:

- Expenditure on Health and Education: Historically, in India, budget allocations towards health and education have been lower than required.
- These allocations were in the **range between 2.5% to 1.5%** of the total government expenditure.
  - However, the Revised Estimates show that even those targets have not been met in the current financial year.
  - The Budget 2024-25 estimated to be 1.9% of the total expenditure for the Union Ministry of Health, continuing the trend of staying below the 2% mark from 2022-23.

#### 28. (d)

**News**: Farmers from Punjab, Haryana, and Uttar Pradesh commenced their **'Delhi Chalo'** march over several pending demands, including a legal guarantee of minimum support price (MSP) for crops. **What is MSP?** 

• It is the price at which the government offers to procure farmers' produce during the season.

- It was first introduced in the 1965-66 season for wheat. Later the coverage was expanded to coarse cereals.
- Government fixes-the Minimum Support Prices (MSPs) of various agricultural crops on the recommendations of the Commission for Agricultural Costs & Prices (CACP), after ascertaining the views of State Governments and Central Ministries/ Departments concerned.
- While recommending MSPs, CACP considers the cost of production and host of factors such as demandsupply situation, trends in domestic and international prices, inter-crop price parity, terms of trade between agricultural and non-agricultural sectors and the likely impact of MSP on consumers and overall economy along with rational utilization of scarce natural resources like land and water.

#### 29. (d)

### A six-digit numerical code used to classify traded goods globally.

- HSN codes:
- HSN codes, or Harmonized System of Nomenclature codes, are six-digit numerical codes used to classify traded goods globally.
- It was developed by the World Customs Organization (WCO) and is considered the global standard when it comes to naming goods.

#### 30. (a)

Statement 1 is correct and Statement 2 is not correct. HSN codes:

- HSN codes, or Harmonized System of Nomenclature codes, are six-digit numerical codes used to classify traded goods globally.
- It was developed by the **World Customs Organization (WCO)** and is considered the **global standard** when it comes to naming goods.

#### Structure of HSN codes:

The **six-digit code** structure provides increasingly detailed product classifications:

- First two digits: Chapter (broad product category, e.g., vegetable products)
- Next two digits: Heading (more specific product group, e.g., fresh vegetables)
- Last two digits: Subheading (specific product, e.g., tomatoes)
- Additional digits: Some countries add additional digits to further classify products at the national level.

#### 31. (d)

A WTO exemption which allows developing countries to impose additional duties in the event of an abnormal surge in imports.

#### Special Safeguard Mechanism (SSM)

- A Special Safeguard Mechanism (SSM) was introduced by WTO in the Doha Round negotiations as a safety valve.
- It allows developing countries to impose additional (temporary) safeguard duties in the event of an abnormal surge in imports or the entry of unusually cheap imports.

#### 32. (b)

In News : Recently, an Union Minister of Information and Broadcasting released revised policy guidelines for setting up Community Radio Stations (CRS) in India on the occasion of World Radio Day.

Statement 1 is not correct : Community Radio Stations (CRS): These are an important third tier in Radio Broadcasting, distinct from Public Service Radio broadcasting and Commercial Radio.

• They are low power Radio Stations, which are meant to be set-up and operated by local communities. Statement 2 is correct : They have a lot of potential to weave together a community into a stronghold and can help give impetus to rural development-related issues such as *Gram Panchayat Development Plan (GPDP), social audit, water harvesting and solar panel installation* etc. • In December 2002, the Government of India approved a policy for the grant of license, for setting up of Community Radio Stations, to well established educational institutions

#### 33. (c)

#### Both the statements are correct.

#### <u>Context</u>

• Reserve Bank of India (RBI) and Nepal Rastra Bank (NRB) signed Terms of Reference (ToR) to integrate fast payment systems of India and Nepal.

#### What is Unified Payments Interface (UPI)?

- UPI was designed and launched by the National Payments Corporation of India (NPCI) in 2016.
- It is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.
- It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience.

#### 34. (a)

News: Recently, the United Kingdom and Japan have fallen into recession.

#### What is a Recession?

• Generally, recession is defined as a period of fall in the GDP in two successive quarters.

Causes

- A steep increase in oil prices because of the international crisis like Russia-Ukraine conflict and tension in the Middle East.
- Financial market problems like rise in bankruptcies, defaults, or foreclosures.
- Pandemic outbreak.

#### Impact

- It increases unemployment especially among the low-skilled workers.
- Stricter financial lendings by Central Banks, drop in output and business closures.
- Adverse effects of recessions in large economies are rapidly felt by their regional trading partners, especially during globally synchronized recessions.

#### How to prevent it?

• The most popular, or most recommended, policy for any country to come out of recession is expansionary fiscal policy like tax incentives and increased government spending.

#### 35. (d)

All the statements are correct: Government announces minimum support prices (MSPs) for 22 mandated crops and fair and remunerative price (FRP) for sugarcane. The mandated crops are 14 crops of the kharif season, 6 rabi crops and two other commercial crops. In addition, the MSPs of toria and de-husked coconut are fixed on the basis of the MSPs of rapeseed/mustard and copra, respectively. The list of crops are as follows:

- O Cereals (7) paddy, wheat, barley, jowar, bajra, maize and ragi
- O Pulses (5) gram, arhar/tur, moong, urad and lentil
- O Oilseeds (8) groundnut, rapeseed/mustard, toria, soyabean, sunflower seed, sesamum, safflower seed and niger seed
- o Raw cotton
- o Raw jute
- o Copra
- De-husked coconut
- Sugarcane (Fair and remunerative price)
- o Virginia flue cured (VFC) tobacco

• The Commission for Agricultural Costs & Prices (CACP) makes recommendations for the MSPs. The Cabinet Committee on Economic Affairs (CCEA) takes these decisions.

#### 36. (d)

#### Dr M S Swaminathan

#### National Commission on Farmers (NCF)

- On November 18, 2004, the Ministry of Agriculture constituted a National Commission on Farmers (NCF) under Prof Swaminathan.
- The NCF submitted **five reports between 2004-2006** in favor of farmers, and made several recommendations, **including on MSP**.
- The 10-point terms of reference of the commission, included
  - o suggesting a "comprehensive medium-term strategy for food and nutrition security", and
  - ways of "enhancing productivity, profitability, and sustainability of the major farming systems" in the country.

#### 37. (a)

#### FCI

#### Food Corporation of India (FCI)

- Origin: Setup under the Food Corporations Act 1964.
- **Parent body:** Ministry of Consumer Affairs, Food and Public Distribution.
- **Primary Objective:** To ensure food security for the nation by effectively managing the procurement, storage, and distribution of essential commodities, thereby providing a reliable and sufficient food supply to meet the needs of the population.
- Mandate: To fulfill following objectives of the Food Policy:
  - Effective price support operations for safeguarding the interests of the farmers,
  - Distribution of foodgrains throughout the country for public distribution system and
  - Maintaining satisfactory level of operational and buffer stocks of foodgrains to ensure national food security.
- Role: Since its inception, FCI has played a significant role in India's success in transforming the crisis management-oriented food security into a stable security system.

#### 

### **INDIAN POLITY & CONSTITUTION**

#### 1. 'Article 371A' of the Constitution of India, is related to which of the following?

- (a) Directive for development of the Hindi language.
- (b) Special provisions for Sikkim
- (c) Special provisions for Nagaland
- (d) None of the above

#### 2. With reference to the Lokpal, consider the following statements:

- 1. The Lokpal is empowered to initiate inquiries and investigations against any public servant on its own, without any complaint being filed.
- 2. The members are appointed by the president on the recommendation of a selection committee, chaired by the Prime Minister.
- 3. The Lokpal will also have jurisdiction over Ministers and MPs except not in the matter of anything said in Parliament or a vote given there.

Choose the correct option:

- (a) Only Statement 1 is correct.
- (b) Only Statement 2 is correct.
- (c) Only Statements 2 and 3 are correct.
- (d) All statements are correct.

#### 3. Which of the following states are covered under the Sixth Schedule of the Constitution?

- 1. Assam
- 2. Meghalaya
- 3. Tripura
- 4. Nagaland

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 and 3 only

#### 4. With reference to the Corporate Social Responsibility (CSR), consider the following statements:

- 1. The Companies Act, 2013 allows companies to spend 1% of their average net profit in the previous three years on CSR activities.
- 2. CSR provisions are applicable to companies with an annual turnover of 1,000 crore and more, or a net worth of Rs. 500 crore and more.
- 3. Non compliance of CSR provisions has been notified as a criminal offense.

Which of the above given statements is/are correct?

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

# **5.** With reference to Central Adoption Resource Authority (CARA), which of the following statements is/are correct?

- 1. It is a statutory body of the Ministry of Women and Child Development.
- 2. It deals with inter-country adoptions in accordance with the provisions of the Hague Conventions on Inter-Country Adoptions, 1993.

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. Which one of the following best describes the term "Digital Public Infrastructure (DPI)"?

- (a) A network of public Wi-Fi hotspots across cities and rural areas.
- (b) A system for managing government-owned physical infrastructure such as roads, bridges, and utilities.
- (c) Digital platforms and systems that support the delivery of essential public services.
- (d) A framework for regulating social media platforms and online content.
- 7. Regarding the Constitution of India, prohibitions or limitations or provisions contained in ordinary laws cannot act as prohibitions or limitations on the constitutional powers under Article 142. It could mean which one of the following?
  - (a) The decisions taken by the Election Commission of India while discharging its duties cannot be challenged in any court of law.
  - (b) The Supreme Court of India is not constrained in the exercise of its powers by laws made by the Parliament.
  - (c) In the event of a grave financial crisis in the country, the President of India can declare a Financial Emergency without the counsel from the Cabinet.
  - (d) State Legislatures cannot make laws on certain matters without the concurrence of the Union Legislature.

#### 8. The 'Section 41A of the CrPC (1973)' sometimes appeared in the news, is related to:

- (a) Wellbeing of prisoners
- (b) Judicial inquiry after conviction
- (c) Basic amenities in the prison
- (d) Process of arrest in India
- **9.** With reference to the Electoral Bond Scheme, consider the following statements:
  - 1. It was introduced in 2018 for political donations.
  - 2. The electoral bonds are issued in multiples of Rs 1,000, Rs 10,000, Rs 100,000 and Rs 1 crore.
  - 3. The electoral bonds will bear the name of the donor.

How many of the statements given above are correct?

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

#### **10.** With reference to the Lok Sabha, consider the following statements:

- 1. The maximum strength of the House envisaged by the Constitution is 552.
- 2. The Lok Sabha is presided over by the Speaker, who is elected by the members of the House.

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.** Consider the following statements with reference to the Law Commission of India.

- 1. It is a constitutional body under the Ministry of Law & Justice.
- 2. 22nd Law Commission consists of full-time Chairperson and four full-time Members (Excluding Member-Secretary).

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.** The recent report titled, 'Death Penalty in India: Annual Statistics Report 2023' was released by which of the following?
  - (a) Supreme Court of India
  - (b) Amnesty International
  - (c) Ministry of Law and Justice
  - (d) Project 39A

#### **13.** The 'Annual NeSDA Way Forward Report for 2023' is released by:

- (a) NITI Aayog
- (b) Department of Administrative Reforms and Public Grievances
- (c) The Reserve Bank of India
- (d) Department of Investment and Public Asset Management

#### 14. Provision for free legal aid is explicitly provided under which of the following Articles of the Constitution?

- (a) Article 14
- (b) Article 21
- (c) Article 22
- (d) Article 39A

#### **15.** Consider the following statements:

- 1. Preamble is an integral part of the Constitution and hence can not be amended under Article 368 of the Constitution.
- 2. As of now, Preamble has been amended twice.
- 3. The Preamble serves as a guiding light for interpreting the Constitution and enacting laws.

How many of the statements given above are correct?

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

#### **16.** Which of the following statements is correct regarding Polygamy?

- (a) It is the practice of marrying a person with a higher socio-economic status.
- (b) It is the custom of being married to only one person at a particular time.
- (c) It is the practice of having more than one spouse at the same time.
- (d) It is a social phenomenon of marrying outside one's own community.
- **17.** Which of the following statements is NOT correct regarding Money Bills in the Indian Constitution?
  - (a) Any bill concerning imposition of fines or other pecuniary penalties automatically qualifies as a Money Bill.
  - (b) The Speaker of the Lok Sabha has final authority in classifying bills as Money Bills.

- (c) Bills classified as Money Bills can only be introduced in the Lok Sabha with Rajya Sabha having only advisory function.
- (d) The bill regulating borrowing of money or the giving of any guarantee by the Government of India is a Money Bill.

#### **18.** With reference to the Gender Budgeting, which of the following statements is/are correct?

- 1. Gender-responsive budgeting in India was adopted in 2005.
- 2. The share of the Gender Budget in 2024-25 has been reduced from the previous year budget.
- 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.** With reference to the recently introduced *the Water (Prevention and Control of Pollution) Amendment Bill (2024),* consider the following statements:

- 1. It aims to amend the Environment (Protection) Rules, 1986.
- 2. The Bill would not be applicable to Indian States like Himachal Pradesh and Rajasthan.
- 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.** Consider the following statements with reference to the Public Examinations (Prevention of Unfair Means) Bill, 2024 .
  - 1. It only covers recruitment examinations conducted by the Union Public Service Commission (UPSC) and National Testing Agency (NTA).
  - 2. Persons committing an organized crime will be punished with imprisonment of 20 years with a fine of 5 crore rupees.

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

#### **21.** With reference to the Panel of Vice-Chairpersons, consider the following statements:

- 1. The Chairman nominates the members of the panel from among the members of the House.
- 2. All the members are selected from the Majority party of the House.
- 3. The Vice-Chairman, when presiding over a sitting of the House, has the same powers as the Chairman.

How many of the statements given above are correct?

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

#### **22.** With reference to the *Central Bureau of Investigation*, consider the following statements:

- 1. It is a statutory body and derives its power to investigate from the Delhi Special Police Establishment Act, 1946.
- 2. It functions under the Union Ministry of Home Affairs.

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.** Consider the following:

- 1. Prime Minister of India
- 2. Leader of the Opposition in the Lok Sabha
- 3. Leader of the Opposition in the Rajya Sabha
- 4. Chief Justice of India
- 5. Union Home Minister

Which of the above are members of the committee that appoints the *director of Central Bureau of Investigation (CBI)?* 

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

#### **24.** With reference to Joint Parliamentary Committee (JPC), consider the following statements:

- 1. It is set up by the Parliament for a special purpose, like for the detailed scrutiny of a Bill.
- 2. It comprises members from the ruling party only.
- 3. It is dissolved after its task has been completed.

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

#### 25. With reference to the Uniform Civil Code (UCC), consider the following statements

- 1. It is mentioned in Part IV of the Constitution under Article 44.
- 2. Dr BR Ambedkar supported the UCC as a means to promote gender equality and secularism.

#### 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.** 'Anuradha Bhasin v. Union of India Case' sometimes seen in the news, is related to which of the following?

- (a) Medical Termination of Pregnancy (Amendment) Act of 2021
- (b) Right to Education
- (c) Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 (PoSH)
- (d) Right to usage of the Internet

#### **27.** With reference to the Governor of State in India, consider the following statements:

- 1. He/She has the power to grant pardons against any law under the executive power of the state.
- 2. He/She cannot dissolve the State Legislative Assembly.
- 3. The Governor appoints the Advocate General of the state.

How many of the statements given above are correct?

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

#### **28.** With reference to the Surrogacy (Regulation) Act, 2021, consider the following statements:

- 1. The intending couple must not have any living child without any exception.
- 2. The couple can get an 'essential' certificate if suffering from proven infertility of both partners.
- 3. A surrogate mother has to be a married woman with a child of her own.

#### How many of the statements given above are correct?

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

#### **29.** The 'T.N. Godavarman Case' sometimes appeared in the news, is related to:

- (a) Forest Conservation
- (b) Temple Management
- (c) Labour Matters
- (d) Elections

#### **30.** Consider the following:

- 1. Public Hospitals
- 2. Family Welfare
- 3. Population Control
- 4. Sanitation
- 5. Manufacture of Drugs

#### How many of the above come under the purview of State List (List II of Schedule VII)?

- (a) Only two
- (b) Only three
- (c) Only four
- (d) Only five

# **31.** With reference to the *Surrogacy (Regulation) Amendment Rules (2024),* consider the following statements:

1. It allows a single woman to use surrogacy for having children.

#### 2. It is applicable for widowed or divorced women.

#### 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

#### **32.** With reference to Prisons in India, which of the following statements is/are correct?

- 1. Prison is a concurrent subject in the Seventh schedule of the Constitution.
- 2. In India, prisons are managed by State Governments with their own rules and regulations for the day-to-day administration of prisons.

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

#### 33. With reference to the Uniform Civil Code (UCC), which of the following statements is/are correct?

- 1. It is part of the Directive Principles of State Policy of Indian Constitution.
- 2. In India only Goa has implemented the UCC.

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

#### **34.** With reference to the Association for Democratic Reforms (ADR), consider the following statements:

- 1. It was established by statutory provision under the Parliament of India.
- 2. It focuses on corruption and criminalization in the political process.

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. (c)

Article 371 A was inserted into the Constitution in 1962 following the 16-point agreement between the Government of India and the Naga People's Convention.

#### • Article 371A: Special provisions for Nagaland

- The state can have its **own administrative and legal mechanisms** based on the Naga customary laws, and the right to carry on religious and local social practices.
- Special powers to the governor to overrule the decision of the chief minister on a law and order situation.
- It empowers the Nagaland Legislative Assembly to enact laws on matters like ownership and transfer of land and its resources, which otherwise would have required the assent of the President of India.

#### 2. (c)

#### Only Statements 2 and 3 are correct.

#### Structure of lokpal:

- The institution of Lokpal is a statutory body established by the Lokpal Act 2013.
- Members: Lokpal is a multi member body, made up of one chairperson and maximum of 8 members.
  - **Chairperson**: Should be either the former Chief Justice of India, the former Judge of Supreme Court Or an eminent person with impeccable integrity and outstanding ability.

#### • Eight members:

- Half will be judicial members.
- Minimum fifty per cent of the Members will be from SC / ST / OBC / Minorities and women.
- The judicial member of the Lokpal should be either a former Judge of the Supreme Court or a former Chief Justice of a High Court.
- The non-judicial member should be an **eminent person** with impeccable integrity and outstanding ability.

- **Selection committee:** The members are appointed by the president on the recommendation of a selection committee, composed of:
  - The Prime Minister who is the Chairperson;
  - O Speaker of Lok Sabha,
  - Leader of Opposition in Lok Sabha ,
  - o Chief Justice of India or a Judge nominated by him / her, and
  - One eminent jurist.

#### • Jurisdiction of lokpal:

- The jurisdiction of the Lokpal will **include the Prime Minister** except on: Allegations of corruption relating to international relations, security, the public order, atomic energy and space.
- **Ministers and MPs:** The Lokpal will also have jurisdiction over Ministers and MPs except not in the matter of anything said in Parliament or a vote given there.
- **Public Servants:** Lokpal's jurisdiction will cover all categories of public servants within and outside India.
- Statement 1 is incorrect. The Lokpal can only initiate investigations based on complaints received, not suo moto (on its own).

#### 3. (d)

The Sixth Schedule comes under Article 244 which provides for the formation of Autonomous Administrative Divisions — Autonomous District Councils (ADCs) — that have some legislative, judicial, and administrative autonomy within a state.

• It applies to the Northeastern states of Assam, Meghalaya, Mizoram (three Councils each), and Tripura (one Council).

#### Significances of the Sixth Schedule in Indian Constitution

- Autonomy to Tribal Populations: It protects the autonomy of tribal populations by creating autonomous development councils.
  - These councils can frame laws on land, public health, and agriculture.
- Administration of Tribal Areas: It provides for the administration of tribal areas in Assam, Meghalaya, Tripura, and Mizoram.
  - As of now, ten autonomous councils exist in these states.
- **Protection of Tribal Rights:** It is intended to protect tribal populations from exploitation and preserve their unique cultural and social practices.
  - O It ensures that tribal communities have a say in their governance and development.
- Safeguarding Resources: The autonomous councils under the Sixth Schedule have the power to regulate the issuance of licences for mining, control money lending to tribes, and regulate business and commerce in the areas.

#### 4. (c)

**Statement 1 is not correct:** The term "Corporate Social Responsibility" in general can be referred to as a corporate initiative to assess and take responsibility for the company's effects on the environment and impact on social welfare. In India, the concept of CSR is governed by clause 135 of the Companies Act, 2013. Under the Act, the Companies are required to spend, in every financial year, **at least 2%** of their average net profits generated during the 3 immediately preceding financial years.

**Statement 2 is correct:** All companies with a net worth of Rs 500 crore or more, a turnover of Rs 1,000 crore or more, or net profit of Rs 5 crore or more, are required to spend 2 percent of their average profits of the previous three years on CSR activities every year.

Statement 3 is not correct: Non compliance of CSR provisions has been notified as a civil offense.

Both the Statements are correct.

### Central Adoption Resource Authority (CARA)

- It has been set up as a **statutory body** of the **Ministry of Women and Child Development**.
- It functions as a nodal body for the adoption of Indian children and is mandated to monitor and regulate **in-country and inter-country** adoption.
- It deals with adoption of orphan, abandoned and surrendered children through its associated adoption agencies.
- It is designated as the Central Authority to deal with inter-country adoptions in accordance with the provisions of the **Hague Conventions on Inter-Country Adoptions**, **1993**, ratified by the Government of India in 2003.

#### 6. (c)

#### Digital platforms and systems that support the delivery of essential public services. <u>Digital Public Infrastructures (DPIs)</u>

- Digital Public Infrastructures (DPIs) are **digital platforms and systems that support the delivery of essential public services** to citizens and businesses.
- They act as **foundational layers**, **enabling various digital solutions** to be built upon them and also act as **digital highways facilitating seamless interactions** between different stakeholders.

#### Present Status in India:

- India's **DPI ecosystem, known as India Stack,** has made significant strides in recent years.
- Key DPIs include:
  - Aadhaar: Unique digital identity for every resident.
  - **UPI:** Real-time payment system enabling instant money transfers.
  - **eSign:** Digital signature solution for online authentication.
  - **DigiLocker:** Platform for storing and sharing digital documents.
  - API (Application Programming Interface) Gateway: Standardized interface for accessing government data and services.

# 7. (b)

The Supreme Court of India is not constrained in the exercise of its powers by laws made by the Parliament.

<u>Article 142 of the Constitution</u>: Enforcement of decrees and orders of Supreme Court and orders as to discovery, etc

Article 142 (1) says, the Supreme Court in the exercise of its jurisdiction may pass such decree or make such order as is necessary for doing complete justice in any cause or matter pending before it, and any decree so passed or order so made shall be enforceable throughout the territory of India in such manner as may be prescribed by or under any law made by Parliament and, until provision in that behalf is so made, in such manner as the President may by order prescribe.

