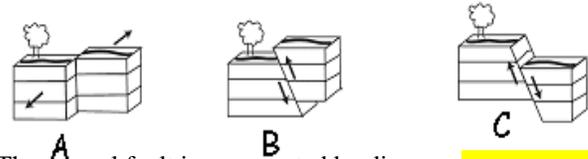


## Semester B Exam Review/Practice

- When particles line up in a repeating pattern they form a(n)
  - Element
  - Crystal
  - Mixture
  - Compound
- A mineral that splits apart easily along flat surfaces/layers has the property called \_\_\_\_
  - Cleavage
  - Crystal shape
  - Fracture
  - Hardness
- The scale used to determine the hardness of a mineral is the \_\_\_\_\_.
  - Celsius scale
  - Fujita scale
  - Moh's scale
  - Richter scale
- According to this scale, which of the following minerals has a hardness value of 1?
  - Quartz
  - Talc
  - Diamond
  - Calcite
- According to this scale, which of the following minerals has a hardness value of 10?
  - Quartz
  - Talc
  - Diamond
  - Calcite
- Which of the following is not a way to identify a mineral?
  - Streak
  - Luster
  - Shape
  - Hardness
- What is streak?
  - The color of a mineral's powder
  - The way a mineral reflects light
  - The way a mineral sample rolls along a flat surface
  - The way to see how easy a mineral scratches another mineral
- The lithosphere is made of \_\_\_\_\_.
  - crust
  - crust and upper mantle
  - the lower mantle
  - crust and lower mantle
- The asthenosphere is made of \_\_\_\_\_.
  - crust
  - crust and upper mantle
  - the lower mantle
  - crust and lower mantle
- A divergent plate boundary occurs where plates are \_\_\_\_\_ each other.
  - moving towards
  - sliding past
  - separating from
  - stuck in place with

- A transform plate boundary occurs where plates are \_\_\_\_\_ each other.
  - moving towards
  - sliding past
  - separating from
  - stuck in place with

For the following questions, use the diagrams below.



- The normal fault is represented by diagram \_\_\_\_\_.
- The fault that occurs as a result of tension is shown in diagram \_\_\_\_\_.
- The fault that occurs at a divergent boundary is shown in diagram \_\_\_\_\_.
- The fault that occurs where mountains form is shown in which diagram? \_\_\_\_\_.
- The strike-slip fault is shown in diagram \_\_\_\_\_.
- The fault that occurs as a result of shearing is shown in diagram \_\_\_\_\_.
- What is Pangaea?
  - A supercontinent that used to be near Europe
  - A supercontinent that was made of all of the continents
  - A supercontinent that existed about 280 million years ago
  - b & c
  - a & c
- Which statement best describes the theory of Continental drift?
  - Theory created by Alfred Wegener
  - Theory that states the continents are drifting apart
  - Theory that explains that all the continents were once together
  - a & c
  - a, b, & c
- How do we know that Pangaea really existed?
  - Mountain ranges match up on the same continents
  - Fossils on different continents are similar
  - The continents fit like puzzle pieces
  - b & c
  - a, b, & c
- What are plates?
  - Pieces of the asthenosphere
  - Pieces of the lithosphere
  - Another word used to describe continents
  - Another word used to describe boundaries
- Plates move because of ...
  - Extreme weather conditions
  - Convection currents occurring in the inner core
  - Scientists
  - Convection currents occurring in the mantle
  - Coriolis Effect

23. You made oobleck to represent the properties of the mantle. When pressure is added it acts as a \_\_\_\_\_. When pressure is removed it acts as a \_\_\_\_\_.
- liquid; liquid
  - solid; solid
  - liquid; solid
  - solid; liquid

24. New crust on the ocean bottom indicates that the sea floor \_\_\_\_\_.
- forms from sediments
  - moves
  - stays in the same place
  - is made of granite

25. The \_\_\_\_\_ are mountains formed by the collision of the Indian Plate and the Asian plate.
- Alps
  - Rockies
  - Himalayas
  - Appalachians

26. When a continental plate, and an oceanic plate converge, \_\_\_\_\_.
- the continental plate and oceanic plate are moving away from each other
  - the oceanic plate and continental plate will collide together forming a mountain
  - the continental plate subducts under the oceanic plate forming a volcano
  - the oceanic plate subducts under the continental plate forming a volcano
  - the continental plate subducts under the oceanic plate forming an island volcano

