

Q1. Heat is moved in three main ways. Which one of the following is NOT one of those ways:

- A. Conduction
- B. Induction
- C. Radiation
- D. Convection

Answer: B. Induction. Conduction, radiation, and convection causes vibration of atoms. Heat is the vibration of atoms.

Q2. There are several ways to measure earthquake size. The most common is:

- A. The Richter scale
- B. Seismographs
- C. Craters
- D. Volcanoes

Answer: A. The Richter scale is most commonly used to measure earthquake size. It measures of how much the ground shakes during a quake.

Q3. Where is the hottest, driest place in the United States?

- A. Denver, CO
- B. Death Valley, CA
- C. State College, PA
- D. Austin, TX

Answer: B. On July 10, 1913, the temperature reached 134°F the temperature reached and rainfall is about 2 inches per year.

Q4. True or False: The core has a liquid inner part and a solid outer part.

- A. True
- B. False

Answer: B. The earth's core has a solid inner part (higher pressure squeeze to solid) and liquid outer part.

Q5. Most of the earth's heat comes from which of the following:

- A. A sauna
- B. Wild fires
- C. Volcanoes
- D. Decay of natural radioactive atoms in rocks

Answer: D. Most of the earth's heat is made from the decay of natural radioactive atoms in rocks. Radioactivity creates heat from vibrating atoms.

Q6. The Ring of Fire is which of the following:

- A. A really catchy Johnny Cash song that is fun to sing out of tune
- B. An out of control wildfire burning in California
- C. A stretch of volcanoes and trenches located in the Pacific Ocean
- D. A tornado on fire

Answer: C. The Ring of Fire sits within the Pacific Ocean and is home to a majority of the world's earthquakes and volcanoes.

Q7. True or False: Tsunamis are a hazard that can be caused due to a volcanic eruption.

- A. True
- B. False

Answer: A. A large undersea eruption may move a lot of water. This water can come crashing to shore, creating a tsunami.

Q8. Which of the following is not a type of tectonic plate stress:

- A. Pull-Apart
- B. Push-Apart
- C. Push-Together
- D. Slide-Past

Answer: B. Pull-Apart, Push-Together, and Slide-Past are all kind of stresses that affect tectonic plates. Each of which are on different faults around the Earth.

Q9. True or False: The lithosphere is broken into a few big rafts, called plates.

- A. True
- B. False

Answer: A. The lithosphere is split into eight big plates plus some smaller ones.

Q10. Which of the following is not a plate in the lithosphere:

- A. Caribbean Plate
- B. American Plate
- C. Atlantic Plate
- D. Pacific Plate

Answer: C. Even though some of the other oceans of the Earth have their own designated plates in the lithosphere, the Atlantic Ocean does not have a plate.

Q11. What structural style is Crater Lake and Mt. St. Helens?

- A. Push-Together
- B. Pull-Apart

- C. Slide-Past
- D. Push-Apart

Answer: A. Both Crater Lake and Mt. St. Helens are push-together subduction structural types.

Q12. Tsunamis move rapidly across the ocean at approximately:

- A. 3 to 5 miles per hour
- B. 30 to 50 miles per four
- C. 300 to 500 miles per hour
- D. 3000 to 5000 miles per hour

Answer: C. Tsunamis move across the ocean with speeds of 300 to 500 miles per hour. They can be caused by disturbances in the ocean then come crashing into shore.

Q13. True or False: Friction plays a role in tsunamis.

- A. True
- B. False

Answer: A. Once a tsunami reaches shallow water, friction slows the front of the wave down while the back catches up, causing the wave to become high and short.

Q14. The oldest rocks on the Atlantic sea floor are about:

- A. 150 years old
- B. 150,000 years old
- C. 15,000,000,000 years old
- D. 150,000,000 years old

Answer: D. The oldest rock on the Atlantic sea floor are approximately the same age as sediments that were deposited in a Death-Valley-type setting in the Newark Basin of New Jersey and elsewhere along the U.S. east coast.

Q15. Which of these can create a tsunami:

- A. Undersea earthquakes
- B. Volcanoes
- C. Landslides
- D. All of the above

Answer: D. Tsunamis can be created by a disturbance in the ocean. All of the answers can create such a scenario.

