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# Surface Processes

Earth Science

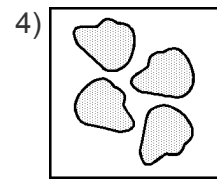
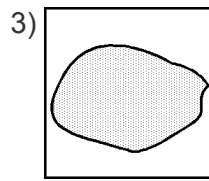
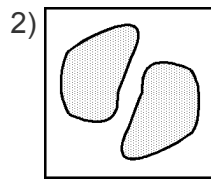
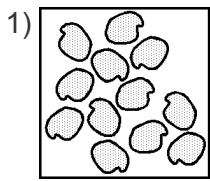
# Surface Processes

## Practice Test

Directions: For questions 1-25 record your answers on the scantron provided. Some questions may require the use of the 2011 Edition Reference Tables for Physical Setting/Earth Science.



1) The four limestone samples illustrated below have the same composition, mass, and volume. Under the same climatic conditions, which sample will weather *fastest*?



2) Chemical weathering of rocks occurs most rapidly in a climate that is

- 1) cold and arid                      2) cold and humid                      3) hot and arid                      4) hot and humid

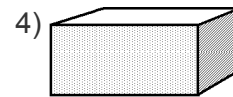
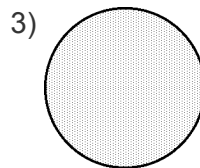
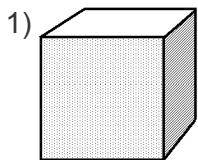
3) Solid bedrock is changed to soil primarily by the process of

- 1) weathering                      2) erosion                      3) transpiration                      4) infiltration

4) Four samples of aluminum, *A*, *B*, *C*, and *D*, have identical volumes and densities, but different shapes. Each piece is dropped into a long tube filled with water. The time each sample takes to settle to the bottom of the tube is shown in the table below.

Sample	Time to Settle (sec)
<i>A</i>	2.5
<i>B</i>	3.7
<i>C</i>	4.0
<i>D</i>	5.2

Which diagram most likely represents the shape of sample *A*?



5) A large, scratched boulder is found in a mixture of unsorted, smaller sediments forming a hill in central New York State. Which agent of erosion most likely transported and then deposited this boulder?

- 1) running water                      2) ocean waves                      3) wind                      4) a glacier

6) Which agent of erosion most likely moves sediments in a sand dune?

- 1) running water                      2) wind                      3) wave action                      4) glaciers

7) Which two factors will increase the rate of a stream's flow?

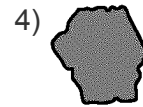
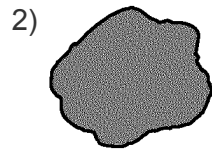
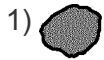
- 1) increased precipitation and decreased slope                      3) decreased precipitation and decreased slope  
 2) increased precipitation and increased slope                      4) decreased precipitation and increased slope



- 12) The diagram below represents the size and shape of a pebble. This pebble and 20 other pebbles having a similar size and shape were placed in a rock tumbler with water and allowed to abrade for five days.

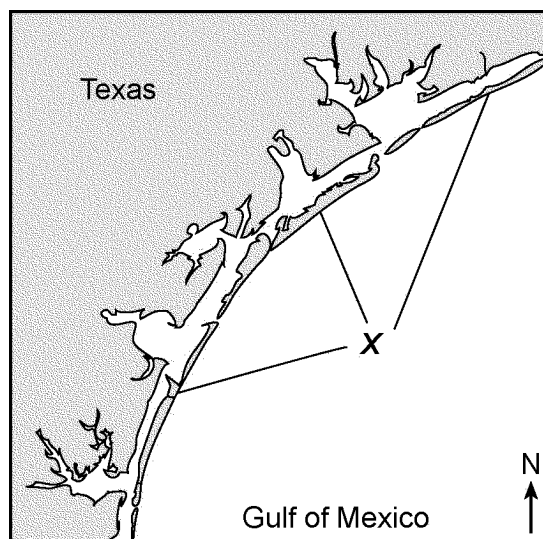


Which one of the following diagrams *best* represents the size and shape of this pebble after the five-day period?



- 13) Which erosional agent typically deposits hills of unsorted sediments?
- 1) winds                      2) glaciers                      3) ocean waves                      4) streams
- 14) The velocity of a stream is decreasing. As the velocity approaches zero, which size particle will most likely remain in suspension?
- 1) pebble                      2) sand                      3) clay                      4) boulder
- 15) A glacial moraine is *best* described as
- 1) an elongated hill composed of sand and formed by a retreating glacier  
2) sorted sediment deposited as the glacier melts  
3) unsorted sediment directly deposited by a glacier  
4) a body of water formed by a retreating glacier

- 16) The map below shows a portion of the coast of Texas. Letter X indicates features formed by wave action.



What is the name of the features indicated by letter X?