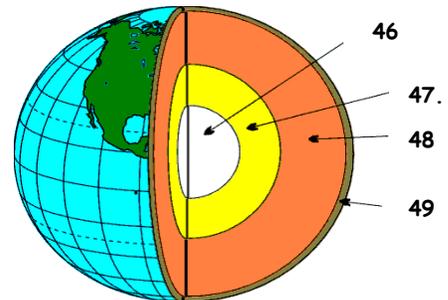
**True or False- Indicate A for True, B for False**

27. Pressure increases from crust to core. **True**
28. Mid-Ocean ridges occur at divergent boundaries. **True**
29. S waves are the fastest seismic waves. **False**
30. Earthquakes occur mostly at faults along the boundary between two plates. **True**
31. At a divergent boundary the plates are pushed together and the resulting stress is compression. **False**
32. When a strike-slip fault moves the rocks slide past each other and create an earthquake. **True**
33. A normal fault is the only fault without a hanging wall or footwall. **False**
34. When igneous rocks undergo heat and pressure, they can become metamorphic rocks. **True**
35. Sedimentary rock is classified into three major groups; clastic, organic, and chemical. **True**
36. The only processes responsible for sedimentary rocks to form are erosion, deposition, and cementation. **False**
37. Intrusive rocks are usually always mafic in composition. **False**
38. Clastic rocks are grouped by mineral composition. **False**
39. An igneous rock that is dark colored is said to be felsic in composition. **false**
40. Limestone can be both a chemical and organic sedimentary rock. **True**

41. Extrusive igneous rocks result from magma that has cooled underground. **False**
42. In erosion, carried particles settle out and deposit as loosely packed sediment. **True**
43. All igneous rocks have crystals- coarse, fine, or a porphyry. **False**
44. Metamorphic rock will turn into sedimentary rock after it melts. **False**
45. Igneous rock will turn into sedimentary rock after weathering and erosion. **True**

Label the diagram using the following options (SKIPS 50):

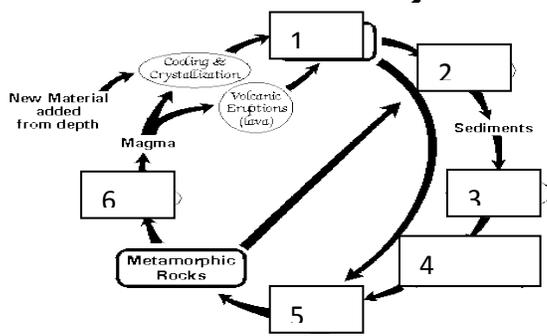
Outer core - 47b. Mantle- 48 c. Crust - 49 d. Inner core- 46



51. Most mountain ranges on continents are associated with \_\_\_\_\_ plate boundaries
- convergent
  - divergent
  - transformer
  - transform
52. Subduction occurs along \_\_\_\_\_ plate boundaries.
- convergent
  - divergent
  - transformer
  - transform
53. The east African rift valleys are good examples of \_\_\_\_\_ plate boundaries
- convergent
  - divergent
  - transformer
  - transform
54. Earthquakes are mainly produced at \_\_\_\_\_ plate boundaries
- convergent
  - divergent
  - transformer
  - Transform
55. Which of the following statements is true about boundaries?
- Crust is destroyed at a transform boundary
  - Crust is neither created nor destroyed at a convergent boundary
  - Crust is created at a divergent boundary
  - Crust is neither created nor destroyed at a divergent boundary

