

In the context of India's internal security architecture and technology-driven border surveillance, **Project Hawk Eye** has been introduced primarily to achieve which one of the following objectives?

- (a) To establish an automated agricultural monitoring system along the International Border using ground-penetrating radar and soil sensors.
- (b) To detect and dismantle cross-border financial fraud and cyber-terrorism networks through AI-enabled cyber intelligence.
- (c) To create a satellite-integrated communication network for maritime surveillance and search-and-rescue operations along India's western coastline.
- (d) To implement a comprehensive multi-layered surveillance system integrating drones, biometric identification, CCTV monitoring, and tactical deployment for securing a sensitive pilgrimage route.

Answer: (d)

Explanation

Project Hawk Eye is a modern surveillance initiative launched by the **Anantnag District Police of Jammu & Kashmir Police** to strengthen security during the **Shri Amarnath Ji Yatra**.

The project transforms traditional security arrangements into a proactive surveillance model through multiple technological layers.

Its important features include:

- A network of **five surveillance drones** providing continuous aerial monitoring of the pilgrimage route.
- **Artificial Intelligence-based Facial Recognition Systems (FRS)** installed at vulnerable locations to identify suspects in real time.
- Around **416 high-resolution CCTV cameras** ensuring continuous visual surveillance.
- **28 Machan Morchas (elevated observation posts)** positioned at strategic locations for better monitoring.
- **22 specialized sniper teams** deployed to neutralize any emerging threat in difficult Himalayan terrain.

The integration of aerial surveillance, biometric identification, ground observation, and rapid response capabilities significantly reduces blind spots and enhances preventive security during one of India's most sensitive religious pilgrimages.

Hence, **Option (d) is correct.**

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- 1) With reference to the classical musical traditions of Kashmir, recently proposed for inclusion in UNESCO's Intangible Cultural Heritage List, **Sufiyana Music (Sufiyana Mausiki)** is best described as:

- (a) A solo vocal tradition accompanied exclusively by wind instruments derived from Central Asian musical culture.

- (b) A ritual dance-drama tradition depicting Shaivite mythology through codified gestures and elaborate costumes.
- (c) A contemporary musical style combining electronic sound technology with traditional folk songs of Jammu.
- (d) A structured choral classical music tradition in which performers simultaneously sing and play traditional instruments while preserving Persian-inspired maqams through oral transmission.

Answer: (d)

Explanation

Sufiyana Mausiki represents one of the oldest surviving classical music traditions of the Kashmir Valley.

Its major characteristics include:

- It is performed by **five to seven musicians** functioning simultaneously as singers and instrumentalists.
- The musical system follows **Persian-derived maqams**, which resemble Indian ragas in their melodic framework.
- The tradition incorporates instruments such as:
 - **Sufiana Santoor**
 - **Rabab**
 - **Ney**
 - Tabla
 - Sitar
- The entire tradition survives through **oral transmission**, with knowledge being passed from one generation to another within traditional **gharanas**.
- Since its compositions, maqams, and performance techniques are largely uncoded, the preservation of the tradition depends upon hereditary musical lineages.

These characteristics distinguish Sufiyana Music as a unique Indo-Persian classical musical heritage.

Therefore, **Option (d) is correct.**

2) Consider the following statements regarding the **Tungabhadra River**:

Statement-I: The Tungabhadra River is an important right-bank tributary of the Krishna River and serves as a major source of irrigation and water supply across the semi-arid Deccan Plateau.

Statement-II: The Tungabhadra River is formed by the confluence of the Tunga and Bhadra rivers, both of which originate in the Western Ghats of Karnataka.

Which one of the following is correct?

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

Answer: (b)

Explanation

Statement-I is correct.

The **Tungabhadra River** is one of the largest right-bank tributaries of the **Krishna River**. Flowing across the dry regions of Karnataka, Andhra Pradesh, and Telangana, it plays a vital role in irrigation, drinking water supply, hydroelectric power generation, and agricultural development. Major irrigation projects and reservoirs, including the **Tungabhadra Dam**, support extensive cultivation in the Deccan Plateau.

Statement-II is also correct.

The river originates through the confluence of two independent rivers:

- **Tunga River**, originating near **Varaha Parvatha**.
- **Bhadra River**, originating at **Gangamoola** in the **Kudremukh Range**.

These rivers meet at **Kudli**, near Shivamogga, to form the Tungabhadra River.

However, the fact that the river originates from these two streams does **not explain** why it serves as an agricultural lifeline. Its agricultural importance arises from its perennial flow, extensive canal network, reservoirs, and irrigation projects rather than merely its origin.

