

Daily MCQ: 07.03.2026

- 1) With reference to quantum computing, consider the following statements:
1. Quantum computers rely on qubits, unlike classical computers which process information using binary values
 2. Qubits in quantum computers can exist in multiple states simultaneously, unlike classical bits, which can exist in one state at a time.

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) Consider the following statements regarding PM_{2.5} (fine particulate matter):
1. PM_{2.5} particles can penetrate deep into the lungs and enter the bloodstream.
 2. The 24-hour average PM_{2.5} limit recommended by WHO is 15 µg/m³.
 3. Temperature inversion traps pollutants close to the ground, increasing PM_{2.5} levels.

Which of the statements given above are correct?

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

- 3) Consider the following statements:

Statement I : Many Governments are considering banning or restricting social media usage for children.

Statement II : Excessive social media usage among children has been linked to mental health issues such as anxiety, depression, and reduced attention span.

Statement III : Children are more vulnerable to online risks such as cyberbullying, exposure to harmful content, and data privacy violations.

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

- (a) Both Statement II and Statement III are correct and both of them explain Statement I
- (b) Both Statement II and Statement III are correct but only one of them explains Statement I
- (c) Only one of the Statements II and III is correct and that explains Statement I
- (d) Neither Statement II nor Statement III is correct.

- 4) With reference to the Essential Commodities Act (ECA), 1955, consider the following statements

1. The Central Government can notify any commodity as "essential" to regulate its production, supply, and price in the public interest.
2. During LPG shortages, the government can use the ECA to cap prices and limit dealer stocks to stop hoarding.

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

- 5) With reference to Exercise Dharma Guardian, consider the following statements
1. It is a joint military exercise between India and Japan.
 2. The exercise focuses joint combat readiness in complex urban and semi-urban settings.

Which of the above statements is/are correct?

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

Explanation

- 1) **Answer: (C)**

Quantum computing is a type of computing that **uses the principles of quantum mechanics**, the laws that govern the behaviour of matter and energy at the smallest scales to process information in fundamentally different ways from classical computers. Unlike conventional computers that use transistors and work with binary digits (bits) representing **either 0 or 1**, quantum computers use **quantum bits or qubits**. **Hence statement 1 is correct.**

A **qubit** can represent **0, 1, or a combination of both** at the same time due to a quantum phenomenon called **superposition**. This allows quantum computers to explore many possible solutions simultaneously, giving them potential advantages for solving certain problems that are extremely hard for classical computers which exist in one state at a time. **Hence statement 2 is correct.**

Therefore , option C is the correct answer.

- 2) **Answer: (D)**

PM_{2.5} particles are small enough (≤ 2.5 micrometers) to penetrate deep into the lungs (reaching the alveoli) and even enter the bloodstream, leading to serious health effects like cardiovascular and respiratory issues. **Hence, Statement 1 is correct.**

According to the latest WHO Global Air Quality Guidelines (updated in 2021), the recommended 24-hour average guideline level for PM_{2.5} is 15 $\mu\text{g}/\text{m}^3$ (with an annual mean of 5 $\mu\text{g}/\text{m}^3$). This is the health-protective guideline value. **Hence, Statement 2 is correct.**

Temperature inversion occurs when a layer of warmer air traps cooler air near the ground, preventing vertical mixing and dispersion of pollutants. This stable atmospheric condition traps emissions close to the surface, significantly increasing PM_{2.5} concentrations, especially during winter in valleys or urban areas. **Hence, Statement 3 is correct.**

Therefore D is the right answer

- 3) **Answer: (A)**

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Several governments and policymakers across the world are considering or debating restrictions on children's access to social media due to rising concerns regarding safety and well-being. **Hence, statement I is correct.**

Excessive social media usage is linked to dopamine-driven feedback loops, sleep deprivation, and "Comparison Anxiety." In public policy, these are considered "Negative Externalities" of the digital economy that the State must mitigate. **Hence, statement II explains statement I.**

Unlike adults, children are viewed as "vulnerable subjects" in data protection law. Risks such as **cyber-grooming, phishing, and non-consensual data profiling** necessitate State intervention. **Hence, statement III explains statement I.**

Therefore, option A is the correct answer.

4) Answer: (C)

Under **Section 2A** of the ECA, 1955, the Central Government has the authority to amend the Schedule to include any commodity it deems necessary in the **public interest**. Once notified, the government gains the power to regulate the entire lifecycle of that commodity—from its manufacturing and production to its distribution and pricing. **Hence, Statement 1 is correct.**

Petroleum and petroleum products (which include **LPG**) are already listed in the Schedule of the Essential Commodities Act. During disruptions—such as a global supply chain crisis or local shortages—the government can issue **Control Orders** to:

- **Fix Prices:** Set a Maximum Retail Price (MRP) to prevent predatory pricing.
- **Impose Stock Limits:** Legally mandate the maximum amount a dealer can store, forcing them to release supply into the market to prevent "artificial scarcity" or hoarding. **Hence, Statement 2 is correct. Therefore, option C is the correct answer.**

5) Answer: (C)

- Exercise Dharma Guardian is an annual bilateral land-force military exercise between the Indian Army and the Japan Ground Self-Defense Force (JGSDF). Conducted alternately in India and Japan. The exercise aims to enhance interoperability and strengthen joint operational capabilities in semi-urban and urban environments, focusing on Temporary Operating Base (TOB) establishment, Intelligence, Surveillance and Reconnaissance (ISR) grid development, and Cordon and Search Operations, along with advanced drills such as Heliborne operations and close-quarter battle (house intervention) tactics. Strategically, it is a key component of the India–Japan Special Strategic and Global Partnership supporting a Free and Open Indo-Pacific (FOIP) and forms part of broader defence cooperation that includes exercises like JIMEX (Navy), Veer Guardian (Air Force), Shinyuu Maitri (Air Force – Transport), and the multilateral Malabar naval exercise with the USA and Australia. **Hence both the statements are correct.**
- **Therefore, option C is the correct answer.**

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