

D2 (grades 5-6) Earth Science/Astronomy
WRITTEN QUESTIONS

1. Trilobite fossils from different time periods show small changes in appearance. These observations suggest that the changes may be the result of
 - a. the gradual disintegration of radioactive substances
 - b. evolutionary development
 - c. a variety of geological processes
 - d. periods of destruction of the geological record

2. The fossil record indicates that most of the plants and animals that lived on Earth in the past
 - a. lived on land
 - b. became index fossils
 - c. have become extinct
 - d. appeared during the Cambrian Period

3. Earth scientists studied fossils of a certain type of plant. They noted slight differences in the plant throughout geologic time. What inference is best made from this evidence?
 - a. When uplifting occurred, the fossils of this type of plant were deformed.
 - b. When the environment changed, this type of plant also changed, allowing it to survive.
 - c. The fossils have changed as a result of weathering and erosion.
 - d. The processes which form fossils today differ from those of the past.

4. Particles of soil often differ greatly from the underlying bedrock in color, mineral composition, and organic content. Which conclusion about these soil particles is best made from this evidence?
 - a. They are transported sediments.
 - b. They are residual-sediments.
 - c. They are soluble in water.
 - d. They are uniformly large-grained.

5. Which factor has the least effect on the weathering of a rock?
 - a. composition of the rock
 - b. exposure of the rock to the atmosphere
 - c. the number of fossils found in the rock
 - d. climatic conditions

6. As the gradient of a stream increases, the stream's ability to carry sediment
 - a. decreases
 - b. increases

- c. remains the same
- d. not enough information

7. Which is the best example of physical weathering?
- a. the cracking of rock caused by the freezing and thawing of water
 - b. the transportation of sediment in a stream
 - c. the reaction of limestone with acid rainwater
 - d. the formation of a sandbar along the side of a stream
8. During the past 100 years, which erosional agent has been the most dominant in changing the landscape of New York State?
- a. glacial erosion
 - b. wind erosion
 - c. stream erosion
 - d. wave erosion
9. Which is the best evidence that erosion has occurred?
- a. a large number of fossils embedded in limestone
 - b. a soil rich in lime on top of a limestone bedrock
 - c. sediments found in a sandbar of a river
 - d. a layer of basalt found on the floor of the ocean
10. For which movement of earth materials is gravity not the main force?
- a. snow tumbling in an avalanche
 - b. moisture evaporating from an ocean
 - c. boulders carried by a glacier
 - d. sediments flowing in a river
11. Stream A has a steeper slope than stream B. However, the average water velocity of stream B is greater than that of stream A. Which is the most reasonable explanation for this?
- a. Stream B has a curved streambed.
 - b. Stream B has more friction to overcome along its banks.
 - c. Stream B has a greater volume of water.
 - d. Stream B has a higher average temperature.
12. In which type of climate does chemical weathering usually occur most rapidly?
- a. hot and wet
 - b. cold and wet
 - c. hot and dry
 - d. cold and dry

13. A river transports material by suspension, rolling, and
- transpiration
 - solution
 - sublimation
 - evaporation
14. The chemical composition of a residual soil in a certain area is determined by the
- method by which the soil was transported to the area
 - slope of the land and the particle size of the soil
 - minerals in the bedrock beneath the soil and the climate of the area
 - length of time since the last crustal movement in the area occurred
15. During a period of one year, what would be the greatest altitude of the Sun at the North Pole?
- 90 Degrees
 - 0 Degrees
 - 23 ½ Degrees
 - 66 ½ Degrees
16. The Coriolis effect provides evidence that the Earth
- has a magnetic field
 - has an elliptical orbit
 - rotates on its axis
 - revolves around the Sun
17. Which process is primarily responsible for the transfer of energy by air currents within the Earth's atmosphere?
- absorption
 - radiation
 - convection
 - conduction
18. The tilt of the Earth on its axis is a cause of the Earth's
- 365 ½ Day Year
 - 24 Hour Day
 - Changing length of day and night.
 - Uniform daylight hours.
19. What is the largest planet in our solar system?
- Earth

- b. Jupiter
- c. Mars
- d. Venus

20. What is the process by which plants convert sunlight into food called?

- a. Respiration
- b. Photosynthesis
- c. Germination
- d. Transpiration

21. Which layer of the Earth's atmosphere contains the ozone layer?

- a. Troposphere
- b. Stratosphere
- c. Mesosphere
- d. Thermosphere.

22. What is the outermost layer of the Earth called?

- a. Crust
- b. Mantle
- c. Core
- d. Lithosphere

23. What type of rock is formed from cooled lava?

- a. Igneous
- b. Sedimentary
- c. Metamorphic
- d. Fossil

24. What is the name for a sudden shaking of the Earth's surface?

- a. Tornado
- b. Hurricane
- c. Earthquake
- d. Tsunami

25. What is the study of weather called?

- a. Geology
- b. Meteorology
- c. Paleontology
- d. Seismology

26. What is the process by which water changes from a liquid to a gas called?
- Evaporation
 - Condensation
 - Precipitation
 - Transpiration
27. What causes tides in the oceans?
- Moon's gravitational pull
 - Earth's rotation
 - Sun's heat
 - Wind patterns
28. What is the name for a large underground water source?
- River
 - Lake
 - Ocean
 - Aquifer
29. What is the closest star to Earth?
- Proxima Centauri
 - Sirius
 - Alpha Centauri A
 - Sun
30. What is the name of the largest moon in our solar system?
- Titan
 - Ganymede
 - Europa
 - Callisto