

Advanced Earth Science Knowledge Assessment

Earth Science · Answer Key · 15 Questions

1. Which of the following is the most abundant mineral in the Earth's crust by weight?

- A) Quartz
- B) Feldspar**
- C) Mica
- D) Amphibole

2. The Mohs Hardness Scale ranks minerals based on their ability to resist what?

- A) Scratching**
- B) Breaking
- C) Dissolving
- D) Magnetization

3. What is the primary mechanism for heat transfer within the Earth's mantle?

- A) Conduction
- B) Radiation
- C) Convection**
- D) Advection

4. The Mariana Trench, the deepest part of the world's oceans, is located in which ocean?

- A) Atlantic Ocean
- B) Indian Ocean
- C) Arctic Ocean
- D) Pacific Ocean**

5. Which type of sedimentary rock is formed from the accumulation and lithification of organic matter?

- A) Sandstone
- B) Shale
- C) Limestone
- D) Coal**

6. The Coriolis effect, which influences wind and ocean currents, is a result of Earth's what?

- A) Axial tilt
- B) Orbital speed
- C) Rotation**
- D) Magnetic field

7. Which geological era is characterized by the diversification of complex animal life, including the Cambrian Explosion?

A) Precambrian

B) Paleozoic

C) Mesozoic

D) Cenozoic

8. The 'Ring of Fire' is a region around the Pacific Ocean known for its high concentration of what?

A) Deserts

B) Glaciers

C) Volcanoes and earthquakes

D) Tropical rainforests

9. What is the main process responsible for the formation of clouds?

A) Precipitation

B) Evaporation

C) Condensation

D) Transpiration

10. The Earth's magnetic field is generated by the movement of molten iron in which part of the Earth?

A) Crust

B) Mantle

C) Inner core

D) Outer core

11. Which atmospheric layer contains the ozone layer, which absorbs most of the Sun's ultraviolet radiation?

A) Troposphere

B) Stratosphere

C) Mesosphere

D) Thermosphere

12. What term describes the process by which solid rock is transformed into magma?

A) Erosion

B) Weathering

C) Melting

D) Sublimation

13. The majority of Earth's freshwater is found in what form?

- A) Rivers and lakes
- B) Groundwater
- C) Atmospheric vapor

D) Glaciers and ice caps

14. What is the name for a scientist who studies earthquakes?

- A) Volcanologist
- B) Meteorologist

C) Seismologist

- D) Paleontologist

15. The composition of Earth's atmosphere is approximately 78% nitrogen, 21% oxygen, and what percentage for the remaining gases (primarily argon)?

- A) 0.5%

B) 1%

- C) 2%

- D) 5%