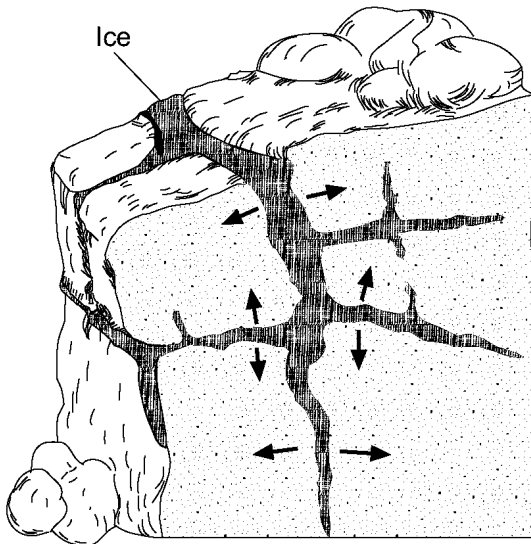
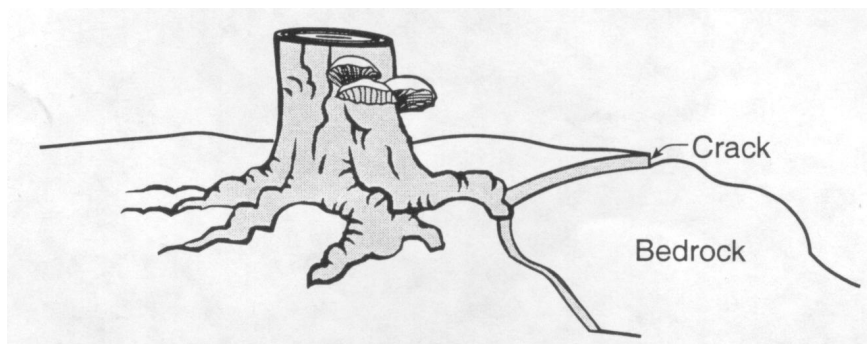


1. Base your answer to the following question on The diagram below shows granite bedrock with cracks. Water has seeped into the cracks and frozen. The arrows represent the directions in which the cracks have widened due to weathering.



Which statement best describes the physical weathering shown by the diagram?

- A) Enlargement of the cracks occurs because water expands when it freezes.
 - B) This type of weathering occurs only in bedrock composed of granite.
 - C) The cracks become wider because of chemical reactions between water and the rock.
 - D) This type of weathering is common in regions of primarily warm and humid climates.
2. Base your answer to the following question on The diagram below shows the stump of a tree whose root grew into a small crack in bedrock and split the rock apart.

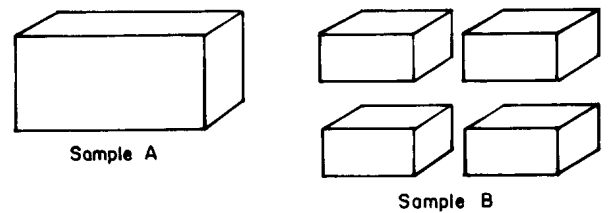


The action of the root splitting the bedrock is an example of

- A) chemical weathering
- B) deposition
- C) erosion
- D) physical weathering

3. In which climate would the chemical weathering of limestone occur most rapidly?
- A) cold and dry B) cold and humid
C) warm and dry D) warm and humid
4. By which processes are rocks broken up and moved to different locations?
- A) evaporation and condensation
B) weathering and erosion
C) burial and cementation
D) compaction and transportation
5. At high elevations, which is the most common form of physical weathering?
- A) abrasion of rocks by the wind
B) alternate freezing and melting of water
C) dissolving of minerals into solution
D) oxidation by oxygen in the atmosphere
6. Which activity demonstrates chemical weathering?
- A) freezing of water in the cracks of a sandstone sidewalk
B) abrasion of a streambed by tumbling rocks
C) grinding of talc into a powder
D) dissolving of limestone by acid rain
7. Chemical weathering will occur most rapidly when rocks are exposed to the
- A) hydrosphere and lithosphere
B) mesosphere and thermosphere
C) hydrosphere and atmosphere
D) lithosphere and atmosphere
8. Which change in climate would most likely cause the greatest increase in chemical weathering of local bedrock?
- A) lower temperature in winter
B) lower humidity in winter
C) higher atmospheric pressure in summer
D) greater precipitation in summer
9. Which factor has the greatest influence on the weathering rate of Earth's surface bedrock?
- A) local air pressure B) angle of insolation
C) age of the bedrock D) regional climate

10. What occurs when a rock is crushed into a pile of fragments?
- A) The total surface area decreases and chemical composition changes.
B) The total surface area decreases and chemical composition remains the same.
C) The total surface area increases and chemical composition changes.
D) The total surface area increases and chemical composition remains the same.
11. Base your answer to the following question on The diagram below represents equal masses of two identical rock samples. Sample *A* is one large block, while sample *B* was cut into four smaller blocks of equal size.



