

1. Which sedimentary rock would be formed by the compaction and cementation of particles 1.5 centimeters in diameter?

- A) shale                      B) sandstone  
C) **conglomerate**        D) siltstone

2. The diagram below shows actual sizes and shapes of particles removed from a clastic sedimentary rock.



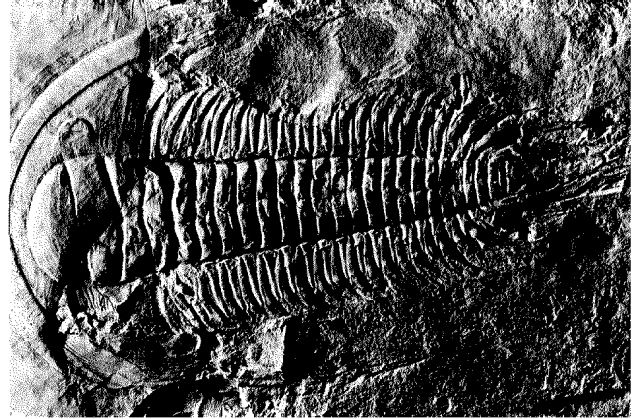
The sediments are from

- A) chemical limestone    **B) conglomerate**  
C) granite                    D) sandstone

3. Brachiopod fossils were found in a layer of limestone rock. In which type of environment did the limestone layer form?

- A) shallow marine**        B) tropical forest  
C) coastal plain            D) interior grassland

4. The fossil below was found in surface bedrock in the eastern United States.



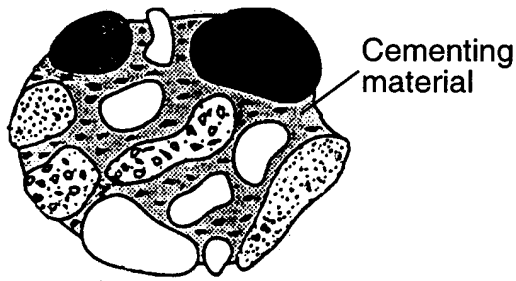
Which statement best describes the formation of the rock containing this fossil?

- A) The rock was formed by the metamorphism of sedimentary rock deposited in a terrestrial environment during the Cretaceous Period.  
B) The rock was formed by the compaction and cementation of sediments deposited in a terrestrial environment during the Triassic Period.  
**C) The rock was formed by the compaction and cementation of sediments deposited in a marine environment during the Cambrian Period.**  
D) The rock was formed from the solidification of magma in a marine environment during the Triassic Period.

5. Which rock is sedimentary in origin and formed as a result of chemical processes?

- A) granite                      B) shale  
C) breccia                      **D) dolostone**

6. Base your answer to the following question on the rock sample shown below.

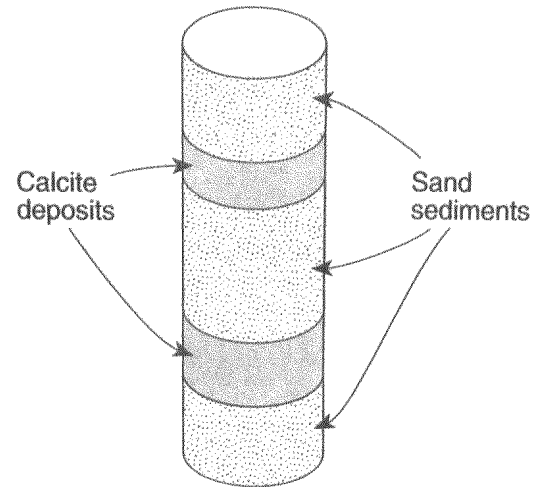


( Actual size )

The rounded pebbles of this rock have been cemented together to form

- A) granite, an igneous rock
  - B) conglomerate, a sedimentary rock**
  - C) siltstone, a sedimentary rock
  - D) Weiss, a metamorphic rock
7. Dolostone is formed by the
- A) local metamorphism of marble
  - B) biological deposition of skeletons and shells
  - C) chemical replacement of limestone**
  - D) mechanical deposition of silts
8. Which characteristic determines whether a rock is classified as a shale, a siltstone, a sandstone, or a conglomerate?
- A) the absolute age of the sediments within the rock
  - B) the mineral composition of the sediments within the rock
  - C) the particle size of the sediments within the rock**
  - D) the density of the sediments within the rock
9. Which rock was most likely formed from pebble sized sediment deposited in shallow water at an ocean shoreline?
- A) shale
  - B) basalt
  - C) siltstone
  - D) conglomerate**

10. The diagram below shows a drill core of sediment that was taken from the bottom of a lake.



Which types of rock would most likely form from compaction and cementation of these sediments?

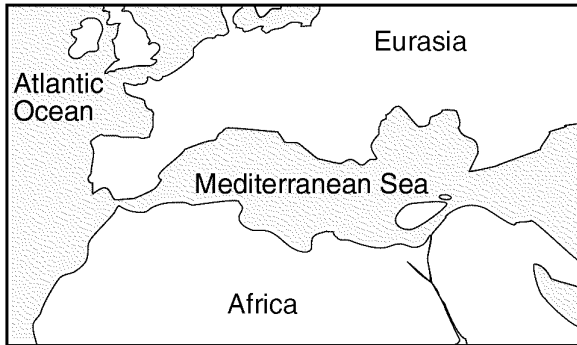
- A) sandstone and limestone**
  - B) shale and coal
  - C) breccia and rock salt
  - D) conglomerate and siltstone
11. Which process could lead most directly to the formation of a sedimentary rock?
- A) metamorphism of unmelted material
  - B) slow solidification of molten material
  - C) sudden upwelling of lava at a mid-ocean ridge
  - D) precipitation of minerals from evaporating water**
12. Fossils would most likely be found in a sample of
- A) limestone**
  - B) granite
  - C) quartzite
  - D) metaconglomerate

13. The diagram below shows a sedimentary rock drawn actual size.

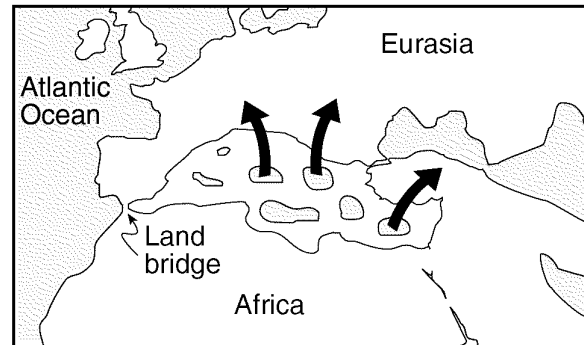


This rock is classified as having a

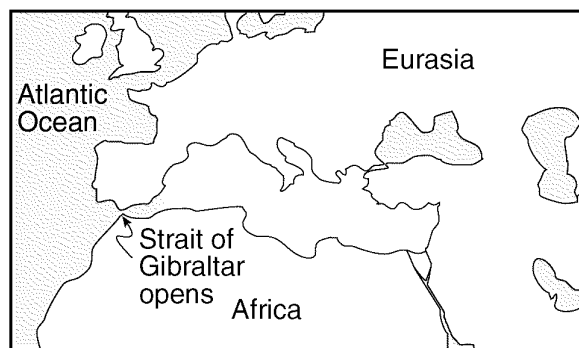
- A) elastic texture consisting of sand-size particles
  - B) clastic texture consisting of mixed grain sizes**
  - C) nonclastic texture with mixed grain sizes
  - D) nonclastic texture with coarse-grained particles
14. Base your answer to the following question on the maps below, which show changes in the distribution of land and water in the Mediterranean Sea region that scientists believe took place over a period of 6 million years.



**About 10 Million Years Ago**



**About 8 to 5.5 Million Years Ago  
Evaporation from Mediterranean Sea**



**About 4 Million Years Ago  
Mediterranean Sea Refills  
with Atlantic Ocean Water**

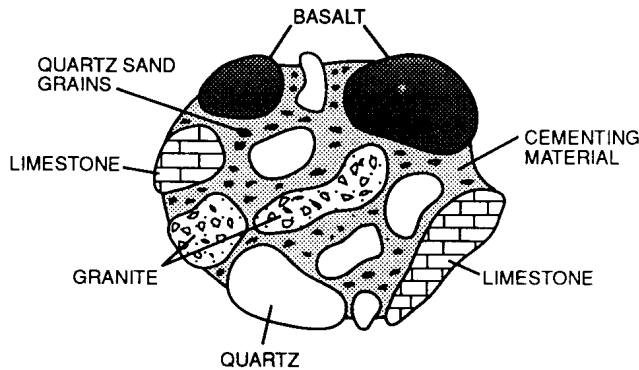
Which type of rock was precipitated from seawater as the Mediterranean Sea evaporated between million years ago and 5.5 million years ago?

