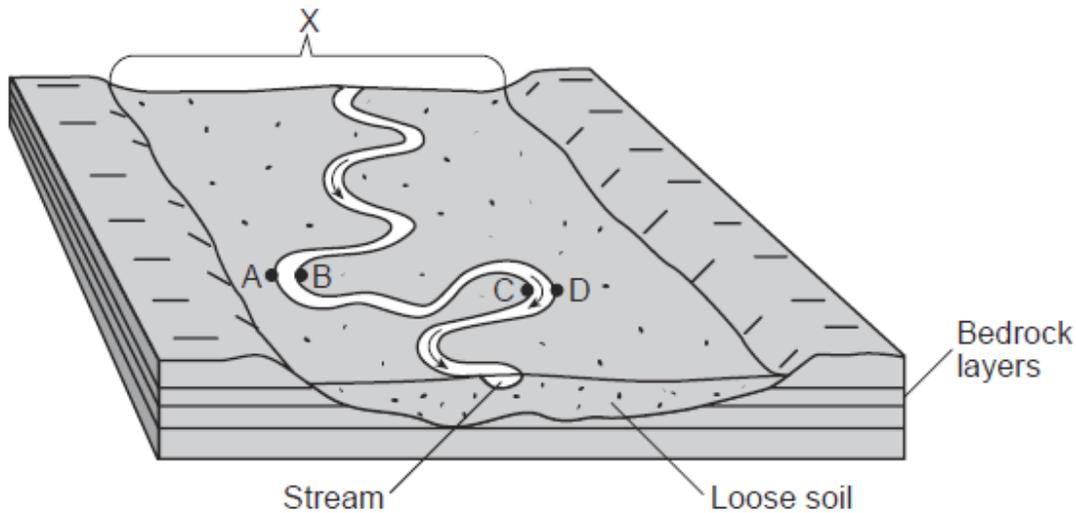
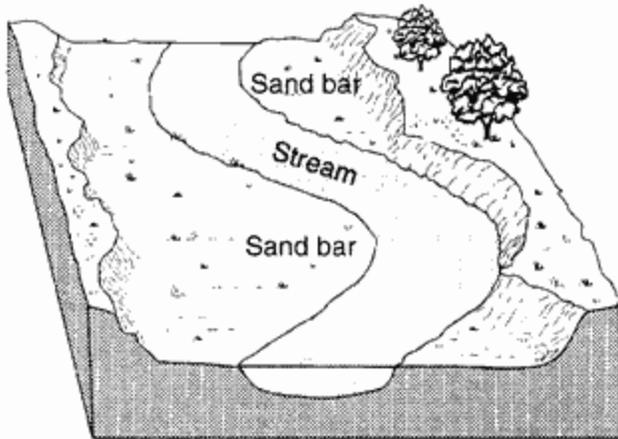


Base your answers to questions 1 and 2 on the block diagram below and on your knowledge of Earth science. The block diagram represents a landscape that was produced by a meandering stream. One landscape feature is labeled *X*. Letters *A*, *B*, *C*, and *D* represent locations on the stream banks.



- Erosion is most likely greatest at locations
 - A* and *B*
 - B* and *C*
 - C* and *D*
 - D* and *A*
- The landscape feature labeled *X* is best described as
 - a flood plain
 - a sand bar
 - a delta
 - an escarpment

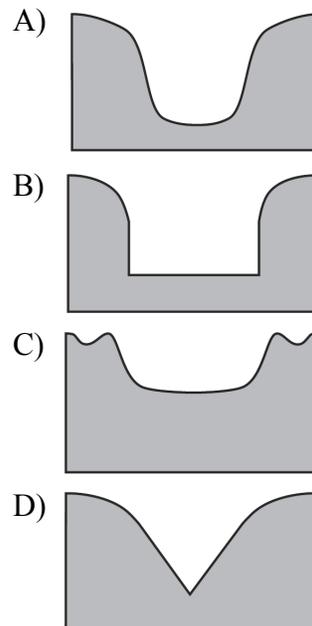
- The diagram below shows a portion of a stream.



