Environment & Ecology

DAILY PRACTICE 06/11/2026 · UPSC CSE · Environment & Ecology

Q1.

With reference to mega-hydropower projects and environmental governance in India, consider the following statements:

1. Hydropower projects can affect riverine biodiversity by altering natural flow regimes and sediment transport.
2. The Environment Impact Assessment (EIA) Notification, 2006 provides the framework for prior environmental clearance of specified development projects.
3. Gram Sabhas have no role in decisions concerning forest rights and diversion of forest land in Scheduled Areas.
4. The Forest Rights Act, 2006 recognises the rights of eligible forest-dwelling communities over forest resources.

Which of the statements given above is/are correct?

A. 1 and 2 only

B. 1, 2 and 4 only

C. 2 and 3 only

D. 1, 2, 3 and 4

Correct answer: Option B — 1, 2 and 4 only

Explanation

Correct Answer: (b) — Statements 1, 2 and 4 only.

1. **Statement 1 is correct:** Dams can alter river flows, sediment movement and aquatic habitats.
2. **Statement 2 is correct:** The EIA Notification, 2006 mandates prior environmental clearance for specified projects.
3. **Statement 3 is incorrect:** Gram Sabhas have important roles under forest-rights and related legal frameworks.
4. **Statement 4 is correct:** The Forest Rights Act, 2006 recognises individual and community forest rights of eligible communities.

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Q2.

With reference to ethanol blending in petrol in India, consider the following statements:

1. Ethanol blending in petrol is part of India's strategy to reduce dependence on imported crude oil.
2. Ethanol is primarily produced through the fermentation of biomass containing sugars and starch.
3. The Bureau of Indian Standards (BIS) develops standards relating to fuel quality in India.
4. The E20 programme refers to petrol containing 20% ethanol by volume, subject to applicable fuel specifications.

Which of the statements given above is/are correct?

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A. 1 and 2 only

B. 1, 2 and 3 only

C. 1, 3 and 4 only

D. 1, 2, 3 and 4

Correct answer: Option D — 1, 2, 3 and 4

Explanation

Correct Answer: (d) — All four statements are correct.

1. **Statement 1 is correct:** Ethanol blending aims to reduce crude oil imports and improve domestic energy security.
2. **Statement 2 is correct:** Ethanol can be produced through fermentation of sugar- and starch-rich feedstocks.
3. **Statement 3 is correct:** BIS formulates and publishes standards for petroleum products and other commodities.
4. **Statement 4 is correct:** E20 denotes petrol blended with 20% ethanol by volume.

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Q3.

With reference to human-wildlife conflict and wildlife conservation in India, consider the following statements:

1. Kuno National Park is located in Madhya Pradesh.
2. The Wildlife (Protection) Act, 1972 provides the legal framework for wildlife protection in India.
3. Compensation for livestock losses caused by wild animals can help reduce retaliatory actions against wildlife.
4. The National Tiger Conservation Authority (NTCA) is the statutory authority responsible for implementing India's cheetah reintroduction programme.

Which of the statements given above is/are correct?

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A. 1 and 2 only

B. 1, 2 and 3 only

C. 2, 3 and 4 only

D. 1, 2, 3 and 4

Correct answer: Option B — 1, 2 and 3 only

Explanation

Correct Answer: (b) — Statements 1, 2 and 3 only.

1. **Statement 1 is correct:** Kuno National Park is situated in Sheopur district of Madhya Pradesh.
2. **Statement 2 is correct:** The Wildlife (Protection) Act, 1972 provides the principal statutory framework for wildlife conservation.
3. **Statement 3 is correct:** Timely compensation can reduce economic hardship and retaliatory conflict with wildlife.
4. **Statement 4 is incorrect:** The Cheetah Project Steering Committee and wildlife authorities oversee the reintroduction programme; NTCA is not its sole implementing authority.

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Q4.

With reference to stubble burning and air pollution in India, consider the following statements:

1. Stubble burning releases particulate matter and gaseous pollutants into the atmosphere.
2. The Commission for Air Quality Management (CAQM) has jurisdiction over air quality management in the National Capital Region and adjoining areas.
3. Pusa Decomposer is a microbial formulation developed to accelerate the decomposition of paddy straw.
4. The National Clean Air Programme (NCAP) is exclusively designed to eliminate agricultural stubble burning.

Which of the statements given above is/are correct?

A. 1 and 2 only

B. 1, 2 and 3 only

C. 2, 3 and 4 only

D. 1, 2, 3 and 4

Correct answer: Option B — 1, 2 and 3 only

Explanation

Correct Answer: (b) — Statements 1, 2 and 3 only.

1. **Statement 1 is correct:** Stubble burning releases particulate matter, carbon monoxide and other pollutants.
2. **Statement 2 is correct:** CAQM coordinates air quality management in NCR and adjoining areas.
3. **Statement 3 is correct:** Pusa Decomposer uses microbial formulations to accelerate crop-residue decomposition.
4. **Statement 4 is incorrect:** NCAP addresses urban air pollution through multiple pollution-control measures.

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Q5.

With reference to elephant conservation and wildlife protection in India, consider the following statements:

1. The Asian elephant is listed as Endangered on the IUCN Red List.
2. The Asian elephant is included in Schedule I of the Wild Life (Protection) Act, 1972.
3. India is a signatory to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
4. Wildlife rescue and rehabilitation centres can provide specialised veterinary treatment to injured and orphaned wild animals.

Which of the statements given above is/are correct?

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A. 1, 2, 3 and 4

B. 1 and 2 only

C. 2, 3 and 4 only

D. 1, 3 and 4 only

Correct answer: Option A — 1, 2, 3 and 4

Explanation

Correct Answer: (a) — All four statements are correct.

