

European Science Breakthroughs Go Viral: Quantum Leaps, Cosmic Views, and AI Advances

Science · Practice Test · 10 Questions

1. The European Space Agency's Euclid mission, launched in July 2023, is primarily designed to study which of the following?

- A) Exoplanets using gravitational microlensing.
- B) The dark Universe, including dark matter and dark energy.
- C) The composition of Martian soil.
- D) The formation of black holes in distant galaxies.

2. Which European company, known for its 'cat qubits,' is building what it aims to be the world's first fault-tolerant quantum computer by 2030?

- A) Pasqal
- B) IQM Quantum Computers
- C) Alice & Bob
- D) CERN

3. Recent advancements in quantum technology in Europe aim to establish the continent as a global leader, often referred to as the 'quantum valley.' Which of these is a key objective of the European Quantum Strategy?

- A) To focus solely on quantum communication networks.
- B) To develop a unified, sovereign quantum ecosystem across member states.
- C) To exclusively export quantum technology to non-European countries.
- D) To privatize all quantum research initiatives.

4. Scientists at CERN have recently announced the discovery of a new subatomic particle. What is this particle, described as an 'extra-heavy proton,' composed of?

- A) Two up quarks and one charm quark.
- B) One up quark and two charm quarks.
- C) Two charm quarks and one down quark.
- D) Three strange quarks.

5. The European AI in Science Strategy introduces 'RAISE' (Resource for AI Science in Europe). What is the primary goal of RAISE?

- A) To fund exclusively AI hardware development.
- B) To create a virtual institute pooling resources for AI development and application in science.
- C) To regulate all AI usage in European scientific research.
- D) To exclusively focus on AI for artistic endeavors.

6. Which European mission, launched in July 2023, aims to map the large-scale structure of the Universe and study billions of galaxies?

- A) Plato
- B) Ariel
- C) Cheops
- D) Euclid

7. In the field of archaeology, a significant discovery in Europe in 2024 involved genetic analysis of bone fragments. What did this analysis reveal about early humans in Northern Europe?

- A) Modern humans reached northern Europe approximately 45,000 years ago.
- B) Neanderthals were the only hominids in northern Europe 45,000 years ago.
- C) Early humans in northern Europe were exclusively hunter-gatherers.
- D) The first evidence of agriculture was found in northern Europe from that period.

8. The EU's Copernicus Climate Change Service (C3S) announced that 2024 is virtually certain to be the warmest year on record. What significant temperature milestone did it likely exceed for the first time?

- A) 1.0°C above pre-industrial levels
- B) 1.25°C above pre-industrial levels
- C) 1.5°C above pre-industrial levels
- D) 2.0°C above pre-industrial levels

9. Several European countries are pioneering renewable heating technologies. Which technology is highlighted as a 'revolution' in sustainable energy in Europe?

- A) Geothermal energy
- B) Solar thermal energy
- C) Wind turbine efficiency
- D) Heat pump technology

10. Regarding quantum computing initiatives in Europe, the French startup Pasqal delivered a significant quantum processing unit in 2024. Approximately how many qubits did this unit contain?

- A) 50+
- B) 100+
- C) 500+
- D) 1000+