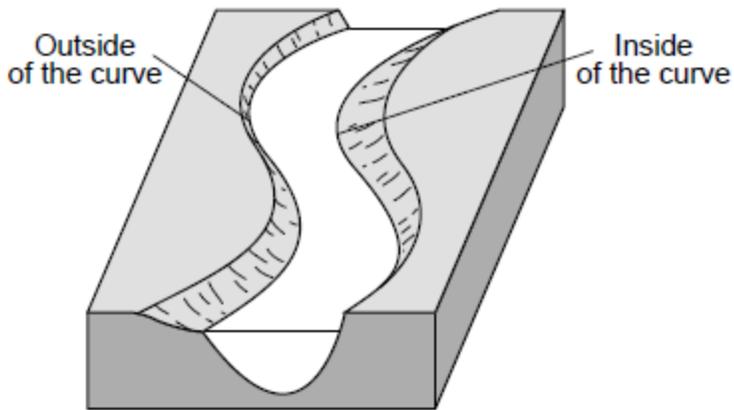
The sand bars formed as a direct result of

- erosion due to a decrease in stream velocity
- erosion due to an increase in stream velocity
- deposition due to a decrease in stream velocity
- deposition due to an increase in stream velocity

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



5. The block diagram below represents a meandering stream.



Which table indicates where the greatest stream velocity and the greatest rate of stream erosion occur?

- A)

| Greatest Stream Velocity | Greatest Stream Erosion |
|--------------------------|-------------------------|
| outside of the curve | outside of the curve |
- B)

| Greatest Stream Velocity | Greatest Stream Erosion |
|--------------------------|-------------------------|
| outside of the curve | inside of the curve |
- C)

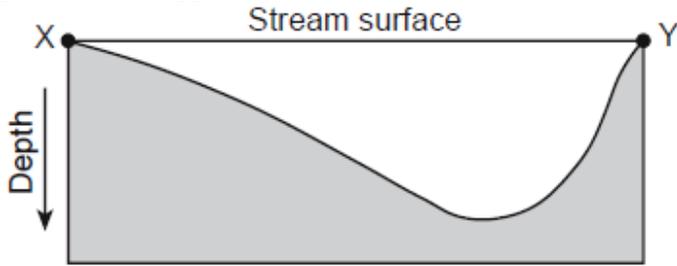
| Greatest Stream Velocity | Greatest Stream Erosion |
|--------------------------|-------------------------|
| inside of the curve | inside of the curve |
- D)

| Greatest Stream Velocity | Greatest Stream Erosion |
|--------------------------|-------------------------|
| inside of the curve | outside of the curve |

6. Trees growing on the edge of a river's meander are most likely to fall into the river due to

- A) deposition on the inside of the meander
- B) deposition on the outside of the meander
- C) erosion on the inside of the meander
- D) erosion on the outside of the meander

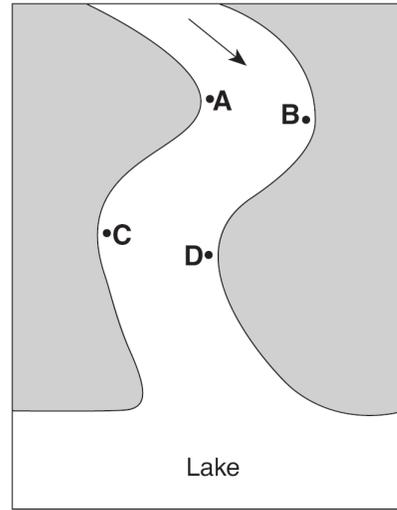
7. The cross section below represents a portion of a meandering stream. Points *X* and *Y* represent two positions on opposite sides of the stream.



Based on the cross section, which map of a meandering stream best shows the positions of points *X* and *Y*?

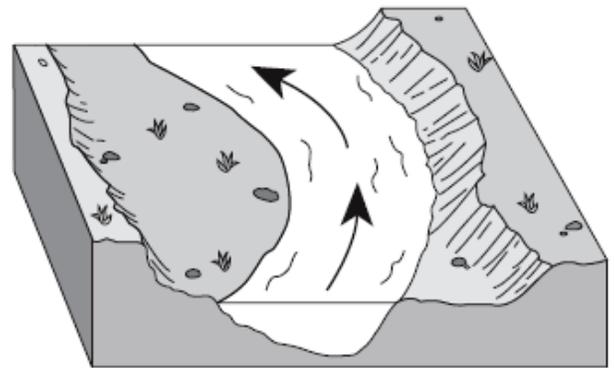
- A)
- B)
- C)
- D)

8. The map below shows a meandering stream as it enters a lake. The arrow shows the direction of stream flow. Points *A* through *D* represent locations on the surface of the stream.