8. (d)

In News : Section 41A of the CrPC (1973): It is a significant provision that regulates the process of arrest in India.

- It was introduced to avoid routine arrests.
- It provides for the requirement of a notice to be sent by the investigating agencies before making an arrest in certain conditions prescribed by the Code.
- It empowers a police officer conducting a probe to issue notices to people connected to the case, directing them to appear before him.
- If the person concerned complies with the notice, they shall not be arrested unless there are specific reasons, which have to be recorded in writing by the police officer.

9. (b)

Statement 1 and 2 are correct: Government of India notified the Electoral Bond scheme in 2018.

- An electoral bond is like a **promissory note** that can be bought by any Indian citizen or company incorporated in India from select branches of State Bank of India.
- The citizen or corporate can then **donate the same to any eligible political party of his/her choice.**
- The bonds are issued in multiples of Rs 1,000, Rs 10,000, Rs 100,000 and Rs 1 crore .

Statement 3 is not correct: Anonymous Donation: The electoral bonds will not bear the name of the donor. Thus, the political party might not be aware of the donor's identity.

#### 10. (c)

Both the Statements are correct: As per the provision of Article 79 of Indian Constitution, the House of the People, the Lok Sabha is the lower House of the parliament.

- Lok Sabha is composed of **representatives of the people** chosen by direct election on the basis of the **adult suffrage.**
- The maximum strength of the House envisaged by the Constitution is 552.
- At present, the Lok Sabha has **543 seats** filled by elected representatives.
- The term of the Lok Sabha, unless dissolved, is **five years** from the date appointed for its first meeting.

#### 11. (d)

**Statements 1 and 2 are not correct:**The Law Commission of India is a **non-statutory body**, constituted by the Government of India from time to time. The Commission was originally constituted in 1955 and is reconstituted from time to time

- The Law Commission has taken up various subjects on references made by the Department of Legal Affairs, Supreme Court and High Courts .
- The Government has constituted the 22nd Law Commission of India for a period of three years with effect from February, 2020. The term of 22nd Law Commission has since been extended upto 31stAugust, 2024.

The composition of 22ndLaw Commission of India as under:

- a full-time Chairperson;
- four full-time Members (including Member-Secretary);
- Secretary, Department of Legal Affairs as ex officio Member;
- Secretary, Legislative Department as ex officio Member; and not more than five part-time Members.

# 12. (d)

# Project 39A

• Recently, a report titled, 'Death Penalty in India: Annual Statistics Report 2023' was released by Project 39A, a criminal justice programme linked with the National Law University, Delhi.

# Key Takeaways:

- Appellate Courts Supreme Court and all the High Courts together confirmed only one death sentence in 2023 while the rest were either commuted or saw the prisoners acquitted altogether.
- There was a 45.71% increase in the number of prisoners under death sentence by the end of December 2023, from that in 2016.
- Similar to the last five years, the majority of death penalty cases in trial courts involved crimes related to sexual offences.

# **13.** (b)

Recently, the Department of Administrative Reforms and Public Grievances (DARPG) has released the **'Annual NeSDA Way Forward Report'** for 2023.

#### About the Report:

- It was released by the **Department of Administrative Reforms and Public Grievances (DARPG)**, Ministry of Personnel, Public Grievances and Pensions.
- It highlights the significant progress made by the States and UTs during the year under mandatory e-Services and total e-Services under the **NeSDA Framework**.

#### 14. (d)

#### Article 39A

#### Legal Aid in India

#### **Constitutional Provisions:**

- **Preamble**: Securing to all the citizens, Justice social, economic and political.
- Article 39 A: Provides for free legal aid to the poor and weaker sections of the society, to promote justice on the basis of equal opportunity.
- Articles 14 and 22(1): Make it obligatory for the State to ensure equality before law.

#### Legal Provisions:

- The Legal Services Authorities Act, 1987: Enacted by the Parliament to establish a nationwide uniform network for providing free and competent legal services to the weaker sections of the society.
- The National Legal Services Authority (NALSA): It was constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society.
  - The Chief Justice of India is the Patron-in-Chief and the Senior most Hon'ble Judge, Supreme Court of India is the Executive Chairman of the Authority.
  - **A three-tier structure:** National Legal Services Authority (NALSA), State Legal Services Authorities (SLSAs), and District Legal Services Authorities (DLSAs).

#### 15. (a)

#### Statement 1 and 2 are not correct and Statement 3 is correct.

#### Preamble to the Constitution of India:

- The Preamble of the Indian Constitution is primarily based on the **'Objective Resolution'** written by Jawaharlal Nehru in 1946.
- The Preamble to the Constitution of India is a **brief introductory statement outlining the guiding principles and aspirations** of the nation.

#### Major Issues:

# Is the Preamble a Part of the Constitution of India?

- In **Berubari Union Case, 1960,** the Supreme Court said, the **Preamble is not a part of the Constitution.** But in the **Kesavananda Bharati Case, 1973**, the Supreme Court reversed its stand on the Preamble said,
  - The Preamble of the Indian Constitution will now be considered a part of the Constitution.
  - It will **play an important role in the interpretation of statutes** and other various provisions of the Constitution.

#### Can the Preamble be Amended?

- Kesavananda Bharati Case, 1973: In this case, the Supreme Court held that the Preamble is a part of the Constitution and hence can be amended, subject to the condition that no amendment is done to the 'Basic Structure' of the Constitution.
- The **Preamble was amended only once** in December 1976 by the Indira Gandhi government to introduce the words 'socialist' and 'secular'. The phrase "unity of the nation" was replaced with "unity and integrity of the nation". The changes were made in the Preamble through the **42nd Constitutional Amendment** during the Emergency.

In News : THE Uttarakhand Legislative Assembly passed the Uniform Civil Code (UCC) Bill, 2024

- The Bill explicitly bans polygamy in the state.
- Polygamy is the practice of having more than one spouse( wife or husband at the same time
- It has two forms, namely, **polygyny** (marriage of a man to several women at a time) and **polyandry** (marriage of a woman to several men at a time).

# 17. (a)

Any bill concerning imposition of fines or other pecuniary penalties does not automatically qualify as a Money Bill.

### About Money Bill:

### Article 110 in Constitution of India: Definition of "Money Bills"

- (1) For the purposes of this Chapter, a Bill shall be deemed to be a Money Bill if it contains only provisions dealing with all or any of the following matters, namely:--
- (a) the imposition, abolition, remission, alteration or regulation of any tax;
- (b) the regulation of the **borrowing of money or the giving of any guarantee by the Government of** India;
- (c) **the custody of the Consolidated Fund or the Contingency Fund of India,** the payment of moneys into or the withdrawal of moneys from any such Fund;
- (d) the **appropriation of money** out of the Consolidated Fund of India;
- (e) the **declaring of any expenditure to be expenditure charged on the Consolidated Fund of India** or the increasing of the amount of any such expenditure;
- (f) the **receipt of money on account of the Consolidated Fund of India or the public account of India** or the custody or issue of such money or the audit of the accounts of the Union or of a State; or
- (2) A Bill shall not be deemed to be a Money Bill by reason only that it provides for the imposition of fines or other pecuniary penalties, or for the demand or payment of fees for licences or fees for services rendered, or by reason that it provides for the imposition, abolition, remission, alteration or regulation of any tax by any local authority or body for local purposes.
- (3) If any question arises whether a Bill is a Money Bill or not, the decision of the Speaker of the House of the People thereon shall be final.
- (4) There shall be endorsed on every Money Bill when it is transmitted to the Council of States under article 109, and when it is presented to the President for assent under article 111, the certificate of the Speaker of the House of the People signed by him that it is a Money Bill.

# 18. (a)

# Statement 1 is correct and Statement 2 is not correct.

#### What is Gender Budgeting?

- **Gender Budgeting** is a strategy with gender responsive formulation of legislation, policies, plans, programmes, and schemes; resource allocation; implementation; tracking of expenditure, audit, and impact assessment.
- It aims to ensure that public resources are collected and spent efficiently based on differing gender needs and priorities.
- Gender Budgets are not separate budgets for women; neither do they imply that funds be divided into half for men and women or that budgets should be divided into half.
  - They are attempts to disaggregate the government's budget according to its differential impact on different Genders, and reprioritize allocations to bridge gender gaps.
- Gender-responsive budgeting in India was adopted in **2005.** It comprises **two parts**:
  - Part A: It encompasses schemes that allot **100 percent** of the funds for women (such as maternity benefits).

- **Part B:** It consists of schemes that allocate **at least 30 percent** of funds for women (such as the Mid-Day Meal scheme).
- The quantum of Gender Budget reported in **2024-25 is 38.6%** more than budget estimates of 2023-24.
- The share of Gender Budget in the total Union Budget increased to **6.5% in 2024-25** from 5% in 2023-24.

#### 19. (d)

#### Statement 1 is not correct:

• The Water (Prevention and Control of Pollution) Amendment Bill, 2024 was introduced in the Rajya Sabha aiming to **amend the Water (Prevention and Control of Pollution) Act, 1974.** 

#### Statement 2 is not correct:

- Applicability: The Bill would be applicable to Himachal Pradesh and Rajasthan, and any other state that passes a resolution under the Water (Prevention and Control of Pollution) Act, 1974.
- Uniformity in appointment of Chairman of SPCBs: The 1974 Act states the Chairman of the State Pollution Control Board was nominated by the State government, to which the *Bill adds 'in such a manner as may be prescribed by the Central Government'*.
- **Decriminalisation of Minor Offences:** The bill aims to decriminalise the existing provisions of the Water (Prevention and Control of Pollution) Act, 1974, which means that instead of imprisonment, violators would be **required to pay a fine**.

#### 20. (d)

In News: The Centre introduced a Bill in the Lok Sabha titled "The Public Examinations (Prevention of Unfair Means) Bill, 2024" to curb leaks, malpractices as well as organized malpractices in recruitment examinations

**Statements 1 and 2 are not correct :** The bill outlines **15 unfair practices**, such as leaking question papers, colluding to leak them, unauthorised possession of materials such as question paper or an Optical Mark Recognition response sheet, providing answers by unauthorised individuals, assisting candidates without authorisation, manipulating exam conditions, conducting fake exams, issuing fraudulent admit cards, and more.

- It will cover entrance examinations held by the Union Public Service Commission, the Staff Selection Commission, the Railways, banking recruitment examinations and all computer-based examinations conducted by the National Testing Agency.
  - It will also cover entrance tests such as NEET, JEE, and CUET.
- "All offences under this Act, shall be cognizable, non-bailable and non-compoundable.
  - It proposes a punishment of a minimum of three to five years of imprisonment to curb cheating and for those involved in organised crimes of cheating will face five to 10 years of imprisonment and a minimum fine of Rs 1 crore.
  - In case of an institution found guilty, attachment and forfeiture of property and proportionate cost of examination to be recovered from it.

#### 21. (b)

Statement 1 is correct: The Chairman, from time to time, nominates from amongst the members of the House, a panel of Vice-Chairmen.

- In the absence of the Chairman and the Deputy Chairman, one of them presides over the House. Statement 2 is not correct: Nomination: The Chairman gives consideration to the strength of various parties in the House and as per convention, selects some members from the opposition parties to the panel.
- The Chairman may also **consult the leaders** of political parties/groups for the purpose before making a final choice.

**Statement 3 is correct: Functions and Powers:** The Vice-Chairman, when presiding over a sitting of the House, has the same powers as the Chairman when so presiding.

- He is, however, free to participate fully in all discussions in the House.
- A Vice-Chairman while presiding over a sitting of the House **cannot vote in the first instance**, and has to exercise a **casting vote** in the case of an equality of votes.

#### 22. (d)

In News: Recently, the Department of Personnel and Training (DoPT) in its Annual Report (2022-23) highlighted the manpower shortage and pending cases before the Central Bureau of Investigation (CBI). Statement 1 is not correct:

- History of the Central Bureau of Investigation (CBI): It came into being during World War II, when the colonial government felt the need to probe cases of corruption in the War and Supply Department.
- A law came in 1941, and became the DSPE Act in 1946.
  The CBL is not a statutory body but derives its power to investigate from the comparison of the
- The CBI is **not a statutory body** but derives its power to investigate from the **Delhi Special Police Establishment Act, 1946**.

#### Statement 2 is not correct:

- **CBI** is the premier **investigating police agency** in India. It plays a major role in preserving values in public life and ensuring the health of the national economy.
- It functions under the **Department of Personnel, Ministry of Personnel, Pension & Public Grievances**, Government of India.
  - It was **established by a resolution** of the Ministry of Home Affairs, Government of India, dated April 1, 1963.
- It is exempted from the purview of the Right to Information (RTI) Act.
- Motto: Industry, Impartiality, and Integrity

#### 23. (a)

In News: Recently, the Department of Personnel and Training (DoPT) in its Annual Report (2022-23) highlighted the manpower shortage and pending cases before the Central Bureau of Investigation (CBI). The Lokpal Act 2013 prescribed that the CBI director shall be appointed on the recommendation of a committee comprising the *Prime Minister, Leader of the Opposition in the Lok Sabha and Chief Justice of India or a judge of the Supreme Court nominated by him.* 

#### 24. (c)

Statements 1 and 3 are correct: Joint Parliamentary Committee (JPC) is set up by the Parliament for a special purpose, like for the detailed scrutiny of a subject or Bill.

- It is dissolved after its term ends or its task has been completed. Statement 2 is not correct: It has members from both the Houses and from both the ruling parties and the opposition. A JPC is set up after one House of Parliament has passed a motion and the other has agreed to it.
- Members of the JPC are decided by the Parliament. The number of members can vary there is no fixed number.

#### 25. (c)

**In News:** The Uttarakhand Cabinet has approved the final draft of the Uniform Civil Code (UCC) **Statements 1 and 2 are correct:** UCC aims to enforce a uniform legal framework to all citizens, irrespective of their religion.

It is part of Part IV of the Constitution which includes the Directive Principles of State Policy (DPSP).

- Article 44 in DPSP states that "The State shall endeavour to secure for the citizens a uniform civil code throughout the territory of India
- The UCC can be traced back to the debates during the framing of the Indian onstitution.

- Some members of the Constituent Assembly, including **Dr BR Ambedkar believed that a UCC was necessary** to promote gender equality, secularism, and national integration.
- However, many other members including **Nazirrudin Ahmad were against it, claiming** that the **religious laws of different communities** should not be tampered with, without their consent.
- 26. (d)

#### Anuradha Bhasisn v. Union of India Case:

- In 2020 the Supreme Court by ruling on Jammu and Kashmir Internet shutdown held that indefinite internet shutdowns by the State is not permissible under Indian Constitution.
- The apex Court further stated that **imposition of Section144** can not be used as a mechanism to avoid genuine protest which is permitted under the Constitution.
  - Section 144 has very specific parameters, only if those parameters are satisfied then only a Magistrate can pass the orders.

#### • Key Highlights of the orders:

- Usage of the Internet is the Fundamental Right under Article 19 of the Indian Constitution.
- Internet shutdowns can be of **temporary period** but not for indefinite period.
- Government to publish all orders imposing restrictions under Section 144.
- The Court had also said that any order with regard to Internet Shutdowns will come under Judicial Scrutiny.

#### 27. (b)

Statement 1 is correct: Under Article 153 there shall be a Governor for each State.

• He has the **power to grant pardons**, **r**eprieves, respites, or remissions of punishment or to suspend, remit, or commute the sentence of any person convicted of any offense against any law relating to a matter to which the executive power of the state extends.

**Statement 2 is not correct:** He addresses the state legislature at the beginning of each legislative year and on other occasions.

- The Governor may also dissolve the state legislative assembly in certain situations.
- Statement 3 is correct: The Governor appoints the Advocate General of the state.

#### 28. (a)

**Statement 1 and 2 are not correct: Eligibility and Conditions for Couples:** A couple should procure certificates of eligibility and essentiality in order to have a child via surrogacy.

- The couple is deemed 'eligible' if they have been married for five years, the wife is aged between 23-50 years and the husband is between 26-55 years.
- The couple must not have any living child (biological, adopted or surrogate.)
  - A child with mental or physical disabilities, or one suffering from a life-threatening disorder has been exempted from the above criterion.
- The couple **can get an 'essential' certificate** if suffering from **proven infertility of either partner** certified by a District Medical Board.
- They must also have insurance coverage for 16 months for the surrogate mother, covering any postpartum complications .

Statement 3 is correct: Eligibility to be a surrogate: A surrogate mother has to be a close relative of the couple, a married woman with a child of her own, aged between 25-35 years, who has been a surrogate only once in her life.

• She must also possess a certificate of medical and psychological fitness for surrogacy.

# 29. (a)

**T.N. Godavarman Thirumalpad vs Union of India (1996):** The Supreme Court of India, in *TN Godavarman Thirumalpad vs Union of India Case*, observed that the *'forest'* has to be understood in terms of its *dictionary meaning*.

- It defined 'forest' to include **any piece of land** that resembles the dictionary meaning of forest **for the purpose of the Forest (Conservation) Act, 1980.**
- It ruled that the **Forest (Conservation) Act** applies to all land parcels that were either recorded as 'forest', or which **resembled the dictionary meaning** of forest.
- This definition was **further clarified in an interim order** passed by the Supreme Court.
- It covers all statutorily recognized forests, whether designated as reserved, protected, or otherwise.
- It is intended to ensure that the protection and conservation of forests are prioritised in India.

# 30. (a)

In News :

- Constitutional Provisions related to Health:
  - Public Health and Sanitation, Hospitals, and Dispensaries fall under the State List (List II, Schedule VII).
  - Family Welfare and Population Control, Medical Education, Prevention of Food Adulteration, and Quality Control in the Manufacture of Drugs are included in the Concurrent List (List III, Schedule VII).
  - The **Central Council of Health and Family Welfare** (set up under Article 263 of the Constitution) enables consideration and recommendation of broad lines of policy in regard to matters concerning health and family welfare.

# 31. (d)

**In News :** Recently, the Union Ministry of Health and Family Welfare amended the surrogacy Rules to allow couples to use donor eggs or donor sperm for surrogacy.

# Statement 1 is not correct:

- **Single Women and Surrogacy:** The amendment stipulates that if a divorced or widowed woman opts for surrogacy, the egg has to come from the mother.
  - However, it does **not allow a single, never-married woman** to use surrogacy for having children.

# Statement 2 is not correct:

- Medical Conditions and Surrogacy: The amendment keeps surrogacy open to older women as well as those who cannot produce eggs because of certain medical conditions.
  - However, the rule change is **not applicable for widowed or divorced women**.
  - If a divorced or widowed woman opts for surrogacy, the egg has to come from the mother.

# 32. (b)

# Statement 1 is not correct and Statement 2 is correct.

# Prisons in India:

- India's prison system forms a **backbone of its criminal justice system**.
- The management and administration of Prisons falls exclusively in the domain of the State Governments.
  - **'Prisons' is a State subject under the State List** of the Seventh Schedule to the Constitution of India.
  - They are governed by the **Prisons Act, 1894 and the Prison Manuals** of the respective State Governments.

33. (a)

# Statement 1 is correct and statement 2 is not correct. What is Uniform Civil Code (UCC)?

- 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.
- Currently, separate personal laws apply for the members of different major religions.

# Constitutional Provisions

- 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.

UCC in India

- UCC in Goa: It follows the Portuguese Civil Code of 1867, which means that people of all religions in Goa are subject to the same laws on marriage, divorce, and succession.
- The Uttarakhand Assembly passed the Uttarakhand Uniform Civil Code (UCC) Bill 2024, becoming the first state in independent India to implement the Uniform Civil Code.

#### 34. (b)

# Statement 1 is not correct:

• Association for Democratic Reforms (ADR): It is an apolitical and non-partisan non-profit organisation in India that was established in 1999 by a group of professors from the Indian Institute of Management (IIM) Ahmedabad.

# Statement 2 is correct:

• It focuses on **corruption and criminalization** in the political process, empowerment of the electorate through greater dissemination of information relating to the candidates and the parties etc.

#### 

# GEOGRAPHY

- 1. The Mekong Delta is located in which of the following countries?
  - (a) Vietnam
  - (b) China
  - (c) Cambodia
  - (d) Indonesia
- 2. Peru Declared Health Emergency Amid Dengue Surge. In light of this statement, which of the following countries shares a border with Peru ?
  - 1. Ecuador
  - 2. Colombia
  - 3. Brazil
  - 4. Paraguay

Select the correct answer using the code given below:

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

#### **3.** Consider the following countries:

- 1. Kenya
- 2. Burundi
- 3. Zimbabwe
- 4. Zambia

How many of the above countries share borders with Tanzania?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four
- 4. "The town of Avdiivka", recently seen in the news, is related to:
  - (a) Afghanistan
  - (b) Iran
  - (c) Israel
  - (d) Ukraine
- **5.** Greece recently became first Orthodox Christian country to legalize same-sex marriage In context of the above statement, which of the following countries shares borders with Greece ?
  - 1. Bulgaria
  - 2. Albania
  - 3. Tunisia
  - 4. Italy
  - 5. Türkiye

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

#### 6. Which among the following countries share a border with Iran?

- 1. Armenia
- 2. Kazakhstan
- 3. Turkmenistan
- 4. Kyrgyzstan

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

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

# 7. Which of the following countries shares borders with Oman?

- 1. Qatar
- 2. UAE
- 3. Saudi Arabia
- 4. Iran
- 5. Yemen

Select the correct answer using the code given below:

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

# 8. With reference to Coffee plantation in India, consider the following statements:

- 1. Well-drained and rich friable loam is the ideal soil for coffee cultivation.
- 2. Its plantations are resistant to frost.

3. Kerala is the highest producer of coffee in India.

# Which of the above statement(s) is/are *not correct*?

- (a) 1 and 2 only
- (b) 1 only
- (c) 2 and 3 only
- (d) 3 only
- **9.** Consider the following:
  - 1. Hemavati
  - 2. Ghataprabha
  - 3. Lakshmanathirtha
  - 4. Tungabhadra
  - 5. Suvarnavathi

How many of the above are tributaries of Cauvery river?

- (a) Only two
- (b) Only three
- (c) Only four
- (d) All five

**10.** With reference to the Lakshadweep Archipelago, which of the following statements is/are correct?

1. The atoll of Minicoy separated to Laccadive Islands by the Nine Degree Channel.

2. The Laccadive Islands and the Amindivi Islands are separated by the 11th parallel north.

- (a) 1 only
- (b) 2 only

- (c) Both 1 and 2
- (d) Neither 1 nor 2
- **11.** Nohar irrigation project, recently seen in the news, is meant to irrigate districts of which of the following states?
  - (a) Punjab
  - (b) Haryana
  - (c) Rajasthan
  - (d) Madhya Pradesh
- **12.** With reference to the *Western Disturbances*, consider the following statements:
  - 1. They collect moisture from the Black and Caspian Sea.
  - 2. They help ripening of rabi crops in India and bring snow to the Himalayan 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

# **13.** With reference to the Sea of Japan, which of the following statements is/are correct?

- 1. It is a marginal sea of the western Atlantic Ocean.
- 2. It is bounded by the Sakhalin and the Korean Peninsula.