- A) rock salt
- B) basalt
- C) sandstone
- D) metaconglomerate

15. Which sedimentary rock could form as a result of evaporation?

- A) conglomerate      B) sandstone  
C) shale              D) **limestone**

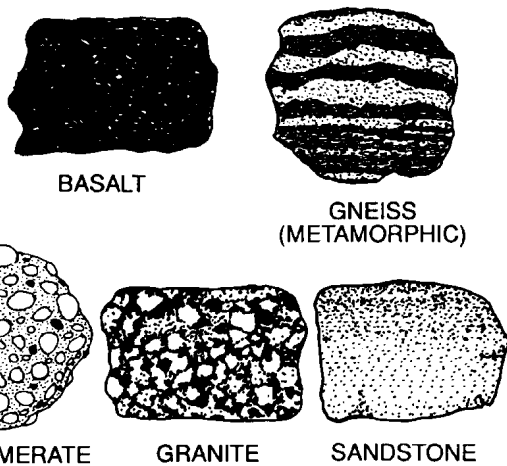
16. The diagram below represents a conglomerate rock. Some of the rock particles are labeled.



Which conclusion is best made about the rock particles?

- A) They are the same age.  
B) They originated from a larger mass of igneous rock.  
C) They all contain the same minerals.  
D) **They have different origins.**

Base your answers to questions 17 and 18 on the diagrams below of five rock samples.



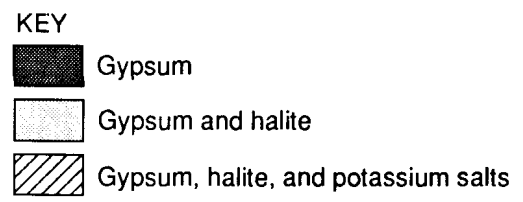
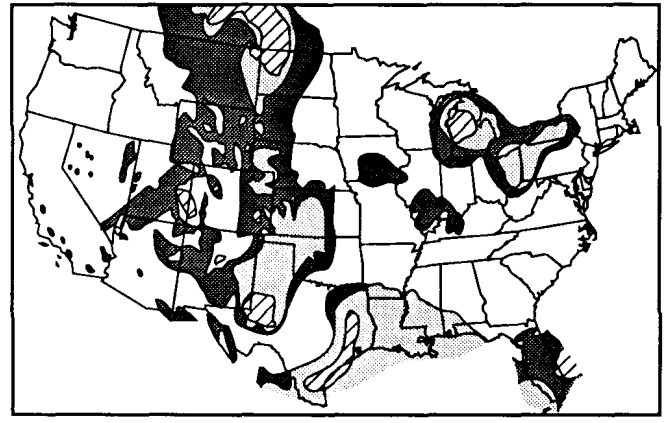
17. Which sample is composed of sediments 0.006 centimeter to 0.2 centimeter in size that were compacted and cemented together?

- A) conglomerate      B) **sandstone**  
C) gneiss              D) granite

18. Which sample would most likely contain fossils?

- A) gneiss              B) granite  
C) **sandstone**        D) basalt

19. The map below shows certain mineral deposits in the surface bedrock in areas of the United States.



What do each of these areas of mineral deposits have in common?

- A) They are active fault zones of the Earth's crust.  
B) **They were once covered by evaporating seas.**  
C) They presently have hot, dry climates.  
D) They are sites of active volcanoes.

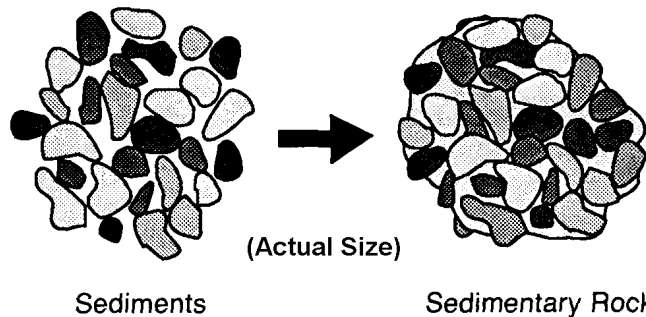
20. Which land-derived sedimentary rock could have formed by the compaction and cementation of particles smaller than 0.0003 centimeter in diameter?

- A) **shale**                      B) siltstone  
C) sandstone                D) limestone

21. Which sedimentary rocks are formed by chemical precipitation from seawater?

- A) **gypsum and limestone**  
B) fossil limestone and shale  
C) sandstone and siltstone  
D) conglomerate and dolostone

Base your answers to questions 22 and 23 on the diagram below.



22. Which sedimentary rock is shown in the diagram?

- A) **conglomerate**            B) sandstone  
C) siltstone                    D) shale

23. Which two processes formed this rock?

- A) folding and faulting  
B) melting and solidification  
C) **compaction and cementation**  
D) heating and application of pressure

24. Particles of sediment collected from a lake bottom averaged 1.2 centimeters in diameter. If left on the lake bottom to become buried by more sediment and compressed into rock, these particles would form

- A) sandstone                    B) **conglomerate**  
C) quartzite                    D) granite

25. Which processes most often cause fossil evidence to be preserved in rock?

- A) weathering and erosion  
B) melting and faulting  
C) **deposition and cementation**  
D) folding and metamorphism

26. Which rock is formed by precipitation from evaporating water?

- A) granite                        B) sandstone  
C) shale                         D) **salt**

27. The chemical precipitation of dissolved minerals from ocean water results in the formation of

- A) **sedimentary rock**  
B) metamorphic rock  
C) fine-grained igneous rock  
D) coarse-grained igneous rock

28. Which process most likely formed a layer of the sedimentary rock, gypsum?

- A) **precipitation from seawater**  
B) solidification of magma  
C) folding of clay-sized particles  
D) melting of sand-sized particles

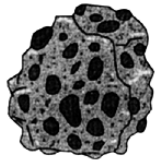
29. Soil that contains large quantities of calcium was most likely formed by the weathering of

- A) rock salt                      B) quartzite  
C) coal                            D) **limestone**

30. A stream slows to a velocity of 300 centimeters per second. Which type of sedimentary rock would most likely form from the deposition occurring at this location?

- A) shale                         B) siltstone  
C) sandstone                    D) **conglomerate**

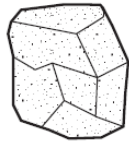
Base your answers to questions 31 through 33 on the drawings of six sedimentary rocks labeled *A* through *F*.



**A**  
Conglomerate



**B**  
Breccia



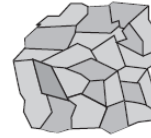
**C**  
Sandstone



**D**  
Shale



**E**  
Limestone



**F**  
Rock salt

31. Which table shows the rocks correctly classified by texture?

A)

<b>Texture</b>	clastic	bioclastic	crystalline
<b>Rock</b>	A, B, C, D	E	F

B)

<b>Texture</b>	clastic	bioclastic	crystalline
<b>Rock</b>	A, B, C	D	E, F

C)

<b>Texture</b>	clastic	bioclastic	crystalline
<b>Rock</b>	A, C	B, E	D, F

D)

<b>Texture</b>	clastic	bioclastic	crystalline
<b>Rock</b>	A, B, F	E	C, D

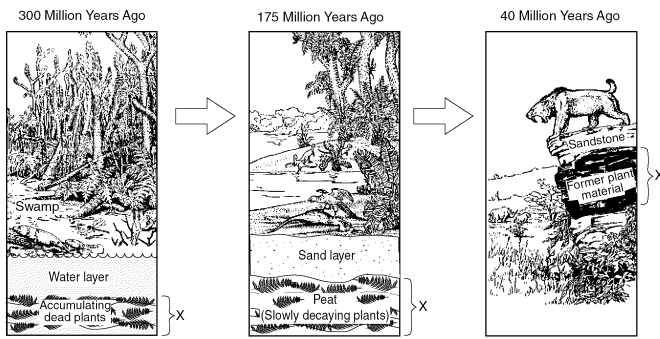
32. Which two rocks are composed primarily of quartz, feldspar, and clay minerals?