Hence, **Option (b) is correct.**

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- 3) With reference to the traditional musical heritage of Kashmir, which one of the following instruments is the distinctive **100-stringed hammer-string instrument** that forms the central musical foundation of **Sufiyana Music**?
- (a) Sufiyana Sitar
 - (b) Rabab
 - (c) Sufiana Santoor
 - (d) Ney

Answer: (c)

Explanation

The **Sufiana Santoor** is the principal instrument of Kashmir's **Sufiyana Mausiki** tradition.

Its notable features include:

- It is a **100-stringed hammer-string instrument**.

- The instrument possesses a **triangular wooden frame** mounted on a three-legged stand.
- Musicians play it using a pair of light wooden mallets.
- It provides the principal melodic foundation of the entire ensemble.

Other accompanying instruments include:

- Rabab
- Ney (reed flute)
- Tabla
- Sitar

Although these instruments contribute significantly to the performance, the distinctive tonal identity of Sufiyana Music is created primarily by the **Sufiana Santoor**.

Therefore, **Option (c) is correct**.

4) Consider the following statements regarding the **AIR SUVIDHA 2.0** digital health surveillance portal for international passengers arriving in India:

1. International passengers are required to submit details of their **21-day travel history**, possible exposure risks, and current health status through the portal.
2. The portal functions as an independent platform and does not share passenger information with state-level disease surveillance authorities.
3. Passengers can complete and upload their digital Self-Declaration Form up to **24 hours before** their scheduled arrival in India.

Which one of the following is correct?

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

Answer: (b)

Explanation

Statement 1 is correct.

AIR SUVIDHA 2.0 requires international travellers to submit a **Self-Declaration Form (SDF)** that records:

- 21-day international travel history.
- Possible exposure to infectious diseases.
- Present symptoms and health status.

This information helps authorities identify passengers who may require medical examination or contact tracing.

Statement 2 is incorrect.

The portal is **not a standalone system**. It is fully integrated with India's public health surveillance infrastructure. Passenger information is automatically shared with:

- **Airport Health Officers (APHOs)**
- **State Surveillance Officers**
- **Integrated Disease Surveillance Programme (IDSP)**

This enables rapid medical intervention and efficient disease monitoring.

Statement 3 is correct.

Passengers are allowed to submit their digital health declaration **up to 24 hours before** the scheduled arrival of their international flight, making the immigration and health screening process faster and paperless.

Therefore, **Statements 1 and 3 are correct, while Statement 2 is incorrect. Hence, Option (b) is the correct answer.**

5) Consider the following statements regarding the **clinical features and underlying mechanism of stroke**:

1. An **ischemic stroke** occurs when a blood vessel supplying the brain becomes blocked, leading to reduced blood flow and oxygen deprivation in brain tissue.
2. In the **B.E. F.A.S.T.** stroke recognition protocol, **Face Drooping** is identified when one side of the face appears uneven or droops while the person attempts to smile.
3. If a person raises both arms and one arm gradually drifts downward without control, it indicates **arm weakness**, suggesting a possible neurological deficit associated with stroke.

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 and 3 only

Answer: (c)

Explanation

Statement 1 is correct.

An **ischemic stroke** is the most common type of stroke. It occurs when a blood clot or atherosclerotic plaque blocks an artery supplying the brain. The interruption of blood flow deprives brain cells of oxygen and nutrients, resulting in rapid cell damage if blood circulation is not restored promptly.

In contrast, a **hemorrhagic stroke** occurs when a weakened blood vessel ruptures, causing bleeding within or around the brain. The accumulated blood increases intracranial pressure and damages surrounding brain tissue.

Statement 2 is correct.

The **B.E. F.A.S.T.** protocol is a widely used method for recognizing early symptoms of stroke.

The letter **F** stands for **Face Drooping**. When the affected person is asked to smile, one side of the face may droop or fail to move normally because of sudden weakness or paralysis of the facial muscles.

Statement 3 is correct.

The letter **A** represents **Arm Weakness**.

A person suspected of having a stroke is asked to raise both arms. If one arm cannot be lifted properly or slowly drifts downward, it indicates muscle weakness caused by impaired neurological function on one side of the brain.

Since **all three statements are correct, Option (c) is the correct answer.**

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- 6) From the perspective of wetland conservation, the community-led practice of **bio-fencing** around the **Kopra Reservoir** primarily serves which one of the following purposes?
- (a) It creates a natural vegetative barrier using native plants that protects bird habitats from human disturbance, stray cattle, and other external pressures.
 - (b) It employs synthetic chemical barriers to regulate the micro-climate and water temperature of the reservoir.
 - (c) It filters aquatic organisms from the reservoir to maintain ecological balance among native fish populations.
 - (d) It functions as a physical wind barrier designed to alter the migratory routes of birds passing through the region.

