Name:_____

NYS Geology and Landscapes and some River stuff

1. Which types of surface bedrock are most likely found near Jamestown, New York?

   A) slate and marble
   B) quartzite and granite
   C) shale and sandstone
   D) schist and gneiss

2. The surface bedrock of Mt. Marcy, New York, is composed primarily of which rock?

   A) anthrosite B) marble C) quartzite D) hornfels

3. The Catskills landscape region is classified as a plateau because it has

   A) low elevations and mostly faulted or folded bedrock
   B) low elevations and mostly horizontal bedrock
   C) high elevations and mostly faulted or folded bedrock
   D) high elevations and mostly horizontal bedrock

4. New York State's Catskills are classified as which type of landscape region?

   A) mountain **B) plateau** C) lowland D) plain

5. 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

6. Old Forge and Watertown, located at nearly the same latitude in New York State, have very different landscapes. Which factor is primarily responsible for these landscape differences?

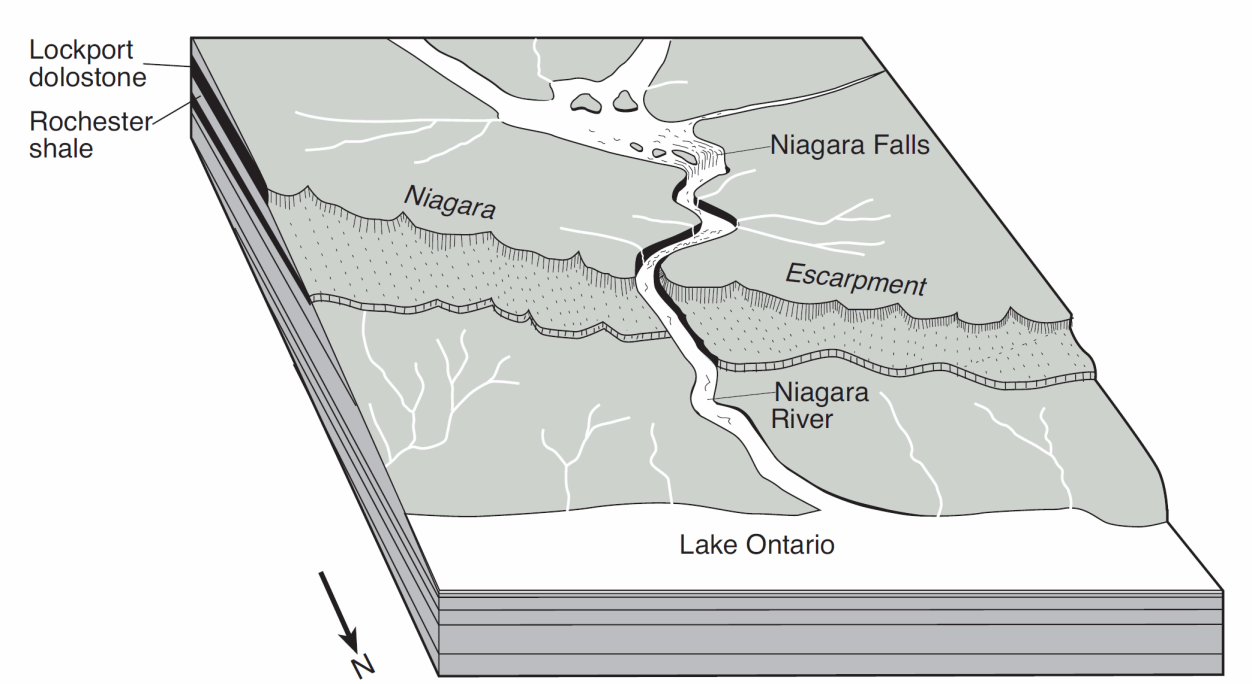
   A) average annual temperature
   B) average annual precipitation
   C) bedrock structure
   D) soil characteristics

7. Base your answer to the following question on the isoline map below, which shows the average yearly precipitation, in inches, across New York State.

Which New York State landscape region receives the greatest average yearly precipitation?

A) Catskills
B) Tug Hill Plateau
C) Adirondack Mountains
D) Taconic Mountains

Base your answers to questions **8** and **9** on the block diagram and information below. The diagram is of the Niagara Falls region as viewed from the north.



The Niagara River began to flow over the Niagara Escarpment about 12,000 years ago when the last Pleistocene ice sheet melted and retreated north from the Niagara Escarpment. Since that time, Niagara Falls has eroded upriver, leaving a deep, steepsided valley that is 11,000 meters long. The top bedrock layer of the escarpment is the Lockport dolostone which lies above the Rochester shale. The shale is more easily weathered than the dolostone. This causes the dolostone to be undercut. As a result, the dolostone breaks off in large blocks that tumble to the base of Niagara Falls.