- A) rock salt and conglomerate  
 B) rock salt and breccia  
 C) **sandstone and shale**  
 D) sandstone and limestone

33. Most of the rocks shown were formed by

- A) volcanic eruptions and crystallization  
 B) **compaction and/or cementation**  
 C) heat and pressure  
 D) melting and/or solidification

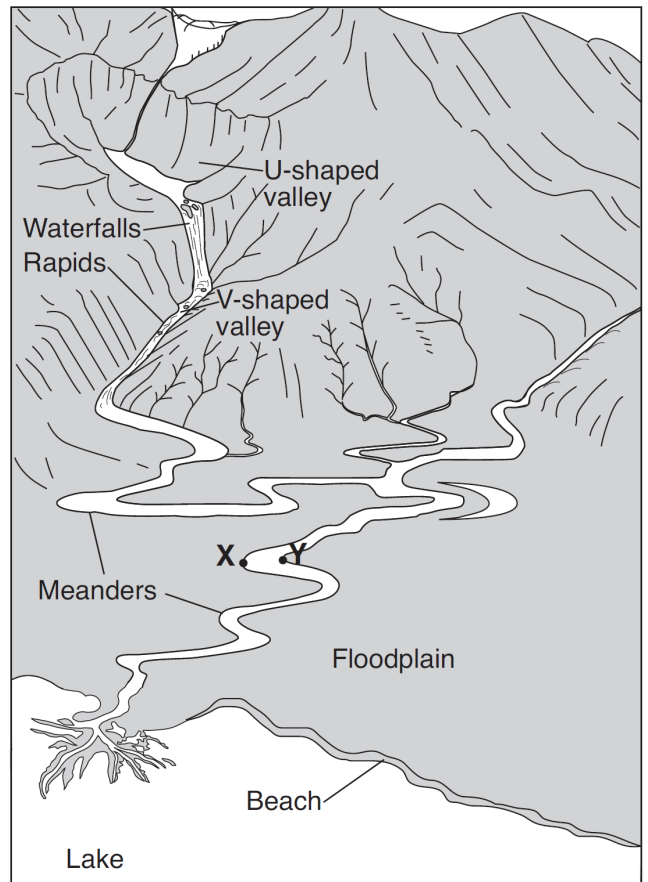
34. The sequence of diagrams below represents the gradual geologic changes in layer *X*, located just below Earth's surface.



Which type of sedimentary rock was formed at layer *X*?

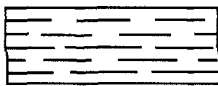
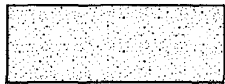


- A) conglomerate      B) shale  
C) rock salt          D) coal

35. Base your answer to the following question on the diagram below, which shows several different landscape features. Points *X* and *Y* indicate locations on the streambank.



The beach consists of particles with diameters from 0.01 cm to 0.1 cm. Identify the sedimentary rock that will form when burial and cementation of these sediments occur.

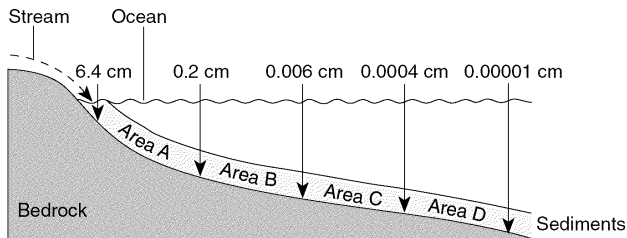
36. Which symbol represents the sedimentary rock with the smallest grain size?

- A)  B)   
C)  D) 

37. Large deposits of rock gypsum and rock salt usually form in areas of

- A) active volcanoes
- B) continental ice sheets
- C) fault zones in the crust
- D) shallow evaporating seas**

38. The profile below shows the average diameter of sediment that was sorted and deposited in specific areas *A*, *B*, *C*, and *D* by a stream entering an ocean.



As compaction and cementation of these sediments eventually occur, which area will become siltstone?

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

39. Which sequence of events occurs in the formation of a sedimentary rock?

- A) Source material eroded → Sediments deposited → Sediments compacted and cemented
- B) Sediments compacted and cemented → Sediments deposited → Source material eroded
- C) Sediments deposited → Sediments compacted and cemented → Source material eroded
- D) Source material eroded → Sediments compacted and cemented → Sediments deposited

40. Limestone is a sedimentary rock which may form as a result of

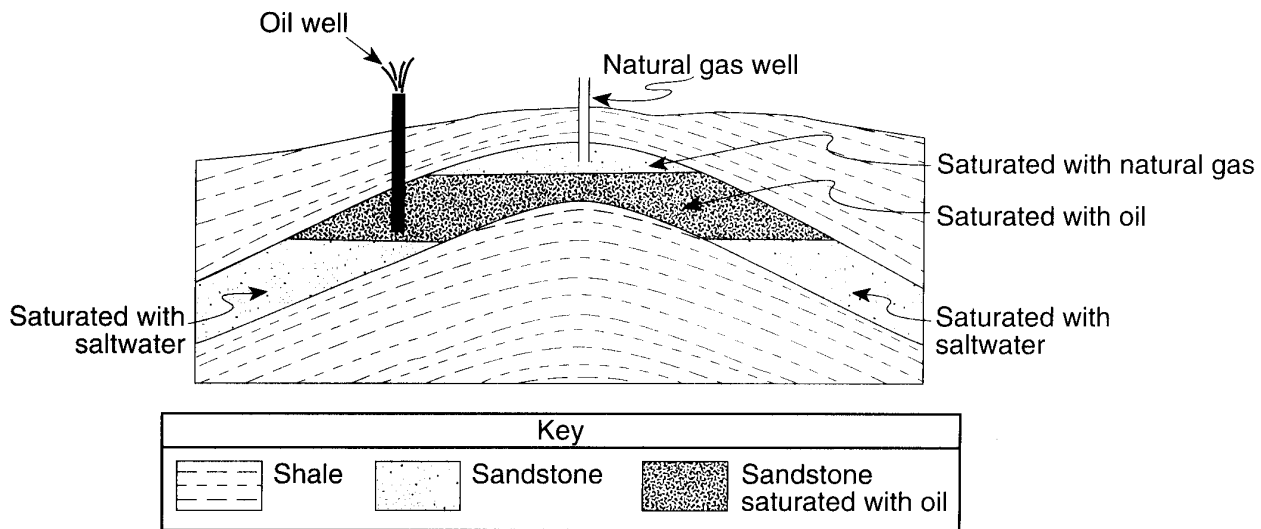
- A) melting
- B) recrystallization
- C) metamorphism
- D) biologic processes**

41. Limestone, gypsum, and salt are rocks formed by the processes of

- A) melting and solidification
- B) evaporation and precipitation**
- C) erosion and deposition
- D) weathering and metamorphism

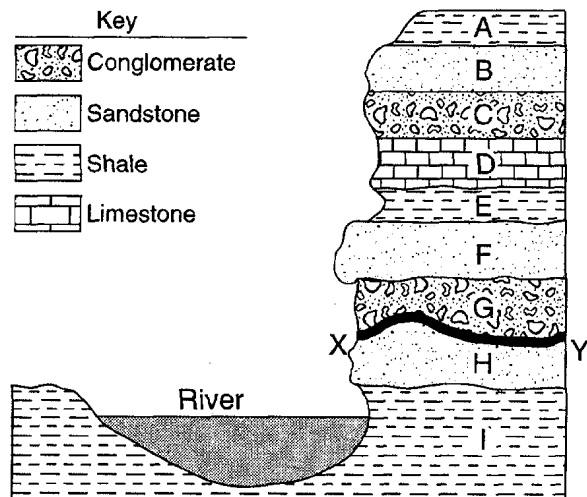


Base your answers to questions 42 and 43 on the cross section below, which shows a typical bedrock structure where oil and natural gas deposits are found.



