

1. Consider the following statements regarding Dr. Syama Prasad Mookerjee:

1. He launched a major nationalist agitation and satyagraha in Jammu and Kashmir.
2. He strongly advocated the complete constitutional integration of Jammu and Kashmir with the Indian Union.
3. He served as the President of the All India Hindu Mahasabha during the period 1943–46.

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

Answer: (d) 1, 2 and 3

Explanation

- **Statement 1 is correct.** Dr. Syama Prasad Mookerjee launched the **Kashmir Satyagraha** in protest against the permit system for entering Jammu and Kashmir.
- **Statement 2 is correct.** He strongly opposed the special constitutional status of Jammu and Kashmir under Article 370 and advocated its complete integration with the Indian Union. He famously gave the slogan "*Ek desh mein do Vidhan, do Pradhan aur do Nishan nahi challenge.*"
- **Statement 3 is correct.** He served as the **President of the Hindu Mahasabha from 1943 to 1946.**

Therefore, all three statements are correct.

2. Consider the following statements regarding INS Mahendragiri:

1. It is a guided-missile stealth frigate developed under the indigenous Project 17A.
2. It is powered by an Integrated Electric Propulsion (IEP) system.
3. Its design incorporates advanced stealth features to minimize its Radar Cross Section (RCS).

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

Answer: (c) 1 and 3 only

Explanation

- **Statement 1 is correct.** INS Mahendragiri is the sixth **Nilgiri-class (Project 17A)** indigenous stealth frigate of the Indian Navy.
- **Statement 2 is incorrect.** The ship uses a **Combined Diesel or Gas (CODOG)** propulsion system rather than an Integrated Electric Propulsion system.
- **Statement 3 is correct.** It features optimized hull geometry, reduced radar signature, infrared suppression and other stealth technologies to lower its Radar Cross Section (RCS).

Therefore, only statements 1 and 3 are correct.

3. Consider the following statements regarding the Himalayan pangolin:

1. The Himalayan pangolin has recently been revalidated as a distinct extant species.
2. Geographic barriers such as the Brahmaputra River basin contributed to its long-term evolutionary isolation.

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

Answer: (c) Both 1 and 2

Explanation

- **Statement 1 is correct.** Recent genetic and morphological studies have confirmed that the **Himalayan pangolin (*Manis aurita*)** is a distinct species rather than a subspecies of the Chinese pangolin.
- **Statement 2 is correct.** Geographic barriers such as the **Brahmaputra River basin** and surrounding mountain ranges restricted gene flow, leading to allopatric speciation over evolutionary time.

Hence, both statements are correct.

4. Consider the following statements with reference to the Information Technology Act, 2000 and the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021:

1. Section 66C of the Information Technology Act, 2000 prescribes punishment for digital identity theft.
2. The Information Technology Rules, 2021 require Significant Social Media Intermediaries to maintain publicly searchable username directories.
3. Section 79 of the Information Technology Act provides conditional safe harbour protection to intermediaries.

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

Answer: (c) 1 and 3 only

Explanation

- **Statement 1 is correct.** Section 66C deals with **identity theft**, including the dishonest use of electronic signatures, passwords and other unique digital identifiers.
- **Statement 2 is incorrect.** The IT Rules, 2021 do **not** require intermediaries to maintain publicly searchable username directories.
- **Statement 3 is correct.** Section 79 grants **conditional safe harbour protection**, subject to compliance with due diligence requirements and lawful government directions.

Therefore, only statements 1 and 3 are correct.

5. Consider the following statements regarding Vepdegestrant:

1. It is an orally administered drug indicated for the treatment of certain advanced breast cancers.
2. It employs PROTAC technology to induce degradation of the target protein through the cell's natural protein disposal system.

Which of the statements given above is/are correct?

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

Answer: (c) Both 1 and 2

Explanation

- **Statement 1 is correct.** Vepdegestrant is a **once-daily oral therapy** for patients with **ESR1-mutated, ER-positive, HER2-negative advanced or metastatic breast cancer**.
- **Statement 2 is correct.** It is a **PROTAC (Proteolysis-Targeting Chimera)** drug that promotes degradation of the estrogen receptor through the **ubiquitin-proteasome system**, instead of merely inhibiting the protein.

Hence, both statements are correct.

6. The term "PROTAC Technology", frequently seen in science and medical news, refers to:

- (a) A technique that edits the genetic code to prevent hereditary diseases.
- (b) A technology that links a disease-causing protein with a cellular enzyme to trigger its degradation.
- (c) A method of synthesizing artificial antibodies to neutralize viral infections.
- (d) A technique that stimulates rapid stem cell multiplication for tissue regeneration.