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

# **14.** Which of the following statements most accurately describes Western disturbances and their impact on India?

- (a) They are primarily high-pressure systems originating in the Indian Ocean, bringing significant rainfall to central India.
- (b) They contribute significantly to the winter rainfall received by the northwestern states of India, impacting agricultural productivity.
- (c) Their frequency and intensity depends upon the rainfall received by the Indian subcontinent during Monsoon.
- (d) Their impact is limited to snowfall in the Himalayan region and does not significantly contribute to water availability in downstream areas.

# **15.** With reference to the Musi river, which of the following statements is/are correct?

- 1. It is the tributary of Godavari river.
- 2. The city of Hyderabad is located on the bank Musi river.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- **16.** With reference to the *Atlantic Meridional Overturning Circulation (AMOC),* consider the following statements:
  - 1. It is one of the tipping points critical for a system that influences the climate and ecology of the planet.
  - 2. The collapse of AMOC may result in more heat in the tropical 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

**17.** Recently Rio De Janeiro, which is a city in Brazil, declared a Dengue Health Emergency.

In the context of the above statement, which of the following countries shares a border with Brazil?

- 1. Chile
- 2. Ecuador
- 3. Venezuela
- 4. Argentina
- 5. Bolivia

Select the correct answer using the codes given below.

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

# **18.** With reference to Brazil, which of the following statements is/are correct?

- 1. It is the fifth largest country in the world.
- 2. It borders every South American country except Chile and Ecuador.
- 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.** Iran recently announced visa-free travel for Indians and citizens of several other nations for a maximum stay of 15 days.

In context of the above statement, which of the following countries shares borders with Iran?

- 1. Yemen
- 2. Armenia
- 3. Turkmenistan
- 4. Pakistan
- 5. Syria

Select the correct answer using the codes given below.

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

# 20. Which among the following Indian States share an International Border with Myanmar?

- 1. Mizoram
- 2. Assam
- 3. Manipur
- 4. Tripura

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

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

# **21.** With reference to the Particularly Vulnerable Tribal Groups (PVTGs), which of the following statements is/are correct?

- 1. There are 75 PVTGs in India, spread over 18 States and the Union Territory of Andaman & Nicobar Islands.
- 2. Jharkhand has the largest population of PVTGs 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

# **22.** Consider the following pairs:

# List I

# List II

- 1. Mount Marapi Indonesia
- 2. Kairouan City Tunisia
- 3. Zuari Bridge India

# How many of the above pairs are correctly matched?

- (a) Only one pair
- (b) Only two pairs
- (c) All three pairs
- (d) None of the pairs

# 23. 38th parallel, demarcates the boundary between which of the following countries?

- (a) USA and Canada
- (b) Germany and Poland
- (c) North Vietnam and South Vietnam
- (d) North Korea and South Korea

# **24.** Consider the following statements:

- 1. Length of a terrestrial mile is lesser than that of a nautical mile.
- 2. Harmattan is a dusty land- wind of the East African Coast.
- 3. Greece and Albania form a part of the Iberian Peninsula.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 3 only
- (d) All of the above
- 25. Which of the following countries are part of the Weimar Triangle?
  - (a) Poland, Italy and Austria
  - (b) France, Germany, and Italy
  - (c) France, Germany, and Poland
  - (d) Germany, Italy and Austria

# **26.** Recently, the Terai Arc Landscape (TAL) has been recognized as one of the seven UN World Restoration Flagships.

In context of the above statement Terai Arc Landscape (TAL) is spread across which of the following Indian states?

- 1. Uttarakhand
- 2. Bihar

- 3. Punjab
- 4. Haryana

Select the correct answer using the code given below.

- (a) 1 and 2 only
- (b) 3 and 4 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4
- **27.** The Red Sea crisis caused a surge in container ship costs, highlighting the need to revisit alternate routes for global trade. In context of this statement, which of the following countries shares borders with the Red Sea.
  - 1. Egypt
  - 2. Yemen
  - 3. Saudi Arabia
  - 4. Djibouti

Select the correct answer using the code given below:

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

#### 28. With reference to the river Krishna, which of the following statements is/are correct?

- 1. The River rises Trimbakeshwar, Maharashtra in the Western Ghats.
- 2. River Pranhita and Purna are the major tributaries of the river.

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

# **EXPLANATIONS**

#### 1. (a)

Vietnam

#### Mekong Delta region

- The Mekong Delta is **one of the largest and most fertile deltas** in Asia and in the world, **located in Southern Vietnam.**
- It covers about four million hectares and supports a population of about 18 million people who depend on it for agriculture and aquaculture.
- Its freshwater habitats range from floodplains, wetlands and mangrove forests, to mudflats, sea grasses, riparian vegetation, paddy land and peatlands, all which host more than 450 species of fish.
- It is also considered among the **world's five most vulnerable deltas.**
- 2. (a)

<u>Peru</u>



- Peru is located on the western side of South America
- It shares its borders with five countries:
  - Ecuador and Colombia to the north, Brazil to the east, Bolivia to the southeast, and Chile to the south.
  - o Its western border lies along the Pacific Ocean.

#### Tanzania

- It is an East African country situated **just south of the Equator**, and was formed as a sovereign state in 1964 through the union of the **Tanganyika and Zanzibar**.
  - Mainland Tanganyika covers most of the area.
- It is bounded by Uganda, Lake Victoria, and Kenya to the north, by the Indian Ocean to the east, by Mozambique, Lake Nyasa, Malawi, and Zambia to the south and southwest, and by Lake Tanganyika, Burundi, and Rwanda to the west.

#### • It does not share a border with Zimbabwe.

- Islands: Zanzibar, Pemba and Mafia Islands.
- Capital: Dodoma;
- Dar es Salaam is the largest city and port in the country.

#### 4. (d)

News: Recently, Russia has captured the town of Avdiivka.

#### Avdiivka

- Located on the frontlines in the east of Ukraine, Avdiivka had been a major centre of resistance, blocking further Russian advance.
- It has seen war since 2014, when Russia staged a 'military intervention' in eastern Ukraine.

#### 5. (a)

Greece is bordered by 4 Nations: by **North Macedonia** and **Bulgaria** in the north, **Albania** in the northwest, and **Türkiye** in the northeast.

- Athens the capital
- It is also bounded by the Aegean Sea in the east, Ionian Sea in the west and the Mediterranean Sea in the south.
- The highest Greek mountain is Mount Olympus.

# 6. (b)

**Iran borders 7 countries :** Afghanistan 921 km; **Armenia** 44 km; Azerbaijan 689 km; Iraq 1,599 km; Pakistan 959 km; Turkey 534 km; **Turkmenistan** 1,148 km.



# 7. (c)

**Oman** is bordered on the north by the **United Arab Emirates** (U.A.E.), on the northwest by **Saudi Arabia**, and on the southwest by the **Republic of Yemen**.

• The Omani coastline stretches 2,092 km.



**Statement 1 is correct.** Well-drained, rich friable loams containing a good deal of humus and minerals like iron and calcium are ideal for coffee cultivation.

**Statement 2 is not correct.** Coffee plantations are not resistant to frost, prolonged drought, stagnant water and excess sunlight. They are very sensitive crops.

**Statement 3 is not correct.** Karnataka is the largest producer (about 70% of total coffee production and 60% of the area under coffee in India).

#### 9. (b)

In News : Cauvery River: The river originates at Talakaveri in the Brahmagiri range of hills in the Western Ghats, located in the Kodagu district of Karnataka. It flows eastward and empties into the Bay of Bengal.

- It rises at an elevation of 1,341 metres.
- Basin: The Cauvery basin extends over the states of Tamil Nadu, Karnataka, Kerala, and the Union Territory of Puducherry, covering an area of 81,155 square kilometres.



- Tributaries: The river has several tributaries, including the Harangi, Hemavati, Lakshmanathirtha, Kabini, Shimsha, Arkavathi, and Suvarnavathy.
- Ghataprabha and Tungabhadra are the tributaries of river Krishna.

#### 10. (c)

#### Both the statements are correct.

#### Lakshadweep Archipelago

- Lakshadweep is an archipelago of **36 islands** that are located some **400 km** to the west of Kerala.
- It is a uni-district Union Territory and comprises **12 atolls**, three reefs, five submerged banks and **10** inhabited islands.
- It is divided into three island subgroups:
  - The Laccadive Islands in the middle with the Amindivi Islands in the north separated by the 11th parallel north and
  - The atoll of Minicoy to the south separated to Laccadive Islands by the Nine Degree Channel.

#### Rajasthan

#### Nohar irrigation project

- The Nohar Irrigation Project is a major canal irrigation project located in the Hanumangarh district of Rajasthan.
- Current status:
  - **Completed in 2002,** but facing various challenges impacting its full potential.
  - Water availability through the Ferozepur Feeder Canal in Punjab has been inconsistent, hindering irrigation in Rajasthan.
- **Purpose:** To irrigate agricultural land and provide drinking water in Hanumangarh district, promoting agricultural productivity and socio-economic development.
- Source: Takes water from the Bhakra Canal of the Indus System (Ravi and Beas) of Canals in Punjab.
- Main canals: Nohar Feeder Canal and the Rajasthan Feeder Canal.

#### 12. (c)

#### In News :

• Western Disturbances are cyclonic storms that form over land. These are referred to as middle latitude or extra tropical cyclones, because of development in the mid and high latitude.

• They are usually associated with a cloudy sky, higher night temperatures, and unusual rain.

#### Statement 1 is correct:

- They occur mostly in the **Mediterranean region** due to a temperature gradient caused by the mixing of warm air from the tropics and cold air from the northern polar regions.
  - They collect moisture from the Mediterranean Sea, Black Sea and Caspian Sea and traverse over Iran and Afghanistan before hitting the western Himalayas.

#### Statement 2 is correct:

- They help farmers in India grow their rabi crop, bring snow to the Himalayas and maintain the flow of the northern rivers.
- These have a significant impact on India's climate and environment, affecting not only the weather patterns but also the country's food and water security.

# 13. (b)

# Statements 1 is not correct and Statements 2 is correct.

# <u>Sea of Japan</u>

- Sea of Japan, a marginal sea of the western Pacific Ocean.
- It is bounded by the Japanese archipelago, Sakhalin, the Korean Peninsula, and the mainland of the Russian Far East.
- The sea is separated from the East China Sea to the south by the **Tsushima** and **Korea straits** and from the Sea of Okhotsk to the north by the **La Perouse** and **Tatar straits**.



#### 14. (b)

They contribute significantly to the winter rainfall received by the northwestern states of India, impacting agricultural productivity.

#### Western disturbances

- Western disturbances are the weather systems which are seen as **extra tropical upper air trough** (extended low pressure area) or/and cyclonic circulations (CCs) in mid-latitude westerlies that move from west to east across Himalayan region.
- They originate in the **Mediterranean region or Caspian Sea**.
  - <u>They are</u> Embedded in the **mid-latitude westerly jet stream**, a fast-moving ribbon of air high in the atmosphere.
  - Gain moisture as they travel over the Mediterranean Sea, Black Sea, or Caspian Sea.
  - Move eastward towards the Indian subcontinent, bringing clouds, rain, and sometimes snow.
- It brings **crucial winter rainfall to northwest India**, encompassing areas like Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, and parts of Rajasthan.
- Recent studies suggest a weakening trend in Western disturbances due to climate change, raising concerns about potential impacts on water availability and agriculture.
- The frequency and intensity of western disturbances is unrelated to the amount of rainfall received by the Indian subcontinent during Monsoon.

# 15. (b)

#### Statements 1 is not correct and Statements 2 is correct. Musi River

- The Musi River is a major tributary of the **Krishna River** in the Deccan Plateau flowing through Telangana, India.
- Hyderabad stands on the banks of the Musi River.

# 16. (c)

Atlantic Meridional Overturning Circulation (AMOC): It is a system of ocean currents that circulates water within the Atlantic Ocean, bringing warm water north and cold water south and is part of a complex system of global ocean currents.

- Statement 1 is correct: It is one of the tipping points critical for a system that influences the climate and ecology of the planet.
  - **Tipping elements in the Earth's climate system:** It includes long-term loss of major ice sheets on Greenland and in Antarctica, large-scale ecosystem shifts for the Amazon rainforest and northern evergreen forests, species loss for coral reefs, shrinking Arctic sea-ice, and **potential weakening of the AMOC** etc.
- **Statement 2 is correct:** Collapse of the AMOC will impact other tipping elements and climate systems globally.

- The Amazon rainforest: AMOC collapse means more heat in tropics; Amazon could either stabilise or turn dry.
- Sahel/West African monsoon: Impact on wind flow, ITCZ by AMOC collapse may hurt establishment of monsoon.

Brazil is a country in South America and It is the fifth largest country in the world.

• It borders every South American country except Chile and Ecuador. To the north, it shares a boundary with Colombia, Venezuela, Guyana, Suriname, and French Guiana. To the northwest, it meets Peru and Bolivia, to the west Argentina and Paraguay, to the southwest Uruguay, and to the south it is bounded by the Atlantic Ocean.



#### 18. (c)

# Both the statements are Correct.

# <u>Brazil</u>

- Brazil is a country in South America and It is the **fifth largest country in the world**.
- It borders every South American country except Chile and Ecuador. To the north, it shares a boundary with Colombia, Venezuela, Guyana, Suriname, and French Guiana. To the northwest, it meets Peru and Bolivia, to the west Argentina and Paraguay, to the southwest Uruguay, and to the south it is bounded by the Atlantic Ocean.



#### 19. (c)

Iran is a mountainous, arid, and ethnically diverse country of southwestern Asia.

• The capital is Tehrān

• Iran is bounded to the north by Azerbaijan, **Armenia**, **Turkmenistan**, and the Caspian Sea, to the east by **Pakistan** and Afghanistan, to the south by the Persian Gulf and the Gulf of Oman, and to the west by Türkiye and Iraq.



#### 20. (b)

**Location:** India shares a long land border of over 1643 kms with Myanmar as well as a maritime boundary in the Bay of Bengal.

• Four northeastern states, viz., Arunachal Pradesh, Nagaland, Manipur and Mizoram, have a boundary with Myanmar.



#### 21. (a)

#### Statement 1 is correct and Statement 2 is not correct. Particularly Vulnerable Tribal Groups (PVTGs)

- These 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.
- There are 75 PVTGs in India, spread over 18 States and the Union Territory of Andaman & Nicobar Islands.
- Odisha has the largest population of PVTGs followed by Madhya Pradesh.

#### 22. (c)

#### All the three pairs are correct.

#### <u>Mount Marapi</u>

- Mount Marapi means 'Mountain of Fire'.
- It is the most active volcano on Sumatra island in Indonesia.

#### Kairouan City

- It is located in the centre of **Tunisia**.
- Founded in AD 670, Kairouan flourished under the Aghlabid dynasty in the 9th century.
- It is one of North Africa's holiest cities and a leading tourist attraction.
- It has been listed as a UNESCO World Heritage site since 1988.

#### Zuari Bridge

- It is located on the Zuari river at Cortalim village on Margao-Panaji National Highway.
- It is India's second longest cable-stayed bridge.

23. (d)

# 38th parallel

#### <u>38th parallel</u>

- 38th parallel, demarcates North Korea and South Korea.
- The line was chosen by U.S. military planners at the Potsdam Conference (July 1945) near the end of World War II.

# 24. (a)

**Statement 1 is correct and Statement 2 is not correct:** One terrestrial mile (1609 metres) is less than one nautical mile (1852 meters). The Harmattan is a season in the West African subcontinent, which occurs at the end of the November and middle of the March. It is characterised by the dry and dusty northeasterly trade wind which blows from the Sahara Desert over West Africa into the Gulf of Guinea. **Statement 3 is not correct:** The Iberian peninsula includes Portugal, Spain, Andorra and Gibraltar.

#### 25. (c)

#### France, Germany, and Poland

# <u>Weimar Triangle</u>

- The "Weimar Triangle" is a regional alliance of **France, Germany**, and **Poland** created in **1991** in the German city of Weimar.
- The group is intended to promote cooperation between the three countries in cross-border and European issues.
- It also aimed at assisting Poland's emergence from Communist rule.

# 26. (a)

<u>Terai Arc Landscape(TAL)</u> extends over 900 km from the Bagmati River(Nepal) in the east to the Yamuna River(India) in the west

- It comprises the Shivalik hills, the adjoining bhabhar areas and the Terai flood plains.
- It is spread across the Indian states of Uttarakhand, Uttar Pradesh and Bihar, and the low lying hills of Nepal. (d)

# 27. (c

The Red Sea is a semi-enclosed, inlet (or extension) of the Indian Ocean between the continents of Africa from Asia.

- It is connected to the Arabian Sea and the Indian Ocean to the south through the Gulf of Aden and the narrow strait of Bab el Mandeb.
- The countries of Yemen and Saudi Arabia border the Red Sea to the east.
- The Red Sea is bordered by Egypt to the north and west, and by Sudan, Eritrea, and Djibouti to the west.

# 28. (d)

# Both the statements are not Correct.

# <u>Krishna River</u>

- **Origin:** The Krishna River originates in the Western Ghats near Mahabaleshwar at an elevation of about 1,300 meters (4,300 ft), in the state of Maharashtra.
- **Tributaries:** Ghataprabha River, Malaprabha River, Bhima River, Tungabhadra River and Musi River. <u>Godavari River</u>
- Origin: The River rises at Trimbakeshwar, Nashik, Maharashtra in the Western Ghats.
- Length:The Godavari River is India's second longest river (Dakshina Ganga) after the Ganga river, with a length 1,465 km.
- sTributaries: Banganga, Purna, Pranhita, Indravati, Pravara, Sindphana, Manjira, Penganga, Wardha, Wainganga, Maner and Sabri.



# **GOVERNMENT SCHEMES/INITIATIVE**

#### 1. With reference to the Garbh-ini (Interdisciplinary Group for Advanced Research on Birth Outcomes— DBT India Initiative), consider the following statements:

- 1. It was launched in 2014, by the Ministry of Health.
- 2. The Garbhini-GA2 determines the gestational age of a foetus in the second and third trimester of pregnancy.

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. Recently launched 'SWATI Portal' is related to which of the following?

- (a) To Increase Awareness related to the Digital Payments.
- (b) Direct Bank Transfer Portal under Mahatma Gandhi National Rural Employment Act.
- (c) To help Women Entrepreneurs Register for Government Schemes.
- (d) Online portal representing Indian Women and Girls in STEMM.

#### 3. Swachhata Green Leaf Rating, recently seen in the news, is related to which of the following?

- (a) To ensure world-class hygiene and sanitation in hospitality facilities.
- (b) To give ratings to villages having ODF+status.
- (c) A rating system devised by CSIR for cleaner vehicles.
- (d) A benchmark set for green technologies by QCI.
- **4.** With reference to PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi), which of the following statements is/are correct?
  - 1. The scheme is funded by the Ministry of Housing and Urban Affairs.
  - 2. The scheme facilitates collateral-free loans of INR 10,000, with subsequent loans of INR 50,000 and INR 100,000.

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. With respect to India's Smart Cities Mission, which of the below given statements is/are correct?

- 1. The Smart Cities Mission is an initiative of the Ministry of Housing and Urban Affairs, launched in 2015.
- 2. For real time monitoring of the mission, an Integrated Command and Control Centre (ICCC) was also launched under the mission.
- 3. The mission primarily aims to enhance the quality of life in rural and nearby urban areas by leveraging technology, innovation, and improved infrastructure.

How many of the statements given above are correct?

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

# **6.** With reference to the Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana, consider the following statements:

- 1. It is a sub scheme under the Pradhan Mantri Matsya Sampada Yojana.
- 2. It is 100% funded by the Government.

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 MGNREGA Scheme, consider the following statements:

- 1. The applicant receives guaranteed employment within 15 days from the date of application.
- 2. The wage is deposited directly in the Bank Account/Post Office Account of the applicant.

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 statement with reference to Safe City Project:

- 1. It is a Centrally Sponsored Scheme which is approved by the Ministry of Home Affairs.
- 2. It covers welfare measures for both transgender persons and persons who are engaged in the act of begging with focus extensively on rehabilitation.

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. Operation Greens scheme, recently seen in the news, is related to which of the following?

- (a) Renewable Energy
- (b) Agriculture
- (c) Green Hydrogen
- (d) Fisheries

#### 10. 'Amrit Dharohar Initiative' recently seen in the news, is related to which of the following?

- (a) To Conserve Wetlands
- (b) To promote Cultural Heritage
- (c) Prevention of Land Degradation
- (d) Conservation of the River Ecosystem

#### **11.** With reference to the Lakhpati Didi Scheme, consider the following statements:

- 1. It is launched to financially empower women in rural and urban areas.
- 2. Under the scheme Interest-free loan of Rs. 5 lakh will be granted.

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.** Which of the following states has launched LABHA (Laghu Bana Jatya Drabya Kraya) Yojana for tribal population?

- (a) Odisha
- (b) Jharkhand
- (c) Madhya Pradesh
- (d) Maharashtra
- **13.** With reference to the National Family Health Survey (NFHS-5), 2019-21, which of the following statements is/are correct?
  - 1. For children under five stunting and wasting has reduced whereas underweight prevalence has increased.
  - 2. Meghalaya has the highest number of stunted children and Maharashtra has the highest number of wasted children.

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
- 14. The 'Mission Utkarsh' sometimes appeared in the news, is in the context of:
  - (a) Children below 5 years of age
  - (b) Senior Citizen
  - (c) Women above 49 years of age
  - (d) Adolescent Girls

# **EXPLANATIONS**

#### 1. (b)

**Statement 1 is not correct:** The DBT India initiative (GARBH-Ini) programme was launched in 2014, by the Department of Biotechnology, under the Ministry of Science and Technology.

Statement 2 is correct: The Garbhini-GA2 is the first late-trimester GA estimation model to be developed and validated using Indian population data.

• It is an **India-specific artificial intelligence model** to precisely **determine the gestational age of a foetus** in the second and third trimester of pregnancy.

# 2. (d)

The Government has launched the **SWATI Portal** on the occasion of the International Day For Girls and Women in Science (11th February).

- Science for Women-A Technology & Innovation (SWATI)" Portal is aimed at creating a **single online portal** representing Indian Women and Girls in STEMM (Science, Technology, Engineering, Mathematics & Medicine).
- The database of SWATI Portal will serve in **policy making** to address the challenges of Gender-gap.
- The Portal is a **complete interactive database;** and the first-of-its-kind in India which is developed, hosted and maintained by the **National Institute of Plant Genome Research (NIPGR)**.