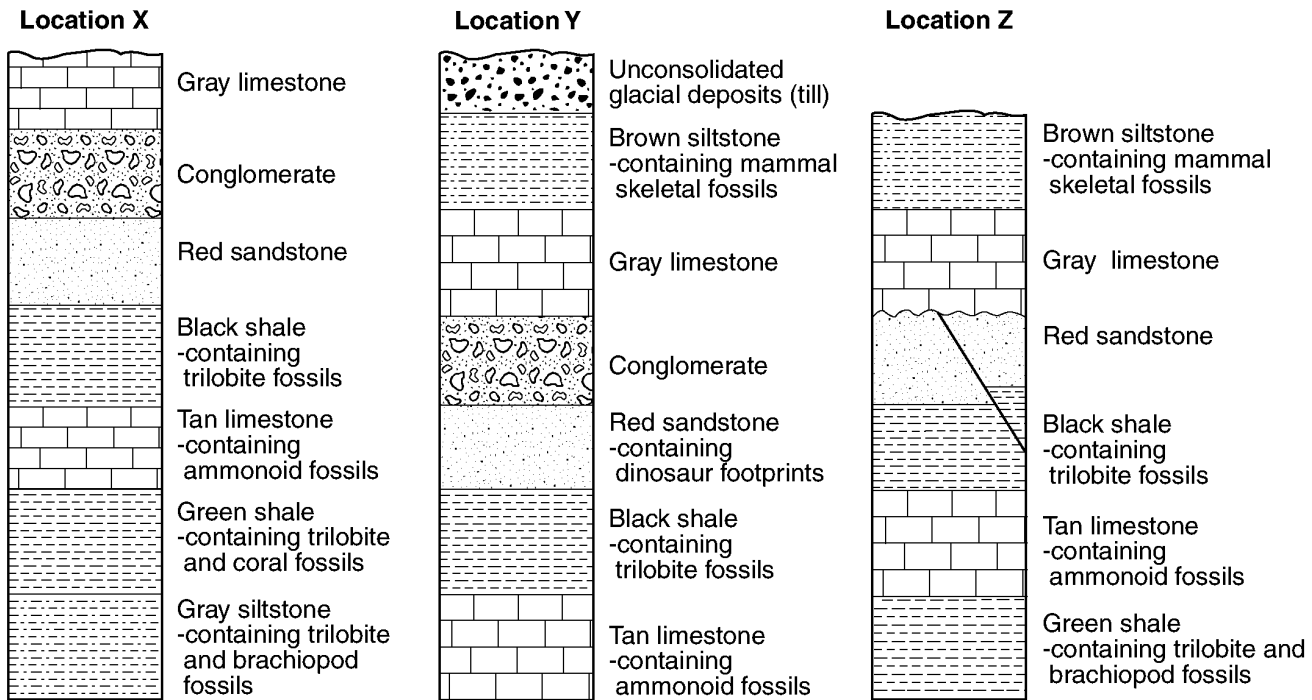
42. The natural gas, oil, and saltwater have formed layers at different levels in the same rock layer due to the
- A) principle of superposition
  - B) principle of original horizontality
  - C) **differences in the density of the three materials**
  - D) differences in the geologic age of the three materials
43. According to the diagram, in which type of rock are these natural gas and oil deposits found?
- A) coarse-textured igneous rock
  - B) foliated metamorphic rock
  - C) **porous clastic sedimentary rock**
  - D) intrusive crystalline sedimentary rock
- 
44. Which sedimentary rock formed from the compaction and cementation of fragments of the skeletons and shells of sea organisms?
- A) shale
  - B) gypsum
  - C) **limestone**
  - D) conglomerate

Base your answers to questions 45 and 46 on the diagram below, which is a geologic cross section of an area where a river has exposed a 300-meter cliff of sedimentary rock layers. The rock layers are labeled *A* through *I*. Line *XY* represents a gap in the geologic record (an unconformity).



45. Rock layer *H* was most likely formed as a result of
- A) cooling of melted rock material
  - B) compaction and cementation of sediments**
  - C) heat and pressure from overlying rock layers
  - D) recrystallization of minerals due to crustal uplift
46. If rock layer *G* contained angular fragments instead of rounded fragments, it would be classified as a
- A) breccia**
  - B) gneiss
  - C) siltstone
  - D) chemical limestone

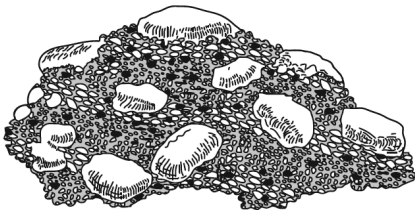
47. Base your answer to the following question on the cross sections below, which show widely separated outcrops at locations X, Y, and Z.



Which rock layer was formed by the compaction and cementation of particles that were all less than 0.0004 centimeter in diameter?

- A) red sandstone    **B) green shale**    C) brown siltstone    D) conglomerate

Base your answers to questions 48 and 49 on the diagram below, which represents a rock composed of cemented pebbles and sand.



48. Which change would most likely occur if this rock became buried deep within Earth's crust and was subjected to intense heat and pressure, but did *not* melt?

- A) The density of the pebbles and sand would decrease.  
 B) The rock would become a plutonic rock composed mostly of quartz.  
 C) The rock would become more felsic with a higher concentration of magnesium.  
**D) The pebbles would become distorted and the sand would be recrystallized.**

49. This rock should be classified as

- A) an intrusive igneous rock                      B) an extrusive igneous rock  
 C) a bioclastic sedimentary rock                **D) a clastic sedimentary rock**

50. Which group lists rocks in order by grain size from smallest to largest?

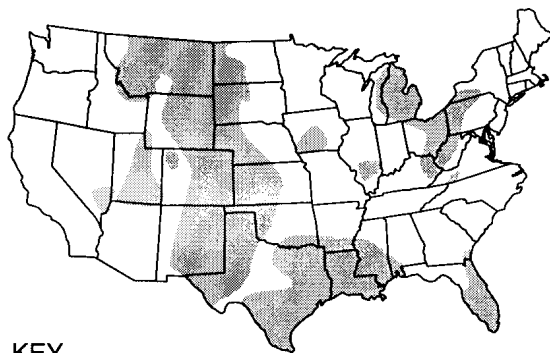
- A) conglomerate, sandstone, shale
- B) sandstone, shale, conglomerate
- C) shale, sandstone, conglomerate**
- D) shale, conglomerate, sandstone

51. Which type of rock is most likely to contain fossils?

- A) granite
- B) gneiss
- C) shale**
- D) metaconglomerate

Base your answers to questions 52 and 53 on the map and cross section below. The shaded areas on the map represent regions of the United States that have evaporite rock layers (layers of rock formed from the evaporation of seawater) under the surface bedrock. The cross section shows the generalized structure of the area in which the evaporite layers are found in New York State.

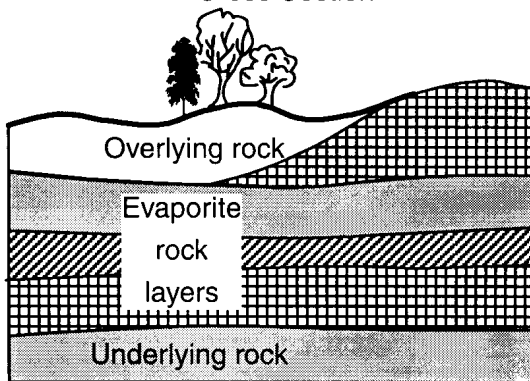
United States Map



KEY

Evaporite rock regions

Cross Section



52. Each of these evaporite rocks is normally formed by

- A) chemical processes**
- B) cooling of lava
- C) decreased heat and pressure
- D) melting of magma

53. The surface rocks overlying these evaporite rock layers are most likely which type of rock?

- A) sedimentary**
- B) plutonic igneous
- C) regional metamorphic
- D) contact metamorphic

54. A rock that forms directly from land-derived sediments is

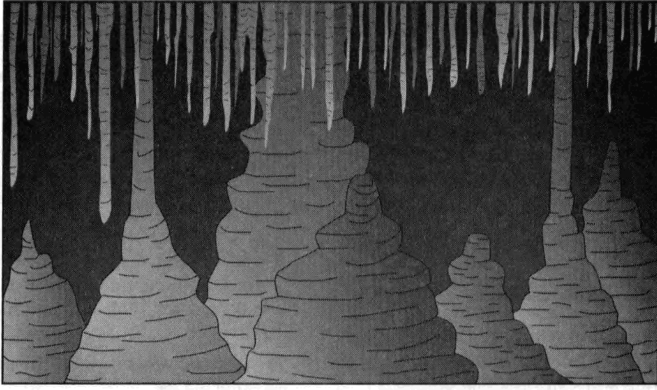
- A) sandstone**
- B) dolostone
- C) gabbro
- D) granite

