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Daily Current Affairs Prelims Quiz 04-11-2026

1. With reference to the newly discovered catfish species Exostoma nasibarbatum, consider the following statements:

1. It belongs to the family Sisoridae and subfamily Glyptosterninae.
2. It was discovered in the hill streams of Chandel district in Manipur, which forms part of the Chindwin-Irrawaddy river drainage system.
3. It is adapted to stagnant freshwater habitats through specialized morphological features.
4. It is considered a bio-indicator of freshwater ecosystem health.

Which of the statements given above are correct?

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

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Answer : b

Statement 1 – Correct

- Exostoma nasibarbatum belongs to:

  - Order – Siluriformes
  - Family – Sisoridae
  - Subfamily – Glyptosterninae
  - Genus – Exostoma.

Statement 2 – Correct

- The species was discovered in the hill streams of Chandel district, Manipur.
- It is associated with the Bupal stream and the Chindwin-Irrawaddy river drainage system.

Statement 3 – Incorrect

- It inhabits high-energy, fast-flowing and clear rocky hill streams, not stagnant freshwater habitats.
- It possesses rheophilic adaptations, including flattened bodies and adhesive structures, which help it cling to rocks against strong water currents.

Statement 4 – Correct

- Rheophilic catfishes are highly sensitive to siltation, water pollution and habitat degradation.
- Therefore, they serve as important bio-indicators of freshwater ecosystem health.

2. With reference to CNGC13 and systemic alarm signalling in plants, consider the following statements:

1. CNGC13 is a cyclic nucleotide-gated calcium ion channel located in the plasma membrane of plant cells.
2. It facilitates the movement of calcium ions, enabling long-distance transmission of defence signals from damaged leaves to undamaged leaves.
3. Glutamate released by damaged plant cells plays a role in activating the CNGC13-mediated signalling pathway.
4. The activation of this pathway inhibits the production of defence-related phytohormones such as Jasmonic Acid.

Which of the statements given above 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

Answer : b

Statement 1 – Correct

- CNGC13 stands for Cyclic Nucleotide-Gated Channel 13.
- It is a specialised calcium-ion-permeable channel located in the plasma membrane of plant cells.

Statement 2 – Correct

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- CNGC13 facilitates the influx of extracellular calcium ions ($Ca^{2?}$).
- This generates a propagating calcium wave that transmits defence signals from damaged leaves to distant, undamaged leaves.

Statement 3 – Correct

- When insect herbivores damage plant tissues, the affected cells release extracellular glutamate.
- Glutamate triggers membrane depolarisation and activates the CNGC13-mediated calcium signalling pathway.

Statement 4 – Incorrect

- Systemic calcium signalling activates the synthesis of defence-related phytohormones, particularly Jasmonic Acid (JA).
- It also promotes the production of anti-herbivore toxins, preparing undamaged leaves for potential insect attacks.

3. With reference to Jupiter's bow shock and plasma wave activity, consider the following statements:

1. Jupiter's bow shock is formed due to the interaction between the solar wind and Jupiter's magnetosphere.
2. Intermediate shocklets and layered transition regions help decelerate the incoming solar wind at Jupiter's bow shock.
3. The Juno spacecraft has observed strong harmonic plasma wave structures and intense particle heating across Jupiter's bow shock.
4. Jupiter's bow shock does not undergo periodic self-reformation under intense solar wind pressure.

Which of the statements given above 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

Answer : b

Statement 1 – Correct

- Jupiter's bow shock is formed when the supersonic solar wind encounters Jupiter's magnetosphere.
- It represents a transition region where the solar wind is decelerated, compressed and heated.

Statement 2 – Correct

- Unlike a relatively straightforward shock transition, Jupiter's bow shock exhibits intermediate shocklets and multiple layered regions.
- These structures progressively decelerate the incoming solar wind.

Statement 3 – Correct

- Data from NASA's Juno spacecraft revealed strong harmonic structures and intense plasma wave activity.
- These waves contribute to the heating of electrons and ions across the shock.

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Statement 4 – Incorrect

- Jupiter's bow shock exhibits cyclical self-reformation patterns under intense solar wind pressure.
- Recurring magnetic structures have been observed at approximately 8.3-second intervals.