Answer: (b) A technology that links a disease-causing protein with a cellular enzyme to trigger its degradation.

Explanation

- **Option (b) is correct. PROTAC (PROteolysis TARgeting Chimera)** is an emerging therapeutic technology that **eliminates disease-causing proteins** rather than merely inhibiting them.
- A PROTAC molecule is a **bifunctional small molecule** with one end binding to the target protein and the other to an **E3 ubiquitin ligase**, an enzyme involved in the cell's natural protein degradation pathway.
- This interaction tags the target protein with **ubiquitin**, after which it is degraded by the **proteasome**.
- Since the PROTAC molecule is released after degradation, it can repeatedly degrade multiple target proteins, making the technology highly efficient.
- PROTACs are being explored for the treatment of **cancers, neurodegenerative disorders, autoimmune diseases**, and other diseases caused by abnormal proteins.

7. Consider the following statements:

1. The Information Technology Rules, 2021 require Significant Social Media Intermediaries providing messaging services to identify the first originator of information under specified legal circumstances.
2. Metadata alerts associated with text-based usernames can display the country of origin of unknown senders.
3. The Ministry of Electronics and Information Technology possesses explicit statutory powers to grant prior approval for consumer software updates.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

- **Statement 1 is correct.** Rule 4 of the **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021** requires Significant Social Media Intermediaries offering messaging services to enable identification of the **first originator** of information when ordered by a competent authority under specified legal conditions.
- **Statement 2 is correct.** Messaging platforms may display **country-of-origin metadata alerts** for unknown users to help identify potential international scam messages.
- **Statement 3 is incorrect.** Neither the **Information Technology Act, 2000** nor the **IT Rules, 2021** grants MeitY explicit statutory authority to pre-approve consumer software features or updates before their rollout.

Therefore, only statements 1 and 2 are correct.

8. Consider the following statements regarding the Teesta River:

1. The Teesta River is a major transboundary tributary of the Ganga River system.
2. After entering Bangladesh, the river eventually joins the Jamuna River.

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

Answer: (b) 2 only

Explanation

- **Statement 1 is incorrect.** The Teesta River is a major tributary of the **Brahmaputra River system**, not the Ganga basin. Although it historically flowed into the Ganga before the flood of 1787, it now forms part of the Brahmaputra basin.
- **Statement 2 is correct.** After flowing through **Sikkim** and **West Bengal**, the Teesta enters **Bangladesh** and ultimately joins the **Jamuna River**, the principal distributary of the Brahmaputra in Bangladesh.

Therefore, only statement 2 is correct.

9. Consider the following statements regarding Raja Rammohan Roy:

1. His campaign against the practice of Sati significantly contributed to the enactment of the regulation abolishing Sati under Lord William Bentinck.
2. He founded the Atmiya Sabha to promote monotheism and oppose idolatry.
3. He founded the Persian weekly newspaper *Samvad Kaumudi*.

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

Answer: (a) 1 and 2 only

Explanation

- **Statement 1 is correct.** Raja Rammohan Roy's sustained campaign against **Sati** played a significant role in influencing **Lord William Bentinck** to abolish the practice through **Regulation XVII of 1829**.
- **Statement 2 is correct.** He founded the **Atmiya Sabha (1814)** to promote **monotheism**, rational religious thought and oppose idolatry.
- **Statement 3 is incorrect.** **Samvad Kaumudi** was a **Bengali weekly**. His **Persian** newspaper was **Mirat-ul-Akbar**.

Hence, only statements 1 and 2 are correct.

10. Consider the following statements regarding Cyprus:

1. Cyprus is the largest island situated in the western Mediterranean Sea.
2. The entire island is administered by the internationally recognized Republic of Cyprus.
3. The Mesaoria Plain lies between the Kyrenia and Troodos mountain ranges and constitutes the principal agricultural region of the island.

Which of the statements given above is/are correct?

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

Answer: (b) 3 only

Explanation

- **Statement 1 is incorrect.** Cyprus is located in the **eastern Mediterranean Sea** and is the **third-largest island** in the Mediterranean after Sicily and Sardinia.
- **Statement 2 is incorrect.** Since **1974**, Cyprus has remained **de facto divided**. The southern part is governed by the internationally recognized **Republic of Cyprus**, while the northern part is administered by the self-declared **Turkish Republic of Northern Cyprus**, recognized only by Turkey.

- **Statement 3 is correct.** The **Mesaoria Plain** is a broad, fertile plain situated between the **Kyrenia Mountains** in the north and the **Troodos Mountains** in the south, forming the island's principal agricultural and cereal-producing region.

