

www.iasmania.com/ias-mania-daily-mcqs

At IASMANIA, we go beyond conventional MCQ practice.

Every weekday from **Monday to Saturday**, we provide **five carefully designed MCQs** based on:

- Daily News Analysis
- Important current affairs from reliable sources
- Government reports such as PIB, Yojana, and Kurukshetra
- Previous Year UPSC questions and trend analysis

For more updates visit: www.iasmania.com

1) Consider the following statements regarding institutions of rural local self-government:

1. The Gram Sabha serves as an institutional mechanism to promote the participation of socially and economically weaker sections in village-level governance.
2. The construction and upkeep of internal village roads fall within the functional domain of the Gram Panchayat.
3. Gram Panchayats are entirely dependent on State Government grants and have no authority to raise their own sources of revenue.

Which of the above statements are correct?

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

Answer: a)

Explanation:

- Statement 1 is correct. The Gram Sabha, comprising all eligible voters of the village, enables inclusive participation, particularly of marginalized and less-privileged sections, in local governance and decision-making.
- Statement 2 is correct. The Gram Panchayat is responsible for the construction and maintenance of roads within the village, while inter-village connectivity lies beyond its jurisdiction.
- Statement 3 is incorrect. Although many Gram Panchayats rely heavily on State grants, they are legally empowered to generate their own sources of revenue through taxes and non-tax means such as house tax, user charges, and rental income.

2) Which of the following are considered essential conditions for the successful functioning of a democracy?

1. Public conscience
2. Avoidance of tyranny of the majority over the minority
3. Equality of law and administration
4. Functioning of moral order in society
5. Presence of a political opposition

How many of the above statements are correct?

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

Answer: d)

Explanation:

- For a democracy to function effectively, several conditions must be met:
- Public conscience: Citizens must uphold ethical and civic values.
- Avoidance of tyranny of majority over minority: Democratic systems must protect minority rights against majority dominance.
- Equality of law and administration: Laws must be applied uniformly without discrimination.
- Functioning of moral order in society: Society should adhere to ethical norms to support democratic values.
- Presence of an opposition: A viable opposition ensures accountability and prevents concentration of power.

3) With reference to the global distribution and causes of earthquakes, consider the following statements:

1. The Circum-Pacific Belt (Pacific Ring of Fire) accounts for more than half of the world's earthquakes.
2. Mid-oceanic ridges are zones of frequent seismic activity due to divergent plate movements.
3. The Alpine–Himalayan seismic belt is characterized by earthquakes resulting from the interaction of the African, Indian, and Eurasian plates.
4. Anthropogenic activities, such as mining and reservoir-induced seismicity, constitute the principal cause of earthquakes globally.

How many of the above statements are correct?

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

Answer: c)

Explanation:

- Statement 1 is correct: The Circum-Pacific Belt is the world's most seismically active zone, accounting for roughly two-thirds ($\approx 68\%$) of global earthquakes.
- Statement 2 is correct: Earthquakes are common along mid-oceanic ridges, where tectonic plates diverge and magma rises to create new crust.
- Statement 3 is correct: The Alpine–Himalayan Belt experiences intense seismicity due to the collision and convergence of the African, Indian, and Eurasian plates.
- Statement 4 is incorrect: While human activities can induce localized seismic events, tectonic plate movements remain the dominant cause of most earthquakes worldwide.

4) Anvesha (EOS-N1)', proposed to be launched by ISRO in 2026, is best described as which one of the following?

- a) A communication satellite supporting next-generation 6G services
- b) A navigation satellite forming part of the NavIC constellation
- c) A hyperspectral Earth observation satellite
- d) A space-based observatory dedicated to the study of exoplanets

Answer: c)

Explanation:

- EOS-N1, also known by its mission name Anvesha, is an advanced hyperspectral imaging satellite designed for Earth observation.
- Unlike multispectral sensors that operate over a limited number of broad wavelength bands, hyperspectral sensors collect data across hundreds of narrow spectral bands, enabling precise spectral fingerprinting of surface materials.
- This capability allows accurate identification of minerals, crop stress and diseases, environmental changes, and even camouflaged military targets, making Anvesha a dual-use satellite with both strategic (defence) and civilian (agriculture, resource mapping, environment) applications.

5) With reference to the Directorate General of Mines Safety (DGMS), consider the following statements:

1. It is a statutory regulatory authority functioning under the administrative control of the Ministry of Mines.
2. It is entrusted with the enforcement of the Mines Act, 1952, and the rules framed thereunder.
3. Its headquarters is situated at Dhanbad, popularly known as the Coal Capital of India.

How many of the above statements are incorrect?