3. With reference to Overseas Citizen of India (OCI) cardholders and their rights in India, consider the following statements:

1. OCI cardholders are considered Indian citizens for the purpose of enjoying Fundamental Rights under Article 19 of the Constitution.
2. OCI cardholders are not entitled to the right to vote in elections in India.
3. OCI status provides lifelong, multiple-entry visa facilities to visit, reside and work in India.
4. OCI cardholders are permitted to acquire agricultural land and plantation properties in India.

Which of the statements given above are correct?

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

Answer : b

Statement 1 – Incorrect

- OCI cardholders are foreign nationals and are not Indian citizens.

- Article 19 guarantees certain fundamental freedoms, including freedom of speech and expression and peaceful assembly, exclusively to Indian citizens.
- Therefore, OCI cardholders cannot claim Article 19 rights on the same footing as Indian citizens.

Statement 2 – Correct

- OCI status does not confer Indian citizenship.
- OCI cardholders cannot vote in Indian elections or contest elections to Parliament or State Legislatures.

Statement 3 – Correct

- OCI registration provides a lifelong, multiple-entry, multi-purpose visa to visit India.
- It facilitates residence, employment and educational opportunities, subject to applicable rules and restrictions.

Statement 4 – Incorrect

- OCI cardholders can purchase residential and commercial properties in India.
- However, they are generally prohibited from purchasing agricultural land, farmhouses and plantation properties.

4. With reference to NASA's Neil Gehrels Swift Observatory, consider the following statements:

1. It was launched in 2004 primarily to study gamma-ray bursts and other high-energy astronomical phenomena.
2. Increased solar activity can accelerate the orbital decay of low-Earth orbit satellites by increasing atmospheric drag.
3. The Swift Observatory was successfully shifted to a higher orbit through NASA's robotic rescue mission named Link.
4. The observatory is expected to undergo atmospheric re-entry, during which most of its structure is likely to burn up.

Which of the statements given above are correct?

a. 1 and 2 only

b. 1, 2 and 4 onlyy

c. 1, 3 and 4 only

d. 2, 3 and 4 only

Answer : a

Statement 1 – Correct

- NASA's Neil Gehrels Swift Observatory was launched on November 20, 2004.
- It primarily studies gamma-ray bursts (GRBs), among the most energetic explosions in the universe.
- It also observes supernovas, comets, asteroids and black holes.

Statement 2 – Correct

- Increased solar activity heats and expands Earth's upper atmosphere.
- This increases atmospheric density at satellite orbital altitudes.

- Consequently, satellites experience greater atmospheric drag, lose orbital energy and gradually descend towards Earth.

Statement 3 – Incorrect

- NASA engaged Katalyst Space Technologies to undertake a robotic rescue mission.
- Its spacecraft, named Link, was intended to push the Swift Observatory into a higher orbit.
- However, Link experienced attitude-control and thruster failures and failed to complete the rescue mission.

Statement 4 – Correct

- The Swift Observatory faces uncontrolled atmospheric re-entry.
- Most of its structure is expected to burn up due to intense atmospheric heating.
- However, dense components, potentially including tungsten parts and mirror fragments, may survive re-entry and reach Earth's surface.

5. With reference to the recently discovered 4,000-year-old defensive structure at Oued Beht, consider the following statements:

1. The structure was discovered in northwestern Morocco, near the Oued Beht river valley.
2. Radiocarbon dating suggests that its original construction dates back to the second millennium BCE.
3. The discovery represents the oldest known large-scale fortified system in North Africa outside the Nile Valley.
4. Archaeological evidence suggests that the structure was primarily constructed to defend against foreign invasions from ancient Egypt.

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Which of the statements given above 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

Answer : b

Statement 1 – Correct

- Oued Beht is an archaeological site located in northwestern Morocco, east of Rabat.
- The fortified structure overlooks the Oued Beht river valley.

Statement 2 – Correct

- Radiocarbon dating of seeds and charcoal deposits places the construction between 4,000 and 3,500 years ago.
- This corresponds broadly to the second millennium BCE and the Bronze Age in the western Mediterranean.

Statement 3 – Correct

- The discovery represents the oldest known large-scale fortified system in North Africa outside the Nile Valley.
- It provides evidence of advanced construction capabilities and organized community activities among prehistoric North African societies.

Statement 4 – Incorrect

- Researchers suggest that the wall was probably constructed to address local competition over resources such as:
    - Agricultural land.
    - Water and food resources.
    - Regional trade routes and movement.
- There is no established evidence that it was primarily built to defend against ancient Egyptian invasions.

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