Q16. True or False: On earth, the equator receives more sunshine than the poles.

- A. True
- B. False

Answer: A. The equator receives more sunshine because of simple geometry. The sun's rays shine directly on the equator, while the curvature of the earth prevents the poles from being hit directly.

Q17. True or False: Air is cooled in two major ways - by losing energy to its surrounding or by being lifted.

- A. True
- B. False

Answer: A. Air can be cooled by longwave radiation to space, or warming the polar regions, or expanding and cooling through lift.

Q18. Air cooling causes:

- A. Condensation
- B. Evaporation
- C. Vaporation
- D. Conduction

Answer: A. Cooling causes condensation of the water vapor in the air because cooler air can hold less water, and the condensation makes clouds and the rain or snow.

Q19. True or False: Evaporation of water does not energy.

- A. True
- B. False

Answer: B. Evaporation of water requires energy. Water is made up of fast-moving particles. The faster-moving particles are the hotter, higher-energy ones. In a pool of water, the faster, hotter water molecules break the attraction to their neighbors and escape, or evaporate.

Q20. Moving the products of weathering is called:

- A. Erosion
- B. Transport
- C. Reduction
- D. Landslide

Answer: B. Mineral changes at the surface are called weather. Moving the products of weather is called transport. Weather and transport together make erosion.

Q21. True or False: A stream or river is a conduit to take excess water, and sediment, from high places to low ones and usually the ocean.

- A. True
- B. False

Answer: A. A stream or river flows water from higher elevation to lower elevation. The smaller streams or rivers generally flow to larger ones, which usually end up at the ocean.

Q22. Evaporation from plants and from other surfaces usually is lumped together and called:

- A. Evotransportation
- B. Echolocation
- C. Evatransportation
- D. Evapotranspiration

Answer: D. In a humid temperate climate such as central Pennsylvania, roughly two-thirds of the rainfall is involved in evapotranspiration and returned directly to the sky.

Q23. True or False: Stalactites are on the ground, and stalagmites are on the ceiling.

- A. True
- B. False

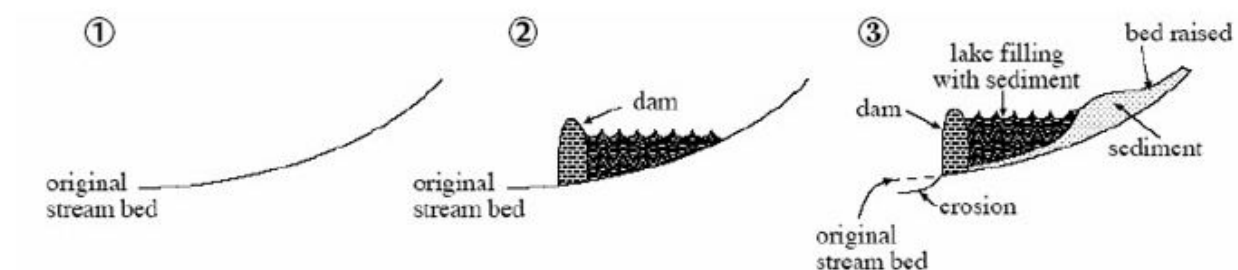
Answer: B. An easy way to remember these cave formations are stalaCtites ("C" for Ceiling) and stalaGmites ("G" for Ground).

Q24. If a stream receives lots of sand and gravel or even bigger chunks:

- A. the small blocks will tend to plug, or dam, a single, deep and narrow channel
- B. nothing will occur
- C. the large blocks will tend to plug, or dam, a single, deep and narrow channel
- D. the large blocks will not tend to plug, or dam, a single, deep and narrow channel

Answer: C. When sand and gravel get really wet along a river bank, that cannot form steep slopes, and the collapse of any steep slopes that start to form along a river bank contributes to having a wide, shallow stream.

Q25. The diagram below shows:



- A. Elevations measured along a river
- B. The water-cycle
- C. Metamorphic rock formations
- D. Water movement in the atmosphere

Answer: A. The original stream bed is shown at (1). After building the dam and filling the reservoir (2), sediment begins to fill the lake, building a delta into the reservoir and raising the elevation of the stream bed upstream of the reservoir.