Answer: (a)

Explanation

Bio-fencing is an environmentally sustainable conservation practice in which native trees, shrubs, grasses, and other vegetation are planted around ecologically sensitive areas to create a living protective boundary.

At the **Kopra Reservoir**, this community-driven initiative aims to:

- Protect nesting and breeding sites of resident and migratory birds.
- Reduce human intrusion into ecologically sensitive wetland areas.
- Prevent grazing by stray cattle that may damage nesting habitats.

- Minimize noise and other disturbances affecting wildlife.

Unlike concrete walls or artificial barriers, bio-fencing integrates naturally with the ecosystem. It also creates additional habitats for insects, birds, and small animals while helping stabilize soil and improve groundwater recharge.

Importantly, bio-fencing does **not** use chemicals, modify water temperature, filter aquatic organisms, or obstruct migratory bird flyways.

Therefore, **Option (a) is the correct answer.**

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- 7) Consider the following statements regarding the **Indian Association for the Cultivation of Science (IACS)**:

Statement-I: The Indian Association for the Cultivation of Science is regarded as one of the pioneering scientific institutions that laid the foundation for modern scientific research in India.

Statement-II: The groundbreaking research conducted by **C. V. Raman** at IACS led to the discovery of the **Raman Effect**, for which he received India's first Nobel Prize in Science.

Which one of the following is correct?

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

Answer: (a)

Explanation

Statement-I is correct.

The **Indian Association for the Cultivation of Science (IACS)** is India's oldest institution devoted exclusively to scientific research. It played a pioneering role in promoting research in physics, chemistry, and other natural sciences during the early years of modern Indian science.

Statement-II is also correct.

Between **1907 and 1933**, **C. V. Raman** carried out his pioneering research on the scattering of light at IACS. His discovery, known as the **Raman Effect**, revolutionized the field of optics and spectroscopy.

For this remarkable scientific achievement, he was awarded the **Nobel Prize in Physics in 1930**, becoming the first Indian scientist to receive a Nobel Prize in Science.

The global recognition earned through Raman's research significantly enhanced the reputation of IACS and explains why the institution occupies a historic place in India's scientific heritage.

Hence, **Statement-II correctly explains Statement-I, making Option (a) the correct answer.**

8) Consider the following statements regarding the **Organization of the Petroleum Exporting Countries (OPEC)**:

Statement-I: OPEC member countries coordinate their crude oil production levels in order to influence global oil supply, reduce market volatility, and promote price stability.

Statement-II: OPEC possesses sovereign legal authority to regulate the domestic energy policies and petroleum industries of non-member oil-producing countries.

Which one of the following is correct?

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

Answer: (c)

Explanation

Statement-I is correct.

OPEC is an intergovernmental organization formed to coordinate petroleum policies among its member countries. Through consultations and agreed production targets, member nations attempt to:

- Balance global oil supply and demand.
- Minimize excessive fluctuations in crude oil prices.
- Maintain stability in international petroleum markets.
- Safeguard the interests of both producers and consumers.

Production adjustments are one of OPEC's principal mechanisms for influencing global oil markets.

Statement-II is incorrect.

OPEC has **no legal or sovereign authority** over countries that are not members of the organization.

Although several major oil-producing countries such as Russia cooperate with OPEC under the **OPEC+** framework, such cooperation is entirely **voluntary** and based on mutual agreements rather than legally binding authority.

Non-member countries remain fully sovereign in determining their domestic energy laws, production policies, and economic strategies.

Therefore, **Statement-I is correct while Statement-II is incorrect, making Option (c) the correct answer.**

9) Consider the following statements regarding the **production process of Green Urea**:

1. Green Urea is produced by utilizing **captured carbon dioxide (CO₂)** from industrial emissions as a raw material during the final stage of urea synthesis.
2. The hydrogen required for producing **green ammonia** is generated through the **electrolysis of water** powered by renewable sources of energy.
3. The synthesis of green ammonia involves combining green hydrogen with **atmospheric nitrogen**, rather than replacing nitrogen with alternative chemical agents.

Which of the following is correct?

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

Answer: (c)

Explanation

Statement 1 is correct.

Green Urea production requires **carbon dioxide (CO₂)** as a key raw material. Instead of generating fresh CO₂ from fossil fuels, the process utilizes **captured carbon dioxide** from industrial emissions, thereby reducing greenhouse gas emissions and promoting a circular carbon economy.

