

**EVA STALIN IAS ACADEMY – BEST IAS COACHING IN CHENNAI**

12/24, Muthurangan Muthali St, West Tambaram, Chennai - 600045

<https://www.evastaliniasacademy.in/>

**Contact Number – +91-8678969915, +91-9940332851**

Q1. Consider the following statements:

1. Among the operationally-run Central Public Sector Enterprises (CPSEs) that have Ratna status, the majority are Maharatna companies.
2. Eight core industrial sectors have a total weight of nearly 70% in the Index of Industrial Production (IIP).

Which of the above statements is/are correct?

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

**Ans: (d)**

**Explanation:**

- Context: The Indian Renewable Energy Development Agency Ltd. (IREDA), a prominent green financing Non-Banking Finance Company focused on renewable energy, has achieved an upgrade from 'Schedule B' to 'Schedule A' status as a Central Public Sector Enterprise.
- As of 2023, India has 13 Maharatna companies, which are among the Central Public Sector Enterprises (CPSEs) listed by the government.
- Presently, there are 14 Navratna Companies and 74 'Miniratna' CPSEs (62 Category-I –I and 12 Category-II).
- The ICI measures combined and individual performance of production of eight core industries viz. Cement, Coal, Crude Oil, Electricity, Fertilizers, Natural Gas, Refinery Products and Steel. The Eight Core Industries comprise 40.27 percent of the weight of items included in the Index of Industrial Production (IIP).

Q2. Which of the following statements about malaria is true?

- (a) Malaria is caused by a virus.
- (b) Malaria is primarily transmitted through contaminated water.
- (c) The most common malaria-carrying mosquito species is Anopheles.
- (d) Malaria has been completely eradicated worldwide.

**Ans: (c)**

**Explanation:**

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- Context: The World Health Organization (WHO) has recommended the use of the R21/Matrix-M malaria vaccine, which was jointly developed by the University of Oxford and the Serum Institute of India.
- Malaria is a life-threatening disease caused by a parasite that is spread through the bites of infected mosquitoes. Symptoms include Fever, Fatigue, Vomiting, Headaches, and Shaking chills.
- Malaria remains a major global health issue, causing over 600,000 deaths annually, with a significant number of victims being children in Africa.

Q3. Which of the following statements about the CALIPSO mission is/are true?

- (a) CALIPSO uses a lidar instrument to measure the altitude and optical properties of clouds and aerosols.
- (b) CALIPSO is a polar-orbiting satellite, meaning that it flies over both poles on each orbit.
- (c) CALIPSO data is used to study climate change, air quality, and weather forecasting.
- (d) All of the above

**Ans: (d)**

**Explanation:**

- Context: NASA has announced the conclusion of its CALIPSO (Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observation) mission, which analysed climate, weather, and air quality for 17 years.
- CALIPSO, launched jointly by NASA and France's CNES, used LIDAR (Light Detection and Ranging) technology to record over 10 billion measurements and generate thousands of scientific reports.
- The mission involved two satellites, CALIPSO and CloudSat, which were launched in 2003 and orbited the Earth in a Sun-synchronous orbit.
- They measured cloud altitudes and various atmospheric particles' properties, such as dust, sea salt, ash, and soot. These observations contributed to sophisticated models to understand complex atmospheric processes, including cloud formation, atmospheric convection, precipitation, and particle transport.

Q4. Which of the following statements about Astra missiles is correct?

- (a) Astra missiles are anti-tank missiles used by ground forces.
- (b) Astra missiles are a series of long-range ballistic missiles used for space exploration.
- (c) Astra missiles are air-to-air missiles developed for aerial combat.

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(d) Astra missiles are underwater torpedoes used by naval forces.

**Ans: (c)**

**Explanation:**

- Context: The Indian Air Force (IAF) is set to induct the indigenous Astra Beyond Visual Range (BVR) Air to Air Missile by the end of 2023.
- Astra is already integrated into the SU-30MKI and was successfully test-fired from the Light Combat Aircraft (LCA) Tejas. The IAF intends to equip its frontline fighters with the Astra-MK1, while the Astra-2 is expected to become a mainstay of the IAF's BVR missile arsenal, reducing import dependency.
- The Astra is a family of Indian air-to-air missiles. It's the first indigenous air-to-air missile developed by the Defence Research and Development Organisation (DRDO). The Astra is a beyond-visual-range (BVRAAM) missile that uses radar guidance to navigate and position the target

Q5. With reference to NavIC, known as the Navigation with Indian Constellation, consider the following statements:

1. It is a constellation of seven satellites owned and operated by India.
2. It offers precise navigation and positioning up to 1500 km beyond its territorial boundary.
3. It has a positional accuracy of 5 meters, surpassing GPS's 15-20 meters.

How many of the statements given above is/are correct?

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

**Ans: (c)**

**Explanation:**

- Context: For the first time, chipsets capable of receiving and processing signals from India's indigenous navigational system, NavIC, will be designed and manufactured in India by an Indian company.

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- Currently, not all smartphones and navigational devices are compatible with NavIC, as they require NavIC-compatible chipsets to decode its signals, often sourced from foreign companies like Qualcomm and MediaTek.
- In a joint effort between the Ministry of Science & Technology and the Ministry of Electronics & Information Technology, an Indian company, based in Hyderabad, will design and commercially produce these chipsets.
- NavIC, known as the Navigation with Indian Constellation, is a constellation of seven satellites owned and operated by India, offering precise navigation and positioning up to 1500 km beyond its territorial boundary.
- It functions similarly to GPS but is owned and operated by India, covering the entire Indian subcontinent with a positional accuracy of 5 meters, surpassing GPS's 15-20 meters.



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