Therefore, only statement 3 is correct.

11. Consider the following statements regarding Sickle Cell Disease (SCD):

1. The clinical manifestations of Sickle Cell Disease generally begin to appear around five to six months after birth.
2. The decline in fetal haemoglobin during infancy contributes to the onset of sickling symptoms.
3. The prevalence of Sickle Cell Disease is uniformly distributed across all regions and population groups in India.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

- **Statement 1 is correct.** Clinical symptoms of **Sickle Cell Disease (SCD)** usually become evident when an infant is about **five to six months old**.
- **Statement 2 is correct.** During early infancy, **fetal haemoglobin (HbF)** protects red blood cells from sickling. As HbF declines and is replaced by defective adult haemoglobin (HbS), sickling begins and symptoms appear.
- **Statement 3 is incorrect.** The disease is **not uniformly distributed** across India. It is predominantly concentrated among **tribal and other vulnerable communities** in specific regions such as central, western and parts of southern India.

Therefore, only statements 1 and 2 are correct.

12. Consider the following statements regarding Air Cushion Vehicles (ACVs):

1. Their amphibious capability enables them to operate over mudflats, marshes and shallow waters where conventional patrol vessels cannot navigate.
2. The Indian Coast Guard deploys these vehicles for surveillance and anti-smuggling operations in difficult coastal terrains.

3. These vehicles depend on deep-draft marine propellers operating beneath the water surface for propulsion.

Which of the statements given above are correct?

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

Answer: (c) 1 and 2 only

Explanation

- **Statement 1 is correct.** Air Cushion Vehicles (hovercraft) travel on a **cushion of air**, enabling them to move across mudflats, marshes, sandbars and shallow waters with ease.
- **Statement 2 is correct.** The **Indian Coast Guard** employs ACVs for **coastal surveillance, anti-smuggling operations and law enforcement** in challenging areas such as the **Sundarbans** and the **creeks of Kutch**.
- **Statement 3 is incorrect.** ACVs have a **zero-draft design** and use **air propellers mounted above the craft**, rather than underwater deep-draft marine propellers.

Hence, only statements 1 and 2 are correct.

13. Consider the following statements regarding disqualification under the Tenth Schedule of the Constitution:

1. A Presiding Officer may infer that a legislator has voluntarily given up membership of a political party based on the member's conduct, even without a formal resignation.
2. The Supreme Court, in the **Rajendra Singh Rana v. Swami Prasad Maurya (2007)** case, held that voluntary resignation from a political party need not always be express.
3. The Supreme Court, in the **Subhash Desai v. Principal Secretary, Maharashtra (2023)** judgment, held that a legislative majority alone determines the real political party.

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

Answer: (a) 1 and 2 only

Explanation

- **Statement 1 is correct.** Under the **Tenth Schedule**, the Presiding Officer may infer that a member has voluntarily given up party membership based on the member's conduct, even in the absence of a written resignation.

- **Statement 2 is correct.** In **Rajendra Singh Rana v. Swami Prasad Maurya (2007)**, the Supreme Court held that **conduct may amount to voluntarily giving up party membership**, even without an explicit resignation.
- **Statement 3 is incorrect.** In **Subhash Desai v. Principal Secretary, Maharashtra (2023)**, the Supreme Court rejected the view that **legislative majority alone determines the real political party**. It held that the party's organisational structure, constitution and leadership must also be considered.

Therefore, only statements 1 and 2 are correct.

14. Consider the following statements regarding Katchatheevu Island:

1. Katchatheevu is a permanently inhabited island in the Gulf of Mannar that supports fishing settlements from both India and Sri Lanka.
2. The island is home to St. Antony's Church, where Indian pilgrims are permitted to attend the annual festival without a passport or visa.
3. International maritime boundary agreements relating to the island can be altered unilaterally through domestic legislation by either country.

Which of the statements given above are correct?

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

Answer: (a) 2 only

Explanation

- **Statement 1 is incorrect.** Katchatheevu is an **uninhabited islet** located in the **Palk Strait** and has **no permanent human settlement**.
- **Statement 2 is correct.** The island houses **St. Antony's Church**, and under the India–Sri Lanka arrangements, **Indian pilgrims may attend the annual church festival without requiring a passport or visa**.
- **Statement 3 is incorrect.** International maritime boundary agreements cannot ordinarily be modified **unilaterally through domestic legislation**. Any alteration requires mutual agreement between the concerned countries or appropriate international legal procedures.

Hence, only statement 2 is correct.