55. Which map symbol is used to represent an organically formed sedimentary rock composed mostly of carbon?

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

---

56. The diagram below shows some features in a cave.



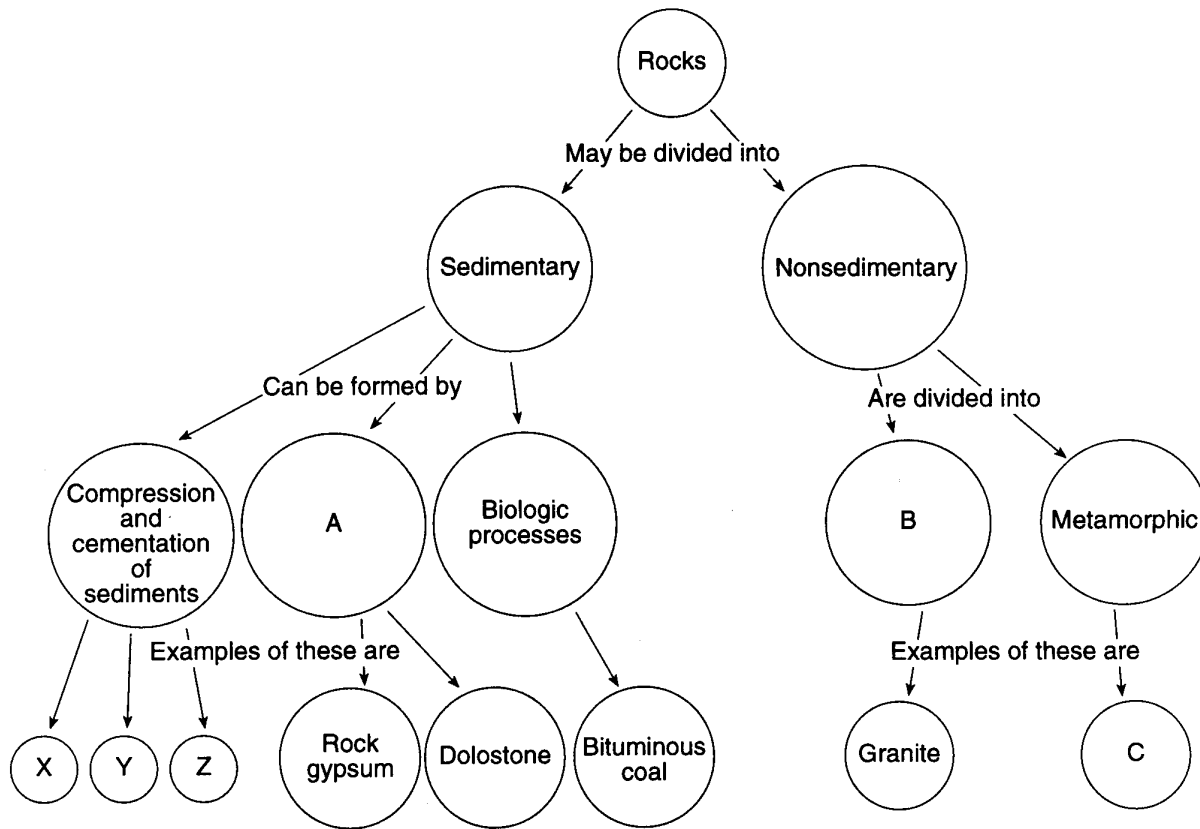
Which type of rock was chemically weathered by acidic groundwater to produce the cave and its features?

- A) siltstone                      B) basalt  
C) quartzite                      **D) limestone**

57. Which sedimentary rock would be composed of particles ranging in size from 0.0004 centimeter to 0.006 centimeter?

- A) conglomerate                  B) dolostone  
**C) siltstone**                          D) shale

58. Base your answer to the following question on the diagram below, which represents a scheme for classifying rocks. The letters *A*, *B*, *C* and *X*, *Y*, *Z* represent missing labels.



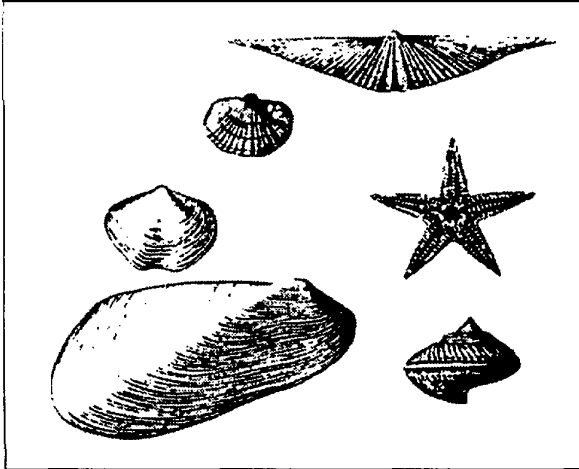
Which rocks could be represented by circles *X*, *Y*, and *Z*?

- A) shale, slate, and schist
- B) sandstone, shale, and siltstone**
- C) anthracite coal, metaconglomerate, and rock salt
- D) breccia, gneiss, and rhyolite

59. Which bedrock would be most likely to contain fossils?

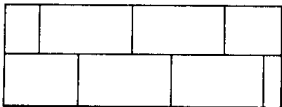
- A) Precambrian granite
- B) Cambrian shale**
- C) Pleistocene basalt
- D) Middle-Proterozoic quartzite

60. The diagram below represents the fossils found in a bedrock formation located in central Rhode Island.



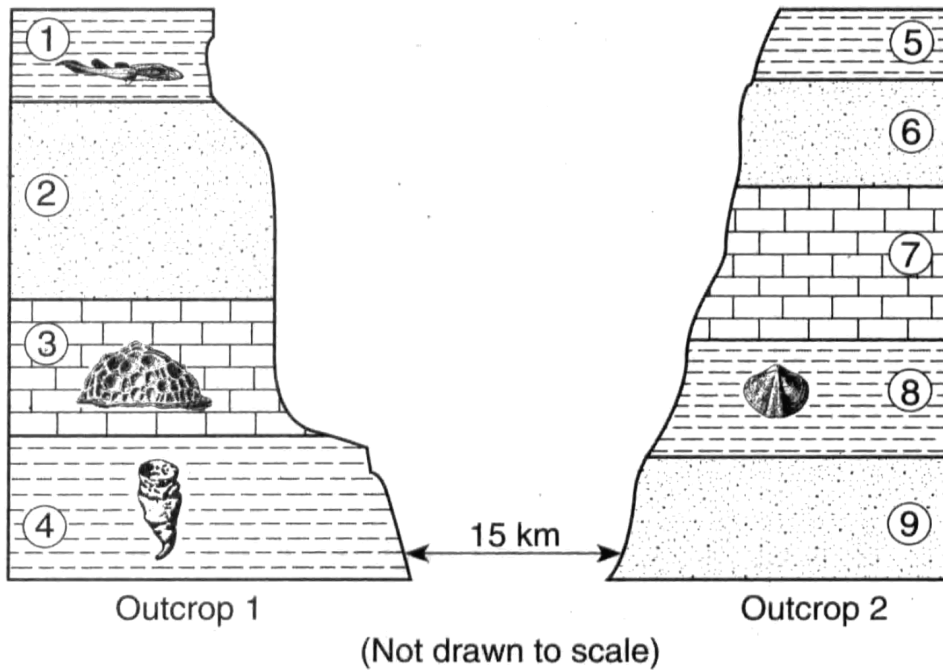
In which type of rock were the fossils most likely found?

- A) **sedimentary rock that formed in an ocean environment**
  - B) sedimentary rock that formed in a land environment
  - C) igneous rock that formed in an ocean environment
  - D) igneous rock that formed in a land environment
61. Which type of rock is represented by the map symbol below?



- A) clastic sedimentary rock formed from organic substances
- B) **chemically formed sedimentary rock that consists mainly of the mineral calcite**
- C) regional metamorphic rock with block like foliation
- D) contact metamorphic rock that results from the alteration of limestone by contact with an igneous intrusion

62. Base your answer to the following question on the cross sections below, which represent two bedrock outcrops 15 kilometers apart. The rock layers have been numbered for identification and some contain the index fossil remains shown.