- If subjected to the same environmental conditions, sample *B* will weather more quickly than sample *A*. The best explanation for this is that the
- A) volume of sample *B* is greater than that of sample *A*
B) surface area of sample *B* is greater than that of sample *A*
C) density of sample *A* is greater than that of sample *B*
D) hardness of sample *A* is greater than that of sample *B*
12. The formation of soil is primarily the result of
- A) stream erosion and mass movement
B) stream deposition and runoff
C) precipitation and wind erosion
D) weathering and biological activity
13. Which change would cause the topsoil in West Virginia to increase in thickness?
- A) an increase in slope
B) an increase in biologic activity
C) a decrease in rainfall
D) a decrease in air temperature

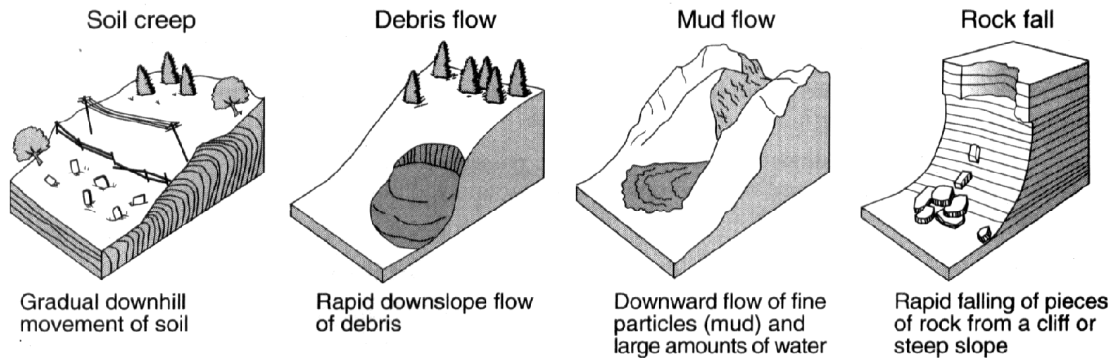
14. Why are Precambrian gneiss cobbles and boulders commonly found on top of the surface bedrock in the Catskills?

- A) The surface bedrock of the Catskills is composed of Precambrian gneiss.
- B) The surface bedrock of the Catskills has been overturned.
- C) Many meteorites composed of gneiss have landed in the Catskills.
- D) Glaciers transported these rocks from the Adirondacks to the Catskills.

15. The major source of sediments found on the deep ocean bottom is

- A) erosion of continental rocks
- B) submarine landslides from the mid-ocean ridges
- C) icebergs that have broken off of continental glaciers
- D) submarine volcanic eruptions

16. The diagrams below represent four different examples of one process that transports sediments.



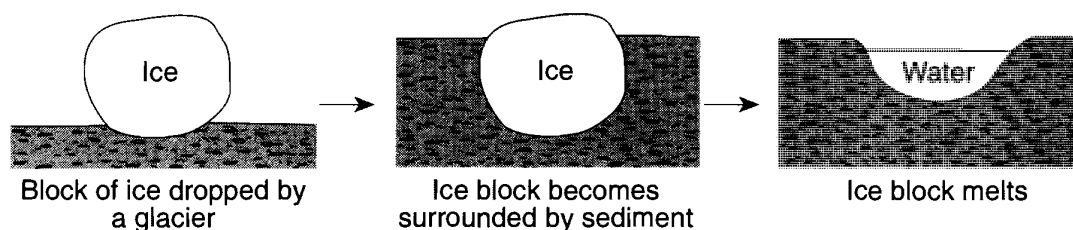
Which process is shown in these diagrams?