The greatest stream velocities are found closest to points

- A) *A* and *B* B) *B* and *C*
 C) *C* and *D* D) *D* and *A*
9. The diagram below shows a section of a meander in a stream. The arrows show the direction of stream flow.



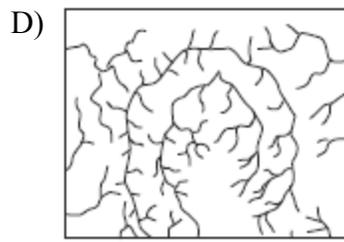
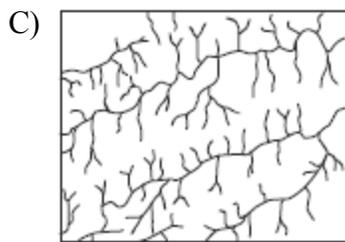
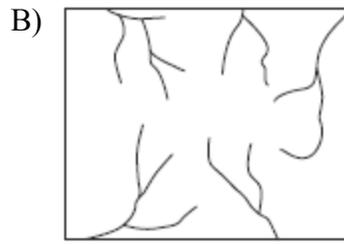
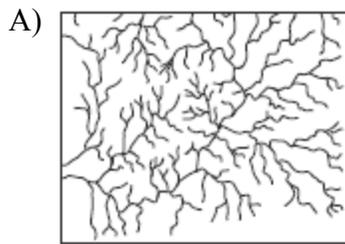
The streambank on the outside of this meander is steeper than the streambank on the inside of this meander because the water on the outside of this meander is moving

- A) slower, causing deposition
 B) faster, causing deposition
 C) slower, causing erosion
 D) faster, causing erosion

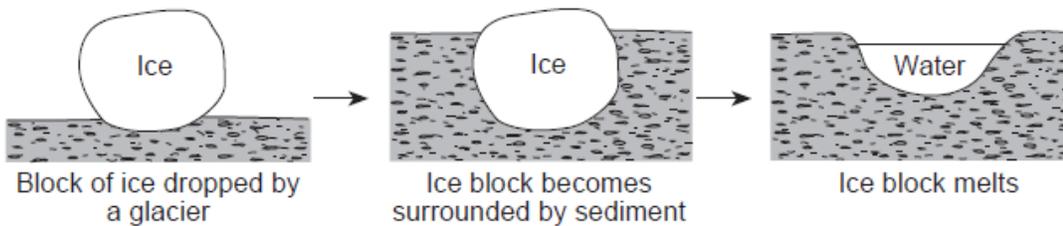
10. The block diagram below represents an igneous dome that uplifted overlying rock layers, which were then weathered and eroded.



Which stream drainage pattern is most likely found on the surface of the area represented by the block diagram?



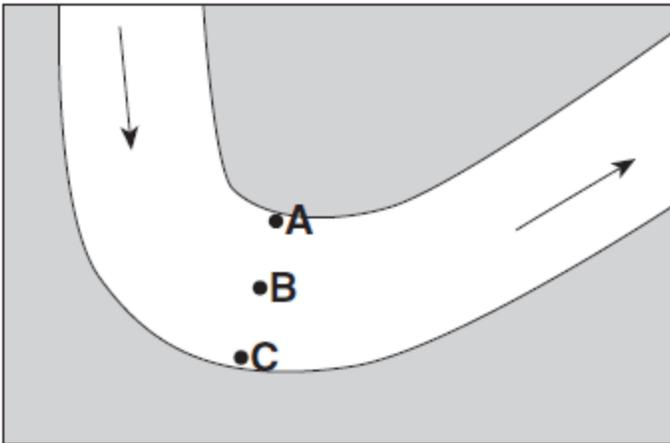
11. The diagram below shows a glacial landscape feature forming over time from a melting block of ice.



This glacial landscape feature is best identified as

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

12. The map below shows the bend of a large meandering stream. The arrows show the direction of stream flow, Letters *A*, *B*, and *C* are positions on the streambed where erosion and deposition data were collected.



