1. Which of the following is not a branch of geology?
a) Petrology
b) Paleontology
c) Meteorology
d) Seismology

Answer: c) Meteorology
Explanation: Meteorology is the study of the atmosphere and weather patterns, while the other options are branches of geology, focusing on rocks, fossils, and seismic activity.

2. What is the outermost layer of the Earth called?
a) Mantle
b) Crust
c) Core
d) Lithosphere

Answer: b) Crust
Explanation: The crust is the outermost layer of the Earth, consisting of solid rock that forms the continents and ocean basins.

3. Which process is responsible for breaking down rocks into smaller fragments?
a) Erosion
b) Deposition
c) Weathering
d) Sedimentation

Answer: c) Weathering

Explanation: Weathering is the process of breaking down rocks into smaller particles through physical, chemical, or biological means.

4. What geological action is primarily responsible for shaping river valleys?
a) Deposition
b) Erosion
c) Weathering
d) Volcanism

Answer: b) Erosion
Explanation: Rivers erode the land over time, carving out valleys and shaping the landscape.

5. Groundwater is found in which geological feature?
a) Aquifer
b) Fault
c) Lava tube
d) Geyser

Answer: a) Aquifer
Explanation: Aquifers are underground layers of rock or sediment that hold water, providing a source of groundwater.

6. Which of the following is NOT a cause of earthquakes?
a) Volcanic activity
b) Plate tectonics
c) Atmospheric pressure
d) Fault movement

Answer: c) Atmospheric pressure
Explanation: Earthquakes are primarily caused by the movement of tectonic plates or volcanic activity, not atmospheric pressure.

7. What is the term for the sudden release of energy in the Earth’s crust, resulting in seismic waves?
a) Volcanic eruption
b) Tsunami
c) Earthquake
d) Landslide

Answer: c) Earthquake
Explanation: Earthquakes occur when there is a sudden release of energy in the Earth’s crust, generating seismic waves.

8. Which type of volcano is characterized by its explosive eruptions and steep-sided cone?
a) Shield volcano
b) Stratovolcano
c) Cinder cone volcano
d) Lava dome volcano

Answer: b) Stratovolcano
Explanation: Stratovolcanoes, also known as composite volcanoes, have explosive eruptions and steep-sided cones due to the high viscosity of their lava.

9. What is the molten rock beneath the Earth’s surface called?
a) Magma

b) Lava
c) Obsidian
d) Pyroclast

Answer: a) Magma
Explanation: Magma is molten rock beneath the Earth’s surface, while lava is molten rock that reaches the surface during volcanic eruptions.

10. Which of the following is NOT a primary factor contributing to volcanic eruptions?
a) Pressure from trapped gases
b) Temperature fluctuations
c) Presence of water
d) Tectonic plate movement

Answer: b) Temperature fluctuations
Explanation: While temperature fluctuations may influence volcanic activity indirectly, they are not a primary factor contributing to volcanic eruptions.