



## Environmental Science & Other Innovations:

### Environmental Science

**NASA-ISRO Satellite Milestone:** The joint NASA-ISRO Earth-observing satellite, NISAR (NASA-ISRO Synthetic Aperture Radar), successfully deployed its 12-meter-diameter radar antenna reflector in orbit. This marks a critical step toward the mission's goal of precisely measuring Earth's changing surface, including glacial movement, seismic activity, and ecosystem changes.

**Plastic Pollution Treaty Talks:** Negotiations for a legally binding global treaty to end plastic pollution have adjourned in Geneva without a final agreement. However, participating countries have expressed a desire to continue discussions at a future date.

**Air Quality Warnings:** A new study from Indonesia has raised concerns about the public health risks associated with a waste-to-energy plant in East Java. Monitoring revealed that the plant's emissions frequently breached safety limits for fine and coarse particulate matter.

**Blue Whale Research:** Recent reports of blue whales "falling silent" off the coast of California have been found to be exaggerated. A study revealed that the whales sang less during a marine heatwave but have since resumed their normal vocal patterns.

### Other Innovations

**Robotics in Manufacturing:** At the World Robot Conference in Beijing, Zoomlion Heavy Industry showcased its latest innovations in industrial

and humanoid robotics. The company is using AI-powered robots in its "Smart Industry City" to achieve high-mix, low-volume production.

**Bio-based Electrolytes:** An eco-friendly electrolyte platform made from cellulose, called BioCell Green, won a Gold Award at a recent exhibition. The product, developed at Universiti Teknologi Malaysia, replaces conventional, toxic electrolytes with a bio-derived, non-flammable system.

**Circular Economy:** A company called Constantia Flexibles announced an investment of over €100 million in its facilities to expand its portfolio of sustainable packaging solutions. This includes fully recyclable materials and the use of low-carbon aluminum.

**India's Self-Reliance Push:** In his Independence Day speech, Prime Minister Narendra Modi stressed the need for India to become self-reliant in critical minerals like lithium and rare earth elements, which are vital for clean energy technologies like electric vehicles and solar power. He also urged for self-reliance in fertilizer production to reduce import dependence.

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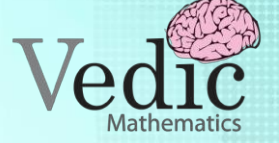
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## MCQS

Q1. What is the name of the joint NASA-ISRO satellite that successfully deployed its 12-meter-diameter radar antenna reflector?

- A. Chandrayaan-3
- B. NISAR
- C. Mangalyaan
- D. Sentinel-6

**Answer: B**

The news states that the joint NASA-ISRO Earth-observing satellite is called "NISAR," which stands for NASA-ISRO Synthetic Aperture Radar.

Q2. According to a study from Indonesia, what is a public health concern related to a waste-to-energy plant in East Java?

- A. It is contaminating local water sources.
- B. Its emissions frequently breached safety limits for fine and coarse particulate matter.
- C. It is causing an increase in noise pollution.
- D. It is disrupting the local ecosystem's biodiversity.

**Answer: B**

The news reports that a study in Indonesia raised concerns because the waste-to-energy plant's "emissions frequently breached safety limits for fine and coarse particulate matter."

Q3. What is a key objective of India's push for self-reliance in critical minerals?

- A. To reduce the cost of traditional fossil fuels.
- B. To improve the country's defense capabilities.
- C. To support clean energy technologies like electric vehicles and solar power.
- D. To boost the import of raw materials.

**Answer: C**

The news highlights that Prime Minister Narendra Modi stressed the need for India to become self-reliant in critical minerals because they are "vital for clean energy technologies like electric vehicles and solar power."

Q4. What is the name of the eco-friendly electrolyte platform made from cellulose that won a Gold Award?

- A. GreenVolt
- B. BioCell Green
- C. Eco-Electrolyte
- D. Cellu-Power

**Answer: B**

The news states that an eco-friendly electrolyte platform made from cellulose, called "BioCell Green," won a Gold Award.







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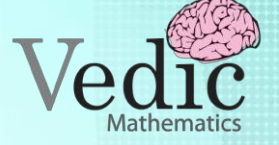
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**Q5. At the World Robot Conference in Beijing, what specific manufacturing strategy is Zoomlion Heavy Industry using AI-powered robots to achieve in its "Smart Industry City"?**

- A. Mass production of a single product.
- B. High-mix, low-volume production.
- C. Manual assembly with robotic assistance.
- D. Outsourcing all manufacturing to other countries.

**Answer: B**

The news states that Zoomlion Heavy Industry is using AI-powered robots in its "Smart Industry City" to "achieve high-mix, low-volume production."



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