



Daily Current Affairs Prelims Quiz 29-10-2026

1. With reference to Carbon Capture, Utilisation and Storage (CCUS), consider the following statements:

1. Carbon capture involves separating CO₂ from industrial emissions or directly from the atmosphere before it is released into the atmosphere.
2. In CCUS, captured CO₂ can be utilised to produce chemicals, fuels and building materials.
3. Geological formations such as depleted oil and gas reservoirs and deep saline aquifers can be used for permanent CO₂ storage.
4. CCUS necessarily results in net-zero emissions irrespective of the energy source used for the capture process.

Which of the statements given above is/are correct?

- a. 1, 2 and 3 only
- b. 1 and 4 only
- c. 2 and 3 only
- d. 1, 2, 3 and 4



Answer : a

Statement 1 — Correct:

Carbon capture refers to capturing **CO₂ before it enters the atmosphere**, mainly from industrial facilities and power plants. CO₂ can also be captured directly from the atmosphere through **Direct Air Capture (DAC)**.

Statement 2 — Correct:

The captured CO₂ need not always be stored. It can be **utilised (CCU)** for applications such as:

- Production of chemicals
- Synthetic fuels
- Building materials and concrete
- Enhanced oil recovery in some applications

Statement 3 — Correct:

For long-term geological storage, CO₂ can be injected deep underground into formations such as:

- **Deep saline aquifers**
- **Depleted oil and gas reservoirs**

The objective is to prevent the stored CO₂ from returning to the atmosphere.

Statement 4 — Incorrect:

CCUS does **not automatically mean net-zero emissions**. Its overall climate benefit depends on factors such as the **energy source used, capture efficiency, transport, utilisation pathway and permanence of storage**. If fossil fuels are used to power the capture process, additional emissions may occur.

2. With reference to the Nelakondapalli Buddhist Heritage Destination, consider the following statements:

1. Nelakondapalli is an ancient archaeological site located in Telangana.
2. The site contains a Mahastupa locally known as *Eradibba* or *Virataraja Dibba*.
3. Archaeological excavations at the site have revealed Buddhist monastic remains, including viharas and chaitya halls.
4. The site is associated exclusively with the Satavahana period and has no evidence of later dynasties.

Which of the statements given above is/are correct?

- a. 1, 2 and 3 only
- b. 1 and 4 only
- c. 2 and 3 only
- d. 1, 2, 3 and 4

Answer : a



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Statement 1 — Correct:

Nelakondapalli is an important **ancient Buddhist archaeological site in Khammam district, Telangana**, near Balasamudram Lake.

Statement 2 — Correct:

The primary monument at Nelakondapalli is a large **Mahastupa**, locally known as **Eradibba or Virataraja Dibba**. It is a major feature of the archaeological complex.

Statement 3 — Correct:

Excavations have revealed several Buddhist remains, including:

- **Brick-built viharas** — monastic residences
- **Chaitya halls** — Buddhist prayer/worship halls
- Wells and water cisterns
- Bronze Buddha image
- Terracotta figures
- Miniature limestone stupa

Statement 4 — Incorrect:

The site is **not exclusively associated with the Satavahanas**. Archaeological evidence connects Nelakondapalli with multiple periods, including the **Satavahana, Ikshvaku and Vishnukundin periods**.

3. With reference to the Twin-Drone Search and Rescue (SAR) System developed for maritime rescue operations, consider the following statements:

1. The system uses a quadcopter primarily for surveillance and detection of persons in distress.
2. The quadcopter uses optical and thermal cameras along with an AI-based YOLO model to identify human heat signatures.
3. The hexacopter receives the target's coordinates from the quadcopter through long-range radio-frequency communication and delivers a self-inflating lifebuoy.
4. The release of the lifebuoy is completely autonomous and does not require human intervention.

Which of the statements given above is/are correct?