- A) chemical weathering
- B) wind action
- C) mass movement
- D) rock abrasion

17. Which erosional force acts alone to produce avalanches and landslides?

- A) gravity
- B) winds
- C) running water
- D) sea waves

18. The diagram below shows a glacial landscape feature forming over time from a melting block of ice.



This glacial landscape feature is best identified as

- A) a kettle lake B) an outwash plain
C) a finger lake D) a moraine

19. Which landscape characteristic indicates a landscape has been formed primarily by streams?

- A) residual soil covering a large area
B) coastal sand dunes
C) V-shaped valleys
D) parallel hills of unsorted sediments

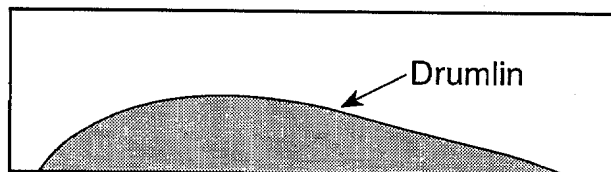
20. Which sediment is most easily picked up and transported by the wind?

- A) cobbles B) pebbles
C) sand D) silt

21. Which agent of erosion was primarily responsible for forming the long, narrow, U-shaped valleys in the Finger Lakes region of New York State?

- A) wind B) landslides
C) meandering streams D) continental glaciers

22. The diagram below represents a side view of a hill (drumlin) that was deposited by a glacier on the Atlantic coast.



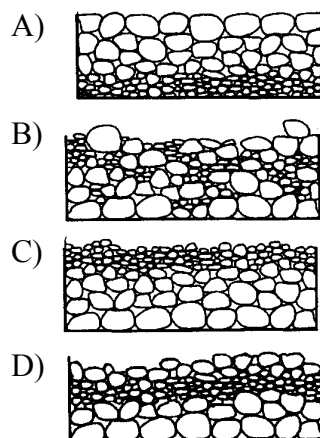
This hill is most likely composed of

- A) cemented sediments
B) unsorted sediments
C) vertically layered sediments
D) horizontally layered sediments

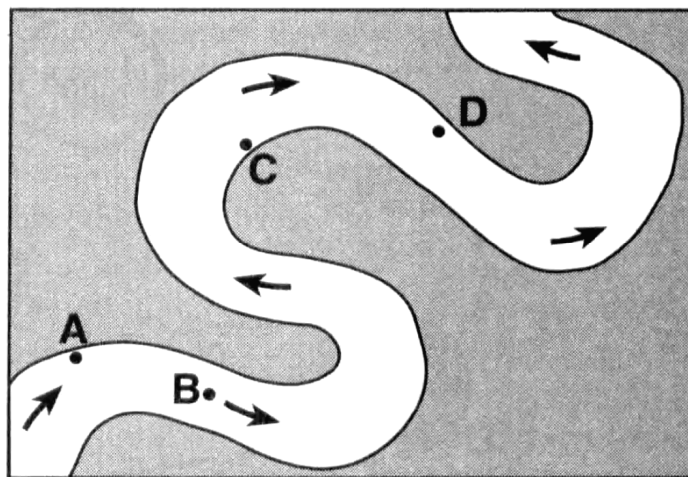
23. What is the largest sediment that can be transported by a stream that has a velocity of 125 cm/sec?

- A) cobbles B) pebbles
C) sand D) clay

24. Quartz particles of varying sizes are dropped at the same time into deep, calm water. Which cross section best represents the settling pattern of these particles?



25. The map below shows a meandering stream. Points A, B, C, and D represent locations along the stream bottom.



At which location is the greatest amount of sediment most likely being deposited?

- A) A B) B C) C D) D

26. The longest portion of the Genesee River in New York State flows through which landscape region?

- A) Erie-Ontario Lowlands
- B) Tug Hill Plateau
- C) Allegheny Plateau
- D) St. Lawrence Lowlands

27. A plane traveling in a straight line from Watertown to Utica would fly over which landscape region?

- A) Tug Hill Plateau
- B) Adirondack Mountains
- C) St. Lawrence Lowlands
- D) Champlain Lowlands

28. New York State's generalized landscape regions are identified primarily on the basis of elevation and

- A) bedrock structure B) climate zones
- C) geologic age D) latitude

29. Between which two cities in New York State would the oldest surface bedrock be found?

- A) Plattsburgh and Watertown
- B) Jamestown and Rochester
- C) Utica and Binghamton
- D) Syracuse and Albany

30. The landscape of northeastern New York State was formed mainly by

- A) mountain building and glacial erosion
 - B) faulting and volcanic activity
 - C) changes in the water level of Lake Ontario
 - D) erosion of Devonian sedimentary bedrock by rivers
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