

G7 Nations Advance Space Exploration: AI, Lunar Missions, and Debris Mitigation

Space Exploration · Answer Key · 10 Questions

1. Which G7 nation is developing the IDEFIX lander for the Japanese-led Martian Moons eXploration (MMX) mission?

- A) United Kingdom
- B) Germany
- C) Canada
- D) France**

2. The G7 nations have expressed a commitment to addressing which major challenge in space?

- A) The cost of rocket fuel
- B) The increasing amount of space debris**
- C) The lack of international communication protocols
- D) The problem of re-entry heat shields

3. Which G7 country's space agency is a key contributor to NASA's Artemis program, developing parts for the Orion spacecraft and a lunar habitation module?

- A) Japan
- B) Canada
- C) Italy**
- D) Germany

4. Which G7 nation recently announced funding to study the feasibility of a mission to remove space debris?

- A) France
- B) United Kingdom**
- C) Japan
- D) Italy

5. The James Webb Space Telescope (JWST), a joint project involving NASA and ESA (which includes several G7 nations), has made recent discoveries about what early universe phenomena?

- A) The formation of the first stars
- B) Mysterious 'little red dots' that may be black hole stars**
- C) The composition of dark matter
- D) The existence of exoplanets with liquid water

6. Which G7 nation is collaborating with France on the SVOM mission, which detected a gamma-ray burst from the early universe?

- A) Germany
- B) United Kingdom
- C) Japan**
- D) Italy

7. The G7 Hiroshima Summit in 2023 included a strong commitment to space sustainability. What specific action did the G7 leaders commit to regarding anti-satellite missile testing?

- A) To conduct joint anti-satellite missile tests
- B) To refrain from destructive direct-ascent anti-satellite missile testing and encourage others to do so**
- C) To develop new anti-satellite missile technologies
- D) To ban all anti-satellite missile testing globally

8. Which G7 nation's space agency is developing AI models to support future exploration missions as part of a Transatlantic Tech Prosperity Deal?

- A) Germany
- B) Italy
- C) Canada
- D) United Kingdom**

9. The European Space Agency (ESA), which includes several G7 nations as members, is planning to launch the SMILE mission in May 2026. What is the primary focus of the SMILE mission?

- A) Studying the Sun's poles
- B) Observing Jupiter's icy moons
- C) Investigating the interaction between Earth's magnetosphere and solar wind**
- D) Mapping dark matter in the universe

10. Which G7 nation is a leading contributor to the European Space Agency's (ESA) Space Safety programme, which focuses on space debris and collaboration?

- A) France
- B) Japan
- C) United Kingdom**
- D) Germany