56. In this process, extreme pressure pushes pieces of sediment together and air or water is squeezed out forming a layer of sedimentary rock.
- Cementation
  - Compaction
  - Deposition
  - Erosion
57. This causes a metamorphic rock to form.
- evaporation
  - cementation
  - heat and pressure
  - recrystallization
58. Sedimentary rock that is made up of sharp-edged rock fragments is called \_\_\_\_\_, and sedimentary rock that is made up of rounded-edged rock fragments is called \_\_\_\_\_.
- course-grained; fine-grained
  - felsic; mafic
  - breccia; conglomerate
  - foliated; non-foliated
59. In a porphyry, these form first.
- large crystals
  - small crystals
  - fine grained crystals
  - no crystals
60. After rocks are buried, what should happen to create igneous rocks?
- magma melts the rock and recycles it
  - lava erupts and causes the rock it touches to change
  - pressure causes the rock to turn igneous
  - erosion and deposition create new rock
61. Which is true about extrusive igneous rocks?
- they can have no crystals and form above ground.
  - they are coarse grained and were formed above ground.
  - they are fine grained and cooled slowly
  - none of the above.
62. Index minerals are special because...
- they can only form from heat
  - they can only form from extreme pressure
  - they can only form from a combination of heat and pressure
  - they are a special type of igneous rock
63. These sedimentary rocks are examples of organic rocks.
- limestone and coal
  - coal and basalt
  - rock salt and limestone
  - basalt and rock salt
64. The rocks obsidian and pumice are both...
- clastic, sedimentary rocks
  - extrusive, igneous rocks
  - intrusive, igneous rocks
  - minerals
65. The process in which heat causes atoms to rearrange in minerals and pressure forces the atoms into a new position is called...
- regional metamorphism
  - contact metamorphism
  - recrystallization
  - foliation
66. The term used to describe a rock with layers is ...
- non foliated
  - fracture
  - cleavage
  - foliation
67. These sedimentary rocks are examples of chemical rocks.
- limestone and coal
  - coal and basalt
  - rock salt and limestone
  - basalt and rock salt
68. To which of the following does conglomerate belong...
- foliated metamorphic
  - clastic sedimentary
  - chemical sedimentary
  - porphyry igneous
69. This lava is slow moving and creates rocks with rough jagged edges
- Pahoehoe
  - Aa
  - Pillow
  - Mahalo
70. This lava is fast moving because it has a low silica content, so it looks like a ribbon when it cools
- Pahoehoe
  - Aa
  - Pillow
  - Mahalo
71. Seismic waves arrive in the follow order
- S, P, Surface
  - Surface, S, P
  - P, S, Surface
  - P, Surface, S
- Matching-** Match the following Protoliths to their metamorphic rock partner
- |               |          |              |
|---------------|----------|--------------|
| 72. Limestone | <b>C</b> | a. Gneiss    |
| 73. Shale     | <b>D</b> | b. Quartzite |
| 74. Sandstone | <b>B</b> | c. Marble    |
| 75. Granite   | <b>A</b> | d. Slate     |

# The Rock Cycle



76. Which type of rock is most likely located at number 1?
- metamorphic
  - igneous
  - sedimentary
  - conglomerate
77. This breaks down rock in part 2 to create sediment.
- weathering and erosion
  - compaction
  - cementation
  - recrystallization
78. Which process is occurring at number 3? (Sediment is being squeezed together but no minerals are present)
- erosion
  - compaction
  - cementation
  - deposition
79. These types of rocks are being formed at number 4...
- metamorphic
  - igneous
  - sedimentary
  - granite
80. The following process occurs at number 5
- metamorphism
  - sedimentation
  - compaction
  - deposition

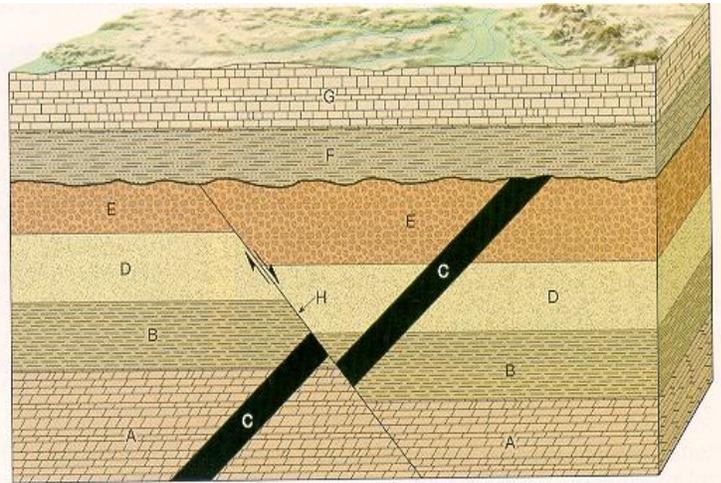
## True or False- Indicate A for True, B for False