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

Answer: a)

Explanation:

- Statement 1 is incorrect: Although DGMS regulates mining safety, it functions under the Ministry of Labour & Employment, not the Ministry of Mines. Its mandate relates to occupational safety, health, and welfare of mine workers.
- Statement 2 is correct: DGMS is the nodal authority for administering and enforcing the Mines Act, 1952, along with allied rules applicable to coal, metalliferous, and oil mines.
- Statement 3 is correct: The headquarters of DGMS is located in Dhanbad, Jharkhand, widely referred to as the Coal Capital of India due to its rich coal resources.

6) Consider the following statements about in-flight Wi-Fi technologies:

1. Air-to-ground (ATG) systems are more cost-effective than satellite-based systems.
2. Satellite-based systems rely exclusively on geostationary satellites.
3. Both ATG and satellite-based systems require onboard servers to manage passenger data.

How many of the above statements is/are incorrect?

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

Answer: a)

Explanation:

- Statement 1 is correct: ATG systems use ground-based towers to communicate with aircraft, making them more cost-effective than satellite systems, especially for domestic/regional routes.
- Statement 2 is incorrect: Modern satellite-based systems also use Low Earth Orbit (LEO) satellites, which reduce latency and improve bandwidth and coverage. They are not limited to geostationary satellites.
- Statement 3 is correct: Both ATG and satellite-based systems use onboard servers to manage passenger data, optimize network usage, and ensure smooth internet connectivity.

7) Which one of the following best describes the purpose of the 'Unwilling or Unable' doctrine in international law?

- a) To force states to accede to international treaties
- b) To justify humanitarian intervention to protect civilian populations
- c) To permit the use of force against non-state actors located in another state when that state cannot or will not neutralise the threat
- d) To penalise states failing to meet their UN financial obligations

Answer: c)

Explanation:

- The 'Unwilling or Unable' doctrine relates to the right of self-defence. It allows a state to use force against non-state actors (such as terrorist groups) operating from another state's territory if the host state is unwilling or incapable of preventing those threats.
- The doctrine is controversial, as it can undermine state sovereignty, and it is not recognised as settled customary international law, though it has been invoked by countries such as the United States in counter-terrorism operations.

8) With reference to the ISRO PSLV-C61 mission, consider the following statements:

1. The PSLV-C61 marked the first-ever launch of the Polar Satellite Launch Vehicle.
2. The mission aimed to place the EOS-09 satellite, meant for communication purposes, into a Geostationary Transfer Orbit (GTO).
3. The EOS-09 satellite carried a Synthetic Aperture Radar (SAR) payload capable of all-weather Earth observation.

How many of the above statements is/are incorrect?

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

Answer: (b)

Explanation:

- Statement 1 is incorrect. PSLV-C61 was not the maiden mission; it was the 63rd flight of PSLV and the 27th in the XL configuration, reflecting PSLV's long operational history.
- Statement 2 is incorrect. EOS-09 is an Earth Observation satellite, not a communication satellite, and it was placed in a Sun-Synchronous Polar Orbit (SSPO) rather than a GTO.
- Statement 3 is correct. EOS-09 is equipped with a Synthetic Aperture Radar (SAR) payload, enabling day-night and all-weather imaging, including through cloud cover.

9) Consider the following statements:

1. Statement I: The Mpemba effect refers to a counter-intuitive phenomenon in which hot water freezes faster than cold water when placed under identical conditions.
2. Statement II: Heating water can lead to evaporation-induced mass loss and molecular changes, which may affect the rate at which water cools and eventually freezes.

Which one of the following is correct?

- a) Both Statement-I and Statement-II are correct, and Statement-II correctly explains Statement-I
- b) (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- c) (c) Statement-I is correct, but Statement-II is incorrect
- d) Statement-I is incorrect, but Statement-II is correct

Answer: a)

Explanation:

- The Mpemba effect is a well-documented physical phenomenon where hot water can freeze faster than cold water. This occurs due to factors such as evaporation-driven mass reduction, removal of dissolved gases, enhanced convection currents, and differences in supercooling behavior.
- These changes arise as a result of heating and directly influence the freezing process. Hence, both statements are correct, and Statement-II provides the correct explanation for Statement-I.

10) Consider the following statements regarding “Blue Carbon” ecosystems:

1. They primarily refer to terrestrial forests known for high carbon sequestration rates.
2. Coastal ecosystems like mangroves, tidal marshes, and seagrass meadows are key blue carbon ecosystems.
3. The carbon stored in blue carbon ecosystems is predominantly found in the above-ground biomass of plants.
4. Destruction of blue carbon ecosystems can lead to the release of significant amounts of stored carbon into the atmosphere.

How many of the above statements are correct?

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

Answer: b)

Explanation:

- Statement 1: Incorrect. Blue Carbon specifically refers to carbon captured by coastal and marine ecosystems; terrestrial forests store green carbon.

