

Asia's Latest Scientific Milestones: Moon Far Side Samples, Brain-Inspired AI

Scientific Discoveries · Answer Key · 8 Questions

1. Which Asian nation achieved the unprecedented feat of returning soil samples from the far side of the Moon to Earth in 2024?

- A) Japan
- B) India
- C) China**
- D) South Korea

2. In 2024, Chinese scientists unveiled a pioneering 'primitive-based vision processor' designed to enhance computer vision. What key characteristic defines this processor's approach?

- A) It mimics quantum entanglement for image processing.
- B) It utilizes a single, high-speed pathway for all visual data.
- C) It parses visual information into primitive representations and forms complementary pathways for cognition and rapid response.**
- D) It relies exclusively on thermal imaging for environmental analysis.

3. The Bose Institute in India recently made a breakthrough in agricultural biotechnology. What specific advancement did they achieve using CRISPR technology?

- A) Developing drought-resistant wheat strains.
- B) Creating a tissue-specific CRISPR system for tomato plants.**
- C) Engineering rice to produce higher vitamin content.
- D) Improving nitrogen fixation in legumes.

4. Which significant archaeological discovery in China, dating back 60,000 to 80,000 years, provided new evidence of complex modern human behaviors in East Asia?

- A) The Wuwangdun Mausoleum.
- B) The Zhouyuan Site.
- C) The Xiatang Site.
- D) The Mengxihe Paleolithic Site.**

5. Researchers from Singapore developed a CRISPR/Cas9-based gene editor capable of correcting what specific type of genetic mutation?

- A) Chromosomal translocations.
- B) Entire gene deletions.
- C) Single-letter mutations in DNA sequences.**
- D) Mitochondrial DNA duplications.

6. In 2024, India launched its first 'analog space mission' in Leh, Ladakh. What was the primary objective of this mission?

- A) To test new propulsion systems for deep space travel.
- B) To simulate interplanetary habitat conditions for astronaut training.**
- C) To deploy a network of communication satellites.
- D) To conduct atmospheric research at high altitudes.

7. A Japanese research team discovered a new compound, Mic-628, which offers potential applications for what specific biological function?

- A) Enhancing muscle regeneration.
- B) Advancing the body's internal clock to aid jet lag recovery.**
- C) Boosting cognitive function and memory.
- D) Suppressing viral replication.

8. Genetic evidence from 118 Philippine ethnic groups revealed in 2024 showed that which indigenous people carry the highest levels of Denisovan ancestry globally?

- A) The Igorot people.
- B) The Tagalog people.
- C) The Ayta Magbukon people.**
- D) The Lumad people.