8. Toward which compass direction is the location of Niagara Falls likely to move in the future?

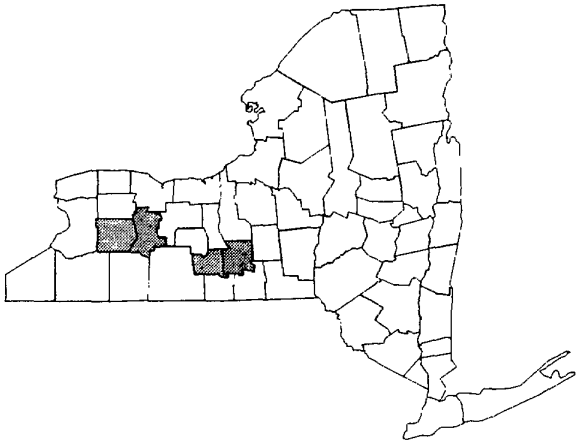
9. In which New York State landscape region is Niagara Falls located?

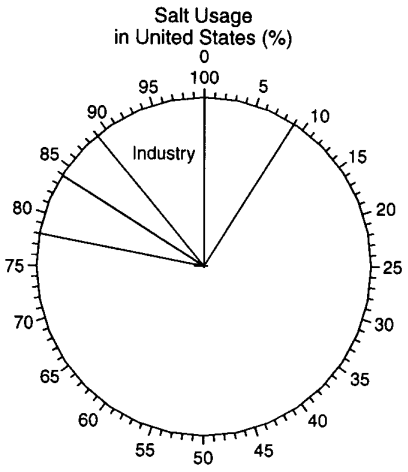
10. New York States Adirondacks are classified as a mountain landscape region. Describe one bedrock characteristic and one land surface characteristic that were used to classify the Adirondacks as a mountain landscape region.

Base your answers to questions **11** and **12** on the data table below, which shows the percent and uses of different types of salt in the United States.

Uses of Salt in the United States

Salt Usage	Percent	How Used
Water softening	9	Sodium ions from salt replace calcium and magnesium ions in water.
Highways	69	Salt keeps highways free of ice in the winter.
Agriculture	6	Salt is provided for livestock and poultry to balance their diet.
Foods	5	Humans use salt in their diet.
Industry	11	Many industrial processes, such as paper-making, use salt.

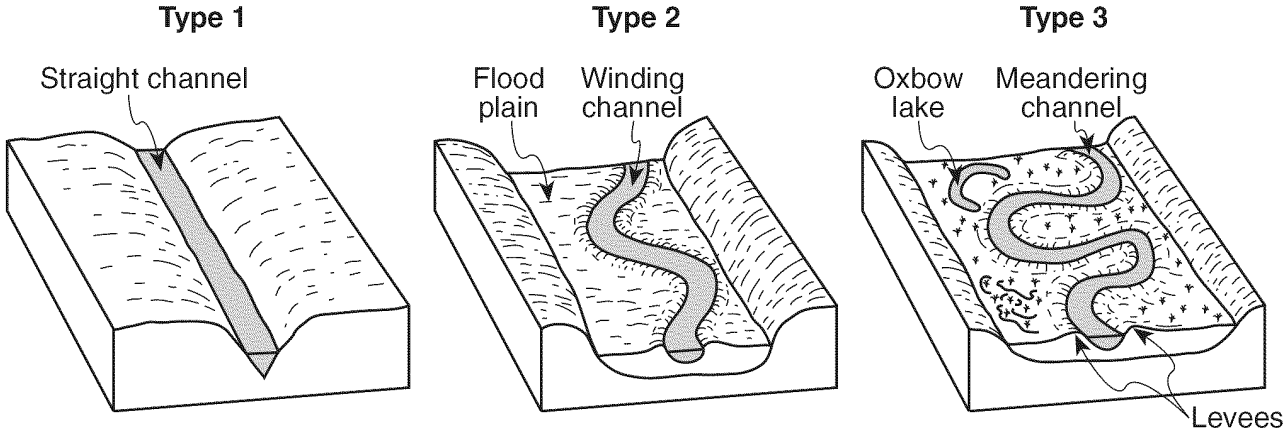




11. Shaded areas on the map above represent some counties in New York State where salt is mined. State the name of *one* New York State landscape region in which all or part of these counties are located.