- 1) deltas                      2) barrier islands                      3) moraines                      4) island arc

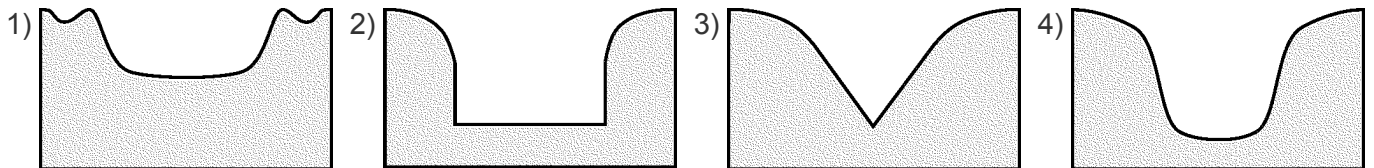
17) Which sediment is most easily picked up and transported by the wind?

- 1) pebbles                      2) silt                      3) sand                      4) cobbles

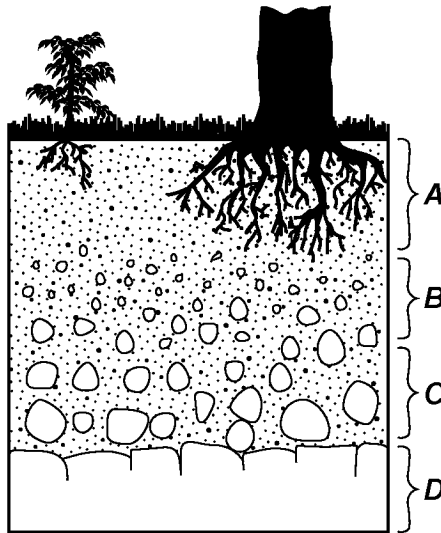
18) A landslide is an example of

- 1) river deposition              2) chemical weathering      3) mass movement              4) glacial scouring

19) Which cross section *best* represents the valley shape where a rapidly flowing stream is cutting into the bedrock in a mountainous area?



20) The cross section below represents zones of soil labeled A, B, and C. Letter D represents underlying bedrock.



Which letter identifies the zone having the *most* organic and weathered material?

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

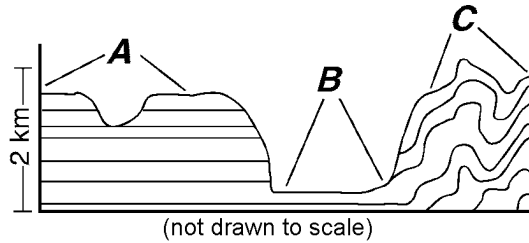
21) Which agent of erosion is most likely responsible for the deposition of sandbars along ocean shorelines?

- 1) mass movement              2) wave action              3) glaciers                      4) wind action

22) Which type of surface bedrock is most commonly found in the Utica, New York area?

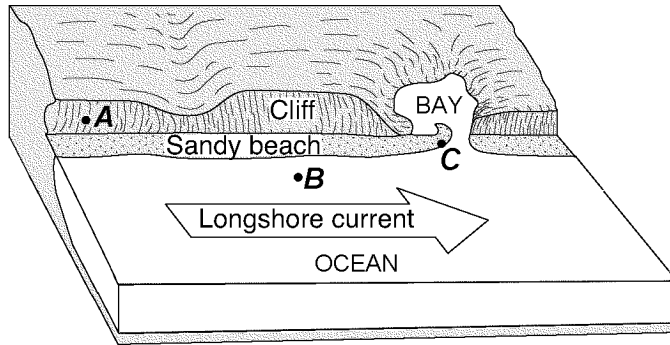
- 1) sedimentary, with limestone, shale, sandstone, and dolostone  
2) metamorphic, with gneiss, quartzite, marble, and slate  
3) sedimentary, with limestone, shale, sandstone, and conglomerate  
4) metamorphic, with quartzite, dolostone, marble, and schist

- 23) The cross section below shows the general bedrock structure of an area containing three different landscape regions, A, B, and C.



Which list correctly identifies the type of landscapes represented by letters A, B, and C?

- 1) A = plateau, B = plain, C = mountain  
 2) A = mountain, B = plateau, C = plain  
 3) A = mountain, B = plain, C = plateau  
 4) A = plain, B = plateau, C = mountain
- 24) In which landscape region are New York State's Finger Lakes primarily located?  
 1) Adirondack Mountains 2) Atlantic Coastal Plain 3) Erie-Ontario Lowlands 4) Allegheny Plateau
- 25) The block diagram below shows a part of the eastern coastline of North America. Points A, B, and C are reference points along the coast.



Which list *best* represents the primary processes occurring along the coastline at points A, B, and C?

- 1) A — precipitation; B — infiltration; C — evaporation  
 2) A — faulting; B — conduction; C — mass movement  
 3) A — folding; B — subduction; C — crosscutting  
 4) A — weathering; B — erosion; C — deposition