- a. 1, 2 and 3 only
- b. 1 and 4 only
- c. 2 and 3 only
- d. 1, 2, 3 and 4

Answer : a

Statement 1 — Correct:

The **quadcopter** performs the **surveillance and detection** function. It searches the sea surface for people requiring assistance.

Statement 2 — Correct:

The quadcopter is equipped with **2K optical and thermal cameras**. It uses a **YOLO-based Artificial Intelligence model** to analyse live video and detect human heat signatures against the surrounding ocean.

Statement 3 — Correct:

Once a person is detected, the **hexacopter** receives the location coordinates from the quadcopter through **long-range RF communication**. It then flies to the location and releases a **self-inflating lifebuoy**.

Statement 4 — Incorrect:

The system follows a **human-in-the-loop** approach. The final command to release the lifebuoy remains under the **direct control of a human operator**. Therefore, the system is not completely autonomous.

4. With reference to Exercise Garuda Shakti 2026, consider the following statements:

1. It is a joint special forces exercise between India and Indonesia.
2. The Indian contingent participating in the exercise is drawn from the Parachute Regiment (Special Forces) of the Indian Army.
3. The 2026 edition is being conducted in Banyuwangi, East Java, Indonesia.
4. The exercise focuses exclusively on maritime warfare and amphibious operations.

Which of the statements given above is/are correct?

- a. 1, 2 and 3 only
- b. 1 and 4 only
- c. 2 and 3 only
- d. 1, 2, 3 and 4

Answer : a

Statement 1 — Correct:

Garuda Shakti is a bilateral joint special forces exercise between the **Indian Army and Indonesian Special Forces**. The 2026 edition is the **11th edition**.

Statement 2 — Correct:

India is represented by personnel from the **Parachute Regiment (Special Forces)** of the Indian Army.

Statement 3 — Correct:

The **2026 edition** is being conducted at **Banyuwangi, East Java, Indonesia**, from **27 October to 6 November 2026**.

Statement 4 — Incorrect:

The exercise is **not exclusively focused on maritime warfare**. Its training encompasses a broad range of special operations capabilities, including:

- Jungle warfare and survival
- Obstacle crossing
- Combat marksmanship
- Mountaineering
- Air assault
- Combat hardening
- Counter-insurgency (CI)
- Counter-terrorism (CT)
- Exchange of special operations procedures, weapons and equipment

The exercise concludes with a **validation exercise** designed to test the participants' readiness and interoperability in realistic operational scenarios.

5. With reference to plant-based meat products, consider the following statements:

1. Plant-based meat products are designed to replicate the taste, texture and appearance of animal-derived meat.
2. Soy protein, pea protein and wheat gluten are commonly used raw materials in their production.
3. Extrusion is a manufacturing technique in which materials are forced through a shaped die under controlled heat and pressure to develop a meat-like texture.
4. Extrusion necessarily involves the use of animal-derived proteins to achieve a meat-like texture.

Which of the statements given above is/are correct?

- a. 1, 2 and 3 only
- b. 1 and 4 only
- c. 2 and 4 only
- d. 1, 2, 3 and 4

Answer : a

Statement 1 — Correct: Plant-based meat products are food products designed to mimic conventional meat in terms of taste, appearance, texture and, in some cases, nutritional

composition. They are generally made using plant-derived ingredients.

Statement 2 — Correct: Common protein sources include:

- Soy protein: Derived from soybeans; widely used in meat alternatives.
- Pea protein: Extracted from peas; provides protein and suitable functional properties.
- Wheat gluten: The protein complex in wheat responsible for elasticity and chewiness, helping create a meat-like structure.

Statement 3 — Correct: Extrusion is an important food-processing technique. The ingredients are mixed and subjected to controlled heat, pressure and mechanical shear before being forced through a die. This can align protein structures and create a fibrous texture resembling meat.

Statement 4 — Incorrect: Extrusion does not necessarily require animal-derived proteins. Plant proteins can be processed to develop meat-like textures, making the technique suitable for vegetarian and vegan meat alternatives.

