

Earth Science Exam: Chapters 3 and 5

Name: _____

Date: _____

Section: _____

Rain sample	pH
1	5.3
2	4.7
3	5.5
4	4.3

_____ 1. Students collected and recorded the pH of four samples of rainwater in the table above. Which sample would cause the most amount of chemical weathering?

- A. 1 B. 2 C. 3 D. 4

_____ 2. Which is true of oxidation?

- A. It is a physical process. B. No change occurs in the makeup of rock.
C. Rocks weather at different rates D. Water freezes in cracks in rock.

_____ 3. which is NOT a cause of physical weathering?

- A. A mole burrows underground? B. A plant grows into a crack in a rock.
C. Rainwater dissolves a stone statue. D. Waves break along a shoreline.

_____ 4. Which of the following typically is NOT a depositional environment?

- A. delta B. mountain peak C. ocean floor D. swamp

_____ 5. Rushing water moving sediment down slopes and a glacier forming a U-shaped valley as it moves past mountains are examples of

- A. weathering B. erosion C. deposition D. rounding

_____ 6. Which agent of erosion can create a limestone cave?

- A. freezing and melting ice B. growing plant roots
C. acidic water D. strong wind

_____ 7. A pile of windblown sand is called a

- A. delta. B. groin. C. meander. D. dune.

_____ 8. If Earth's glaciers were to melt, what would be the most likely effect in Florida?

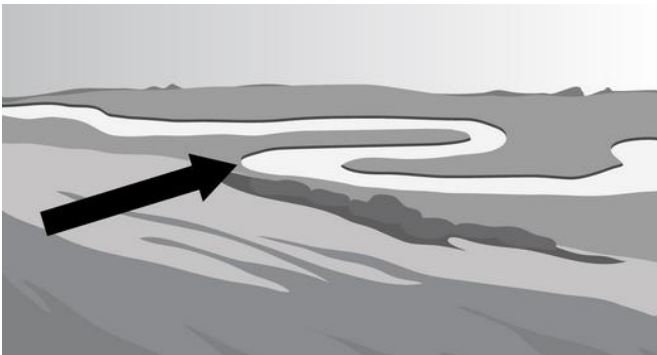
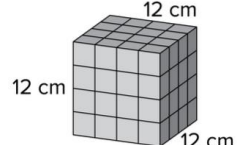
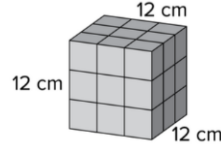
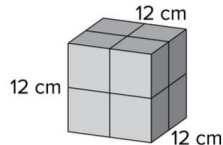
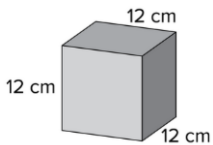
- A. coastal flooding B. till deposition C. increased acid rain D. an outwash plain

_____ 9. Which landform is created by erosion?

- A. delta B. U-shaped valley C. sandbar D. dune

_____ 10. To which material would the largest amount of water attach?

- A. B. C. D.



_____ 11. Which river feature does the arrow point to in the diagram?

- A. A current B. A meander C. A delta D. A valley

_____ 12. How do Florida's caverns form?

- A. When vegetation such as mangrove trees is removed, the rock is eroded, forming holes in the ground.
B. Repeated freezing and thawing of ice wedging breaks rocks apart. Then water washes away the sediment.
C. Wind and rain physically weather the rock into sediment. As a result of mass wasting, caverns were formed.
D. Acidic groundwater seeps through rock. It dissolves and washes away the limestone.

_____ 13. Which feature is NOT associated with an increase in chemical weathering?

- A. oxidation B. abrasion C. acid rain D. warm climate

_____ 14. What is one reason mangrove trees can protect shorelines from hurricanes?

- A. Mangroves are not susceptible to erosion.
B. Mangroves provide complete protection from flooding.
C. The low-growing roots slow the flow of incoming waves.
D. Their root system helps anchor the soil, reducing erosion.

_____ 15. Which two landforms have the most attributes in common?

- A. Sink hole and caves B. Wetlands and glaciers
C. Hoodoos and stalagmites D. Deltas and barrier islands

_____ 16. Trilobites are used index fossils because

- A. they are easy to identify.
B. they are some of the oldest fossils.
C. they were abundant and lived on Earth for a short time.
D. they were the only marine organism during one short period of time.

_____ 17. What do scientists look for in order to correlate rocks in different locations?

- A. different rock types and similar fossils B. many rock types and many fossils
C. similar rock types and lack of fossils D. similar rock types and similar fossils



_____ 18. Examine the image above: which rock layer is typically the youngest?

- A. 1 B. 2 C. 3 D. 4

_____ 19. Which term means “matching up rock layers in different places”?

- A. correlation B. horizontality C. inclusion D. superposition

_____ 20. What do scientists measure when determining the absolute age of a rock?

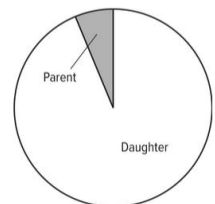
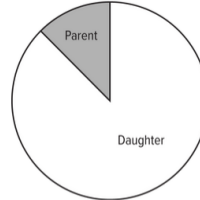
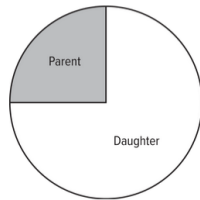
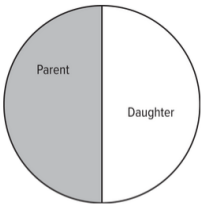
- A. amount of radioactivity B. number of uranium atoms
C. ratio of neutrons and electrons D. ratio of parent and daughter isotopes

_____ 21. What are isotopes?

- A. atoms of the same element with different numbers of electrons but the same number of protons
B. atoms of the same element with different numbers of electrons but the same number of neutrons
C. atoms of the same element with different numbers of neutrons but the same number of protons
D. atoms of the same element with equal numbers of neutrons and protons

_____ 22. Which pie chart shows the ratio of parent to daughter atoms after three half-lives?

- A. B. C. D.



_____ 23. The half-life of potassium-40 (K-40) is 1.25 billion years. If you begin with 80 g of K-40, how much will remain after 5 billion years? Hint: How many half-lives is this?

- A. 20 g B. 10 g C. 5 g D. 2.5 g

_____ 24. Which rocks are the most difficult to determine their age by radiometric dating?

- A. igneous B. sedimentary C. metamorphic D. volcanic

_____ 25. Which statement provides evidence which supports the idea that the Earth is about 4.5 billion years old?

- A. Igneous rocks found on Baffin Island, Canada where radiometrically dated at 4.45 billion years old.
B. The half-life of U-238 is 4.5 billion years.
C. Index fossils are not found in rocks older than 3.5 billion years.
D. Geologic processes like subduction and erosion have recycled Earth’s oldest rocks as part of the rock cycle.