

South Asia's Ascent: Unveiling Cutting-Edge Space Missions and Lunar Discoveries

Space Exploration · Answer Key · 13 Questions

1. What is the primary objective of the BIRDS-X Dragonfly nanosatellite, Sri Lanka's third nanosatellite, which was deployed into orbit in September 2025?

A) To conduct three primary space research missions, including testing a new low-cost communications subsystem.

- B) To monitor atmospheric conditions over the Indian Ocean for improved weather forecasting.
- C) To serve as a communication relay for maritime surveillance in the Bay of Bengal.
- D) To map mineral deposits in the lunar south polar region.

2. As of early 2026, which component of India's Gaganyaan mission has been qualified and is ready for the first uncrewed mission, according to ISRO's Annual Report 2025-26?

A) A human-rated space transportation system based on LVM3 configuration (HLVM3).

- B) The Next Generation Launch Vehicle (NGLV) with fully reusable technology.
- C) The advanced LOX-Methane propulsion system for orbital maneuvers.
- D) The crew module's advanced life support systems.

3. Pakistan's Space and Upper Atmosphere Research Commission (SUPARCO) has focused on expanding its Earth-observation satellite network. Which of the following satellites, launched between January 2025 and June 2026, is described as Pakistan's first hyperspectral satellite?

A) HS-1

- B) PAUSAT-1
- C) PRSS-2
- D) PRSC-EO3

4. Recent findings from India's Chandrayaan-3 mission, analyzed from data collected in late 2023, revealed that the electrical environment near the Moon's surface in the South Polar Region is far more active than previously understood. What specific phenomenon was detected?

A) Streams of charged particles dancing across the surface, generating dynamic spikes of electrical potential.

- B) Subsurface water ice deposits at depths of less than 10 centimeters.
- C) Significant seismic activity indicating a geologically active lunar core.
- D) An unexpected presence of a thin atmosphere composed primarily of methane.

5. Nepal's Space Research Centre (SRC) is actively involved in developing indigenous space capabilities. Which satellite, launched in 2019, marked Nepal's official entry into space and was designed by Nepali engineers as part of a Japanese study program?

A) NepaliSat-1

B) Munal

C) Slipper2Sat

D) Garuda

6. India's Aditya-L1 mission, designed to study the Sun, has made significant observations. In July 2024, it observed a Coronal Mass Ejection (CME). What was a key observation related to this CME regarding the Sun's outer atmosphere?

A) Coronal dimming, where the brightness in a specific region dropped by about 50% for approximately 6 hours.

B) The detection of a massive solar tsunami traveling at over 2,000 km/s.

C) Unusual patterns in solar flares indicating a potential weakening of the Sun's magnetic field.

D) The formation of a temporary magnetosphere around the Sun.

7. The Gaganyaan program aims to send astronauts into space. As of early 2026 updates, what is the current target year for India's first crewed Gaganyaan mission (H1)?

A) 2027

B) 2026

C) 2028

D) 2025

8. Pakistan's Manned Space Mission Program has seen a significant advancement through collaboration with China. Two astronaut candidates are undergoing advanced training in China. What is the current planned timeframe for Pakistan's first astronaut mission to the China Space Station (CSS)?

A) Late 2026

B) Early 2027

C) Mid-2026

D) Late 2027

9. Sri Lanka's third nanosatellite, BIRDS-X Dragonfly, was deployed into orbit in September 2025. What notable financial aspect of this project was highlighted?

A) No capital costs were incurred by Sri Lanka.

B) Sri Lanka provided significant funding through a public-private partnership.

C) The project was entirely funded by the Japan Aerospace Exploration Agency (JAXA).

D) International organizations provided a loan to Sri Lanka for its development.

10. Nepal's upcoming satellite, MUNAL, is set to be launched by ISRO. What is a key technical mission objective for MUNAL, a CubeSat developed by Nepali high school students?

A) Monitoring vegetation using dual cameras and testing a locally developed Satellite System-on-Chip.

- B) Conducting deep-space communication experiments with probes in the asteroid belt.
- C) Mapping the subsurface ice reserves on the Moon's south pole.
- D) Studying the atmospheric composition of Venus with advanced spectrometers.

11. India's Aditya-L1 mission has provided insights into solar storms. What unusual dawn-time geomagnetic disturbances has Aditya-L1 helped decode, according to observations made in early 2026?

A) Disturbances caused by a special type of space current normally confined to auroral regions.

- B) Sudden fluctuations in Earth's magnetic field due to increased solar neutrino emissions.
- C) Harmonic resonances within Earth's magnetosphere triggered by high-energy cosmic rays.
- D) The direct impact of lunar magnetic field anomalies on Earth's magnetosphere.

12. The Indian Space Research Organisation (ISRO) has outlined extensive plans for the Gaganyaan program. As of early May 2026, how many uncrewed test missions are planned before the first crewed Gaganyaan flight?

A) Three

- B) Two
- C) Four
- D) One

13. In a significant development for Pakistan's space program, between January 2025 and June 2026, the country expanded its Earth-observation satellite network by launching six satellites. Which of these satellites was launched using a Long March-6 rocket from China in April 2026, utilizing an orbit designed to increase revisit rates over South Asia?

A) PRSC-EO3

- B) HS-1
- C) PAUSAT-1
- D) PRSS-2