81. Surface(L) waves move slower than P and S waves.. **TRUE**
82. The closer an earthquake, the greater the time between the arrival of P waves and the arrival of S waves **FALSE**
83. Cinder cone volcanoes erupt quietly because of highly viscous magma **FALSE**
84. Shield volcanoes erupt quietly because of magma with a low viscosity **TRUE**
85. Composite volcanoes alternate types of eruptions **TRUE**
86. Rocks are not made from minerals. **FALSE**
87. The five properties of a mineral are that it is naturally occurring, organic, solid, has a crystal structure, and a definite chemical composition. **FALSE**
88. The color of a mineral and the color of its streak are the same. **FALSE**
89. When two minerals are scratched together, the harder one will scratch the softer one. **TRUE**
90. Moh's scale ranges from softest to hardest, with softest being 10, and hardest being 1. **FALSE**
91. Fracture is the term that describes how a mineral reflects light from its surface. **FALSE**
92. Coal is not a mineral because it is made from fossilized plants. **TRUE**

93. What is the difference between relative dating and absolute dating?

Absolute dating requires radioactive decay of atoms  
Relative dating looks at the positions of rocks in layers

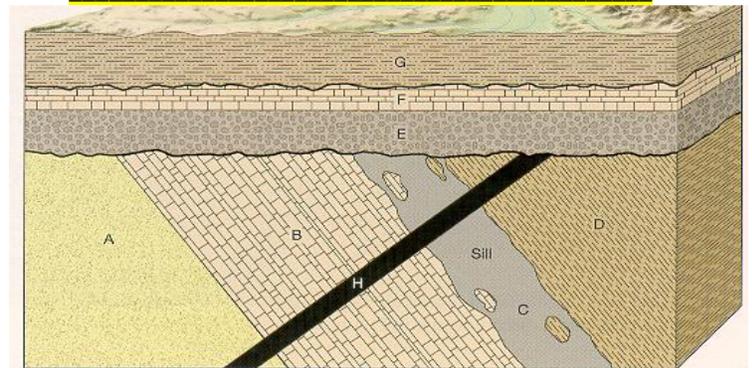
94. List the layers below from youngest to oldest:



95. What law(s) or principle did you apply to order layers of F-G Above? Law of SUPERPOSITION

96. What law or principle did you apply to order layer H Above? Principle of CROSS-CUTTING

97. List the layers below from youngest to oldest:



98. What law(s) or principle did you apply to order layer H? Law of SUPERPOSITION

99. What law(s) or principle did you apply to order layer C? Law of INCLUSIONS

100. What is the Principle of original horizontality?

101. Define unconformity and the three different types.

102. What is the greenhouse effect? What causes the greenhouse effect?

103. How does the greenhouse effect lead to global warming?

104. Why are scientists concerned about global warming?

105. What can we do to prevent a negative (unnatural) climate change?

## Semester B Exam Review/Practice

### Answer Key

1. B
2. A
3. C
4. B
5. C
6. C
7. A
8. B
9. C
10. C
11. B
12. C
13. C
14. C
15. B
16. A
17. A
18. D
19. E
20. E
21. B
22. D
23. D
24. B
25. C
26. D
27. T
28. T
29. F
30. T
31. F
32. T
33. F
34. T
35. T
36. F
37. F
38. F
39. F
40. T
41. F
42. T
43. F
44. F
45. T
46. INNER CORE (SOLID)
47. OUTER CORE (LIQUID)
48. MANTLE (TWO LAYERS)
49. CRUST
50. SKIP
51. A
52. A
53. B
54. D
55. C
56. B
57. C
58. C
59. A
60. A
61. A
62. C
63. A
64. B
65. C
66. D
67. C
68. B
69. B
70. A
71. C
72. C
73. D
74. B
75. A
76. B
77. A
78. B
79. C
80. A
81. T
82. F
83. F
84. T
85. T
86. F
87. F
88. F
89. T
90. F
91. F
92. T
93. AD: radioactive decay  
RD: layers of rocks
94. G,F,H,C,E,D,B,A
95. SUPERPOSITION
96. CROSS-CUTTING
97. G,F,E,H,C,D,B,A
98. SUPERPOSITION
99. INCLUSION
100. ALL LAYERS FALL HORIZONTALLY,  
UNIFORMITARIANISM IS THAT IT HAPPENS THE  
SAME WAY EVERYWHERE ON EARTH
101. NONCONFORMITY  
ANGULAR UNCONFORMITY  
DISCONFORMITY
102. HEAT IS TRAPPED ON EARTH BY CARBON DIOXIDE  
GAS
103. TRAPS SUN'S HEAT
104. FLOOD COASTLINES, INCREASE IN GLOBAL TEMPS,  
DRASTIC CLIMATE CHANGE
105. LIMIT USE OF FOSSIL FUELS