

2024-2025 Global Science Breakthroughs: AI, Quantum, Space & More!

Science · Answer Key · 12 Questions

1. Which field of AI is seeing significant advancements in healthcare for tasks like analyzing medical images and patient data to aid in diagnostics?

- A) Generative AI**
- B) Reinforcement Learning
- C) Supervised Learning
- D) Unsupervised Learning

2. What is a key focus in quantum computing development for 2025, shifting from just increasing qubit count?

- A) Improving qubit precision and performance**
- B) Developing analog quantum computers
- C) Increasing the physical size of qubits
- D) Focusing solely on quantum algorithms

3. In renewable energy, what type of solar panel technology is achieving higher efficiencies by capturing energy on both sides?

- A) Bifacial solar panels**
- B) Thin-film solar panels
- C) Perovskite solar cells
- D) Concentrated solar power

4. What significant milestone has been reached in CRISPR medicine with approvals for treating which genetic blood disorders?

- A) Sickle cell disease and beta-thalassemia**
- B) Cystic fibrosis and Huntington's disease
- C) Duchenne muscular dystrophy and hemophilia
- D) Alzheimer's disease and Parkinson's disease

5. What astronomical discovery in 2025 suggested that dark energy, driving the universe's expansion, might be changing over cosmic history?

- A) Data from the Dark Energy Spectroscopic Instrument (DESI)**
- B) Observations of the James Webb Space Telescope
- C) New findings from the Kepler Space Telescope
- D) Analysis of data from the Chandra X-ray Observatory

6. Which area of archaeology saw discoveries in 2025, including a 7,000-year-old Copper Age settlement in southern Dagestan and other significant finds globally?

A) Ancient settlements and early human activity

- B) Roman-era shipwrecks
- C) Viking burial sites
- D) Maya city explorations

7. The development of 'ambient AI scribes' in healthcare aims to address which common issue for clinicians?

A) Reducing documentation time and clinician burnout

- B) Increasing the number of diagnostic tests
- C) Automating patient scheduling
- D) Improving hospital billing processes

8. What advancement in solar cell technology is achieving high efficiencies by stacking two different photovoltaic materials?

A) Perovskite-silicon tandem solar cells

- B) Organic photovoltaic cells
- C) Gallium arsenide solar cells
- D) Cadmium telluride solar cells

9. In the field of physics, what elusive particle's direct detection was a significant milestone reported in 2024 from CERN's Large Hadron Collider?

A) Electron neutrinos

- B) Muons
- C) Tachyons
- D) WIMPs (Weakly Interacting Massive Particles)

10. What new archaeological discovery in Indonesia in 2024 pushed back the date of the world's oldest known cave paintings?

A) A painting depicting a wild pig and humanoid figures

- B) Cave paintings of bison and horses
- C) Geoglyphs of animal shapes
- D) Petroglyphs of abstract symbols

11. What is a major trend in renewable energy for 2025, involving the integration of solar, wind, and battery storage systems?

A) Hybrid energy systems

- B) Geothermal power plants
- C) Biomass energy conversion
- D) Tidal energy harnessing

12. Which technology is being developed to overcome the challenges of quantum error correction and enable more robust quantum computers by 2025?

A) Logical qubits

B) Superconducting qubits

C) Trapped ion qubits

D) Photonic qubits