Statement 2 is correct.

The hydrogen used for producing **green ammonia** is obtained through **water electrolysis**, in which electricity generated from renewable sources such as solar or wind energy splits water into hydrogen and oxygen. This method eliminates dependence on fossil fuels and produces **green hydrogen**.

Statement 3 is correct.

Green ammonia is synthesized by combining:

- **Green hydrogen**, obtained through renewable-powered electrolysis, and
- **Atmospheric nitrogen**, extracted from air using conventional air-separation technologies.

The process does **not** replace atmospheric nitrogen with chemical looping agents or any alternative source.

Since **all three statements are correct**, **Option (c) is the correct answer.**

10) Consider the following statements regarding the **Central Consumer Protection Authority (CCPA)**:

1. The Central Consumer Protection Authority was established as a statutory body under the provisions of the **Consumer Protection Act, 2019**.

2. The Authority is empowered to investigate violations of consumer rights and impose penalties on manufacturers, advertisers, or endorsers responsible for misleading advertisements and unfair trade practices.

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)

Explanation

Statement 1 is correct.

The **Central Consumer Protection Authority (CCPA)** was established under the **Consumer Protection Act, 2019**, replacing the earlier consumer protection framework created under the 1986 Act. It functions as the country's central regulatory authority for protecting consumer interests.

Statement 2 is also correct.

The CCPA has extensive statutory powers to:

- Investigate violations of consumer rights.
- Initiate inquiries into unfair trade practices.
- Order the recall of unsafe goods and services.
- Direct the discontinuation of misleading advertisements.
- Impose monetary penalties on manufacturers, advertisers, publishers, and celebrity endorsers found guilty of deceptive advertising.

Therefore, **both statements are correct, making Option (c) the correct answer.**

11) With reference to India's recent humanitarian assistance initiatives, **Operation Amistad** was launched primarily for which one of the following purposes?

- (a) To provide naval protection and escort to commercial shipping operating in the Caribbean Sea.
- (b) To send humanitarian assistance, medical teams, and search-and-rescue personnel to earthquake-affected regions of Venezuela.
- (c) To establish a permanent collaborative deep-sea mineral exploration programme with South American countries.
- (d) To evacuate Indian nationals stranded in conflict-affected areas of the Orinoco Basin.

Answer: (b)

Explanation

Operation Amistad is a **Humanitarian Assistance and Disaster Relief (HADR)** mission launched by the Government of India following a series of devastating earthquakes in **Venezuela**.

The mission reflects India's commitment to acting as a responsible global humanitarian partner.

The operation includes:

- Deployment of specialized **search-and-rescue teams**.
- Dispatch of **emergency medical personnel**.
- Establishment of **field medical facilities**.
- Supply of humanitarian relief materials.
- Coordination between the **Ministry of External Affairs** and the **Indian Armed Forces**.

The objective is to assist the affected population and support local authorities during disaster response and recovery operations.

Hence, **Option (b) is the correct answer.**

12) Consider the following statements regarding the literary contributions of **Bankim Chandra Chattopadhyay**:

1. *Anandamath* is a historical novel set against the background of the **Sannyasi Rebellion** of the eighteenth century and is widely regarded as a landmark work in the growth of Indian nationalism.
2. *Devi Chaudhurani* portrays a courageous woman who leads resistance against oppressive colonial revenue policies and highlights the role of women in the struggle against injustice.
3. *Bangadarshan*, founded by Bankim Chandra Chattopadhyay, was an official government periodical established primarily for publishing administrative notifications and legal documents.

Which of the following is correct?

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

Answer: (a)

Explanation

Statement 1 is correct.

Published in **1882**, *Anandamath* is one of Bankim Chandra Chattopadhyay's most influential novels. Set during the **Sannyasi Rebellion** of eighteenth-century Bengal, it inspired nationalist consciousness and introduced the immortal patriotic hymn "**Vande Mataram**."

Statement 2 is also correct.

Devi Chaudhurani presents the story of a courageous woman who emerges as a leader against exploitative colonial taxation and social injustice. The novel emphasizes women's leadership, courage, and patriotism while portraying resistance to oppressive British revenue policies.

Statement 3 is incorrect.

Founded in **1872**, *Bangadarshan* was **not** an official government publication. Instead, it was an influential Bengali literary monthly that became a major platform of the **Bengal Renaissance**, publishing essays, fiction, literary criticism, science, philosophy, and discussions on social reform.

Therefore, **Statements 1 and 2 are correct, while Statement 3 is incorrect. Hence, Option (a) is the correct answer.**

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