When these rocks were deposited as sediments, this area was most likely

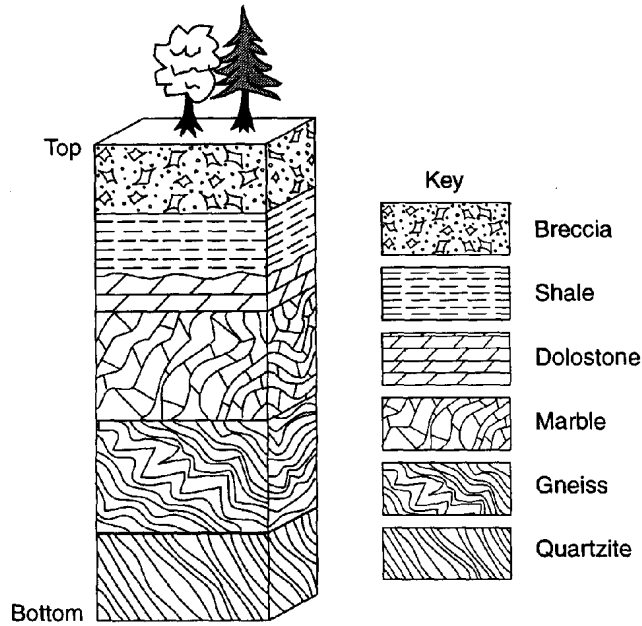
- A) **under the ocean**                      B) a desert between high mountains  
C) repeatedly covered by lava flows      D) glaciated several times

63. Which type of rock is likely to show ripple marks and fossils?

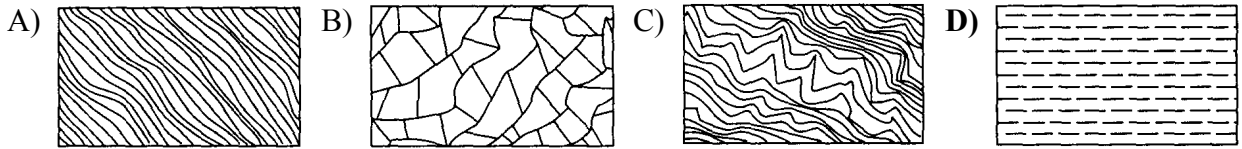
- A) intrusive igneous    B) extrusive igneous  
C) metamorphic        D) **sedimentary**



Base your answers to questions 64 and 65 on the diagram below, which represents a cross section of rock layers that have not been overturned.



64. The breccia layer is composed mostly of
- A) cemented, rounded rock fragments      **B) cemented, angular rock fragments**
- C) intergrown, fine-textured crystals      D) microscopic shells
65. Within which rock type would a fossil most likely be found?



66. A rock is composed of several large, rounded pebbles and sand grains cemented together. Which inference about the rock is best supported by this description?

- A) The rock is older than the pebbles.
- B) The rock is igneous.
- C) The rock is sedimentary.**
- D) The rock resulted from evaporation of sea water.

67. Which sedimentary rocks are clastic and consist of particles that have diameters smaller than 0.006 centimeter?

- A) conglomerate and sandstone
- B) siltstone and shale**
- C) bituminous coal and breccia
- D) fossil limestone and chemical limestone

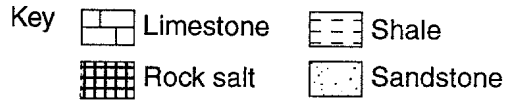
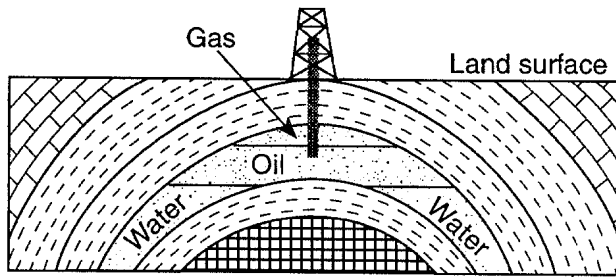
68. The dot below is a true scale drawing of the smallest particle found in a sample of cemented sedimentary rock.



What is this sedimentary rock?

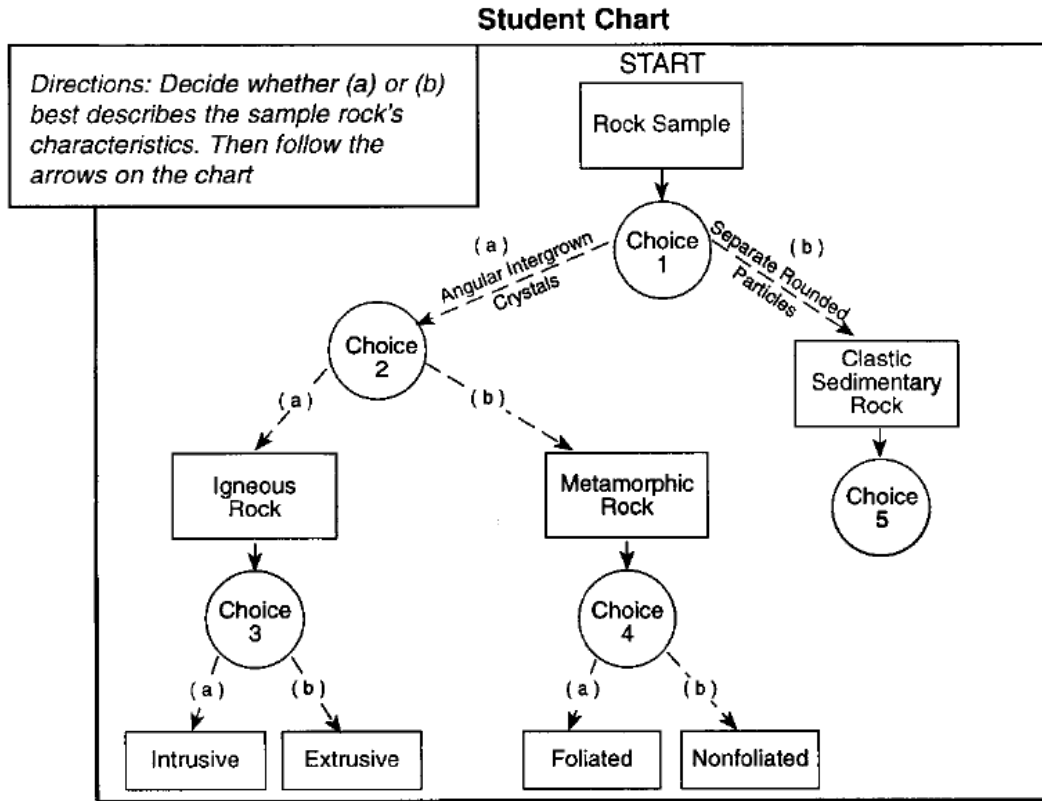
- A) conglomerate**      B) sandstone
- C) siltstone      D) shale

69. The diagram below represents a geologic cross section of a location in Texas where an oil well has been drilled into the bedrock.



- Oil, water, and natural gas can collect and stay in the sandstone layer because sandstone often
- A) has a grain size ranging from fine to coarse (0.006 to 0.2 cm)
  - B) is composed mainly of grains of quartz
  - C) contains air spaces, making it porous and permeable**
  - D) metamorphoses to quartzite
70. Which sedimentary rock is formed by compaction and cementation of land-derived sediments?
- A) siltstone**
  - B) dolostone
  - C) rock salt
  - D) rock gypsum
71. Which rock most likely formed as a result of biologic processes?
- A) granite
  - B) basalt
  - C) sandstone
  - D) limestone**

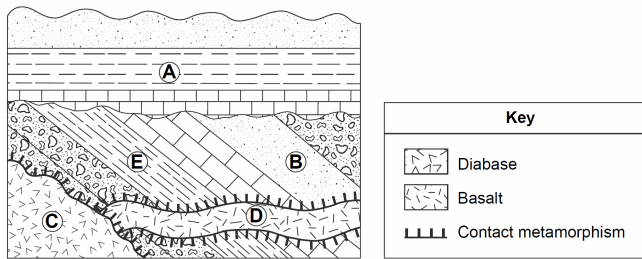
72. Base your answer to the following question on the diagram below which shows the structure of a student-developed chart for identifying some rock samples. The circles labeled choice 1 through choice 4 represent decision-making steps leading either to path (a) or path (b). Choice 5 has not been completed.



