

Weathering Review

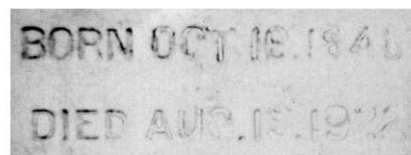
1. Which is the best example of physical weathering?
 - (1) the cracking of rock due to freezing and thawing of water
 - (2) the transportation of sediment in a stream
 - (3) the reaction of limestone with acid rainwater
 - (4) the formation of a sandbar along the side of a stream

2. Chemical weathering occurs most rapidly in climates that are

(1) warm and dry	(3) warm and moist
(2) cool and dry	(4) cool and moist

The two photographs below show dates on tombstones found in a cemetery in St. Remy, New York. The tombstones were 5 meters apart and both faced north. Tombstone A had dates cut into the rock in 1922. Tombstone B had dates cut into the rock in 1892.

3. Which statement best explains why the dates are more difficult to read on tombstone A than on tombstone B?
 - (1) Tombstone A is composed of minerals less resistant to weathering than tombstone B.
 - (2) Tombstone A has undergone a longer period of weathering than tombstone B.
 - (3) Tombstone A experienced cooler temperatures than tombstone B.
 - (4) Tombstone A was exposed to less acid rain than tombstone B.



Tombstone A (1922)



Tombstone B (1892)

4. Which property of water makes frost action a common and effective form of weathering?

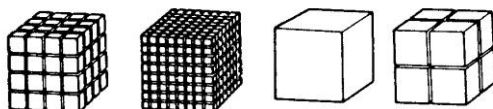
(1) Water dissolves many Earth materials.	(3) Water cools the surroundings when it evaporates.
(2) Water expands when it freezes.	(4) Water contracts when it freezes.

5. Limestone caves are formed as a result of

(1) erosion	(3) chemical weathering
(2) frost action	(4) thermal expansion

6. Impact craters are more obvious on the Moon and Mercury than on Earth because
 - (1) meteorites have not struck Earth
 - (2) exposure to weathering processes on Earth have removed most craters
 - (3) Earth is younger than Mercury or the Moon
 - (4) all meteorites burn up in Earth's atmosphere

7. Four samples of the same material with identical composition and mass were cut as shown in the diagrams below. When subjected to the same chemical weathering, which will weather the fastest?



(1)

(2)

(3)

(4)

8. The weathering of Earth materials is most affected by
 (1) climate (3) topography
 (2) altitude (4) longitude
9. Two different kinds of minerals, A and B, were placed in the same container and shaken for 15 minutes. The diagrams below represent the size and shape of the various pieces of mineral before and after shaking. What caused the resulting differences in shapes and sizes of minerals?

- 1 Mineral B was shaken harder.
- 2 Mineral B had a glossy luster.
- 3 Mineral A was more resistant to weathering.
- 4 Mineral A consisted of smaller pieces before shaking began.



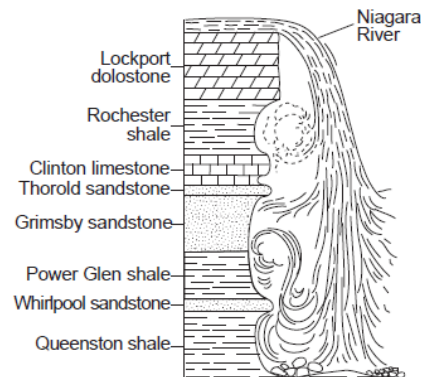
10. Soil develops as a result of
 (1) capillary action and solution (3) erosion and ionization
 (2) leaching and color changes (4) weathering processes and biological activity
11. In which layer of the soil diagram would the most organic material be located?
 (1) topsoil (3) weathered bedrock
 (2) subsoil (4) all layers have organic material



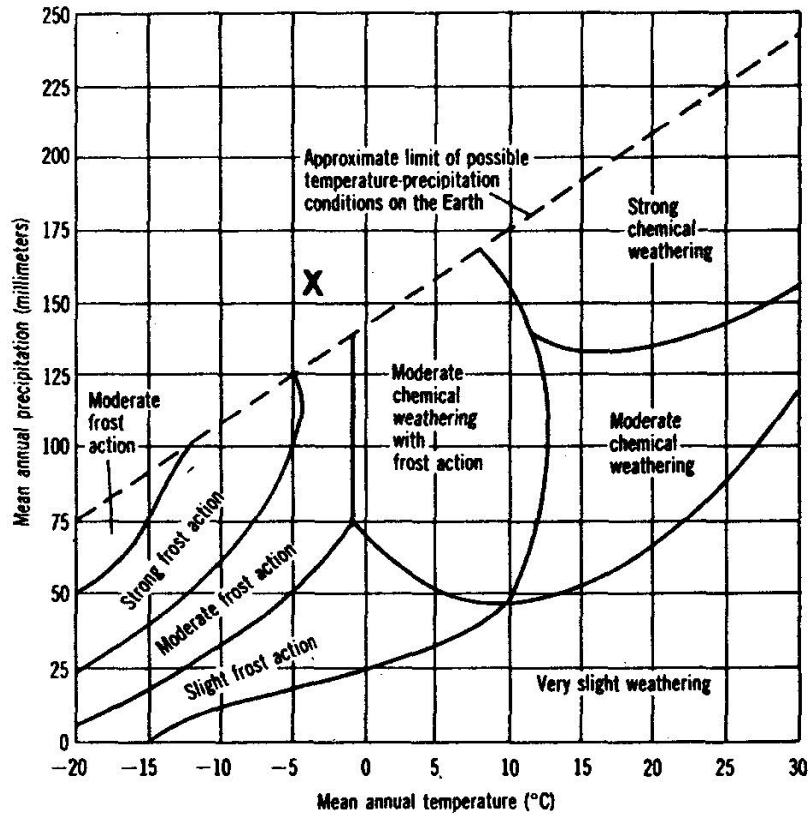
12. The generalized cross section below shows the sedimentary rock layers at Niagara Falls in western New York State.

Which rock layer appears to be most resistant to weathering?

- (1) Lockport dolostone
- (2) Rochester shale
- (3) Grimsby sandstone
- (4) Queenston shale



Use the diagram below to answer questions 13-15.



13. Which climatic conditions would produce very slight weathering?
- (1) a mean annual temperature of 25°C and a mean annual precipitation of 100 mm
 - (2) a mean annual temperature of 15°C and a mean annual precipitation of 25 mm
 - (3) a mean annual temperature of 5°C and a mean annual precipitation of 50 mm
 - (4) a mean annual temperature of -10°C and a mean annual precipitation of 75mm
14. Which climatic conditions would produce strong frost action?
- (1) a mean annual temperature of 25°C and a mean annual precipitation of 100 mm
 - (2) a mean annual temperature of 15°C and a mean annual precipitation of 25 mm
 - (3) a mean annual temperature of 5°C and a mean annual precipitation of 50 mm
 - (4) a mean annual temperature of -15°C and a mean annual precipitation of 50mm
15. The graph shows that as the both temperature and amount of precipitation increase, the amount of chemical weathering
- (1) increases
 - (2) decreases
 - (3) remains the same