3. (a)

To ensure world-class hygiene and sanitation in hospitality facilities. Swachhata Green Leaf Rating:

- The ranking scheme was launched in November 2023 by the Union Tourism Ministry in collaboration with the Department of Drinking Water and Sanitation.
  - The rating will be based on **compliance with the safe sanitation practice**s outlined in the guidelines.
- Aim: To ensure world-class hygiene and sanitation in all hospitality facilities of the country with or without restaurants.
- **Objective:** The objective is to prevent pollution in water bodies and keep the environment clean.
- **Target groups:** Hotels, resorts, lodges, homestays, 'Dharamshalas' and camps which have portable toilets.

#### 4. (a)

#### Statements 1 is correct and Statements 2 is not correct.

#### PM-SVANidhi Scheme

- The PM SVANidhi is a micro-credit scheme which was launched by the government in **2020**.
- The scheme is funded by the **Ministry of Housing and Urban Affairs**.
- The scheme aims to provide credit for working capital to street vendors who have been affected due to the Covid-19 crisis.
- The scheme facilitates collateral-free loans of INR 10,000/-, with subsequent loans of INR 20,000/and INR 50,000/- with 7% interest subsidy for vendors, and rewards digital transactions.
- Eligible criteria: Street vendors in possession of Certificate of Vending/Identity Card issued by Urban Local Bodies (ULBs).

#### 5. (b)

# Smart Cities Mission

- The Smart Cities Mission is an initiative of the Union Housing and Urban Affairs Ministry, launched in 2015. (Statement 1 is correct)
- **Objective:** To promote cities that provide core infrastructure, clean and sustainable environment and give a decent quality of life to their citizens through the application of 'smart solutions'. (**Statement 3** is not correct, the mission focuses on the urban cities not the rural areas)

# Key Features

- Four pillars: Social Infrastructure, Physical Infrastructure, Institutional Infrastructure, Economic Infrastructure.
- Integrated Command and Control Centre: These ICCCs are designed to enable authorities to monitor the status of various amenities in real time.
  - The ICCC acts as a smart city and acts as a "nerve center" for operations management. (Statement 2 is correct)
- Other steps taken under the SCM for digital infrastructure are;
  - Adaptive Traffic Control System (ATCS), Red Light Violation Detection (RLVD), and Automatic Number Plate Recognition System (ANPR),
  - Digital assets for solid waste and waste-water management and water distribution management,
  - o CCTV surveillance systems, smart education and smart health systems.

# 6. (a)

Statement 1 is correct: Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY) is a sub scheme under the Pradhan Mantri Matsya Sampada Yojana, for the micro and small enterprises operating in the fisheries sector with an expected investment of ₹6,000 crore in the next four years.

**Statement 2 is not correct:** The sub-scheme PM-MKSSY is with **50% public finance,** including the World Bank and the Agence Française de Développement (AFD) external financing, and the rest 50% investment from the **private sector leverage.** 

• It will be implemented **for four years** from **2023-24 to 2026-27** across all the States and union territories.

#### 7. (c)

MGNREGA Scheme: It is an employment scheme by the Ministry of Rural Development.

• It provides at least 100 days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled work.

#### Statement 1 is correct:

- Eligibility: Any Indian citizen above the age of 18 years and residing in a rural area can apply to this scheme.
- The applicant receives guaranteed employment within 15 days from the date of application. **Statement 2 is correct:**
- Mode of Payment: The wage is deposited directly in the Bank Account/Post Office Account of the applicant.
  - Wages are paid within a week, or fifteen days at most.
- Men and Women are paid equally.
- It has been credited with having a positive impact on income per household, agricultural productivity, and production-related expenditure.
- MGNREGA covers the entire country with the exception of districts that have a hundred percent urban population.

#### 8. (a)

**In News:** U.N. Women will work closely with the State's gender parks and provide technical assistance for the Safe City project

Statement 1 is correct : Safe City Projects have been approved by the Ministry of Home Affairs with centrally sponsored funding .

• The Empowered Committee under Nirbhaya Fund has approved Safe City projects in 8 selected cities (Delhi, Mumbai, Kolkata, Chennai, Bengaluru, Hyderabad, Ahmedabad and Lucknow).

Statement 2 is not correct : Safe City Project aims to create a safe, secure and empowering environment for women in public places, to enable them to pursue all opportunities without the threat of gender-based violence and/or harassment.

• It also aims to prevent and curb all forms of crimes against women and girl children in public places by providing safer urban infrastructure and efficient access to law enforcement agencies.

# 9. (b)

# About Operation Greens scheme

- Launched: November 2018
- Parent scheme: Pradhan Mantri Kisan SAMPADA Yojana.
- **Objective**: To enhance the value realisation of farmers and minimizing post-harvest losses.
- Components: The scheme has two components namely,

# (I) Long Term Intervention-Integrated Value Chain

# **Development Projects:**

i. Enhancing value realisation of farmers by targeted interventions to strengthen production clusters and FPOs, and linking/ connecting the farmers with the market.

- ii. Reduction in post-harvest losses by creation of farm gate infrastructure.
- iii. Increase in food processing capacities and value addition in the value chain.

(II) Short-Term Interventions: The objective is to protect the growers of Eligible Crops from making distress sale and to reduce post-harvest losses. Subsidy is provided @ 50% on the following two components as per the provisions of scheme guidelines:

- i. Transportation;
- ii. Hiring of appropriate storage facilities for TOP Crops.
- Scope: The scope of OG Long Term Interventions Scheme has been expanded from three crops namely Tomato, Onion and Potato (TOP) to 22 perishable crops namely,
  - Mango, Banana, Apple, Pineapple, Orange, Grapes, Aonla/Amla, Pomegranate, Guava, Litchi, Tomato, Onion, Potato, Green Peas, Carrot, Cauliflower, Beans, Bottle Gourd, Bitter Gourd, Ridge/Sponge Gourd, Pointed Gourd and Ash Gourd, Okra, Garlic, Ginger and Shrimp, during the 15th Financial Commission Cycle (2021-26).

#### 10. (a)

**Amrit Dharohar Initiative:** It is a part of the 2023-24 budget announcement and was launched by MoEF&CC in 2023 to promote **unique conservation values of the Ramsar Sites in the country** while generating employment opportunities and supporting local livelihoods.

• This initiative is to be implemented over three years in convergence with various Central Government ministries and agencies, State Wetland Authorities, and a network of formal and informal institutions and individuals, working together for a common cause.

#### 11. (b)

Statement 1 is not correct: It was launched in 2023 to financially empower women in rural areas and promote their entrepreneurial spirit.

Statement 2 is correct: Target beneficiaries: Women members of existing or newly formed SHGs in rural areas.

- Participants in the Scheme must be active members of self-help groups.
- Financial assistance: Interest-free loan of Rs. 5 lakh per SHG for initiating or expanding incomegenerating activities.

#### 12. (a)

#### Odisha

#### LABHA (Laghu Bana Jatya Drabya Kraya) Yojana

- The Odisha government announced the launch of LABHA (Laghu Bana Jatya Drabya Kraya) Yojana, for minor forest produce (MFP).
- It is a **100% State-funded minimum support price (MSP)** scheme for minor forest produce (MFP). The MSP will be determined every year by the State government.
- Under the scheme, a primary collector (a tribal person) will be able to sell the MFP.
- It will be collected at the procurement centers by the **Tribal Development Cooperative Corporation** Limited of Odisha (TDCCOL).
- These procurement centers will be managed by SHGs and any other notified agencies assisted by TDCCOL.
  - As 99% of primary collectors are tribals and the majority of them are women, the LABHA Yojana will integrate the efforts with **Mission Shakti's Women SHGs** (self help groups).

- The procurement automation system will be set up to capture the total collection of MFPs, the details of the primary collectors, and the procurement point.
- Significance: The LABHA Yojana will also eliminate the possibility of distress sale of produce to middlemen.

#### 13. (b)

#### Statement 1 is incorrect and Statement 2 is correct.

#### Status of Malnutrition in India

- According to findings of the **2019-21 National Family Health Survey (NFHS-5)**, nutrition indicators for children under 5 have improved over NFHS-4 (2015-16).
- **Stunting** has reduced from 38.4% to **35.5%**, wasting from 21.0% to **19.3%** and underweight prevalence is down from 35.8% to **32.1%**.

#### Statewise Data

- Stunting: Meghalaya has the highest number of stunted children (46.5%), followed by Bihar (42.9%).
  Puducherry and Sikkim have the lowest percentage of stunted children.
- Wasting: Maharashtra has 25.6% wasted children (weight for height) the highest followed by Gujarat (25.1%).
- Underweight: Bihar has the highest number of underweight children (41%), followed by Gujarat (39.7%), and Jharkhand at (39.4%).
- Assam, Dadra and Nagar Haveli, Karnataka, Madhya Pradesh, Maharashtra and Uttar Pradesh have a higher percentage of underweight children than the national average of 32.1%.

#### 14. (d)

In News : The Union Ministry of AYUSH and Women & Child Development signed an MoU for improving the nutrition among adolescent girls.

- **Mission Utkarsh:** It is a **joint public health initiative** by the Ministries of Ayush and Women and Child Development.
- It is initially be **launched as a pilot project in five aspirational districts across five states** Assam (Dhubri), Chhattisgarh (Bastar), Jharkhand (Paschimi Singhbhum), Maharashtra (Gadchiroli), and Rajasthan (Dhaulpur)
- It aims to control anaemia among adolescent girls using Ayurvedic interventions.

#### 

# **DEFENCE / INTERNAL SECURITY**

#### 1. Indian Coast Guard (ICG) is an organization under which one of the following ministries?

- (a) Ministry of Defence
- (b) Ministry of Home Affairs
- (c) Ministry of Ports, Shipping and Waterways
- (d) Ministry of Information & Broadcasting

#### 2. Which one of the following countries participated in "DHARMA GUARDIAN" along with India?

- (a) USA
- (b) France
- (c) Indonesia
- (d) Japan

#### 3. With reference to BrahMos missiles, which of the following statements is/are correct?

- 1. It is a three-stage missile with a solid propellant booster engine.
- 2. The missile derives its name from the Brahmaputra and Moskva rivers.

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. MTEX-24 recently seen in the news, it is related to which of the following ?

- (a) Provides for settlement of disputed tax
- (b) Covid-19 variant which is more infectious
- (c) Latest advancements in naval technology
- (d) Satellite for enhanced meteorological observations

# **5.** Consider the following statements:

- 1. The Defence Acquisition Council is headed by the Defence Minister.
- 2. The Acceptance of Necessity (AoN) is the last step in the Defence procurement process.

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 :

- 1. MILAN began as an annual bilateral naval exercise between India and the US in 1992.
- 2. MILAN 2024 is scheduled under the aegis of Eastern Naval Command with invitation extended to 58 countries.

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 one of the following is NOT a Central Armed Police Force (CAPF)?

- (a) Assam Rifles
- (b) National Security Guard

- (c) Indian Coast Guard
- (d) Central Industrial Security Force

#### 8. Exercise Vayu Shakti recently seen the news, it is related to:

- (a) Royal Australian Air Force
- (b) Indian Air Force
- (c) Brazilian Air Force
- (d) Russian Air Force
- **9.** The deal for Predator drone-MQ 9B, was recently concluded by the Indian government with which of the following countries?
  - (a) Russia
  - (b) Israel
  - (c) USA
  - (d) France

# **EXPLANATIONS**

# **1.** (a)

Ministry of Defence

# Indian Coast Guard (ICG)

- ICG is a maritime law enforcement and search and rescue agency of India with jurisdiction over its territorial waters including its contiguous zone and exclusive economic zone.
- Established in 1977 by the Coast Guard Act, 1978 of the Parliament of India.
- Parent Agency: Ministry of Defence
- Headquarters: New Delhi
- Head: Director General Indian Coast Guard (DGICG)

#### 2. (d)

**News:** Recently, the 5th edition of Joint Military Exercise 'DHARMA GUARDIAN' between the **Indian Army** and the **Japan Ground Self Defence Force** commenced at Mahajan Field Firing Ranges in Rajasthan. **About** 

- Exercise 'DHARMA GUARDIAN' is an annual exercise and conducted alternatively in India and Japan.
- The contingent of both sides comprises 40 personnel each.
- The Japanese contingent is being represented by troops from the 34th Infantry Regiment and the Indian Army contingent is being represented by a Battalion from the Rajputana Rifles.

# 3. (b)

#### Statement 1 is not correct and Statement 2 is correct. <u>BrahMos missiles</u>

- It is a joint venture between India's **Defence Research and Development Organisation (DRDO)** and Russia's NPO **Mashinostroyeniya**.
  - The missile derives its name from the **Brahmaputra** and **Moskva** rivers.
- The BrahMos joint venture was formed in **1998** and the first successful launch of the missile took place in **2001**.

# Features

- Stages: BrahMos is a two-stage missile with a solid propellant booster engine.
  - First stage brings the missile to supersonic speed and then gets separated.
  - The second stage takes the missile closer to three times the speed of sound in cruise phase.

- Range: The range of the missile was originally capped at 290 kms as per obligations of the Missile Technology Control Regime (MTCR).
- Following India's entry into the club in June 2016, DRDO officials had stated that the range would be extended to 450 km and to 600 km at a later stage.

**In News:** The Maritime Technical Exposition MTEX-24 stands as a special attraction in the **MILAN 2024** taking place in Visakhapatnam.

<u>MTEX-24</u> is a three-day exposition and fosters collaboration and knowledge exchange between industry leaders, researchers, and defense professionals

- It highlights India's push towards self-reliance in the defense sector.
- It showcases the latest advancements in naval technology viz shipbuilding, communication systems, cybersecurity, and sustainable energy solutions.

#### 5. (a)

Statement 1 is correct: The Defence Acquisition Council (DAC) is headed by **Defence Minister Rajnath** Singh, and is among the top bodies for clearing major capital acquisitions for defence.

Statement 2 is not correct: The Acceptance of Necessity (AoN) is the first step in the long Defence procurement process.

• The grant of AoN does not always lead to a final order.

#### 6. (b)

MILAN 2024 is the 12th edition of the Multilateral Naval Exercise scheduled from 19-27 Feb 24 at Visakhapatnam, 'the City of Destiny'.

**Statement 1 is not correct** : MILAN is hosted by **India**, and made a modest beginning in the Andaman and Nicobar Islands in 1995.

- The navies of Indonesia, Singapore, Sri Lanka and Thailand participated in this edition.
- It is a biennial congregation of friendly navies.

**Statement 2 is correct :** The previous edition, MILAN 2022 was held in Visakhapatnam, **the City of Destiny** under the aegis of **Eastern Naval Command**.

- MILAN 2022 observed participation of 39 friendly foreign countries across continents.
- MILAN 2024 is scheduled under the aegis of Eastern Naval Command with invitation extended to 58 countries.

#### 7.

(c)

#### Indian Coast Guard

#### Central Armed Police Forces (CAPFs)

- CAPFs are seven security forces in India under the authority of the Ministry of Home Affairs.
- The CAPFs are well-trained and well-equipped forces and play a vital role in India's security architecture.
- They are:
  - O Assam Rifles (AR)
  - Border Security Force (BSF)
  - o Central Industrial Security Force (CISF)
  - Central Reserve Police Force (CRPF)
  - IndoTibetan Border Police (ITBP)
  - National Security Guard (NSG))
  - o Sashastra Seema Bal (SSB)
- Each of these forces has its own specific mandate and role, but they all share the common goal of maintaining internal security and border integrity.

#### 8. (b)

**In News:** The **Indian Air Force** will be conducting Exercise Vayu Shakti-24 at the Pokhran Air to Ground Range, near Jaisalmer.

• The last edition was held on 16 February 2019.

<u>Exercise Vayu Shakti-2024</u> will be a demonstration of the IAF's capability to deliver weapons with long range, precision capability as well as conventional weapons accurately, on time and with devastating effect, while operating from multiple air bases.

• It will also exhibit joint operations with the army, which tri-services have been doing for some time ahead as they move towards proposed jointnes.

#### 9. (c)

#### USA

#### Predator drones-MQ-9B

- The deal for 31 MQ-9B Unmanned Aerial Vehicles (UAVs) was recently concluded by the Indian government with the **United States**.
- The deal will include 15 Sea Guardians for the Indian Navy, and eight Sky Guardians each for the Indian Army and the Indian Air Force. The deliveries are expected to begin in 2027.
- The MQ-9B UAV is a high-altitude, long-endurance UAV that can be used for a variety of missions, including intelligence, surveillance, and reconnaissance (ISR), strike, and electronic warfare.

#### 

# **INTERNATIONAL RELATIONS**

1. Which one of the following passed the 'Nature Restoration Law' that was sometimes seen in the news?

- (a) European Union
- (b) Australia
- (c) United Kingdom
- (d) African Union
- 2. With reference to the *Financial Action Task Force (FATF)*, consider the following statements:
  - 1. It's headquarter is located at Paris in France.
  - 2. Countries known as **Non-Cooperative Countries or Territories** are put on the blacklist.
  - 3. Countries that are considered a safe haven for supporting terror funding and money laundering are put in the FATF grey list.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None
- **3.** With reference to the International Energy Agency (IEA), which of the following statements is/are correct?
  - 1. It was created in response to the 1973-1974 oil crisis.
  - 2. A candidate country to the IEA must be a member country of the OECD.

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.** Which one of the following recently adopted the '*Digital Services Act*' to ensure that users have access to a wide range of safe products and services online?
  - (a) European Union (EU)
  - (b) G-20
  - (c) G-7
  - (d) North Atlantic Treaty Organization
- **5.** Which among the following countries are a part of South Asia Subregional Economic Cooperation (SASEC) Corridor Connectivity?
  - 1. Sri Lanka
  - 2. Afghanistan
  - 3. Maldives
  - 4. India

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

#### 6. Consider the following statements with reference to North Atlantic Treaty Organization (NATO).

- 1. The Treaty of Versailles forms the basis of the North Atlantic Treaty Organization (NATO).
- 2. Article 5 of the treaty highlights that an attack on one member is considered an attack on all.
- 3. NATO is resourced through the direct and indirect contributions of its members.
- 4. NATO's purpose is to guarantee the freedom and security of its members only through military means.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All Four

#### 7. With reference to the 'Free Movement Regime', consider the following statements:

- 1. It came into existence in 2018 as a part of India's Act East policy.
- 2. Currently, India follows this regime with Myanmar, Bangladesh and China.

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 Kaladan Multi-Modal Transit Transport Project, consider the following statements:

- 1. Under it port of Kolkata will be connected with the port of Sittwe in Rakhine.
- 2. It will also connect Tripura state in northeastern India to the port of Sittwe in Myanmar.

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 countries are members of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)?
  - 1. Bangladesh
  - 2. India
  - 3. Maldives
  - 4. Myanmar

Select the correct answer using the code given below:

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

# **10.** The Belfast Agreement, sometime appeared in the news, is in the context of:

- (a) Russia Ukraine negotiation
- (b) British-Irish Peace Process
- (c) Sudanese peace process
- (d) Turkey-NATO negotiation

#### **11.** Which of the following countries are the members of the recently announced India-Middle East-Europe-Economic Corridor (IMEC)?

- 1. India
- 2. Italy
- 3. Iran
- 4. France
- 5. Turkiye

Select the correct answer using the code given below:

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

# **12.** The term '*Medium-Term Action Plan – or MTAP V*' was sometimes mentioned in the news in context of:

- (a) Safeguarding Hindu Kush Himalayan Region
- (b) Combating Drought in African Region
- (c) Establishing Smog Towers in Highly Polluted Region
- (d) Mitigating the Hunger in Least Developed Countries

# 13. Which of the following statements is/are correct about the Indo-US Civil Nuclear deal?

- 1. India agreed to separate its civil and military nuclear facilities.
- 2. The United States agreed to work toward full civil nuclear cooperation with India.
- 3. All nuclear facilities in India, including military ones, were placed under International Atomic Energy Agency (IAEA) safeguards as a result of the deal.

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 Paris Club, often seen in the news, consider the following statements:

- 1. It is an informal group of mostly western creditor countries.
- 2. The members of the Paris Club are also members of the Organisation for Economic Co-operation and Development (OECD).

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.** Which one of the following countries participated in the recently approved *Bilateral Investment Treaty* (*BIT*) by India?
  - (a) Saudi Arabia
  - (b) United Arab Emirates
  - (c) Israel
  - (d) Iran

# **16.** With reference to the *Schengen Zone*, consider the following statements:

- 1. It covers all the countries of the European Union.
- 2. It allows for passport-free travel between countries that fall within the European zone without special formalities.

Which of the statements given above is/are correct?

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

17. Aspides, a naval mission, recently seen in the news is launched by which of the following?

- (a) Iran
- (b) USA
- Russia (c)
- **European Union** (d)

#### 18. The Global Initiative on Digital Health (GIDH) was launched by the World Health Organization (WHO) to:

- Provide direct financial aid to countries for digital health infrastructure development. (a)
- Set global standards and regulations for digital health technologies. (b)
- Facilitate collaboration and knowledge sharing on digital health transformation. (c)
- Develop and manage a centralized platform for storing and accessing patient data. (d)

#### 19. Consider the following pairs:

	Interpol Notice	Description
1.	Red Notice	Used for gathering additional information about a person's

- 2.
- Issued for individuals wanted for prosecution or detention for **Blue Notice** serious crimes.

location or activities.

- 3. Yellow Notice Requesting help in locating missing persons or unidentified bodies.
- 4. Green Notice Warning about potential criminal threats or modus operandi.

How many pairs given above are correctly matched?

- Only one (a)
- Only two (b)
- (c) Only three
- (d) All four

#### 20. Consider the following statements:

- 1. The NB8 is a regional cooperation format that brings together the Nordic countries and the Baltic nations.
- 2. All Nordic countries are members of the European Union.

Which of the statements given above is/are correct?

- 1 only (a)
- (b) 2 only
- Both 1 and 2 (c)
- Neither 1 nor 2 (d)
- 21. Recently, the Financial Action Task Force (FATF) removed which among the following countries from its 'Grey List'?
  - (a) Kenya
  - (b) UAE
  - (c) Namibia
  - None of the above (d)

## **EXPLANATIONS**

## 1. (a)

**In News:** Recently, the European Parliament adopted the Nature Restoration Law that sets a target to restore at least 20% of the EU's land and sea areas by 2030.

- <u>The Nature Restoration Law:</u> It is seen as a significant step towards restoring Europe's natural habitats, 81% of which are classed as being in poor health.
- It aims to restore ecosystems, habitats, and species across the EU's land and sea areas to enable the long-term recovery of biodiverse and resilient nature.
- It also seeks to contribute to achieving the EU's climate mitigation and adaptation objectives and meet international commitments.

#### 2. (c)

#### Statement 1 is correct:

- Financial Action Task Force (FATF): It is an intergovernmental organisation established in 1989 by the G7 countries to combat money laundering and terrorist financing by setting global standards and monitoring their implementation.
- Headquarter: Paris, France
- **Members:** It has 40 member countries, including the United States, **India**, China, Saudi Arabia, and European countries such as Britain, Germany, and France.