Before the student can select either path (a) or path (b) at choice 1, the student must make a decision about

- A) mineral composition                      B) crystal size  
 C) the temperature at which rocks form    **D) the appearance of the rock grains**
- 
73. Large rock salt deposits in the Syracuse area indicate that the area once had
- A) large forests  
 B) a range of volcanic mountains  
 C) many terrestrial animals  
**D) a warm, shallow sea**
74. Most of the sediment that is compacted and later forms shale bedrock is
- A) clay                      B) silt  
 C) sand                      D) pebbles

75. The geologic cross section below shows several rock units of Earth's crust. Some rock units are labeled *A* through *E*.

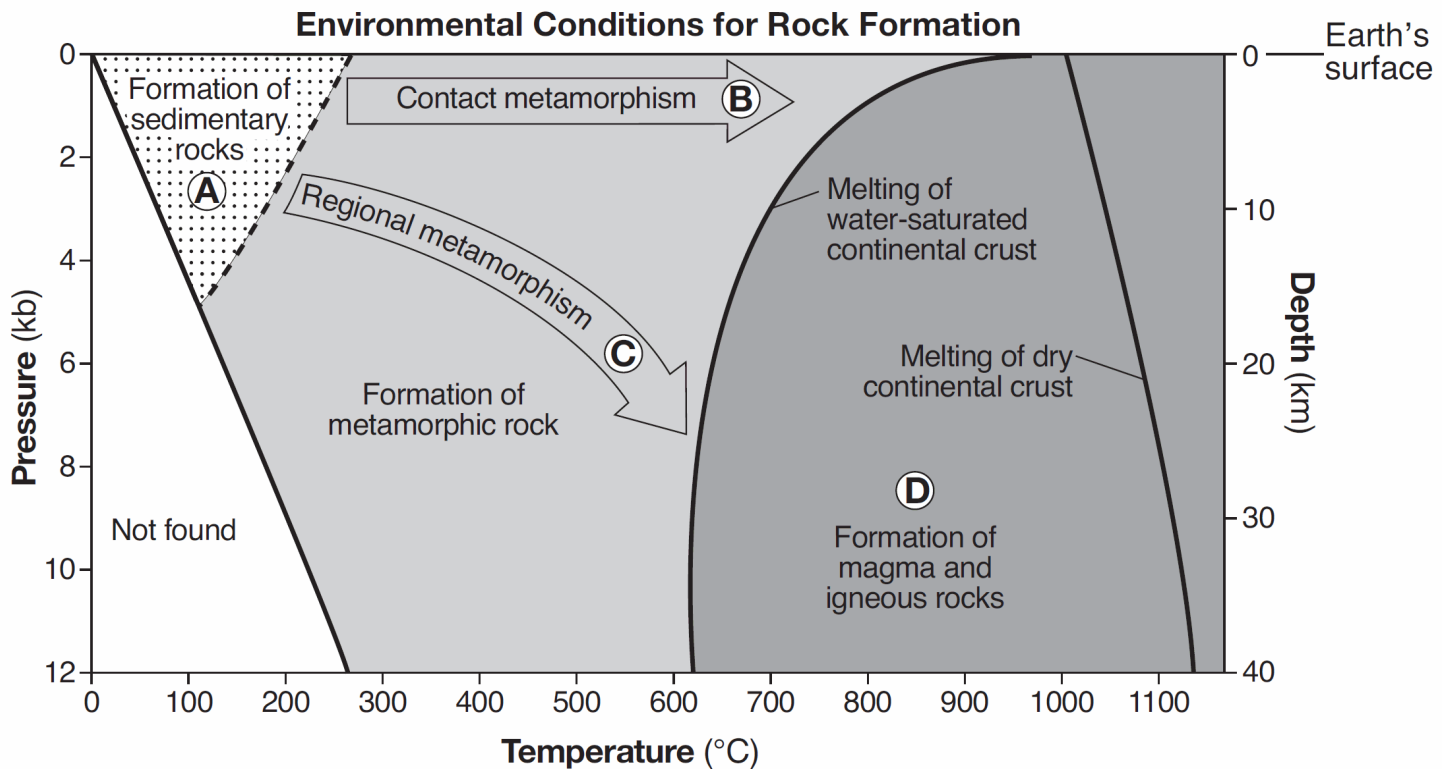


Which two rock units formed from sediments deposited in horizontal layers?

- A) **A and B**                      B) *B and C*  
 C) *C and D*                      D) *D and E*
76. Which property best describes a rock which has formed from sediments?
- A) crystalline structure  
 B) distorted structure  
 C) banding or zoning of minerals  
 D) **fragmental particles arranged in layers**
77. Which characteristic would best indicate that a rock was formed from sediments deposited in shallow water near shore rather than in deep water?
- A) hardness  
 B) a dark color  
 C) **a large grain size**  
 D) a large amount of cement
78. Which phrase best describes coal?
- A) low density, mafic  
 B) chemical precipitate  
 C) **organic plant remains**  
 D) glassy texture, volcanic
79. Which rock was organically formed and sometimes contains fossilized plant impressions?
- A) rock gypsum                      B) phyllite  
 C) breccia                              D) **coal**

Base your answers to questions 80 and 81 on the graph below and on your knowledge of Earth science.

The graph shows the temperature, pressure, and depth environments for the formation of the three major rock types. Pressure is shown in kilobars (kb). Letters A through D identify different environmental conditions for rock formation.



80. Which rock is most likely to form directly from rock material at a depth of 30 km and a temperature of 1000°C?

- A) quartzite      B) scoria      C) shale      **D) granite**

81. Which letter represents the environmental conditions necessary to form gneiss?

- A) A      B) B      C) C      D) D

82. Which rock type most often contains fossils?

- A) gabbro      B) quartzite  
**C) limestone**      D) metaconglomerate

83. Sedimentary rocks of organic origin would most likely be formed from

- A) sediments eroded by running water  
 B) materials deposited by glaciers  
**C) shells of marine animals**  
 D) particles removed from the atmosphere by precipitation

84. Which feature is characteristic of sedimentary rocks?

- A) layering**      B) foliation  
 C) distorted structure      D) glassy texture

85. Most rocks that form from fragmental rock particles are classified as

- A) extrusive igneous  
 B) intrusive igneous  
**C) clastic sedimentary**  
 D) chemical sedimentary

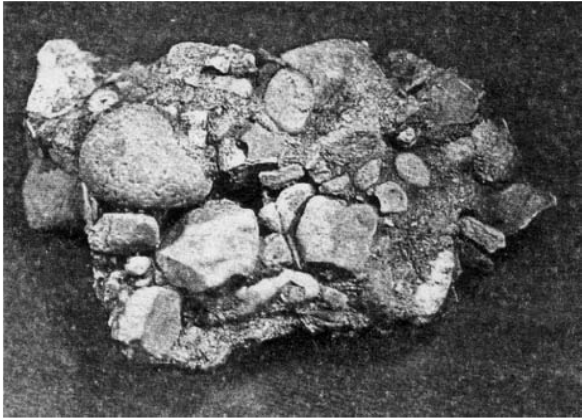
86. Which sedimentary rock is formed by the compaction and cementation of sorted sediments 0.05 centimeter in diameter?

- A) shale                      B) siltstone  
C) **sandstone**                D) conglomerate

87. Which sedimentary rock may form as a result of biologic processes?

- A) shale                      B) siltstone  
C) **fossil limestone**        D) breccia

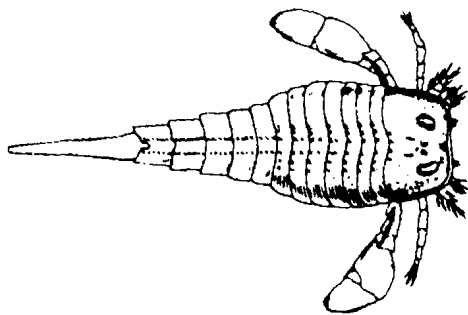
88. A student classified the rock below as sedimentary.



Which observation about the rock best supports this classification?

- A) The rock is composed of several minerals.  
B) The rock has a vesicular texture.  
C) **The rock contains fragments of other rocks.**  
D) The rock shows distorted and stretched pebbles.

89. Base your answer to the following question on the index fossil below, which was found in surface bedrock in Connecticut.