Which table best represents the locations where erosion and deposition are dominant and where an equilibrium exists between the two processes? [A check mark represents the dominant process for each lettered location.]

A)

| | Erosion | Equilibrium | Deposition |
|----------|---------|-------------|------------|
| A | | ✓ | |
| B | | | ✓ |
| C | ✓ | | |

B)

| | Erosion | Equilibrium | Deposition |
|----------|---------|-------------|------------|
| A | | | ✓ |
| B | ✓ | | |
| C | | ✓ | |

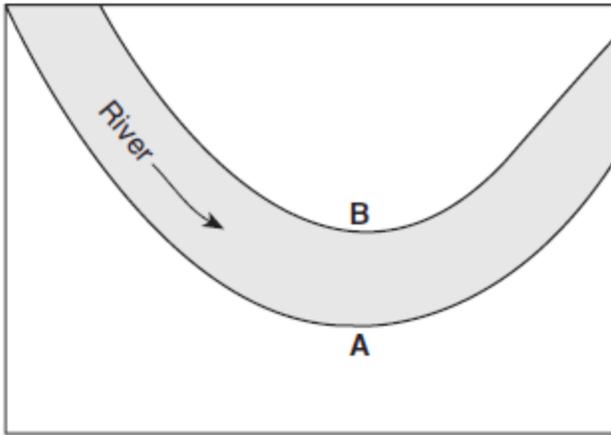
C)

| | Erosion | Equilibrium | Deposition |
|----------|---------|-------------|------------|
| A | ✓ | | |
| B | | ✓ | |
| C | | | ✓ |

D)

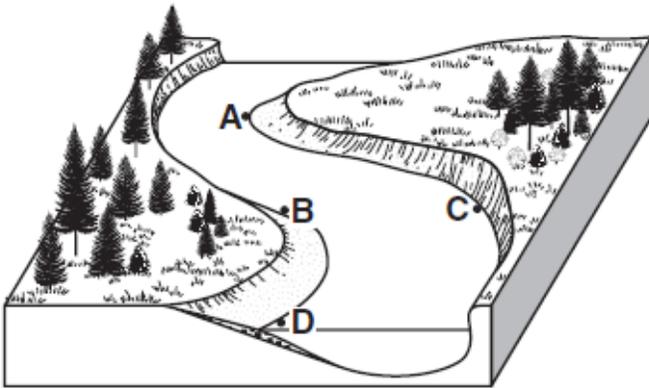
| | Erosion | Equilibrium | Deposition |
|----------|---------|-------------|------------|
| A | | | ✓ |
| B | | ✓ | |
| C | ✓ | | |

13. The map below shows the path of a river. The arrow shows the direction the river is flowing. Letters *A* and *B* identify the banks of the river.



The water depth is greater near bank *A* than bank *B* because the water velocity near bank *A* is

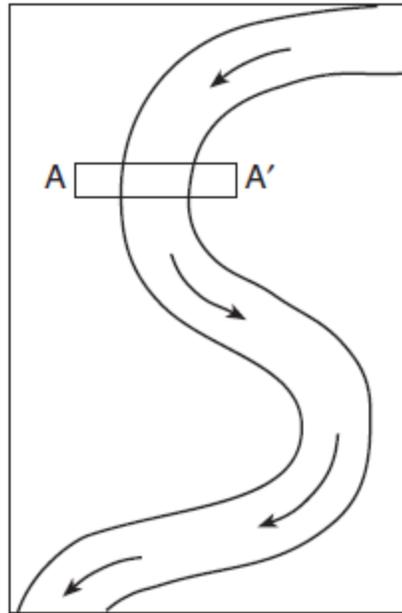
- A) faster, causing deposition to occur
 - B) faster, causing erosion to occur
 - C) slower, causing deposition to occur
 - D) slower, causing erosion to occur
14. The diagram below shows points *A*, *B*, *C*, and *D* on a meandering stream.



At which point does the greatest stream erosion occur?

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

15. The map below shows a meandering river. *A–A'* is the location of a cross section. The arrows show the direction of the river flow.



Which cross section best represents the shape of the river bottom at *A–A'*?

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