12. On the pie graph provided, complete the graph to show the percent of *each* salt usage. (The percent of salt used in industry has been drawn and labeled.) Label *each* section of the pie graph to indicate the salt usage.

Base your answers to questions **13** and **14** on the block diagrams below, which show three types of streams with equal volumes.



13. Explain how the cobbles and pebbles that were transported by these streams became smooth and rounded in shape.

14. Explain why the outside of the curve of a meandering channel experiences more erosion than the inside of the curve.

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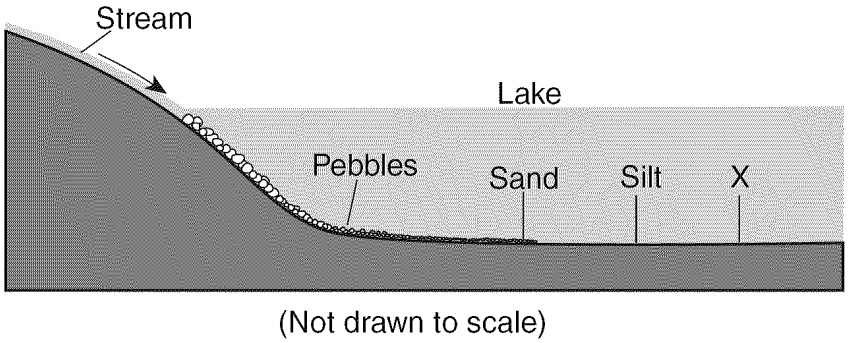
15. The cross section below illustrates the normal pattern of sediments deposited where a stream enters a lake. Letter *X* represents a particular type of sediment.



a Briefly explain why deposition of sediment usually occurs where a stream enters a lake.
b Name the type of sediment most likely represented by letter *X*.

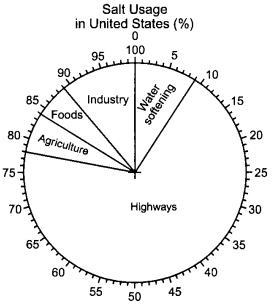
8.THE DEPOSITIONAL PROCESS (15)

8.C.Landscape Characteristics (7)

8.C.iii.Landscape Regions of New York State (7)

8.E.Constructed Response VIII (8)

#	QID#	Ans	Thinking Skills	Difficulty	Standards
1	7785	C		Unassigned	8.C.iii.
2	7701	A		Unassigned	8.C.iii.
3	7291	D		Unassigned	8.C.iii.
4	5908	B	Knowing	Unassigned	8.C.iii.
5	7021	A		Unassigned	8.C.iii.
6	6760	C	Applying	Unassigned	8.C.iii.
7	5916	A	Analyzing	Unassigned	8.C.iii.
8	6885	n/a	Applying	Unassigned	8.E.
9	6884	n/a	Applying	Unassigned	8.E.
10	5208	n/a		Unassigned	8.E.
11	3906	n/a		Unassigned	8.E.
12	3905	n/a		Unassigned	8.E.
13	5361	n/a		Unassigned	8.E.
14	5360	n/a		Unassigned	8.E.
15	4890	n/a		Unassigned	8.E.

1. **C**
2. **A**
3. **D**
4. **B**
5. **A**
6. **C**
7. **A**
8. — S — south — SE — SW
9. — Erie-Ontario Lowlands — Erie-Ontario plains — interior lowlands
10. Bedrock characteristics: – The Adirondacks have faulted, folded, and deformed bedrock. – The Adirondacks have intensely metamorphosed bedrock. – The oldest bedrock is near the center of the Adirondacks. Land surface characteristics: – The Adirondacks have high elevations. – The Adirondacks have steep slopes. – The Adirondacks are a partially eroded dome.
11. Credit for Erie-Ontario Lowlands or Allegheny Plateau or Appalachian Plateau.
12. 

13. Responses include, but are not limited to: These tumbling cobbles and pebbles were abraded against other transported rocks and the stream channel; Abrasion occurred as the rocks bounced and rolled along the bottom of the streambed; Sharp corners and edges were knocked off, scraped, and/or worn down; Grinding against other sediment and rocks
14. Responses include, but are not limited to: Stream velocity is greater on the outside of the meandering channel; Stream flow is slower on the inside of the meandering channel; Water is moving faster on the outside of a meander curve
15. *a*: – The stream velocity decreases. – The still water of the lake slows the stream current.
b: – Silt – Clay

Question ID's in Numerical Order

12. 3905
11. 3906
15. 4890
10. 5208
14. 5360
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