1. **Statement 1 is correct:** The Asian elephant is classified as Endangered on the IUCN Red List.
2. **Statement 2 is correct:** The Asian elephant receives the highest statutory protection under Schedule I of the Wild Life (Protection) Act, 1972.
3. **Statement 3 is correct:** India is a party to CITES, which regulates international trade in endangered species.
4. **Statement 4 is correct:** Specialised rescue centres provide veterinary care, rehabilitation and recovery facilities for wildlife.

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Q6.

With reference to afforestation, forest plantations and wildfire management, consider the following statements:

1. Afforestation refers to the establishment of forests on land that has not been under forest cover for a long period.
2. Monoculture plantations generally contain a single tree species over a large area.
3. Dense and continuous vegetation can increase fuel availability and contribute to wildfire spread.
4. Afforestation always reduces wildfire risk and increases carbon sequestration irrespective of local ecological conditions.

Which of the statements given above is/are correct?

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A. 1, 2 and 3 only

B. 1 and 4 only

C. 2, 3 and 4 only

D. 1, 2, 3 and 4

Correct answer: Option A — 1, 2 and 3 only

Explanation

Correct Answer: (a) — Statements 1, 2 and 3 are correct.

1. **Statement 1 is correct:** Afforestation involves establishing forests on previously non-forested land.
2. **Statement 2 is correct:** Monoculture plantations are dominated by a single tree species.
3. **Statement 3 is correct:** Continuous vegetation can provide fuel that facilitates fire propagation.
4. **Statement 4 is incorrect:** Afforestation can increase wildfire risk depending on vegetation, climate and landscape conditions.

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Q7.

With reference to air pollution management in the National Capital Region (NCR), consider the following statements:

1. The Commission for Air Quality Management (CAQM) was established under the Commission for Air Quality Management in National Capital Region and Adjoining Areas Act, 2021.
2. The Graded Response Action Plan (GRAP) provides emergency measures to address worsening air quality in Delhi-NCR.
3. The National Clean Air Programme (NCAP) focuses on reducing air pollution through city-level action plans and coordinated interventions.
4. The Central Pollution Control Board (CPCB) functions under the Ministry of Environment, Forest and Climate Change.

Which of the statements given above is/are correct?

A. 1, 2, 3 and 4

B. 1 and 2 only

C. 2, 3 and 4 only

D. 1, 3 and 4 only

Correct answer: Option A — 1, 2, 3 and 4

Explanation

Correct Answer: (a) — All four statements are correct.

1. **Statement 1 is correct:** The CAQM was established through the 2021 Act to coordinate air-quality management in NCR and adjoining areas.
2. **Statement 2 is correct:** GRAP prescribes graded emergency actions based on air-quality conditions.
3. **Statement 3 is correct:** NCAP promotes city-level strategies to reduce particulate pollution.
4. **Statement 4 is correct:** CPCB operates under the Ministry of Environment, Forest and Climate Change.

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Q8.

With reference to the United Nations Framework Convention on Climate Change (UNFCCC) and the Conference of the Parties (COP), consider the following statements:

1. The UNFCCC was adopted at the 1992 Earth Summit held in Rio de Janeiro.
2. The Conference of the Parties is the supreme decision-making body of the UNFCCC.
3. The Paris Agreement was adopted at COP21 in 2015.
4. The United States is not a party to the Paris Agreement.

Which of the statements given above is/are correct?

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A. 1 and 2 only

B. 1, 2 and 3 only

C. 2 and 4 only

D. 1, 2, 3 and 4

Correct answer: Option B — 1, 2 and 3 only

Explanation

Correct Answer: (b) — Statements 1, 2 and 3 only.

1. **Statement 1 is correct:** The UNFCCC was adopted at the 1992 Rio Earth Summit.
2. **Statement 2 is correct:** COP is the supreme decision-making body of the UNFCCC.
3. **Statement 3 is correct:** The Paris Agreement was adopted at COP21 in 2015.
4. **Statement 4 is incorrect:** The United States is a party to the Paris Agreement, although its participation has been subject to changes in government policy.

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Q9.

With reference to digital payments, consider the following statements:

1. BHIM app allows the user to transfer money to anyone with a UPI-enabled bank account.
2. While a chip-pin debit card has four factors of authentication, BHIM app has only two factors of authentication.

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

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Correct answer: Option A — 1 only

Explanation

Correct Answer: (a) — 1 only:

Statement 1 is correct. The BHIM application, based on the Unified Payments Interface (UPI), allows users to transfer money to other users with UPI-enabled bank accounts.

Statement 2 is incorrect. The comparison of authentication factors given in the statement is not correct. UPI-based transactions use prescribed authentication mechanisms, including device binding and a UPI PIN,

depending on the transaction and application requirements.

Q10.

Which of the following statements best describes “carbon fertilization”?

A. Increased plant growth due to increased concentration of carbon dioxide in the atmosphere

B. Increased temperature of Earth due to increased concentration of carbon dioxide in the atmosphere

C. Increased acidity of oceans as the result of increased concentration of carbon dioxide in the atmosphere

D. Adaptation of all living beings on Earth to the climate change brought about by the increased concentration of carbon dioxide in the atmosphere

Correct answer: Option A — Increased plant growth due to increased concentration of carbon dioxide in the atmosphere

Explanation

Correct Answer: (a) — Increased plant growth due to increased concentration of carbon dioxide in the atmosphere:

Carbon fertilization refers to the enhancement of plant growth and photosynthesis due to increased atmospheric carbon dioxide.

Carbon dioxide is an essential raw material for photosynthesis. Higher CO_2 concentrations can increase the rate of photosynthesis, particularly in C3 plants.

However, the effect is limited by other factors such as availability of water, nutrients, sunlight and suitable temperatures.