#### Statement 2 is correct:

- Black List: Countries known as Non-Cooperative Countries or Territories (NCCTs) are put on the blacklist.
- These countries support terror funding and money laundering activities.
- The FATF revises the blacklist regularly, adding or deleting entries.

## Statement 3 is correct:

- **Grey List:** Countries that are considered a safe haven for supporting terror funding and money laundering are put in the FATF grey list.
- This inclusion serves as a warning to the country that it may enter the blacklist.

## 3. (c)

## Both the statements are correct.

News: Recently, India began talks with the International Energy Agency (IEA) for full membership.

• India has joined the IEA as an associate member in 2017.

## About the IEA

- The IEA was created in response to the 1973-1974 oil crisis.
- It is a **Paris-based** intergovernmental organisation of **31 nations**.
- It aims to promote reliable, affordable, and clean energy for its member countries and the rest of the world.
- A candidate country to the IEA **must be a member country of the OECD.**

## 4. (a)

**In News :** The European Commission recently informed that the **Digital Services Act (DSA)** has started applying to all online platforms in the European Union.

- <u>Digital Services Act</u>: It is a landmark legislation introduced by the European Union (EU) to regulate online intermediaries and platforms.
  - It was adopted in 2022 and now applicable to all EU Member States.

- It aims to create a safer and more open digital space, where the rights of users are protected and businesses can freely and fairly compete.
- It is designed to ensure that users have access to a wide range of safe products and services online.

## 5. (c)

SASEC was established in 2001, it brings together Bangladesh, Bhutan, India, Maldives, Myanmar, Nepal, and Sri Lanka in a project-based partnership.

• SASEC seeks to strengthen multimodal cross-border transport networks that boost **intraregional trade** and open up trade opportunities with East and Southeast Asia.

## 6. (b)

**In News:** Former US President Donald Trump accused NATO allies of not spending enough on defence. **Statements 1 and 4 are not correct :** North Atlantic Treaty Organization (NATO) was signed in Washington D.C. on 4 April 1949 by 12 founding members. The **Washington Treaty** forms the basis of NATO.

- NATO's purpose is to guarantee the freedom and security of its members through political and military means.
- **Political :** NATO promotes democratic values and enables members to consult and cooperate on defence and security-related issues to solve problems, build trust and, in the long run, prevent conflict.
- Military : NATO is committed to the peaceful resolution of disputes.
  - If diplomatic efforts fail, it has the military power to undertake crisis-management operations.

**Statements 2 and 3 are correct :** The Treaty derives its authority from Article 51 of the United Nations Charter, which reaffirms the inherent right of independent states to individual or collective defence.

- Collective defence is at the heart of the Treaty and is enshrined in Article 5. It commits members to protect each other and sets a spirit of solidarity within the Alliance.
  - Enshrined in Article 5 of its founding treaty is the principle of collective defence the idea that an attack on **one member is considered an attack on all of them.**
- NATO is resourced through the **direct and indirect contributions** of its members.
- NATO's common funds are composed of direct contributions to collective budgets and programmes, which equate to only 0.3% of total Allied defence spending
- In 2006, **NATO Defence Minister**s agreed to commit a minimum of 2% of their Gross Domestic Product (GDP) to defence spending to continue to ensure the Alliance's military readiness.
- 7. (a)

## Statement 1 is correct and Statement 2 is not correct.

• Recently, India has decided to suspend the Free Movement Regime (FMR) with Myanmar.

## Free Movement Regime (FMR)

- The FMR came into existence in **2018 as a part of India's Act East policy**. It allows cross-border movement up to 16 km without a visa.
- The agreement was brought to facilitate local border trade, improve access to education and healthcare for border residents, and strengthen diplomatic ties.

## 8. (a)

Statement 1 is correct: Kaladan Multi-Modal Transit Transport Project is aimed at connecting the port of Kolkata with the port of Sittwe in Rakhine which would then be connected to Mizoram by road and the Kaladan river which flows by Paletwa.

Statement 2 is not correct: It involves building roads to connect Mizoram state in northeastern India to the port of Sittwe in Myanmar's Rakhine state.

## 9. (b)

**News:** Recently, the first-ever edition of the BIMSTEC aquatic championship was held in New Delhi (India).

## About BIMSTEC:

- The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a regional organization that was established on 06 June 1997 with the signing of the Bangkok Declaration.
- Members: Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand.

## 10. (b)

**In News:** The US President was in Belfast to mark 25 years of the Good Friday Agreement, the deal that ended 3 decades of bloodshed.

## Good Friday Agreement:

- It was **signed on April 10, 1998** at **Belfast**, the capital city and principal port of Northern Ireland, which was a significant milestone in the **history of Ireland**.
  - It is also known as the **Belfast Agreement.**
  - It ended more than three decades of bloody conflict, known as the 'Troubles'.
- The agreement had **two parts**:
  - A 'multi-party agreement' between Northern Ireland's major parties, and;
  - An agreement between the governments of the UK and the Republic of Ireland.
  - The economic integration and soft borders between the two Irelands were one of the key aspects.

## 11. (a)

## India-Middle East-Europe-Economic Corridor (IMEC).

- The IMEC was announced on the sidelines of the G20 meeting in New Delhi when a memorandum of understanding was signed between the **European Union** and **seven countries**, namely **India**, the US, Saudi Arabia, the United Arab Emirates (UAE), **France**, Germany, and **Italy**.
- The proposed IMEC will consist of railroad, ship-to-rail networks (road and sea) and road transport routes (and networks) extending across two corridors, that is, the east corridor connecting India to the Gulf, and the northern corridor connecting the Gulf to Europe.

## 12. (a)

## International Centre for Integrated Mountain Development (ICIMOD):

- It is a regional intergovernmental organisation established in 1983.
- It is working to make the Hindu Kush Himalayan (HKH) region greener, more inclusive, and climate resilient.
- ICIMOD is **based in Kathmandu, Nepal** and works in and for its eight regional member countries.
- It works to improve the lives and livelihoods of men, women, and children of the HKH and protect mountain environments and cultures.
- It has officially launched its new **Strategy 2030** and is excited to begin implementation in January 2023.
- In line with this strategy, their fifth **Medium-Term Action Plan or MTAP V** details how they will deliver on their commitments.

## 13. (b)

## Statement 3 is incorrect.

## The U.S.-India Civil Nuclear Agreement

• The U.S.-India Civil Nuclear Agreement, also known as the **123 Agreement**, is a landmark agreement signed in 2005 that marked a significant shift in the **nuclear relationship between the two countries**.

Key Provisions:

- Separation of Programs: India agreed to separate its civilian and military nuclear facilities, placing civilian facilities under International Atomic Energy Agency (IAEA) safeguards.
- **Nuclear Trade:** The agreement allowed the U.S. to supply nuclear fuel and technology to India for its civilian nuclear program.
- Non-proliferation Commitments: India reaffirmed its commitment to non-proliferation and agreed to additional safeguards against transferring sensitive nuclear technology or materials.

## 14. (c)

## Both the Statements are correct:

## About Paris Club

- The Paris Club is an **informal group of mostly western creditor** countries.
- It grew from a 1956 meeting in Paris between Argentina and its public creditors.
- Its objective is to find **sustainable debt-relief solutions** for countries unable to repay their bilateral loans.
- The members of the Paris Club are also members of the Organisation for Economic Co-operation and Development (OECD).
- **Members:** Australia, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Japan, Netherlands, Norway, Russia, South Korea, Spain, Sweden, Switzerland, the United Kingdom and the United States.
- Since its inception, the Paris Club has **reached 478 agreements** with 102 different debtor countries, with a total treated **debt of \$614 billion**.
- The Paris Club operates on the principles of **consensus and solidarity** and any agreement reached with the debtor country applies equally to all Paris Club creditors.
- The club used to be a dominant bilateral lender in the last century, but its importance has diminished with the emergence of China as the world's largest bilateral lender.
- In the case of Sri Lanka, **China, Japan, and India** are the largest bilateral creditors, with Japan being a member of the Paris Club.

## 15. (b)

**In News:** Recently, the Union Cabinet approved the signing and ratification of a Bilateral Investment Treaty (BIT) with the UAE to significantly boost bilateral economic engagement, including Foreign Direct Investment (FDI).

- It is an **agreement between two countries** that sets the terms and conditions for private investment by nationals and companies of one state in another.
- It is a part of the **International Investment Agreements (IIAs)** under the United Nations Conference on Trade and Development **(UNCTAD)**.
- It is expected to improve investor confidence, increase foreign investments and overseas direct investment opportunities, and have a positive impact on employment generation.

## 16. (b)

In News :

## Statement 1 is not correct:

- Schengen Zone: It covers most of the EU countries, except Cyprus and Ireland, and it includes few non-EU countries like Norway, Iceland, Switzerland, and Liechtenstein.
  - The Schengen Agreement was signed in 1985 at a Schengen village in Luxembourg (bordering France and Germany).

#### Statement 2 is correct:

- It's an area in the **European Union** without internal borders, allowing for the **free and unrestricted movement of people**.
  - It allows for passport-free travel, work and living in an EU country without special formalities between countries that fall within the European zone.

#### 17. (d)

#### European Union

**News:** The **European Union** (EU) launched a naval mission **(Aspides)** to protect the Red Sea shipping from Yemen's Houthi rebels.

#### Red Sea

- It is a critical waterway that is anchored by two strategic waterways the Suez Canal and the Bab-el-Mandeb.
- A total of 6 countries of Asia and Africa border the Red Sea-which includes Yemen and Saudi Arabia to the east, Egypt to the north and west, and Sudan, Eritrea, and Djibouti to the west.

#### Houthis

- They are a rebel group based in Yemen.
- The roots of the Houthi movement can be traced to "Believing Youth" (Muntada al-Shahabal-Mu'min), a Zaydi revivalist group founded by Hussein al-Houthi and his father, Badr al-Din al-Houthi, in the early 1990s.

#### 18. (c)

## Facilitate collaboration and knowledge sharing on digital health transformation. Global Initiative on Digital Health (GIDH)

- The GIDH will be a WHO Managed Network ("Network of Networks") that will promote equitable access to digital health by addressing challenges such as duplication of efforts and "products-focused" digital health transformation.
- Aim:
  - ALIGN efforts to support the Global Strategy on Digital Health 2020–2025;
  - **SUPPORT** quality assured technical assistance to develop and strengthen standards-based and interoperable systems aligned to global best practices, norms and standards;
  - **FACILITATE** the deliberate use of quality assured digital transformation tools that enable governments to manage their digital health transformation journey.

## 19. (b)

## Pairs 1 and 2 are not correct.

#### Types of Interpol Notice

- **Red Notice:** To seek the location and arrest of persons wanted for prosecution or to serve a sentence.
- **Yellow Notice:** To help locate missing persons, often minors, or to help identify persons who are unable to identify themselves.
- Blue Notice: To collect additional information about a person's identity, location or activities in relation to a criminal investigation.
- Black Notice: To seek information on unidentified bodies.
- Green Notice: To provide warning about a person's criminal activities, where the person is considered to be a possible threat to public safety.
- **Orange Notice:** To warn of an event, a person, an object or a process representing a serious and imminent threat to public safety.

- **Purple Notice:** To seek or provide information on modus operandi, objects, devices and concealment methods used by criminals.
- INTERPOL–United Nations Security Council Special Notice: Issued for entities and individuals who are the targets of UN Security Council Sanctions Committees.

#### 20. (a)

Statement 1 is correct: The NB8 is a regional cooperation format that brings together the Nordic countries and the Baltic nations.

- Denmark, Finland, Iceland, Norway, and Sweden (Nordic countries),
- Estonia, Latvia, and Lithuania (Baltic states).

Statement 2 is not correct: Nordic countries are members of the European Union but Norway and Iceland have rejected EU membership but belong to the EFTA (which has free trade with the EU) and the Schengen area.

#### 21. (b)

UAE

News

- Recently, the Financial Action Task Force removed the UAE from its 'Grey List'.
- Barbados, Gibraltar and Uganda were also removed from the grey list, while Kenya and Namibia were placed on it.

#### Financial Action Task Force

- It is a global money laundering and terrorist financing watchdog, established in 1989.
- It lays down international standards to combat money laundering and terrorist financing at the global level.
- FATF maintains 2 types of lists: 'Grey List' and 'Black List'.
- Black List: Countries known as Non-Cooperative Countries or Territories (NCCTs) are put on the Blacklist. These countries support terror funding and money laundering activities.
- **Grey List:** Countries that are considered a safe haven for supporting terror funding and money laundering are put in the FATF Grey list. This inclusion serves as a warning to the country that it may enter the blacklist.

## **SCIENCE & TECHNOLOGYRE**

#### 1. With reference to the Rare Diseases, consider the following statements:

- 1. Rare Diseases Day is observed on the last day of February.
- 2. Haemophilia is a type of Rare Disease.

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 Antimicrobial Resistance (AMR) ,consider the following statements:

- 1. Self-prescription without proper medical guidance is one of the leading causes of AMR.
- 2. H1 rule of India prohibits the over-the-counter (OTC) sales of antibiotics without a prescription.
- 3. The Kerala government launched Operation AMRITH to prevent the overuse of antibiotics in the state.

How many statements given above are correct?

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

#### **3.** Consider the following statements:

- 1. A virus is an infectious microbe which doesn't have capsid.
- 2. Viroids cause many infectious diseases in humans.

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. 'Obelisks' recently seen in the news, is related to which of the following?

- (a) A scientific Mission
- (b) A supercomputer
- (c) A dwarf Planet
- (d) Newly discovered Life Form
- 5. With reference to Gaganyaan Mission, which of the following statements is/are correct?
  - 1. It is the first crewed Indian space mission.
  - 2. The mission will carry a crew of astronauts into a low earth orbit at an altitude of 400 km.

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.** Operation AMRITH (Antimicrobial Resistance Intervention for Total Health) has been launched by which of the following states?
  - (a) Maharashtra
  - (b) Gujarat

- (c) Tamil Nadu
- (d) Kerala

## 7. With reference to the Coronal Mass Ejections (CMEs), consider the following statements:

- 1. They are stronger than the solar wind.
- 2. They can travel in any random direction.
- 3. They are capable of driving the Space Weather in near-Earth space.

How many of the statements given above are correct?

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

## 8. With reference to Visceral Leishmaniasis (Kala-Azar), consider the following statements:

- 1. It is a parasitic infection transmitted by sandflies.
- 2. In India, Leishmania donovani is the only parasite causing this disease.

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 Zombie deer disease, which of the following statements is/are correct?

- 1. It is a viral disease, which damages brain and nerve tissues.
- 2. It is zoonotic in 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.** Consider the following:

- 1. Manufacturing of components and systems/sub-systems for satellites.
- 2. Launch Vehicles and associated systems or subsystems.
- 3. Creation of Spaceports for launching and receiving Spacecraft.

How many of the above is / are allowed for up to 100% under the automatic route in the space sector in India?

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

## **11.** With reference to INSAT-3DS Satellite, which of the following statements is/are correct?

- 1. It was launched by Geosynchronous Launch Vehicle (GSLV), which is a four-stage launch vehicle.
- 2. It is fully funded by the Ministry of Earth Sciences.

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 followings statements with reference to" Sora"

- 1. It is an AI model developed by the Indian Space Research Organisation (ISRO).
- 2. It can generate videos up to a minute long while maintaining visual quality.

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.** Recently, the Central Drugs Standard Control Organisation (CDSCO) has approved use of Jardiance (empagliflozin) for treating which of the following medical conditions?

- (a) Tuberculosis
- (b) Cervical Cancer
- (c) Kidney Failure
- (d) Malaria

14. Which of the following functions can be successfully carried out by the AI-enabled voice cloning tool?

- 1. A renowned musician who has lost his voice due to illness but wants to release a new album.
- 2. Keeping the voices of loved ones alive for future generations.
- 3. Creating new song clips in the voice of popular pop stars.
- 4. A speech being delivered in the voice of Gandhiji with a message of unity and progress in 2047, India's 100th year of independence.

Select the correct option code among the following:

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

## 15. Which of the following statements is MOST ACCURATE regarding the Digital Twin technology?

- (a) Digital Twins are primarily used for entertainment and video games, with limited practical applications in real-world scenarios.
- (b) While promising, the lack of raw material like uranium make Digital Twins unsuitable for widespread adoption in India.
- (c) Digital Twins create virtual representations of physical assets, enabling real-time monitoring and data-driven decision-making across industries.

(d) The primary benefit of Digital Twins lies in their aesthetic appeal with minimal practical value.

## 16. Consider the following statements with reference to INSAT-3DS

- 1. It is a follow-on mission of Third Generation Meteorological Satellite from Geostationary Orbit.
- 2. It is fully funded by the Ministry of Earth Sciences (MoES).
- 3. It will be the first radar of its kind in space to systematically map Earth, using two different radar frequencies (L-band and S-band).

How many of the statements given above are correct?

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

## **17.** With reference to the Stem Cells, consider the following statements:

- 1. A stem cell is a cell with the potential to form many of the different cell types found in the body.
- 2. Embryonic Stem Cells can be derived from upto 2 months of embryos.
- 3. Adult Somatic Cells (ASCs) are in bone marrow that makes the blood.

How many of the statements given above are correct?

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

**18.** He was a British naturalist and biologist whose work laid the foundation for the modern theory of evolution. He is considered as the *'Father of Evolution'*.

Which among the following Scientists has been described above?

- (a) Charles Darwin
- (b) Gregor Mendel
- (c) Alfred Russel Wallace
- (d) Aristotle

## **19.** Consider the following statements with reference to Lymphatic filariasis

- 1. It is a Vector Borne Disease which is mainly spread by Culex mosquitoes.
- 2. It affects people living only in the tropics of Asia and Africa.
- 3. India is committed to eliminating Lymphatic Filariasis by 2027.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None
- 20. Imagine you're the captain of a spaceship travelling through the solar system. You've just received a distress call from a planet called "Earth" experiencing a strange phenomenon called "Global Warming." Based on your knowledge and the information you've gathered, which of the following actions would you MOST RECOMMEND to the inhabitants of Earth to combat this issue?
  - (a) Deploy a giant sunshield to block out a portion of the sun's radiation.
  - (b) Increase the number of volcanoes on their planet to release more heat into space.
  - (c) Genetically modify all living creatures to become cold-blooded and require less energy.
  - (d) Focus on reducing their reliance on fossil fuels and developing renewable energy sources.

## 21. With reference to Kyasanur Forest Disease (KFD), which of the following statements is/are correct?

- 1. The disease is caused by the bacteria.
- 2. The disease is transmitted to humans primarily through tick bites.

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

## 22. With reference to Dengue, which of the following statements is/are correct?

- 1. Dengue is an infection caused by bacteria of the Flaviviridae family.
- 2. The virus is transmitted to humans through the bites of infected female Aedes Aegypti mosquitoes. 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 the Lymphocytes, consider the following statements:

- 1. Cytotoxic T-cells send signals that direct other immune cells to fight infection.
- 2. Plasma cells and Memory cells are two main types of B-cells.

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

## 24. 'NexCAR19' recently seen in the news, is related to which of the following?

- (a) Newly Developed RNA based Covid- 19 Vaccine
- (b) Indigenously Developed CAR-T Cell Therapy
- (c) A Dwarf Planet
- (d) A Supercomputer

## **25.** With reference to the Kerr/Rotating Black Hole, consider the following statements:

- 1. Anything inside the ergosphere will be dragged by the black hole and can never escape.
- 2. Rotational Energy can be extracted from a rotating black hole.

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.** With reference to the Cervical Cancer, consider the following statements:

- 1. It is linked to infection with high-risk human papillomaviruses (HPV) which are transmitted through sexual contact.
- 2. It is the second most common type of cancer in India among women.
- 3. It cannot be treated even in the early stage of diagnosis.

How many of the statements given above are correct?

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

## **27.** On the eve of World Wetlands Day (WWD) 2024, the Government has designated Ramsar sites in which of the following states?

- 1. Tamil Nadu
- 2. Uttar Pradesh
- 3. Odisha
- 4. Karnataka
- 5. Gujarat

Select the correct answer using the code given below:

- (a) 1, 2 and 5 only
- (b) 1 and 4 only
- (c) 2 and 3 only
- (d) 1, 2, 3, 4 and 5
- **28.** The National Research Foundation (NRF), recently seen in the news, is going to replace which of the following bodies/institutions?
  - (a) The Science and Engineering Research Board (SERB).
  - (b) The Department of Science and Technology (DST).

- (c) The Department of Biotechnology (DBT).
- (d) The Principal Scientific Adviser.

## 29. Which of the following is/are the most likely benefits of doing a digital detox?

- (a) You can have better sleep quality and quantity
- (b) You can reconnect with nature and yourself
- (c) You can have enhanced face-to-face communication skills
- (d) All of the above

**30.** Which one of the following states recently announced the launch of a digital detox initiative?

- (a) Kerala
- (b) Karnataka
- (c) Maharashtra
- (d) Gujarat

## **31.** With reference to the Nano Diammonium Phosphate (DAP), consider the following statements:

- 1. It is a novel nano-formulation which helps in better crop growth and yield.
- 2. The tiny particle size makes Nano DAP more efficient enabling the fertiliser to enter easily inside the seed surface.

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

# **32.** Alaskapox that was recently reported from the Fairbanks North Star Borough area of Alaska, is caused by:

- (a) Fungi
- (b) Bacteria
- (c) Virus
- (d) Protozoa

# **33.** With reference to the Electronic Voting Machines (EVMs), which of the following statements is/are correct?

- 1. There are only two Indian PSUs that manufacture EVM machines.
- 2. It consists of a 'control unit' and a 'balloting unit', connected by a 5-meter cable.

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
- 34. With reference to the *Bubonic Plague*, consider the following statements:
  - 1. It is often referred to as the 'Black Death'.
  - 2. It occurs when the bacteria get into the lymph nodes.
  - 3. It is treatable with common antibiotics.

How many of the statements given above are correct?

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

### 35. With reference to the Mission Shakti, which of the following statements is/are correct?

- 1. Under the mission Defence Research and Development Organisation (DRDO) neutralized a satellite in space with its anti-satellite (ASAT) missile.
- 2. The satellite was placed in Geostationary orbit (GEO).

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

#### **36.** With reference to the Mimas, consider the following statements:

- 1. It was discovered in 1789 by Polish astronomer Nicolaus Copernicus.
- 2. It is the largest and most massive natural satellite of Jupiter.

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.** Beresheet, Hakuto, Peregrine and Odysseus, recently seen in the news, are related to which of the following?

- (a) New planets discovered in the Milky Way Galaxy.
- (b) News craters discovered on the South pole of the Moon.
- (c) These are the names of black holes recently discovered by NASA.
- (d) These are the private moon missions launched in recent times.

