Europe's Ambitious Leap: Artemis II Success, Exoplanet Mysteries Solved, an

Space Exploration · Practice Test · 10 Questions

1. What significant European contribution powers NASA's Artemis II mission's Orion spacecraft, enabling its journey around the Moon?

A) The European Service Module (ESM)
B) The Columbus laboratory module
C) The European Robotic Arm (ERA)
D) The Cupola observation module

2. Recent European research, utilizing the Very Large Telescope (VLT) and Gemini North telescope, has provided the strongest evidence to date for what characteristic on ultra-hot Jupiter exoplanets?

A) Presence of magnetic fields
B) Subsurface liquid water oceans
C) Active volcanic activity
D) Atmospheric composition resembling early Earth

3. The European Space Agency (ESA) recently agreed to a substantial three-year budget increase to EUR22.1 billion. What percentage increase does this represent compared to the agency's previous budget?

A) Approximately 30%
B) Approximately 15%
C) Approximately 50%
D) Approximately 10%

4. Which ESA mission, launched in July 2023, is designed to map the large-scale structure of the Universe and investigate dark matter and dark energy, recently releasing its most detailed image of the Milky Way's center?

A) Euclid
B) Juice
C) Solar Orbiter
D) Gaia

5. Europe is pioneering active debris removal with the ClearSpace-1 mission. What is the primary objective of this mission?

A) To capture and deorbit a specific piece of uncooperative space junk
B) To deploy a network of debris-monitoring satellites
C) To test laser-based technology for pushing debris away
D) To recycle space debris into usable rocket fuel in orbit

6. The recent decision by the United States to pause the lunar Gateway station and cancel the Mars Sample Return mission campaign has prompted calls from ESA's Director General for Europe to increase its investment in space. What is the proposed minimum factor by which ESA's investment should be multiplied?

A) By a factor of two, at least
B) By a factor of ten
C) By a factor of five
D) By a factor of three

7. What new European rocket model recently set a payload record by successfully deploying 36 satellites into orbit in a single launch?

A) Ariane 6
B) Vega-C
C) Soyuz (European variant)
D) Isar Aerospace's Spectrum

8. Which ESA mission, an ESA-led collaboration with Airbus, is testing the first metal 3D printer in space to produce components for future long-duration exploration missions?

A) A collaboration with Airbus on the International Space Station (ISS)
B) The Moonlight programme
C) The Hera planetary defence mission
D) The DEXTER project

9. The DEXTER project, an EU-funded initiative, is exploring innovative ways to tackle space debris. Which of the following is a key objective of this project?

A) To develop robotic tools for dismantling and repurposing old spacecraft, and explore converting scrap aluminium into fuel
B) To deploy a fleet of spacecraft that beam debris out of orbit using charged particles
C) To develop advanced AI for predicting debris collision trajectories with higher accuracy
D) To create a satellite constellation for constant space debris monitoring

10. The European Space Agency (ESA) has significantly increased its budget for the Science Programme. What is the projected annual increase for this program through 2028, in addition to inflation?

A) 3.5%
B) 5%
C) 2%
D) 1.5%