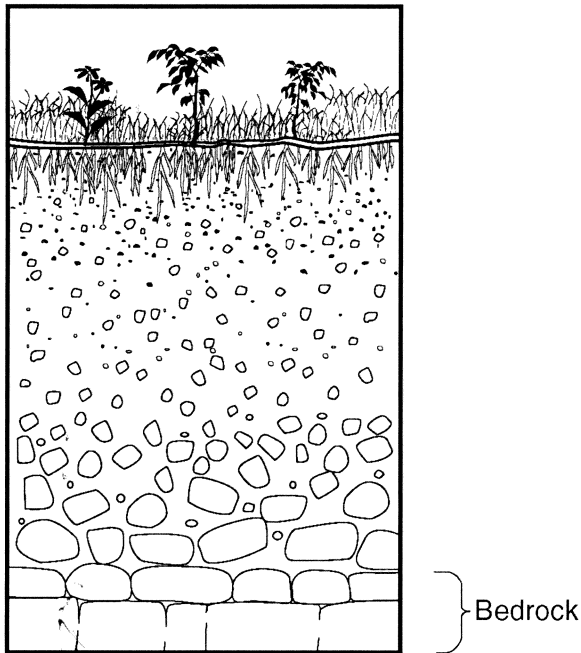


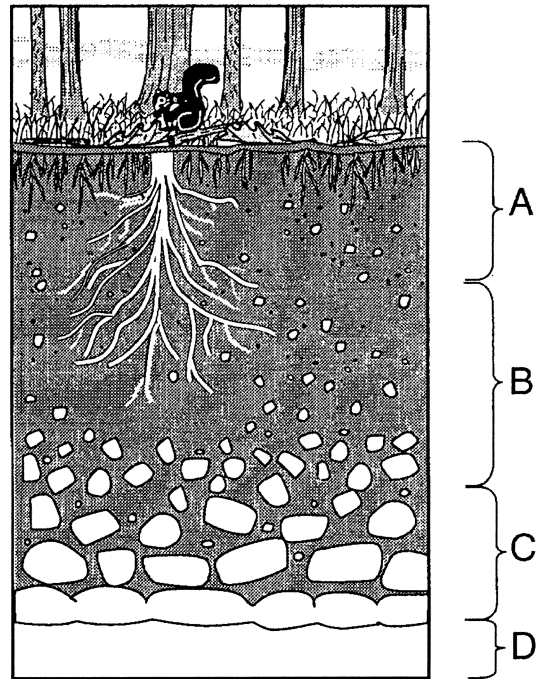
1. The cross section below shows a soil profile.



This soil was formed primarily by

- (1) erosion by glaciers
 - (2) erosion by running water
 - (3) capillarity and human activity
 - (4) weathering and biological activity
2. Humus, which is formed by the decay of plant and animal matter, is important for the formation of most
- (1) soils
 - (2) minerals
 - (3) sediment
 - (4) surface bedrock
3. Which factor has the most influence on the development of soil?
- (1) climate
 - (2) longitude
 - (3) amount of rounded sediment
 - (4) slope of the landscape

4. The diagram below shows a soil profile formed in an area of granite bedrock. Four different soil horizons, *A*, *B*, *C*, and *D*, are shown.

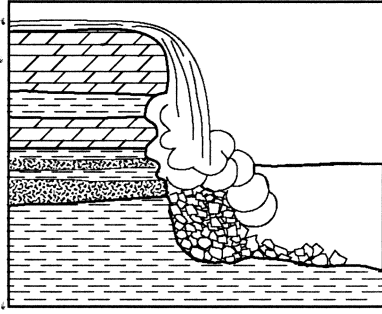


Which soil horizon contains the greatest amount of material formed by biological activity?

- (1) *A*
 - (2) *B*
 - (3) *C*
 - (4) *D*
5. Which substance found in a soil sample collected in an arid region would most likely be absent in a soil sample collected in a humid region?
- (1) rock salt
 - (2) quartz
 - (3) obsidian
 - (4) pyroxene
6. The mineral composition of a residual soil is most affected by the
- (1) depth of the water table
 - (2) elevation of the surface
 - (3) steepness of hillslopes
 - (4) type of bedrock material
7. Which factors most directly control the development of soils?
- (1) soil particle sizes and method of deposition
 - (2) bedrock composition and climate characteristics
 - (3) direction of prevailing winds and storm tracks
 - (4) earthquake intensity and volcanic activity
8. In which climate would the chemical weathering of limestone occur most rapidly?
- (1) cold and dry
 - (2) cold and humid
 - (3) warm and dry
 - (4) warm and humid
9. Which process involves either a physical or chemical breakdown of earth materials?
- (1) deposition
 - (2) sedimentation
 - (3) weathering
 - (4) cementing

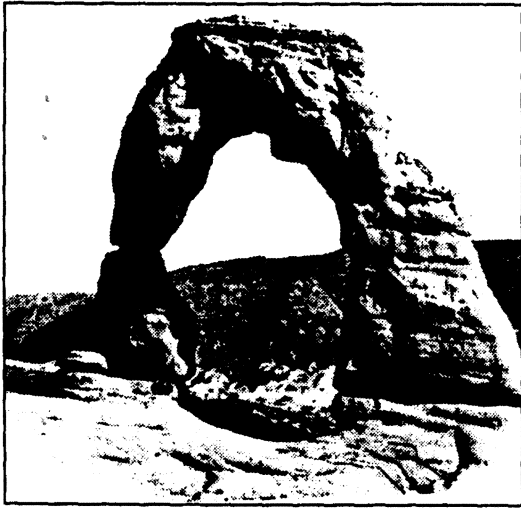
Weathering & Soils

10. The cross section below shows sedimentary rocks being eroded by water at a waterfall.



The sedimentary rock layers are being weathered and eroded at different rates primarily because the rock layers

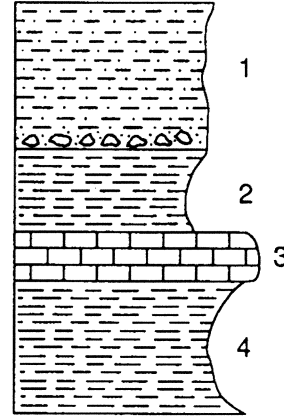
- (1) formed during different time periods
 - (2) contain different fossils
 - (3) have different compositions
 - (4) are horizontal
11. Which factor has the greatest influence on the weathering rate of Earth's surface bedrock?
- (1) local air pressure
 - (2) angle of insolation
 - (3) age of the bedrock
 - (4) regional climate
12. The photograph below shows an arch of rock located in the western United States.



How did the arch most likely form?

- (1) The bedrock in the arch was more resistant to weathering and erosion than the surrounding bedrock that was removed.
- (2) An earthquake forced bedrock upward into the shape of an arch.
- (3) Sand and gravel were deposited and compacted in the shape of an arch.
- (4) An underground glacier tunneled through the bedrock.

13. The diagram below represents a sedimentary rock outcrop.



Which rock layer is the most resistant to weathering?

- (1) 1
 - (2) 2
 - (3) 3
 - (4) 4
14. Which long-term atmospheric changes would increase the rate of chemical weathering of surface bedrock?
- (1) decreasing temperature and decreasing precipitation
 - (2) decreasing temperature and increasing precipitation
 - (3) increasing temperature and decreasing precipitation
 - (4) increasing temperature and increasing precipitation