#### **38.** Which of the following statements about Quantum Computing is NOT true?

- (a) Quantum computers use qubits, which can exist in a superposition of states, unlike classical bits which are strictly 0 or 1.
- (b) Quantum computers are expected to revolutionize fields like cryptography, materials science, and drug discovery due to their ability to solve certain problems significantly faster than classical computers.
- (c) Quantum computers are currently commercially available and widely used in various industries.
- (d) Building and maintaining quantum computers is challenging due to their sensitivity to environmental factors and the need for specialized hardware and software.

## **39.** "Sora", recently seen in the news, is related to which of the following?

- (a) Volcano
- (b) Dwarf Planet
- (c) Al Model
- (d) Anti-Satellite Weapon

## **40.** The term 'human rating' sometimes appeared in the news, best described as:

- (a) Certifying humans on the basis of knowledge of space and astronomy.
- (b) Categorisation of humans that are capable of space walk.
- (c) Certifying a system capable of safely transporting humans into space.
- (d) Categorisation of humans and machines on the basis of health concerns in space.

## **EXPLANATIONS**

## 1. (c)

Statement 1 is correct: Rare Diseases Day is observed on the last day of February month. The theme for Rare Disease Day 2024 is "Share your colours."

Statement 2 is correct: A rare disease is often a lifelong disease or disorder with a prevalence of 1 or less, per 1000 population.

- Considering the population of India the suggested threshold for India for a disease to be defined as rare is 1 in 10,000.
- Examples of Rare Diseases: Lysosomal Storage Disorders (LSD), Pompe disease, cystic fibrosis, muscular dystrophy, spina bifida, haemophilia etc.
- Haemophilia is usually an inherited bleeding disorder in which the blood does not clot properly.
- 2. (c)

## All the Statements are correct.

## What is Antimicrobial Resistance?

- Antimicrobial Resistance (AMR) occurs when bacteria, viruses, fungi and parasites change over time and no longer respond to medicines making infections harder to treat and increasing the risk of disease spread, severe illness and death.
- Nearly **700,000 people** die of AMR every year. The toll can rise to as many as 10 million by 2050 and eat up **3.8 per cent** of annual global gross domestic product (GDP).

## Causes for Antimicrobial Resistance

- Overuse and Misuse of Antibiotics: The excessive and inappropriate use of antibiotics in humans and animals is a major driver of antimicrobial resistance. This includes using antibiotics without a prescription, not completing the full course of prescribed antibiotics, and using antibiotics for non-bacterial infections.
- Inadequate Dosage and Duration: When antibiotics are not taken in the correct dosage and for the recommended duration, it can lead to incomplete eradication of the targeted microorganisms, allowing the surviving bacteria to develop resistance.
- **Self-Medication:** Self-prescription without proper medical guidance contributes to the misuse of antibiotics.

## Measures Taken against Antimicrobial Resistance

- India's Red Line campaign: Which demands that prescription-only antibiotics be marked with a red line, to discourage the over-the-counter sale of antibiotics— is a step forward.
- The Kerala Drug Control Department launched **Operation AMRITH** to prevent the overuse of antibiotics in the state.
- In 2011, the Indian government introduced the **H1 rule** to prohibit the **over-the-counter (OTC) sales** of antibiotics without a prescription, responding to the growing concern over antimicrobial resistance (AMR).
- In 2013, the rule to limit the OTC restriction was limited to second- and third-line antibiotics, allowing the sale of first-line antibiotics without a prescription.
- Step was taken to ensure that life-saving antibiotics remained accessible to the public, especially in remote areas

#### 3. (d)

**Both the statements are not correct:** A virus is an infectious microbe consisting of a segment of nucleic acid (either DNA or RNA) surrounded by a **protein coat called capsid**.

• Viruses are **not considered living organisms** because they cannot carry out metabolic processes on their own.

- Viroids are small, infectious pathogens that consist of a **short**, **single-stranded RNA molecule without any surrounding protein coat**.
- They are significantly smaller than viruses and were first discovered in the **1970s by the American** plant pathologist Theodor Otto Diener.
- Viroids are primarily known for their impact on plants, there is **no evidence to suggest that they** infect animals or humans. Hence, Statement 2 is not correct.

## 4. (d)

Scientists have discovered a new life form known as **obelisks**.

## <u>About</u>

- When analysing genetic material from bacteria present in the human gut, the scientists identified **a new form of life lying between viruses and viroids** on the scale of simplicity. They called them 'obelisks'.
- The discovery was made possible using data obtained using a powerful technique called **next-generation sequencing (NGS)**.
- Obelisks have a circular single-stranded RNA genome and no protein coat but, like viruses, their genomes contain genes that are predicted to code for proteins.

## 5. (c)

## Both the statements are correct.

**News:** Recently, Prime Minister Narendra Modi announced the names of the four astronaut-designates that will fly to **low-Earth orbit** as part of ISRO's Gaganyaan space flight mission.

## Gaganyaan Mission

- It is the **first crewed Indian space mission** and is expected to take off in 2025.
- The mission will demonstrate India's human spaceflight capability by launching **astronauts to an orbit 400 kilometres** above the Earth for a three day mission.

## Significance

• If successful, India will become the fourth country to send humans into space after Russia, US, and China.

## 6. (d)

## Kerala

## <u>Context</u>

• The Kerala Drug Control Department launched Operation AMRITH to prevent the overuse of antibiotics in the state.

## **Background**

- In 2011, the Indian government introduced the **H1 rule** to prohibit the **over-the-counter (OTC) sales** of antibiotics without a prescription, responding to the growing concern over antimicrobial resistance (AMR).
- In 2013, the rule to limit the OTC restriction was limited to second- and third-line antibiotics, allowing the sale of first-line antibiotics without a prescription.
  - Step was taken to ensure that life-saving antibiotics remained accessible to the public, especially in remote areas.
  - Operation AMRITH enforces the original H1 rule, mandating a doctor's prescription for acquiring any class of antibiotics.

## 7. (c)

In News : Recently, ISRO informed that the Plasma Analyser Package for Aditya (PAPA) payload onboard the Aditya-L1 has been operational and performing nominally.

## Statement 1 is correct:

• Coronal Mass Ejections (CMEs): They are large expulsions of plasma and magnetic fields (frozen in

flux) from the Sun's corona.

• These are **stronger than the background solar wind** interplanetary magnetic field (IMF) strength.

#### Statement 2 is correct:

• They can travel in **any random direction** and cut through solar winds, and they are **sometimes associated with flares** but **can occur independently**.

#### Statement 3 is correct:

- CMEs are capable of driving the **Space Weather in near-Earth space**.
- If CMEs are Earth-directed, they can cause severe implications.

### 8. (c)

## Both the statements are correct.

- Visceral leishmaniasis is a **parasitic infection** transmitted by sandflies.
- Visceral leishmaniasis is commonly known as kala-azar (KA), a word coined in the late nineteenth century in India, which means "black disease", referring to the greyish or blackish discoloration of the skin during infection, from the Hindi word for black (kala) and the Persian word for disease (azar).
- Kala-azar is a slow progressing indigenous disease caused by a protozoan parasite of genus Leishmania.
- In India, Leishmania donovani is the only parasite causing this disease.
- It is characterized by irregular bouts of fever, weight loss, enlargement of the spleen and liver, and anaemia. Most cases occur in Brazil, east Africa and India.
- It causes fever, weight loss, spleen and liver enlargement.

## 9. (a)

## Statement 1 is correct.

#### Zombie deer disease

- It is a fatal **neurological illness and chronic wasting disease that** affects **deer**, **elk**, **reindeer**, **sika deer**, **and moose**.
  - Symptoms include emaciation, disorientation, lethargy, and abnormal behavior, earning it the nickname "zombie" due to affected animals exhibiting staggering gaits and vacant expressions.
- Causative factor: It is caused by abnormal proteins called prions, which damage brain and nerve tissues.
- Symptoms: It may take over a year before an infected animal develops symptoms, which can include drastic weight loss (wasting), stumbling, listlessness and other neurologic symptoms.
- **Treatment:** There are no treatments or vaccines for the disease.
- **Transmission:** It spreads between animals through **body fluids** like feces, saliva, blood, or urine, either through **direct contact or indirectly** through environmental contamination of soil, food or water. It can spread quickly between deer populations.
- So far, there have not been any reports of zombie deer disease transmitting to humans. Therefore, statement 2 is incorrect.

## 10. (a)

In News : Recently, the Union Government approved 100% FDI in the Space sector.

Policy Changes and FDI in Space Sector: The liberalised entry routes under the amended policy are aimed to attract potential investors to invest in Indian companies in space.

#### Option 1 is correct:

• Up to 100% under Automatic route: Manufacturing of components and systems/ sub-systems for satellites, ground segment and user segment.

#### Option 2 and 3 are not correct:

- Up to 49% under Automatic route: Launch Vehicles and associated systems or subsystems, Creation of Spaceports for launching and receiving Spacecraft.
  - Beyond 49% these activities are under government route.
- Up to 74% under Automatic route: Satellites-Manufacturing & Operation, Satellite Data Products and Ground Segment & User Segment.
- Beyond 74% these activities are under government route.

### 11. (b)

**News:** ISRO's GSLV-F14 carrying **INSAT-3DS Satellite** successfully lifted off from the Satish Dhawan Space Centre in Sriharikota, Andhra Pradesh.

#### **INSAT-3DS Satellite**

- The **Geosynchronous Satellite Launch Vehicle** (GSLV), which is a **three-stage** launch vehicle, will deploy the INSAT-3DS satellite into the Geosynchronous Transfer Orbit (GTO).
- Subsequent orbit-raising maneuvers will ensure that the satellite is positioned in a Geo-stationary Orbit.
- INSAT-3DS satellite is a follow-on mission of Third Generation Meteorological Satellite from Geostationary Orbit.
- It is fully funded by the **Ministry of Earth Sciences** (MoES).

#### Significance

- The satellite is designed for enhancing meteorological observations and monitoring of land and ocean surfaces for weather forecasting and disaster warning.
- It will augment the Meteorological services along with the presently operational INSAT-3D and INSAT-3DR satellites.
- It will also provide Satellite Aided Search and Rescue services.

### 12. (b)

**Statement 1 is not correct : OpenAI**, the creator of the revolutionary chatbot ChatGPT, has launched a new generative artificial intelligence (GenAI) model **"Sora**"

• Sora is an AI model that can create realistic and imaginative scenes from text instructions.

Statement 2 is correct : Sora can generate videos up to a minute long while maintaining visual quality and adherence to the user's prompt.

• Sora is able to generate complex scenes with multiple characters, specific types of motion, and accurate details of the subject and background.

## 13. (c)

The apex drug regulatory body Central Drugs Standard Control Organisation (CDSCO), has approved use of Jardiance for treating kidney failure.

- The drug Jardiance (empagliflozin) 10mg tablets has been approved to reduce the risk of sustained decline in estimated **glomerular filtration rate (eGFR)** which is done to check how well the kidneys are filtering.
- Earlier, the Jardiance was given approval **only for the treatment of heart failure** with reduced ejection fraction (HFrEF).

## 14. (d)

## All statements are correct.

## Voice cloning

- Voice cloning technology employs **sophisticated Al algorithms** to replicate the intricacies of human speech patterns.
- This innovative process hinges on the **principle of training neural networks**, a fundamental aspect of artificial intelligence, using extensive datasets of recorded speech.

- There's a host of these applications online with popular ones like Murf, Resemble and Speechify.
  - Recently, former Pakistani Prime Minister Imran Khan's political party used an AI-generated speech from the now imprisoned leader in an attempt to rally for votes.

#### **Applications**

- **Preserving legacy:** Can keep the voices of loved ones alive for future generations.
  - Apple introduced a voice cloning feature in iOS 17 intended to help people who may be in danger of losing their voice to a degenerative disease.
- **Personalized experiences:** Custom virtual assistants, interactive storytelling, and more immersive digital interactions.
- Gaming: Prominent tech companies also have a hand in the Al voice game. Recently, Meta launched SeamlessM4T, which can understand nearly 100 languages from speech or text and generate translations in real-time.
- Accessibility: Can offer voice to those who have lost it or will lose it due to illness or disability.
- Song creations: YouTube took a similar route and announced Dream Track that allows them to create song clips featuring AI vocals with permission from pop stars like Demi Lovato, Sia and John Legend.
- Creative applications: Enhancing storytelling, audio games, and immersive experiences.

## 15. (c)

## About Digital Twin:

- **Digital Twin technology creates virtual replicas of physical assets,** constantly updated with real-time data and replicating its behavior.
- It allows for **real-time monitoring**, simulation and analysis for experimental iterations.
- It **leverages data collected from sensors and other sources** to create a real-time representation that reflects the physical counterpart's state and behavior.

**Statement (a) is incorrect.** While Digital Twins can be used for entertainment, their primary applications lie in real-world sectors like **manufacturing**, **healthcare**, **Smart cities**, **Logistics and supply chain**.

**Statement (b) is incorrect**. While cost and complexity are initial challenges, ongoing advancements are making Digital Twins more accessible. Countries like India are actively exploring their potential.

Statement (c) accurately describes the core function and potential of Digital Twins.

Statement (d) is incorrect: They offer valuable insights for optimization, simulation, and decision-making, impacting various sectors.

## 16. (b)

In News :INSAT-3DS will be launched by the Indian Space Research Organisation (ISRO).

<u>Statements</u> 1 and 2 are correct : INSAT-3DS Satellite is a follow-on mission of Third Generation Meteorological Satellite from Geostationary Orbit.

- The GSLV aims at deploying the INSAT-3DS meteorological satellite into the Geosynchronous Transfer Orbit (GTO).
  - Subsequent orbit-raising maneuvers will ensure that the satellite is positioned in a Geostationary Orbit.
- It is fully funded by the **Ministry of Earth Sciences (MoES**).

**Statement 3 is not correct :** INSAT-3DS is designed for **enhanced meteorological observations** and **monitoring of land and ocean surfaces** for **weather forecasting and disaster warning**.

[Note : NISAR will be the first radar of its kind in space to systematically map Earth, using two different radar frequencies (L-band and S-band) to measure changes of our planet's surface, including movements as small as centimeter]

## 17. (b)

Statement 1 is correct: A stem cell is a cell with the potential to form many of the different cell types found in the body.

Statement 2 is not correct: Embryonic Stem Cells: These are derived in about six- to eight-day embryos, and these are cells with even more potential than the adult cells, because an embryonic stem cell derived in the proper way can give rise to neural cells, muscle cells, and liver cells.

Statement 3 is correct: Somatic Stem Cells: These are the Adult Somatic Cells (ASCs). They are in bone marrow that makes the blood.

## 18. (a)

**February 12** is globally celebrated as **Darwin Day** to mark the **birthday of naturalist Charles Darwin** (12 February 1809 – 19 April 1882).

- Charles Darwin was a **British naturalist and biologist** whose work laid the foundation for the **modern theory of evolution**.
- He is best known for his groundbreaking book "On the Origin of Species," published in 1859, which presented evidence for the theory of natural selection as the mechanism driving evolution.
- He is considered as the Father of Evolution.

## 19. (b)

<u>In News:</u> The first phase of the Bi-annual Nationwide Mass Drug Administration (MDA) campaign for Lymphatic Filariasis elimination was launched recently.

Statements 1 and 3 are correct : <u>Lymphatic filariasis</u> is a Vector Borne Disease which is caused mainly by Wuchereria Bancrofti and spread by Culex mosquito.

- This mosquito grows in dirty accumulated water.
- It is a neglected **tropical disease that is** commonly known as **elephantiasis**.
- Infection occurs when filarial parasites are transmitted to humans through mosquitoes.
  - Infection is usually acquired in childhood and causes hidden damage to the lymphatic system.
  - India is committed to eliminating Lymphatic Filariasis by 2027, three years ahead of the global target through mission mode, multi partner, multi sector, targeted drive for which we have drawn up the roadmap"

**Statement 2 is not correct :Lymphatic filariasis** affects over 120 million people in 72 countries throughout the tropics and subtropics of **Asia, Africa, the Western Pacific, and parts of the Caribbean and South America**.

## 20. (d)

## Focus on reducing their reliance on fossil fuels and developing renewable energy sources.

While the other options might seem like creative solutions, they are either **impractical**, dangerous, or have unintended consequences.

- Sun shield: Blocking out sunlight would disrupt the planet's entire ecosystem and potentially lead to a new set of problems.
- More volcanoes: This would release harmful gases and ash into the atmosphere, further damaging the environment.
- Genetic modification: Altering the entire planet's lifeforms carries unpredictable and potentially disastrous consequences.

## 21. (b)

#### Statements 1 is not correct and Statements 2 is correct. What is Kyasanur Forest Disease (KFD)?

• **History:** The disease was first noticed in the Kyasanur Forest area of Sorab Taluk in Shimoga district in 1956-57, and was named after the region.

- Cause: Monkey fever is caused by the Kyasanur Forest disease virus (KFDV), a member of the Flaviviridae virus family.
- **Transmission:** The disease is transmitted to humans primarily through **tick bites** or contact with an infected animal, particularly a sick or recently deceased monkey.
- Human beings who visit the forest area either for livelihood, to graze cattle, or to collect firewood contract the disease. There is no evidence of person-to-person transmission.

## 22. (b)

## Statements 1 is not correct and Statements 2 is correct.

### What is Dengue?

- Dengue is a viral infection caused by the **dengue virus (DENV)**, transmitted to humans through the bite of infected mosquitoes. It is more common in tropical and subtropical climates.
- **DENV is an RNA virus** of the **Flaviviridae family** with four serotypes (DENV-1 to 4). Infection with one serotype provides lifelong immunity to that type, but subsequent infections with different serotypes can lead to severe, life-threatening forms of the disease.

#### **Transmission**

- Vector: The virus is transmitted to humans through the bites of infected female mosquitoes, primarily the Aedes Aegypti mosquito.
- Human-to-mosquito transmission: After feeding on a DENV-infected person, the virus replicates in the mosquito midgut before disseminating to secondary tissues, including the salivary glands.

## 23. (b)

Statement 1 is not correct: B-cells and T-cells are a specific type of white blood cell called lymphocytes.

- They help the immune system to fight germs and protect from disease.
- Types of T cells:
  - **Cytotoxic T-cells:** They kill cells infected with viruses and bacteria, and they also destroy tumor cells.
  - $\circ$  Helper T-cells: They send signals that direct other immune cells to fight infection.
  - **Regulatory T-cells (Tregs):** These cells suppress excessive immune responses to prevent autoimmune reactions and maintain immune tolerance. They play a crucial role in preventing the immune system from attacking the body's own cells and tissues.

Statement 2 is correct: B-cells make antibodies in response to antigens (antibody generators).

• There are two main types of B-cells: plasma cells and memory cells. Both types help to protect from infection and disease.

## 24. (b)

## Indigenous CAR-T cell therapy (NexCAR19) is now available for commercial use.

- NexCAR19 is the indigenously developed therapy for B-cell cancers (types of cancers that form in the immune system's cells) such as **leukemia and lymphoma.**
- It has been developed collaboratively by **ImmunoACT**, a company incubated at the Indian Institute of Technology Bombay (IITB), and **Tata Memorial Hospital**.
- The commercial use of this therapy was approved by the **Central Drugs Standard Control Organisation (CDSCO).**

## 25. (b)

Statement 1 is not correct: A rotating black hole is also called a Kerr black hole.

- There are two event horizons, the outer and the inner.
- The region of **space in-between the two horizons is the ergosphere**.
  - Anything inside the ergosphere will be dragged by the black hole and **rotate with it but it can still escape.**
  - However, anything inside the inner event horizon can never escape.

Statement 2 is correct: Scientific Significance: We can extract rotational energy from a rotating black hole.

- If something is sent inside of the ergosphere, and split it up into two parts, one goes in the black hole while the other comes out.
- The part coming out can be made to have a much higher speed, hence higher energy.

### 26. (b)

**Statement 1 and 2 are correct:** Cervical cancer develops in a **woman's cervix** (the entrance to the uterus from the vagina).

- Spread: Almost all cervical cancer cases (99%) are linked to infection with high-risk human papillomaviruses (HPV), an extremely common virus transmitted through sexual contact.
  - Although most infections with HPV resolve spontaneously and cause no symptoms, persistent infection can cause cervical cancer in women.
- **Prevalence:** Cervical cancer is the **fourth most common cancer** in women.
  - o It is the second most common type of cancer in India for women.

Statement 3 is not correct: Treatment: When diagnosed, cervical cancer is one of the most successfully treatable forms of cancer, as long as it is detected early and managed effectively.

Cancers diagnosed in late stages can also be controlled with appropriate treatment and palliative care. **(b)** 

On the eve of WWD 2024, India has increased its tally of Ramsar sites (Wetlands of International Importance) to 80 by designating five more wetlands as Ramsar sites.

Three of these sites, Ankasamudra Bird Conservation Reserve, Aghanashini Estuary and Magadi Kere Conservation Reserve are located in Karnataka whereas two, Karaivetti Bird Sanctuary and Longwood Shola Reserve Forest are in Tamil Nadu.

## 28. (a)

27.

## The Science and Engineering Research Board (SERB)

## The National Research Foundation (NRF) Bill, 2023

- The approved Bill will pave the way to establish NRF, an apex body to provide high-level strategic direction of scientific research in the country as per recommendations of the National Education Policy (NEP).
- The Department of Science and Technology (DST) will be the administrative Department of NRF. National Research Foundation (NRF)
- Aim: To seed, grow and promote Research and Development (R&D) and foster a culture of research and innovation throughout India's universities, colleges, research institutions, and R&D laboratories.
- **Governing Board**: NRF will be governed by a **Governing Board** consisting of eminent researchers and professionals across disciplines.
  - Ex-officio President of the Board: The Prime Minister
  - Ex-officio Vice-Presidents of the Board: Union Minister of Science & Technology & Union Minister of Education
- **Executive Council:** NRF's functioning will be governed by an Executive Council chaired by the **Principal Scientific Adviser** to the Government of India.

## • Role of NRF:

- Forge collaborations among the industry, academia, and government departments and research institutions,
- **Create an interface mechanism** for participation and contribution of industries and State governments in addition to the scientific and line ministries(specific governmental departments).

- Focus on creating a policy framework and putting in place regulatory processes that can encourage collaboration and increased spending by the industry on R&D.
- **Repeal**: The bill will also repeal **the Science and Engineering Research Board (SERB)** established by an act of Parliament in 2008.

#### 29. (d)

#### All of the above

### Digital detox:

- A digital detox is a **period of time when one voluntarily abstains from using digital devices** such as smartphones, computers, and social media.
- This can be for a **short period of time, like a few hours, or for a longer period**, like a week or even a month.

