



Daily MCQ: 28.08.2026

- 1) Consider the following statements regarding the Mines and Minerals (Development and Regulation) Amendment Act, 2026:
1. A uniform tax framework applies to mining activities under the amended framework.
 2. No tax or cess shall be imposed by a State Government on mineral rights or mineral-bearing lands.
 3. Minor minerals do not remain entirely under the control of State Governments.

Which of the statements given above is/are correct?

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

- 2) Consider the following statements regarding Supervisory Control and Data Acquisition (SCADA) systems:

1. It is a combined software and hardware architecture used to monitor, gather real-time data, and control large-scale industrial processes from remote locations.
2. Modern SCADA systems run on their own closed-off networks, making them pretty much safe from online hackers.
3. In India, the National Critical Information Infrastructure Protection Centre (NCIIPC) is the designated nodal agency for protecting SCADA networks deployed in critical sectors like power and telecommunications.

Which of the statements given above is/are correct?

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

- 3) In which of the following are lithium carbonate or its precursor derivatives used?

1. Production of cathode materials for lithium-ion batteries
2. Medical treatment of bipolar disorder and manic depression
3. Manufacturing of specialized heat-resistant glass and ceramics

Select the correct answer using the code given below:

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

- 4) Consider the following statements regarding Land Subsidence:

1. Reduction in pore-water pressure due to excessive groundwater extraction can transfer a greater share of the overburden load to the sediment skeleton, resulting in irreversible compaction.
2. Subsidence caused by groundwater extraction is generally confined to the area immediately surrounding the pumping well and does not extend across wider aquifer systems.



3. Dissolution of soluble rocks beneath the surface can create underground cavities, potentially leading to sudden or progressive collapse of the overlying ground.

Which of the statements given above is/are correct?

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

5) Consider the following countries:

- 1. Kazakhstan
- 2. Kyrgyzstan
- 3. Tajikistan
- 4. Turkmenistan
- 5. Afghanistan

How many of the above countries share a land boundary with Uzbekistan?

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

Explanation

1. Answer: A

Explanation

- **Statement 1 — Correct:** The MMDR Amendment Act, 2026 seeks to establish a more uniform and predictable fiscal framework for the mineral sector by restricting disparate State-level taxes, cesses and other levies.
- **Statement 2 — Correct:** Under Section 9D(1), States cannot impose a tax, cess or other levy on mineral rights or mineral-bearing lands, whether based on mineral quantity, mineral value, royalty payable or otherwise, except in accordance with conditions/restrictions prescribed by the Central Government.
- **Statement 3 — Incorrect:** The amendment does not remove the existing distinction between major and minor minerals or transfer all control over minor minerals to the Centre. State Governments continue to have substantial regulatory powers over minor minerals under the MMDR framework.

2. Answer: C

Explanation:

Statement 1 is correct: SCADA systems rely on components like Remote Terminal Units (RTUs) and Programmable Logic Controllers (PLCs) to interface with physical machinery (like valves or pumps in a water treatment plant) and send that data back to a central supervisory system for remote control and monitoring.

Statement 2 is incorrect: While early SCADA systems were isolated ("air-gapped"), modern ones are heavily connected to standard IT networks, the cloud, and the internet. This makes them highly vulnerable to online hackers and cyber threats (like the Stuxnet worm or ransomware attacks on power grids).

Statement 3 is correct: Created under Section 70A of the Information Technology Act, 2000, the NCIPC is the nodal agency in India responsible for defending the country's



Critical Information Infrastructure (CII), which is largely driven by SCADA and other Industrial Control Systems (ICS).

3. Answer: D

1. Production of cathode materials for lithium-ion batteries — Correct

Lithium carbonate is an important lithium compound used as a **lithium source in the manufacture of cathode materials** for lithium-ion batteries.

2. Medical treatment of bipolar disorder and manic depression — Correct

Lithium carbonate is used as a mood stabiliser, particularly in the treatment and management of bipolar disorder and manic episodes.

3. Manufacturing of specialised heat-resistant glass and ceramics — Correct

Lithium compounds are used in **specialised glass and ceramic manufacturing** because lithium can improve properties such as **thermal shock resistance and thermal expansion characteristics**.

Hence, option D is the correct answer.

4. Answer: ()

Statement 1 is correct: When groundwater is extracted excessively, the fluid pressure (*pore-water pressure*) inside the aquifer decreases. This reduction transfers the weight of the overlying soil and rock (*overburden load*) directly to the solid sediment skeleton, causing grains to consolidate and compact permanently.

Statement 2 is incorrect: Land subsidence caused by groundwater pumping is **not** confined just to the immediate area around a pumping well. Regional aquifer systems are interconnected; large-scale or continuous groundwater depletion leads to widespread regional subsidence extending across broad basin areas (e.g., California's Central Valley or Mexico City).

Statement 3 is correct: Dissolution of soluble rocks (such as limestone, gypsum, or salt) by groundwater creates underground voids and karst topographies. When the structural integrity of these cavities fails, it leads to progressive settling or sudden sinkhole collapses.

5. Answer: (D)

- Uzbekistan is a **landlocked country in Central Asia**, with **Tashkent** as its capital. It is bordered by five countries: **Kazakhstan** to the north, **Kyrgyzstan** to the northeast, **Tajikistan** to the southeast, **Afghanistan** to the south, and **Turkmenistan** to the southwest. Thus, Uzbekistan shares land borders with **all four other Central Asian republics**, making it the **only Central Asian country to do so**. Geographically, it has an **extreme continental climate**, with the south generally warmer and the north colder. The **Kyzylkum Desert** occupies a large part of the country, while the **Tien Shan Mountains** rise in the east. **Khazret Sultan, at about 15,233 feet (4,643 m), is the highest point in Uzbekistan**. The country lies mainly between the **Syr Darya** in the northeast and the **Amu Darya**, and important lakes include **Aydar Lake and Sarygamysh Lake**. Uzbekistan also possesses significant **mineral and energy resources**, including **copper, lead, zinc, tungsten, uranium and natural gas**.
- Therefore option D is the correct answer .



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