The surface bedrock in which this index fossil was found is most likely composed of

- A) basalt                      B) granite  
C) **limestone**                D) anthracite coal

90. Which process led to the formation of thick salt deposits found in the bedrock at some locations in New York State?

- A) melting                    B) runoff  
C) condensation            D) **evaporation**

91. Limestone can form as a result of

- A) cooling of molten rock under the oceans  
B) metamorphosis of conglomerate rock  
C) **precipitation from evaporating water**  
D) radioactive decay of dolostone

92. A student obtains a cup of quartz sand from a beach. A saltwater solution is poured into the sand and allowed to evaporate. The mineral residue from the saltwater solution cements the sand grains together, forming a material that is most similar in origin to

- A) an extrusive igneous rock  
B) an intrusive igneous rock  
C) **a clastic sedimentary rock**  
D) a foliated metamorphic rock

93. Dolostone is classified as which type of rock?

- A) land-derived sedimentary rock  
B) **chemically formed sedimentary rock**  
C) foliated metamorphic rock  
D) nonfoliated metamorphic rock

94. Which statement about the formation of a rock is best supported by geologic evidence?

- A) Magma must be weathered before it can change to metamorphic rock.  
B) **Sediment must be compacted and cemented before it can change to sedimentary rock.**  
C) Sedimentary rock must melt before it can change to metamorphic rock.  
D) Metamorphic rock must melt before it can change to sedimentary rock.

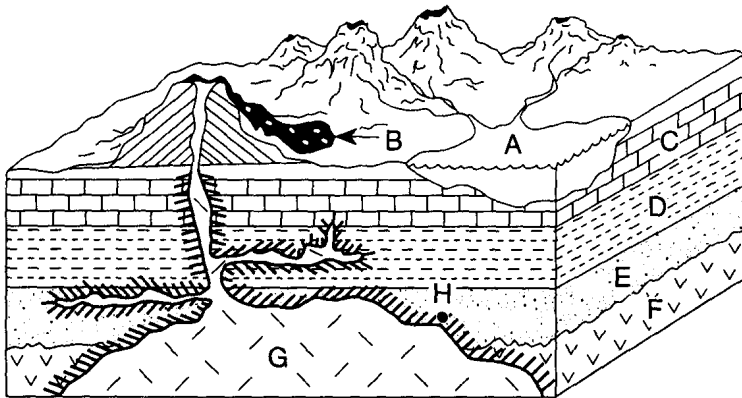
95. Which type of rock most likely contains fossils?

- A) scoria                      B) gabbro  
C) schist                      D) **shale**

96. Which rock is made up of angular fragments of rock held together by a natural cement?

- A) **breccia**                      B) scoria  
C) granite                      D) quartzite

97. Base your answer to the following question on the block diagram below which shows a cross section of Earth's crust. Letter *A* identifies a lake, and letters *B* through *G* represent different types of bedrock.



Key:

- |                        |                          |
|------------------------|--------------------------|
| Limestone C            | Intrusive igneous rock F |
| Shale D                | Intrusive igneous rock G |
| Fine-grain sandstone E | Lava flow B              |
| Contact metamorphism   |                          |

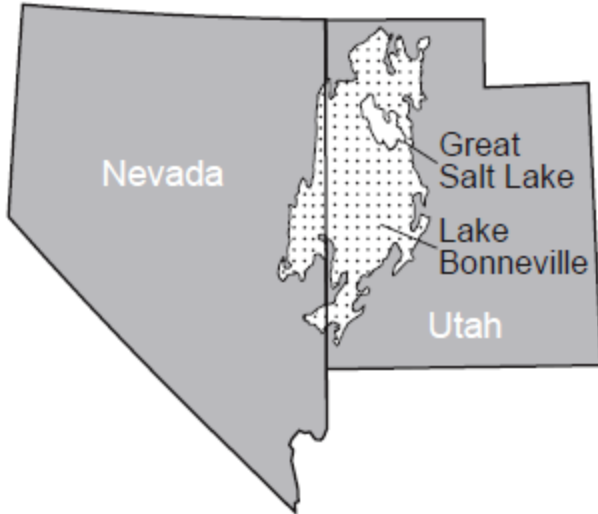
Rock C most likely resulted from the

- A) rapid cooling of lava from volcanic eruptions  
 B) regional metamorphism of a previously existing rock  
 C) compaction and cementation of angular quartz fragments  
**D) precipitation of minerals from evaporating water**

98. Which kind of bedrock would most likely contain fossils?

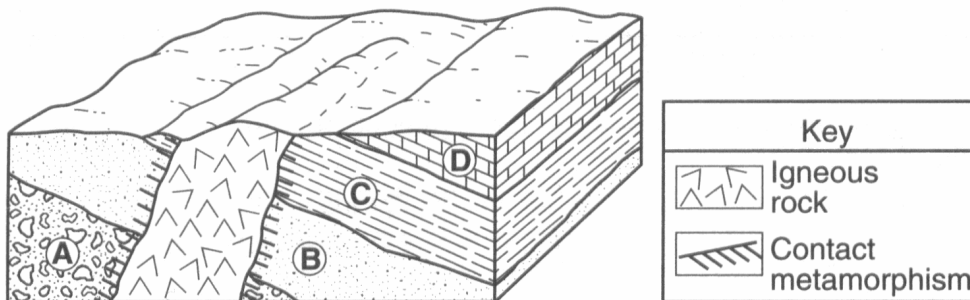
- A) a high-grade metamorphic rock layer made from mixed igneous and sedimentary layers  
**B) a series of alternating layers of shale and sandstone**  
 C) a basalt lava flow from an ancient volcano  
 D) a mass of granite in the core of a mountain
99. The presence of brachiopod, nautiloid, and coral fossils in the surface bedrock of a certain area indicates the area was once covered by
- A) tropical vegetation    B) glacial deposits  
 C) volcanic ash            **D) ocean water**

100. The map below shows the area that, at one time, was covered by ancient Lake Bonneville. Evidence of ancient shorelines indicates that, near the end of the last ice age, Lake Bonneville existed in western Utah and eastern Nevada. The Great Salt Lake in Utah is a remnant of the former Lake Bonneville.



Which material that was formerly on the bottom of Lake Bonneville is most likely exposed on the land surface today?

- A) folded metamorphic bedrock
  - B) flat-lying evaporite deposits**
  - C) coarse-grained coal beds
  - D) fine-grained layers of volcanic lava
101. Base your answer to the following question on the block diagram below, which shows a portion of Earth's crust. Letters *A*, *B*, *C*, and *D* indicate sedimentary layers.

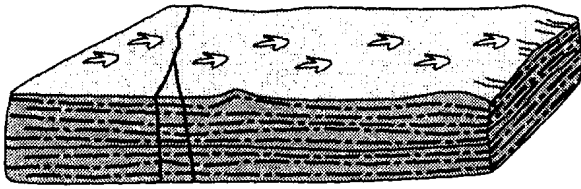


Which processes produced rock layer *B*?

- A) subduction and melting
- B) uplift and solidification
- C) heat and pressure
- D) compaction and cementation**



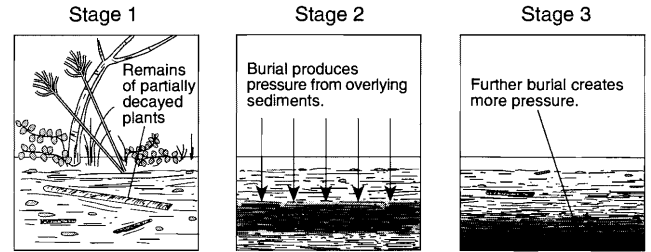
102. Base your answer to the following question on the diagram below, which represents a rock sample containing fossilized *Coelophysis* footprints.



The siltstone layer containing the dinosaur footprints was turned into rock by

- A) folding and faulting
  - B) burial and cementation**
  - C) weathering and erosion
  - D) deformation and melting
103. Which mineral precipitates from oceans and forms rock salt?
- A) quartz
  - B) fluorite
  - C) halite**
  - D) olivine
104. Most sandstone bedrock is composed of sediment that was
- A) sorted by size and not layered
  - B) sorted by size and layered**
  - C) unsorted and not layered
  - D) unsorted and layered

105. The diagram below shows three stages in the formation of a specific rock.



Which rock is formed as a result of these three stages?

- A) limestone
- B) gneiss
- C) schist
- D) coal**