## Benefits:

- Assist people to overcome addiction to technology. Research shows that about 61% of people admit they're addicted to the internet and their digital screens.
- Improved mental health and wellbeing. Disconnecting from technology can help reduce stress and anxiety, and can improve overall mental health and wellbeing.
- Increased productivity and creativity. Taking a break from constant digital stimulation can help improve focus and concentration, leading to increased productivity and creativity.
- Better sleep quality and quantity. Excessive screen time has been linked to poor sleep quality and disrupted sleep patterns. A digital detox can help improve sleep by reducing exposure to blue light and stimulating content.
- Enhanced face-to-face communication skills. Spending less time online can lead to more time for face-to-face interactions, improving communication skills and overall social connectedness.

## 30. (b)

## Karnataka

## Karnataka's Digital detox initiative:

- The Karnataka government recently announced it will ensure a responsible gaming environment by pursuing 'digital detox' initiatives.
- The digital detox programme will **focus on the time people spend** in gaming and on social media.
- Although the initiative looks counter-productive to the industry, the government is expected to spread awareness on the ills of the sector.
- The programme will enable **meaningful and constructive use of technology** while minimising its adverse effects on individuals and society.
- As part of the initiative, **both online and offline 'Digital Detox' centres will be set up** across the state.

## 31. (c)

Both the statements are correct: It is a unique liquid fertilizer product that contains nanoparticles of Diammonium Phosphate (DAP).

- The small size of Nano DAP (< 100 nm) and high surface area drive the easy absorption by plant leaves.
- It is a novel nano-formulation which helps in better crop growth and yield, reduced environmental burden and increased farmer profitability.
- More Efficient: The tiny particle size makes Nano DAP more efficient than its conventional counterpart, enabling the fertiliser to enter easily inside the seed surface or through stomata and other plant openings which leads to better quality and increase in crop yields.

## 32. (c)

In News : Alaskapox, a rare virus causing mild illnesses, has been found in Alaska.

• Alaskapox Virus (AKPV) is **an orthopoxvirus** that was first identified in 2015.

- Orthopoxviruses are known to infect mammals, including humans, and can lead to the development of skin lesions.
- Transmission: All recorded cases have been reported from the Fairbanks North Star Borough area, located a few hundreds kilometres from the Kenai Peninsula in Alaska.
  - o It is believed that the virus is transmitted from animals to humans.
  - o It is transmitted from small mammals and is related to smallpox and cowpox.
  - However, **no human-to-human transmission** has occurred so far.

#### 33. (c)

## Both the statements are correct.

#### Electronic Voting Machine (EVM)

- Electronic Voting Machine (EVM) is a simple electronic device used to record votes in place of ballot papers and boxes which were used earlier in conventional voting systems.
- The use of EVM started back in **1982 Kerala Assembly elections.** Prior to this only ballot papers and ballot boxes were allowed.

#### How does the machine work?

- EVM has two parts, it consists of a 'control unit' and a 'balloting unit', connected by a 5-meter cable.
- The control unit is with the Election Commission-appointed polling officer and it is the brain of the EVM.
- The balloting unit is in the voting compartment into which the voter enters to cast the vote in secret by pressing the button against the name and symbol of the candidate of her choice.
  - The balloting unit is turned on only after the polling officer presses the 'Ballot' button on it.
- The EVM runs on a **6 volt single alkaline battery** fitted in the control unit, and can even be used in areas that have no electricity.

#### Production and design

- There are only two Indian PSUs that manufacture EVM machines;
  - O Bharat Electronic Limited (BEL) and
  - Electronics Corporation of India Limited (ECIL).
- The secret source code is only accessible to a few engineers.

## 34. (c)

## All the statements are correct:

## Bubonic Plague:

- It is often referred to as the 'Black Death'.
- It is an infectious disease caused by the **bacterium Yersinia pestis** which is usually found in small mammals and their fleas.
  - It occurs when the **bacteria get into the lymph nodes**.
- Earlier, it occurred from 1346 to 1353, resulting in the deaths of as many as 50 million people in Europe.

## Treatment:

- All forms of the **plague are treatable with common antibiotics**, and people who seek treatment early have a better chance of a full recovery.
- Sunlight and drying can kill plague bacteria on surfaces.

#### 35. (a)

#### Statement 1 is correct and statement 2 is incorrect. <u>Mission Shakti</u>

• Defence Research and Development Organisation (DRDO) in **2019** successfully neutralized a satellite in space with its anti-satellite (ASAT) missile in Mission Shakti.

- The satellite downed by the ASAT missile was **Microsat-R**, an imaging satellite in the **Low Earth Orbit** (LEO) at 300 km in space.
- **Significance:** Anti-satellite weapons provide the capability to shoot down enemy satellites in orbit thereby disrupting critical communications and surveillance capabilities.
- ASAT missiles also act as a space deterrent in dissuading adversaries from targeting the country's satellite network.

#### 36. (d)

**In News :** Astronomers believe Mimas may have a liquid ocean around 20-30 km under its heavily cratered ice shell.

Statements 1 and 2 are not correct : Mimas was discovered in 1789 by English astronomer William Herschel.

- It is less than 123 miles (198 kilometers) in mean radius.
- The crater-covered Mimas is the smallest and innermost of Saturn's major moons.
- Its low density suggests that it consists almost **entirely of water ice**, which is the only substance ever detected on Mimas.
- Its most distinguishing feature is a giant impact crater named Herschel
- Mimas appears to be frozen solid is puzzling because Mimas is closer to Saturn.

#### 37. (d)

## These are the private moon missions launched in recent times.

'Odysseus' Moon lander/IM (Intuitive Machines)-1 mission

- Launched on: February 15, 2024
- Launch vehicle: Aboard a SpaceX Falcon 9 rocket
- **Developed by:** Intuitive Machines, a private entity.
- **Mission objective:** Land near the lunar south pole, a region rich in resources and unexplored by previous crewed missions.
- **Onboard**: It carried six NASA experiments and technology demonstrations alongside six private payloads.
- Significance: If Odysseus completes its journey and soft lands on the Moon, it will make it the first privately-led mission to do so.
- Previous attempts: Israel's Beresheet attempted in 2019, Japan's Hakuto in 2023 and the American Peregrine in 2024.
- All of them failed to land on the Moon, with Astrobiotic's Peregrine suffered a propellant leak hours after launch and eventually burned up in Earth's atmosphere.

#### 38. (c)

## Quantum computing:

- Quantum computing is a revolutionary computing paradigm **utilizing the principles of quantum mechanics** to perform calculations.
- Unlike classical computers that rely on bits (0 or 1), quantum computers harness qubits, which can exist in a state of superposition (both 0 and 1 simultaneously).
  - For example, to perform one calculation that requires **16 different inputs**, a classical computer requires a total of **four bits and sixteen computations**.
  - But with four qubits in superposition, a quantum computer could generate answers corresponding to all **16 inputs in a single computation**.
- This unique property allows them **to perform certain calculations exponentially faster than classical computers**, opening doors to groundbreaking advancements in various fields.
  - Quantum computers **hold potential for significant advancements in various fields** due to their ability to solve specific problems faster than classical computers.

- **Building and maintaining quantum computers is currently complex** due to their sensitivity and specific requirements.
  - **Specific environment:** All those systems suitable for realising qubits can operate as qubits only at very low temperatures or in a high vacuum or both.
  - Hardware limitations: Qubits are fragile and prone to errors, making it difficult to build large, stable quantum computers.
  - **Software development:** Quantum algorithms are fundamentally different from classical algorithms, requiring specialized programming languages and techniques.
- Option (c) is false. While significant progress has been made, quantum computers are still under development and not yet commercially available for widespread use.
- **Commercial viability:** Quantum computers based on available technologies are expensive. If a technology is not economically viable, it is not easy to sustain it long enough for breakthroughs to happen.

#### 39. (c)

**News:** OpenAI, the creator of the revolutionary chatbot ChatGPT, has launched a new generative artificial intelligence (GenAI) model "Sora".

#### Sora

- Sora is an **AI model** that can create realistic and imaginative scenes from text instructions.
- It can generate videos up to a minute long while maintaining visual quality and adherence to the user's prompt.
- It is able to generate complex scenes with multiple characters, specific types of motion, and accurate details of the subject and background.

## 40. (c)

**In News :** Recently, ISRO has successfully completed the human rating of its **CE20 cryogenic engine**, which represents a major boost to India's attempt to launch humans into space under the Gaganyaan mission.

• A critical aspect of this mission is the **concept of 'human rating'**, which refers to the **process of certifying a system capable of safely transporting humans.** 

#### 

## **ENVIRONMENT & ECOLOGY**

### 1. With reference to Hydrogen, which of the following statements is/are correct?

- 1. Hydrogen produced from Natural Gas with carbon sequestration is called blue Hydrogen.
- 2. Hydrogen generated entirely from renewable power sources is called green hydrogen.

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

## 2. Consider the following activities:

- 1. Tree plantation
- 2. Water management
- 3. Sustainable agriculture
- 4. Waste management
- 5. Eco-mark labelling

How many of the above-mentioned activities are eligible to be considered as a 'green credit' under Green Credit Rules, 2023?

- (a) Only two
- (b) Only three
- (c) Only four
- (d) All five
- **3.** The term *BioTRIG* sometimes appeared in the news, is related to:
  - (a) Immunisation
  - (b) Afforestation
  - (c) Waste Management Technology
  - (d) Biopiracy

## 4. With reference to the Mimosa Pudica Plant, which of the following statements is/are correct?

- 1. It is a perennial flowering plant of the legume family Fabaceae.
- 2. The species is native to the Indian 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
- 5. The Selous Game Reserve, sometimes appeared in the news, is located in:
  - (a) South Africa
  - (b) South Sudan
  - (c) Angola
  - (d) Tanzania

## 6. Consider the following pairs

- Species In News IUCN Red List status
- 1. Hawksbill Turtle Vulnerable
- 2. Skywalker hoolock gibbon Critically Endangered
- 3. Spur-winged lapwing Least Concern

How many of the above pairs are correctly matched?

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

## 7. Cannabis sativa, recently seen in the news, is related to which of the following?

- (a) It is used for recreational purposes due to the psychoactive effects.
- (b) It has potential medicinal applications for conditions like chronic pain, epilepsy, and nausea.
- (c) It has industrial applications with respect to producing textiles, rope and construction materials.
- (d) All of the above.

## 8. With reference to the Agroforestry, consider the following statements:

- 1. It is a combination of practising agriculture and forestry together on the same unit of land.
- 2. Increment in soil nutrients is one of the benefits of agroforestry.

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 Central Pollution Control Board (CPCB), consider the following statements :

- CPCB is a statutory organization established under the Air (Prevention and Control of Pollution) Act, 1974.
- 2. It comes under the Ministry of Jal Shakti.
- 3. Principal function of CPCB is to promote cleanliness of streams and wells and to improve the quality of air in the country.

Which of the statements given above are correct?

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

## **10.** Consider the following pairs

## Species In News

## IUCN Red List status

- 1. White rhinoceros Vulnerable
- 2. Laughing Gull Critically Endangered
- 3. Arabian Leopard Near Threatened

## How many of the above pairs are correctly matched?

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

## **11.** With reference to Hydrogen, which of the following statements is/are correct?

- 1. Hydrogen produced from fossil fuels is called green Hydrogen.
- 2. Hydrogen generated entirely from renewable power sources is called blue hydrogen.

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.** Which one of the following released the '*Greening and Restoration of Wasteland with Agroforestry* (*GROW*)' report?

- (a) Department of Agricultural Research and Education
- (b) Comptroller and Auditor General of India
- (c) Department of Investment and Public Asset Management
- (d) NITI Aayog
- **13.** The term '*Brumation*', sometime appeared in the news, best describes as:
  - (a) It is the process by which the mix of species and habitat in an area changes over time.
  - (b) It is a state of sluggishness and inactivity exhibited by reptiles during winter.
  - (c) It describes the role an organism plays in a community.
  - (d) It aims to recreate, initiate, or accelerate the recovery of an ecosystem that has been disturbed.

## **14.** With reference to the *Wildlife Protection Act (1972),* consider the followings:

- 1. It aims to preserve the wildlife species of both fauna and flora.
- 2. It establishes the National Board for Wildlife, State Board for Wildlife and Central Zoo Authority. 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.** The National Ambient Air Quality Standards in India are notified for which of the following parameters:

- 1. PM10
- 2. PM 2o
- 3. NO2
- 4. CO2
- 5. CO
- 6. 02
- 7. Benzene

Select the correct answer using the code given below:

- (a) 1, 2, 4 and 5 only
- (b) 2, 4, 5 and 6 only
- (c) 1, 3, 5 and 7 only
- (d) 1, 3, 4, 5 and 7 only

## 16. With reference to the National Chambal Sanctuary, which of the following statements is/are correct?

- 1. It is located near the tri-point of Rajasthan, Madhya Pradesh and Uttar Pradesh.
- 2. The sanctuary is home for critically endangered Ghariyals.

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 the Nagoya Protocol, consider the following statements:

- 1. It provides the legal framework for the effective implementation of objectives of the UN Convention on Biological Diversity.
- 2. India ratified the Nagoya Protocol on Access and Benefit Sharing.

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.** With reference to the Indian Grey wolf, which of the following statements is/are correct?

- 1. The species is nocturnal and hunts from dusk to dawn.
- 2. The IUCN status of the species is Critically Endangered.

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.** With reference to the Black-Necked Crane, consider the following statements:

- 1. It is the state bird of Ladakh.
- 2. The IUCN status of the species is Near Threatened.

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.** Consider the following statements, with reference to the Carbon Border Adjustment Mechanism (CBAM):
  - 1. Its primary objective is to avert 'carbon leakage'.
  - 2. CBAM will initially apply to imports from the Chemical and Textile sector.

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

## **21.** With reference to the Wetlands, consider the following statements:

- 1. A wetland is a place in which the land is covered by water permanently.
- 2. World Wetlands Day is observed on 2nd February every year to commemorate the signing of the Ramsar Convention in 1971.
- 3. In India, Uttar Pradesh has the maximum number of Ramsar Sites.

How many of the statements given above are correct?

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

## 22. Recently which of the following Indian wetlands were added to the Ramsar list?

- 1. Aghanashini Estuary
- 2. Ankasamudra Bird Conservation Reserve
- 3. Magadi Kere Conservation Reserve

Select the correct answer using the code given below:

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

#### 23. With reference to the Bandipur Tiger Reserve, which of the following statements is/are correct?

- 1. It is located at the tri-junction area of Karnataka, Tamil Nadu and Kerala.
- 2. It is surrounded by the Kabini and Moyar river.

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.** With reference to the broom grass, consider the following statements:

- 1. It is native to the Indian subcontinent and Southeast Asia.
- 2. The planting of broom grass can be done by seeds or rhizomes.

## 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.** In the context of climate change mitigation efforts, which of the following groups are classified as Short-Lived Climate Forcers (SLCFs)?
  - (a) Carbon Dioxide (CO2), Ozone (O3) and Methane (CH4)
  - (b) Black Carbon (BC), Methane (CH4), and Ozone (O3)
  - (c) Methane (CH4), Nitrous Chloride (NOCl) and Hydrofluorocarbons (HFCs)
  - (d) All of the above

## 26. With reference to the International Solar Alliance (ISA), consider the following statements:

- 1. It has set a target of 5 Terawatt (TW) of solar energy by 2070.
- 2. It has approved the Solar Facility, a payment guarantee mechanism to stimulate investments into solar projects.

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 Microplastics, consider the following statements:

- 1. These are tiny fragments of plastic that are less than 0.5 millimeters in diameter.
- 2. They originate from cosmetics, city dust, road markings, and engineered plastic pellets.

## 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. (c)

#### Both the statements are correct.

## Types of hydrogen

- Grey Hydrogen: It is manufactured using Natural Gas without carbon sequestration.
- Brown Hydrogen: It is manufactured using Coal without carbon sequestration.
- Blue Hydrogen: It is manufactured using Natural Gas with carbon sequestration.
- Green Hydrogen: It is manufactured using Renewable Energy.

## 2. (d)

## About the Green Credit Rules, 2023:

- Notified on: October 12, 2023
- Aim: To incentivise individuals, organisations, and industries to undertake positive environmental measures, extending beyond carbon emissions reduction to encompass improvements in air and water quality, increased biodiversity, and more.

## • Key objectives:

- The rules objective is to **launch a Green Credit (GC) programme on a national level** to leverage a competitive market-based approach for GC and incentivise voluntary environmental actions by stakeholders.
  - The GC programme is meant to **complement the proposed Carbon Credit Trading** Scheme (CCTS) introduced by the Energy Conservation (Amendment) Act, 2022.
- Eligibility criteria for Green Credit: Several activities are eligible for Green Credits, categorised into eight key areas:
  - Tree plantation: Planting trees to combat deforestation and increase green cover.
  - Water management: Implementing water conservation techniques like rainwater harvesting.
  - Sustainable agriculture: Adopting eco-friendly farming practices.
  - Waste management: Promoting waste reduction, recycling, and composting.
  - Air pollution reduction: Initiatives that improve air quality.
  - Mangrove conservation and restoration: Protecting and reviving mangrove ecosystems.
  - **Eco-mark labelling:** Obtaining the eco-mark certification for products that meet stringent environmental standards.
  - **Sustainable building and infrastructure:** Constructing green buildings and infrastructure that minimise environmental impact.

## 3. (c)

In News: Researchers claimed that the BioTRIG, a new waste management technology could improve life in rural India.

- <u>The BioTRIG</u>: It is a new waste management technology, based on the process of pyrolysis, could help rural Indians cut indoor air pollution, improve soil health, and generate clean power.
- It is a **community-level pyrolysis system** designed to run on the waste generated by villagers.
  - It produces three products bio-oil, syngas, and biochar fertiliser that could help rural Indians live healthier and greener lives
- The **syngas and bio-oil** can heat and power the pyrolysis system in future cycles, with surplus electricity used to power local homes and businesses.
- The clean-burning bio-oil could replace dirty cooking fuels in homes, and biochar could be used to store carbon while improving soil fertility.

#### 4. (a)

Statement 1 is correct and statement 2 is not correct.

#### <u>Mimosa Pudica</u>

- **Mimosa Pudica**, also called touch-me-not, is a creeping annual or perennial flowering plant of the pea/legume family **Fabaceae**.
- The plant's leaves **fold inward and droop** when touched or shaken and re-open a few minutes later.
- The species is native to the **Caribbean and South and Central America** and the plant is a widespread weed in tropical regions and has naturalized elsewhere in warm areas.

### 5. (d)

In News :

- Selous Game Reserve: It is one of the largest protected areas and is relatively undisturbed by human impact, located in southern Tanzania in Africa.
- It was designated a UNESCO World Heritage Site in 1982 due to its wildlife diversity and undisturbed nature.

#### 6. (a)

Hawksbills are named for their narrow, pointed beak.

- They inhabit the tropical and sub-tropical waters of all of the world's major oceans.
- They identified as **Critically Endangered** under the International Union for Conservation of Nature Red List of Threatened Species

<u>Skywalker hoolock gibbon</u> is a forest-dweller that inhabits primary evergreen, scrub and semi-deciduous hill forest, as well as mountainous broadleaf forest, but it cannot survive in pine-dominated forest.

- It can be found in Myanmar and China
- IUCN Status: listed as Endangered

## Spur-winged lapwing

- Native: North Africa, the Middle East and Mediterranean regions.
- It is found around wetlands, but also away from water in cultivated areas and even suburbia and urban settings.
- IUCN Status: Least Concern

## 7. (d)

## All of the above

## Cannabis/Marijuana

- It is a generic term used to denote the several psychoactive preparations of the plant *Cannabis sativa*.
- **The Mexican term 'marijuana'** is frequently used in referring to cannabis leaves or other crude plant material in many countries.

## Applications:

Medicine:

• **Cannabinoids:** Cannabis sativa contains various cannabinoids, including THC and CBD, with potential therapeutic benefits for diverse conditions like **relief for pain, nausea, managing anxiety, epilepsy, and inflammation.** 

#### Medical research:

• Ongoing studies explore the potential of cannabinoids for treating various conditions like Alzheimer's disease, cancer, and mental health disorders.

Industry:

• Hemp: A variety of Cannabis sativa with low THC content, primarily cultivated for its industrial applications.

- Fibers: Used in producing textiles, rope, construction materials, and biodegradable plastics due to their strength and durability.
- Seeds: A source of protein, essential oils, and nutritional supplements.

### 8. (c)

Both the statements are correct: Agroforestry is a combination of practising agriculture and forestry together on the same unit of land.

- It is a traditional practice recognizing and promoting trees and/or livestock on farms in a special arrangement pattern.
- Ecological Benefits: Reduction of pressure on forest.
  - More efficient recycling of nutrients by deep-rooted trees on the site.
  - Reduction of surface run-off, nutrient leaching and soil erosion through the impending effect of tree roots and stems of these processes.
  - Improvement of microclimate, such as lowering of soil surface temperature and reduction of evaporation of soil moisture through a combination of mulching and shading.
  - Increment in soil nutrients through addition and decomposition of litter-fall.
  - Improvement of soil structure through the constant addition of organic matter from decomposed litter.

#### 9. (b)

#### Statement 1 and 2 are not correct and Statement 3 is correct. The Central Pollution Control Board (CPCB)

- CPCB is a statutory organization established under the Water (Prevention and Control of Pollution) Act, 1974.
  - It is also entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.
- **Parent ministry:** Ministry of Environment, Forest and Climate Change (MoEFCC).
- Functions: Principal Functions of the CPCB, as spelt out in the Water Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981 are

(i) to promote cleanliness of streams and wells in different areas of the States by prevention, control and abatement of water pollution, and

(ii) to improve the quality of air and to prevent, control or abate air pollution in the country.

## 10. (d)

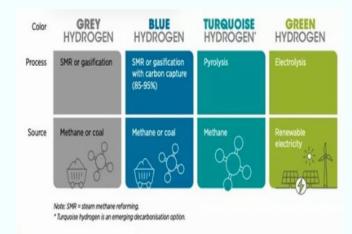
## All of the above pairs are incorrectly matched

- Laughing Gull is a migratory bird from North America and it is found in North, Central and South America. It is listed as Least Concern in IUCN Red List .
- Arabian Leopard occurs mainly in arid and hyper-arid desert ,semi-desert regions and is also found in tropical and subtropical conditions.Classified as **Critically Endangered** on the IUCN Red List
- White rhinos are the second largest land mammal after the elephant.
  - o Northern White Rhino: Critically Endangered
  - Southern White Rhino: Near Threatened

## 11. (d)

## Both the Statements are not correct.

- **Green Hydrogen:** The hydrogen produced via **electrolysis**, the splitting of water into hydrogen and oxygen with electricity generated from renewable energy sources such as solar or wind, is known as Green hydrogen.
- Hydrogen produced from fossil fuels is called Grey Hydrogen.



## 12. (d)

Recently, the **NITI Aayog** unveiled the 'Greening and Restoration of Wasteland with Agroforestry (GROW)' report and portal, aiming to bolster efforts in environmental conservation and sustainable land use across India.