- Statement 2: Correct. Mangroves, tidal marshes, and seagrass meadows are the main blue carbon ecosystems.
- Statement 3: Incorrect. Most carbon in blue carbon ecosystems is stored in soils and sediments, not just above-ground biomass.
- Statement 4: Correct. Destruction or degradation of these ecosystems releases large amounts of stored carbon into the atmosphere, contributing to climate change.

11) Which of the following are correctly stated regarding Carbon Capture and Utilisation (CCU) and the Indian CCU Testbeds initiative?

1. Direct Air Capture (DAC) is a type of carbon capture that extracts CO₂ from ambient air and is known for its low cost and high efficiency.
2. The Indian CCU testbeds are being established under a public–private partnership model with a focus on translational R&D.
3. CCU is a subset of Carbon Capture, Utilisation, and Storage (CCUS), where the ‘S’ component is excluded.

How many of the above statements is/are correct?

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

Answer: b)

Explanation:

- Statement 1 is incorrect: Although Direct Air Capture (DAC) removes CO₂ directly from the atmosphere, it is associated with high costs and high energy intensity due to the very low concentration of CO₂ in ambient air.
- Statement 2 is correct: Indian CCU testbeds are being developed through a Public–Private Partnership (PPP) involving academic institutions and industry, with emphasis on translational research and industrial application.
- Statement 3 is correct: CCU is a subset of CCUS. While CCUS includes long-term geological storage of CO₂, CCU focuses only on utilising captured carbon, thereby excluding the storage component.

12) Consider the following statements regarding Invasive Alien Species:

1. Statement-I: The introduction of non-native invasive alien species can cause a decline in native biodiversity.
2. Statement-II: Invasive alien species often outcompete native species for resources or lack natural predators in the new environment, disrupting ecological balance.

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

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

Answer: a)

Explanation:

- Statement-I is correct: Non-native invasive species are a major threat to biodiversity, often causing decline or extinction of native species.
- Statement-II is correct: They gain competitive advantages such as faster growth, efficient resource use, or absence of natural predators, allowing them to spread unchecked and disrupt ecosystems.
- Statement-II explains Statement-I: The mechanisms described in Statement-II directly account for the decline in native biodiversity mentioned in Statement-I.

13) Which one of the following best describes the “Precautionary Principle” in environmental policy and law?

- a) Polluting industries must pay for the environmental damage they cause.
- b) Environmental resources should be used in a manner that ensures their availability for future generations.
- c) Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for delaying cost-effective measures to prevent environmental harm.
- d) Development projects must undergo a thorough environmental impact assessment before approval.

Answer: c)

Explanation:

- The Precautionary Principle holds that if an action or policy has a suspected risk of causing serious or irreversible environmental harm, the absence of full scientific certainty cannot be used as a reason to postpone preventive measures. The burden of proof lies with those proposing the activity to show it is safe.
- Option (a): Refers to the Polluter Pays Principle.
- Option (b): Refers to Sustainable Development or Inter-generational Equity.
- Option (d): Refers to Environmental Impact Assessment (EIA).

14) Consider the following statements regarding initiatives undertaken by the Bureau of Indian Standards (BIS):

1. The SHINE initiative is a capacity-building programme aimed at empowering women from Self-Help Groups (SHGs) and NGOs to act as quality ambassadors in their communities.
2. The BIS Standardisation Portal offers a fully digital, end-to-end platform covering the entire lifecycle of standards, from proposal submission to final publication.
3. BIS–SAKSHAM is an annual excellence recognition scheme instituted to honour individuals and institutions for their contributions to standardisation and quality systems.

How many of the above statements are correct?

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

Answer: b)

Explanation:

- Statement 1 is incorrect because SHINE (Standards Help Inform & Nurture Empowered Women) is a women-centric initiative, not focused on men, and seeks to empower women as quality champions.
- Statements 2 and 3 are correct. The BIS Standardisation Portal digitises the standard-setting process, and BIS–SAKSHAM is an annual scheme recognising excellence in standardisation and quality promotion.

15) Consider the following statements regarding the Open Network for Digital Commerce (ONDC):

1. ONDC functions as a centralized e-commerce platform that owns product listings and controls transactions to curb monopolistic practices.
2. It is an initiative mentored by the Department for Promotion of Industry and Internal Trade (DPIIT) under the Ministry of Commerce and Industry.
3. ONDC is based on open protocols and standardized Application Programming Interfaces (APIs) to enable interoperability among multiple buyer and seller applications.

How many of the above statements are incorrect?

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

Answer: a)

Explanation:

- Statement 1 is incorrect: ONDC is not a centralized marketplace and does not own or manage product listings. It is a decentralized digital network that enables different e-commerce platforms to interoperate using open protocols.
- Statement 2 is correct: ONDC is mentored by DPIIT, Ministry of Commerce and Industry.
- Statement 3 is correct: The network relies on open protocols and standardized APIs to ensure seamless interaction between buyer-side and seller-side applications.

Thank You

IAS Mania

www.iasmania.com