

Pioneers of Earth Science

Earth Science · Answer Key · 18 Questions

1. Who is credited with producing the first comprehensive geological map of an entire country, published in 1815?

- A) William Smith**
- B) Charles Lyell
- C) James Hutton
- D) Adam Sedgwick

2. In 1912, Alfred Wegener first proposed the theory of continental drift. What was the name of the supercontinent he theorized existed 200 million years ago?

- A) Gondwana
- B) Pangaea**
- C) Laurasia
- D) Rodinia

3. Which scientist is credited with inventing the seismograph in 1855, allowing for the first precise recording of earthquake vibrations?

- A) John Milne
- B) Luigi Palmieri**
- C) Giuseppe Mercalli
- D) Charles Richter

4. What was the first deep-sea drilling vessel, launched in 1968, that provided the definitive proof for the theory of seafloor spreading?

- A) Glomar Challenger**
- B) JOIDES Resolution
- C) Deep Sea Drilling Project I
- D) RV Atlantis

5. In 1863, which American scientist published the first modern weather map based on telegraphic reports, laying the foundation for synoptic meteorology?

- A) Cleveland Abbe
- B) Matthew Maury
- C) Cleveland Abbe**
- D) Cleveland Abbe

6. The concept of the 'Mohorovicic discontinuity' was discovered in 1909. What does this boundary represent within the Earth?

- A) The core-mantle boundary
- B) The lithosphere-asthenosphere boundary
- C) The crust-mantle boundary**
- D) The inner-outer core boundary

7. Who was the first oceanographer to produce a comprehensive bathymetric map of the North Atlantic, published in 1957 with Marie Tharp?

- A) Bruce Heezen**
- B) Robert Ballard
- C) Sylvia Earle
- D) Jacques Cousteau

8. What is the name of the first satellite launched in 1960 specifically designed to provide global meteorological observations?

- A) TIROS-1**
- B) Nimbus-1
- C) GOES-1
- D) Vanguard 2

9. In 1963, Fred Vine and Drummond Matthews provided the first physical evidence for plate tectonics by observing what phenomenon on the ocean floor?

- A) Subduction zones
- B) Magnetic striping**
- C) Hydrothermal vents
- D) Turbidity currents

10. Who authored 'Principles of Geology' (1830), the seminal work that established the doctrine of uniformitarianism?

- A) James Hutton
- B) Charles Lyell**
- C) Georges Cuvier
- D) Louis Agassiz

11. The first controlled experiment to measure the density of the Earth was conducted in 1798. What is this famous experiment called?

- A) Cavendish experiment**
- B) Eötvös experiment
- C) Foucault pendulum
- D) Michelson-Morley experiment

12. Which scientist published the first work to systematically classify clouds in 1803, utilizing Latin terminology that is still in use today?

- A) Luke Howard**
- B) René Descartes
- C) John Dalton
- D) Francis Beaufort

13. The first identified 'hotspot' track, which provided evidence for the movement of tectonic plates over stationary mantle plumes, was identified in which location?

- A) Iceland
- B) Hawaii**
- C) Yellowstone
- D) Galápagos

14. In 1935, Charles Richter developed the earthquake magnitude scale. What was the primary instrument used to provide the data for his original calculations?

- A) Wood-Anderson seismograph**
- B) Mercalli intensity meter
- C) Galitzin seismometer
- D) Horizontal pendulum

15. What substance was first identified as a major cause of stratospheric ozone depletion in a 1974 paper by Mario Molina and F. Sherwood Rowland?

- A) Carbon dioxide
- B) Chlorofluorocarbons**
- C) Sulfur dioxide
- D) Methane

16. Who invented the first thermometer that could be used for meteorological purposes in 1612?

- A) Galileo Galilei**
- B) Daniel Fahrenheit
- C) Anders Celsius
- D) Evangelista Torricelli

17. The first core sample of the Antarctic ice sheet, which revolutionized paleoclimatology, was retrieved from which station in 1968?

- A) Vostok Station
- B) Byrd Station**
- C) Amundsen-Scott Station
- D) McMurdo Station

18. Which mineralogical discovery, made by Friedrich Mohs in 1812, provided the first standardized scale of relative mineral hardness?

A) Mohs scale

B) Vickers scale

C) Rockwell scale

D) Brinell scale