## About the GROW:

- It is a multi-institutional effort **led by NITI Aayog**, which utilised remote sensing and GIS to assess agroforestry suitability across all districts in India.
- It provides **state-wise and district-wise analysis**, supporting government departments and industries for greening and restoration projects.
- It underscores the potential benefits of converting underutilised areas, especially wastelands, for agroforestry.

## 13. (b)

Researchers have observed instances of brumation in various reptilian species across habitats. Brumation:

- It's a state of sluggishness, inactivity, or torpor exhibited by reptiles during winter or extended periods of low temperature because of scarcity of food.
  - It is a **period of dormancy in reptiles**, similar to hibernation in mammals, **to conserve energy** and survive the adverse environmental conditions.
- During brumation, reptiles may **retreat to underground burrows, rock crevices or other sheltered areas** where temperatures are relatively more stable.

## **Brumating Species:**

- Turtles (box and painted), Tortoises, Snakes, Lizards and some amphibians like frogs.
- The Bearded Dragon is the most brumating of all the known reptiles.

## 14. (c)

## Statement 1 is correct:

- The Wildlife Protection Act, 1972: It aims to preserve the wildlife species of both fauna and flora and establish reserved places for their survival. It lays down restrictions on various animal species to be hunted down.
- It prohibits the hunting of animals mentioned under Schedule I, II, III and IV.

## Statement 2 is correct:

- It establishes the National Board for Wildlife & State Board for Wildlife, Central Zoo Authority, and Wildlife Crime Control Bureau.
- The Wild Life (Protection) Amendment Act 2021 seeks to adopt an international convention on the trade of endangered species and create new schedules for species.

## 15. (c)

## Actions taken by Central Pollution Control Board (CPCB) to control Air pollution in India:

- National Air Quality Index (AQI) was launched in 2015. Information is being disseminated to the public through daily air quality bulletins.
- Ambient Air Quality Network: The country has a network of 1447 ambient air quality monitoring stations (516 continuous and 931 manual) covering 516 cities in 28 states and 7 UTs.
  - The National Ambient Air Quality Standards by CPCB are notified for 12 parameters PM10, PM2.5, NO2, SO2, CO, O3, NH3, Pb, Ni, As, Benzo(a)pyrene, and Benzene.
  - A Central Control Room is operated by Central Pollution Control Board wherein, hour to hour tracking of various information such as PM concentrations, Live Air Quality Data of Monitoring stations, Live Air Quality Index is available. Further, the Air Quality Forecast is also available for Delhi-NCR.

## 16. (c)

## Both the statements are Correct.

## National Chambal Sanctuary

- It is located on the Chambal River near the tri-point of Rajasthan, Madhya Pradesh and Uttar Pradesh.
- The sanctuary is home for critically endangered Ghariyals, Red-crowned roof turtles and the Ganga River dolphins.

## 17. (c)

**Statement 1 is correct: Nagoya Protocol** on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation is a supplementary agreement to the **UN Convention on Biological Diversity (CBD)**.

• It provides a **transparent legal framework** for the effective implementation of objectives of the CBD, that is the fair and equitable sharing of benefits arising out of the utilisation of genetic resources.

**Statement 2 is correct:** India has been a victim of misappropriation or biopiracy of its genetic resources and associated traditional knowledge, which have been patented in other countries.

- India ratified the Nagoya Protocol on Access and Benefit Sharing on 12th October 2014.
- The Nagoya Protocol is vital to India's interests, given that the mega-diverse country has seven to 8% of the world's recorded species and a vast repertoire of traditional knowledge.

## 18. (a)

## Statement 1 is correct and Statement 2 is not correct.

## <u>News</u>

• Recently Indian Wolf has been sighted after a gap of more than two decades at the National Chambal Sanctuary.

## <u>About</u>

- It is intermediate in size between the Himalayan wolf and the Arabian wolf.
- Distribution: They are distributed across the Indian Subcontinent to West Asia.
  O In India their number is around 3000.
  - Indian wolves are **nocturnal** and hunt from dusk to dawn.

## • Conservation status:

- o Under Wildlife Protection Act (WPA), 1972, it is listed as Schedule I species.
- o IUCN status: Least Concern

## 19. (c)

## Both the statements are correct.

• The Black-Necked Crane (Grus nigricollis) is listed in Schedule I of the Wild Life (Protection) Act, 1972.

- The species is also listed in Appendix I of Convention on International Trade in Endangered Species of wild fauna and flora and the Convention on conservation of Migratory Species.
- Grus nigricollis is listed as **Near Threatened** on the IUCN Red List of Threatened Species.
- This bird is found in India, China and Bhutan and breed in high-altitude wetlands of the Tibetan plateau of China and eastern Ladakh in India at an elevation ranging from 2950 to 4900 meters above mean sea level.
- Black-Necked Crane is the **State bird** of the UT of Ladakh.

#### 20. (a)

Statement 1 is correct: CBAM is one of the elements of the EU Green Deal, the goal of which is to reduce GHG emissions by 55% by 2030.

- CBAM is aimed at **equalizing the price of carbon paid for EU** products operating under the EU Emissions Trading System (ETS) and imported goods.
- It refers to a phenomenon where a EU manufacturer moves carbon-intensive production to countries outside the region with less stringent climate policies. Its primary objective is to avert 'carbon leakage'.

**Statement 2 is not correct:** The CBAM will initially apply to imports of the following goods, these **sectors** have a high risk of carbon leakage and high carbon emissions.

- Cement
- Iron and steel
- Aluminium
- Fertilisers
- Electricity

## 21. (a)

Statement 1 is not correct: A wetland is a place in which the land is covered by water—salt, fresh, or somewhere in between—either seasonally or permanently. It functions as its own distinct ecosystem.

• It includes water bodies such as lakes, rivers, underground aquifers, swamps, wet grasslands, peatlands, deltas, tidal flats, mangroves, coral reefs, and other coastal areas as well.

Statement 2 is correct: World Wetlands Day is observed on 2nd February every year worldwide to commemorate the signing of the Ramsar Convention on Wetlands of International Importance in 1971.

• India has been a party to the Convention since **1982**.

**Statement 3 is not correct:** India has increased its tally of Ramsar sites (Wetlands of International Importance) **to 80 by** designating **five more wetlands as Ramsar sites.** 

Tamil Nadu continues to have the maximum number of Ramsar Sites (16 sites) followed by Uttar Pradesh (10 sites).

## 22. (d)

## All the three Statements are correct.

#### News

• India has increased its tally of Ramsar sites (Wetlands of International Importance) to 80 from existing 75 by designating five more wetlands as Ramsar sites.

## About

- Three of these sites, Ankasamudra Bird Conservation Reserve, Aghanashini Estuary and Magadi Kere Conservation Reserve are located in Karnataka whereas two, Karaivetti Bird Sanctuary and Longwood Shola Reserve Forest are in Tamilnadu.
- Tamil Nadu continues to have the maximum number of Ramsar Sites (16 sites) followed by Uttar Pradesh (10 sites).

#### **Ramsar Convention**

- It was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975.
- Since then, almost 90% of UN member states, from all the world's geographic regions, have acceded to become "Contracting Parties".
- India ratified this Convention on 1st February 1982.

#### 23. (c)

#### Both the Statements are correct.

#### Bandipur Tiger Reserve

- It was established in the 1930s as a wildlife sanctuary, which became a tiger reserve in 1973 under **Project Tiger.**
- It is located at the tri-junction area of Karnataka, Tamil Nadu and Kerala.
- This area has the **River Kabini** in its north and **River Moyar in its south**.
- It lies in one of the richest biodiversity areas of the country. It is surrounded by
  - o Mudumalai Tiger Reserve (Tamil Nadu) in the South,
  - Wayanad Wildlife Sanctuary (Kerala) in the South-west &
  - $\circ~$  The Kabini Reservoir separates the Bandipur and Nagarahole Tiger Reserve on the Northwest.

#### 24. (c)

**In News :** Recently, the Tribal people have been carrying broom grass at a village in **Karbi Anglong** district of Assam.

#### Statement 1 is correct:

- Broom Grass: It is also known as Thysanolaena maxima, is a type of grass that is native to the Indian subcontinent and Southeast Asia.
- Karbi Anglong, in Assam, is the largest producer of brooms in India.

### Statement 2 is correct:

- Cultivation: The cultivation of broom grass is comparatively easy and requires small financial inputs.
- It can be grown on marginal lands, wasteland, and in Jhum fallow land.
- The planting can be done by seeds or rhizomes.

#### 25. (b)

Black Carbon (BC), Methane (CH4), and Tropospheric Ozone (O3)

## Short-lived climate forcers (SLCFs)

- SLCFs are a group of atmospheric pollutants that have shorter lifespans (less than 20 years) compared to long-lived greenhouse gases like carbon dioxide (CO2).
- However, even with their shorter presence, SLCFs can significantly impact the Earth's climate.
- They include,
  - Aerosols: Sulphate, nitrate, ammonium, carbonaceous aerosols (Black Carbon (BC), mineral dust and sea spray, which are also called particulate matter (PM).
  - Chemically reactive gases: Methane(CH4), Ozone(O3), some halogenated compounds, nitrogen oxides, carbon monoxide, non-methane volatile organic compounds, sulphur dioxide and ammonia.
  - Except for methane and some halogenated compounds whose lifetimes are about a decade or more, SLCF abundances are spatially highly heterogeneous since they only persist in the atmosphere from a few hours to a couple of months.

#### 26. (b)

In News : Recently, Malta became the 119th country to join the International Solar Alliance (ISA).

• <u>International Solar Alliance:</u> It was launched by **India and France** together at the U.N. Climate Change Conference in Paris in 2015, to address energy requirements through a common approach.

• Formation and Purpose: The ISA was conceived as a coalition of solar resource-rich countries, most of them located between the Tropics of Cancer and Capricorn.

#### Statement 1 is not correct:

- The primary objective of the alliance is to work for the efficient consumption of solar energy **to** reduce dependence on fossil fuels.
- The ISA has set a **target of 1 TW of solar energy by 2030**, which would require \$1 trillion to achieve. **Statement 2 is correct:**
- The ISA recently approved the 'Solar Facility', a payment guarantee mechanism expected to stimulate investments into solar projects.

#### 27. (b)

#### Statement 1 is not correct and Statement 2 is correct.

#### Context:

• A study has found that a liter of bottled water can contain more than one lakh particles of micro and nano plastics.

#### Microplastics:

- These are tiny fragments of plastic that are less than 5 millimeters in diameter.
- They originate from various sources, including cosmetics, city dust, road markings, and engineered plastic pellets.
- However, the majority of the primary microplastics in the world's oceans come from the laundry of textiles (35%) and the abrasion of tires while driving (28%).

## MISCELLENEOUS

## 1. With reference to National Science Day, which of the following statements is/are correct?

- 1. The day is observed to mark the successful nuclear tests in Pokhran.
- 2. The theme for National Science Day 2024 is 'Indigenous Technologies for Viksit Bharat'.

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
- **2.** First private ammunition and missiles manufacturing facility in India, was recently opened in which of the following cities?
  - (a) Kanpur, Uttar Pradesh
  - (b) Pune, Maharashtra
  - (c) Alwar, Rajasthan
  - (d) Chennai, Tamil Nadu

## 3. With reference to the Sudarshan Setu, consider the following statements:

- 1. It is built in the state of Gujarat.
- 2. It is the longest Cable-stayed bridge 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
- 4. Consider the following statements with reference to Raisina Dialogue:
  - 1. It is India's flagship conference on geopolitics which is hosted by the Ministry of Commerce and Industry.
  - 2. The theme of the 2024 edition is "One Earth, One Family, One Future".

Which of the above given statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- 5. With reference to the Raisina Dialogue 2024, which of the following statements is/are correct?
  - 1. It is hosted by the Observer Research Foundation, in collaboration with the External affairs ministry of India.
  - 2. The theme for 2024 is "Chaturanga: Conflict, Contest, Cooperate, Create".

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. Consider the following statements with reference to Chevalier de la Legion d' Honneur
  - 1. It is France's highest civilian award which was established by Napoleon Bonaparte.
  - 2. Prime Minister Narendra Modi was the first Indian to receive the honour.

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 is considered the highest literary award in India ?

- (a) Jnanpith Award
- (b) Sahitya Akademi Award
- (c) Saraswati Samman
- (d) Kabir Samman
- **8.** With reference to the the *MS Swaminathan*, who was conferred as Bharat Ratna recently, consider the following statements:
  - 1. He made significant contributions to the understanding of potato genetics and the development of frost-resistant potato varieties.
  - 2. The United Nations Environment Programme (UNEP) has called him 'the Father of Economic Ecology' after significant contributions in the fields of conservation and environmental protection.
  - 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 Bharat Ratna, which of the following statements is/are correct?

- 1. There is no formal provision that recipients of the Bharat Ratna should be Indian citizens.
- 2. Nelson Mandela is the only non-Indian to be awarded the Bharat Ratna.

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. The Grammy Awards, recently seen in the news, are related to which of the following genres?

- (a) Movies
- (b) Theatre
- (c) Dance
- (d) Music

## **11.** Consider the following statements:

- 1. Di-ammonium Phosphate (DAP) is the most commonly used fertilizer in India.
- 2. Phosphorus (P) stimulates root establishment and development in the 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

## **12.** With reference to the Ethnic Groups in Meghalaya, consider the following statements:

- 1. The most prominent Ethnic Groups in Meghalaya are the Khasis, the Garos, and the Jaintias.
- 2. In the Jaintia tribe the youngest daughter of the family inherits the family property.

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.** Recently the Tamil Nadu government banned the sale and production of cotton candy in the state due to the presence of which of the following harmful chemicals?

- (a) Acrylamide
- (b) Rhodamine-B
- (c) Mycotoxins
- (d) Bisphenols

## 14. With reference to the Raisina dialogue, consider the following statements :

- 1. Its primary objective is to denuclearise the world.
- 2. It is co-hosted by the Center for Policy Research (CPR) along with the Ministry of External Affairs (MEA).

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

## **EXPLANATIONS**

## 1. (b)

News: Every year 28th February is observed as National Science Day to mark the discovery of the 'Raman Effect' by Indian Physicist Sir C V Raman. Hence, Statement 1 is not correct. About

- This day was designated by the Government of India in **1986**.
- The theme for National Science Day 2024 is 'Indigenous Technologies for Viksit Bharat'. Hence, Statement 2 is correct.

## What is the Raman Effect?

- The Raman Effect is the phenomenon where light gets scattered when passed through a transparent material, leading to changes in wavelength and energy.
- Sir C V Raman received the 1930 Nobel Prize in Physics for the discovery and was the first Asian to receive a Nobel Prize in any branch of science.

## 2. (a)

## Kanpur, Uttar Pradesh

In a **first in the private sector**, two facilities for the manufacture of ammunition and missiles were opened by **Adani Defence and Aerospace** in **Kanpur**, **Uttar Pradesh** recently.

## About the Kanpur Complex:

- The **twin-facility complex, spread over 500 acres**, was inaugurated by Army chief General Manoj Pande and Uttar Pradesh Chief Minister.
- The Kanpur complex is set to become one of the largest integrated ammunition manufacturing complexes in South Asia, Adani Defence and Aerospace said in a statement.
- The facilities will produce **high-quality small**, **medium and large calibre ammunition** for the armed forces, paramilitary forces and the police.

3. (c)

Both the statements are correct.

- Recently, the Prime Minister of India inaugurated Sudarshan Setu which connects **Okha mainland and Beyt Dwarka island** in Gujarat, built at a cost of around Rs. 980 crores.
- It is the longest Cable-stayed bridge in the country of around 2.32 Km.

## 4. (d)

The 9th edition of the Raisina Dialogue was held recently.

**Statements 1 and 2 are not correct :** The Raisina Dialogue is India's flagship conference on geopolitics and geo-economics, committed to addressing the most challenging issues facing the international community.

• The conference is hosted by the **Observer Research Foundation in partnership with the Ministry of External Affairs,** Government of India. This effort is supported by a number of institutions, organisations and individuals, who are committed to the mission of the conference.

• The theme of the 2024 edition is "Chaturanga: Conflict, Contest, Cooperate, Create".

## 5. (c)

## Both the Statements are correct.

## <u>Context</u>

• Prime Minister Modi will inaugurate the 9th edition of Raisina Dialogue in New Delhi.

<u>About</u>

- Prime Minister of Greece, Kyriakos Mitsotakis, will join the inaugural session as the Chief Guest.
- The theme of the 2024 edition is "Chaturanga: Conflict, Contest, Cooperate, Create".
- Over the event, attendees will engage in discussions on six thematic pillars:
  - O Tech Frontiers: Regulations & Realities;
  - Peace with the Planet: Invest & Innovate;
  - War & Peace: Armouries & Asymmetries;
  - o Decolonising Multilateralism: Institutions & Inclusion;
  - The Post 2030 Agenda: People & Progress; and
  - Defending Democracy: Society & Sovereignty.

## Raisina Dialogue

- The Raisina Dialogue is India's premier conference on geopolitics and geoeconomics committed to addressing the most challenging issues facing the global community.
  - The first session was held in 2016.
  - It is hosted by the Delhi-based **Observer Research Foundation**, in collaboration with the **External affairs ministry** of India.

## 6. (a)

In News : Shashi Tharoor has received "Chevalier de la Legion d'Honneur" award.

**Statement 1 is correct :** The Chevalier de la Legion d'Honneur (Knight of the Legion of Honour) was established by **Napoleon Bonaparte in 1802.** 

• It is **France's highest civilian award** that acknowledges extraordinary accomplishments and services rendered to France.

Statement 2 is not correct : Chevalier de la Legion d'Honneur covers contributions in arts, literature, science and public service, among others.

• Durga Charan Rakshit was the first Indian to receive the honour.

## 7. (a)

**In News**: Legendary lyricist and poet Gulzar and Sanskrit scholar and spiritual leader Jagadguru Swami Rambhadracharya will be honoured with the Jnanpith Award.

**Established** in 1961, the **Jnanpith Award** is given annually for outstanding contributions to Indian literature in any of the 22 "scheduled languages" recognized in the Indian Constitution and, from 2013, in the English language.

## • It is considered the **highest literary honour in the country**.

#### 8. (c)

Recently, MS Swaminathan, an agricultural scientist who helped India achieve food security, was conferred as Bharat Ratna.

#### Statement 1 is correct:

- **Green Revolution:** Swaminathan played a pivotal role in the Green Revolution in India during the 1960s and 70s. He **introduced and developed** high-yielding varieties (HYVs) of wheat and rice.
- He also made significant contributions to the understanding of potato genetics and the development of **frost-resistant potato varieties**.

#### Statement 2 is correct:

- **Conservation and Environmental Protection:** Swaminathan made significant contributions in the fields of conservation and environmental protection. He worked extensively on four aspects of conservation: mangrove ecosystem, biodiversity conservation, genetic conservation, and Keystone Dialogues.
- The United Nations Environment Programme has called him 'the Father of Economic Ecology'.

#### 9. (a)

#### News

- Prime Minister Narendra Modi has announced that Chaudhary Charan Singh, P.V. Narasimha Rao, and M.S. Swaminathan will be conferred with the Bharat Ratna.
- LK Advani and Karpoori Thakur were also conferred with the Bharat Ratna recently.

#### Bharat Ratna

- It is the highest civilian Award of the country and is awarded to any person without distinction.
- There is no formal provision that recipients of the Bharat Ratna should be Indian citizens.
- It has been awarded to a naturalised Indian citizen, **Mother Teresa** in 1980, and to two non-Indians, **Khan Abdul Ghaffar Khan** of Pakistan in 1987 and the former South African President **Nelson Mandela** in 1990.

#### 10. (d)

Music

## The Grammy Awards

- The Grammy Awards, officially known as the **GRAMMYs**, are the **premier music awards** in the United States and among the **most prestigious globally**.
- **Objective:** To recognize outstanding achievements in the music industry across various genres and categories.
- Awarded by: The Recording Academy, a voting membership body of music professionals.
- When?: Held annually, typically in February.
- Where?: Location varies, usually major cities like Los Angeles or New York City.
- Categories and Awards:
  - Over 80 categories spanning various genres like pop, rock, country, rap, R&B, classical, jazz, and more.
  - General Field awards recognize overall achievements like Album of the Year, Record of the Year, Song of the Year, Best New Artist.
  - <u>2024 GRAMMYs</u>:
- The 66th ceremony took place on February 5th, 2024, in Los Angeles.

- It saw Taylor Swift winning her fourth Album of the Year award for "Midnights," and Miley Cyrus taking Record of the Year for "Flowers."
- Indian jazz band Shakti bagged Best Global Music Album for 'This Moment'.

## 11. (b)

Statement 1 is not correct: Di-ammonium Phosphate (DAP) is a type of fertilizer that contains phosphorus and nitrogen, two essential nutrients for plant growth.

- It has the chemical formula (NH<sub>4</sub>)<sub>2</sub>HPO<sub>4</sub>.
- It is the **second most commonly** used fertilizer in India after urea.

**Statement 2 is correct**: It is high in phosphorus (P) that stimulates **root establishment and development** — without which plants cannot grow to their normal size, or will take too long to mature.

• It is thus applied just before, or at the time of sowing.

## 12. (c)

Both the statements are correct: Meghalaya is inhabited by many distinct tribes, the most prominent being the Khasis, the Garos, and the Jaintias.

- The Garos inhabit the western area, the central area by the Khasis and the eastern area by the Jaintias.
- **The Jaintias:** This tribe is also called Pnar or Synteng. They belong to the Hynniewtrep sect of the Austric race whose kingdom was the oldest and most widely spread around Jaintia Hills.
- Like the other two, this tribe also is matrilineal where the youngest daughter of the family inherits the family property.

## 13. (b)

Rhodamine-B

## <u>Context</u>

• The Tamil Nadu government banned the sale and production of cotton candy in the state due to the presence of Rhodamine-B in it.

## 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.
- It is widely used as a food additive in the manufacturing, packaging, import, and sale of various food items.

## Why is it harmful?

• According to studies, even if consumed in small quantities, the chemical is highly

## toxic and carcinogenic.

If consumed regularly, Rhodamine-B can cause severe **damage to the cerebellum tissue** in the brain and to the brainstem that connect the brain to the spinal cord.

## 14. (c)

The Raisina Dialogue is India's premier conference on geopolitics and geoeconomics committed to addressing the most challenging issues facing the global community.

- Like the 9th edition of Raisina Dialogue will engage in discussions on six thematic pillars:
- Tech Frontiers: Regulations & Realities;
- Peace with the Planet: Invest & Innovate;
- War & Peace: Armouries & Asymmetries;
- Decolonising Multilateralism: Institutions & Inclusion;
- The Post 2030 Agenda: People & Progress; and

- Defending Democracy: Society & Sovereignty
  - The first session was held in 2016.

It is hosted by the Delhi-based **Observer Research Foundation**, in collaboration with the **External affairs ministry** of India.