

EARTH SCIENCE FINAL EXAM STUDY GUIDE

Ch 1: Mapping

1. On the global grid, the equator is at 0 degrees. Is the equator a line of longitude or latitude?
2. What type of map shows the differences in elevation?

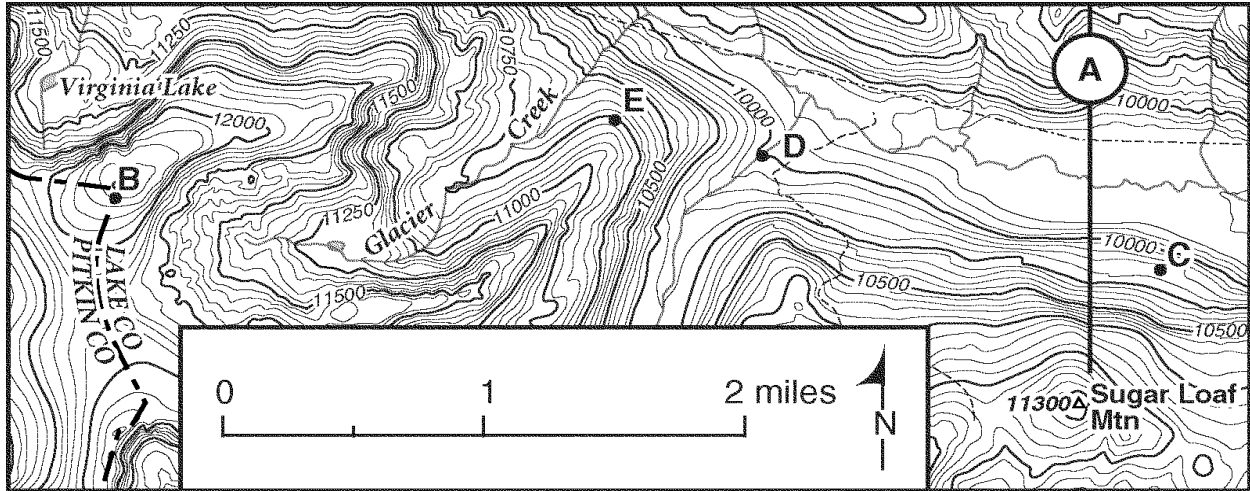
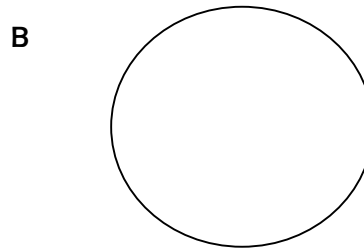
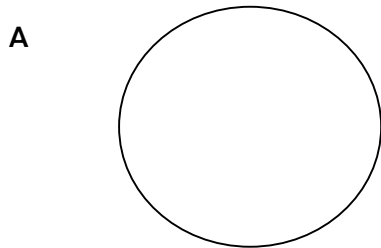


Figure 1-2

3. In Figure 1-2, what is the approximate elevation of point D?
4. In Figure 1-2, what is the elevation of Sugar Loaf Mountain?
5. In Figure 1-2, what is the approximate distance in miles between 'B' and 'C'?
6. Draw lines of latitude on Circle A.
6. Draw lines of Longitude on Circle B.



7. On a topographic map, contour lines that close together indicate a(n) _____.

a. gentle slope	c. hill
b. ocean	d. steep slope
8. On a topographic map, the shape of an area with contour lines that are very far apart is _____.

a. nearly flat	c. mountainous
b. very steep	d. strong winds

Ch 3: Rocks

9. Define Rock.

10. Complete the table.

Type of Rock	Definition	Characteristics
Igneous		
Metamorphic		
Sedimentary		

11. How is a sedimentary rock formed?
12. A rock that forms from cooling lava is classified as an ____.
13. What processes form metamorphic rocks?

Ch 5: Weathering

14. What type of weathering occurs when physical forces break rock into smaller pieces without changing the rock's chemical composition is called ____.
15. When water freezes, its volume ____.
16. Which of the following is the result of chemical weathering?
 - a. a rock that has been changed into one or more new compounds
 - b. a rock that has been broken into tiny pieces
 - c. a rock that has been split in two
17. Whenever the characteristics and chemical composition of weathered materials have been altered, they have undergone what type of weathering?
18. List 3 factors that affect the rate of weathering in rocks?
19. Chemical weathering would be ____.
 - a. most effective in a warm, dry climate
 - b. most effective in a cold, dry climate
 - c. most effective in a warm, humid climate
 - d. equally effective in any climate

Ch 6: Running Water and Ground Water

20. What is the main factor on how much erosion a river will create?
21. Compare a young to a mature river and list features found in both.

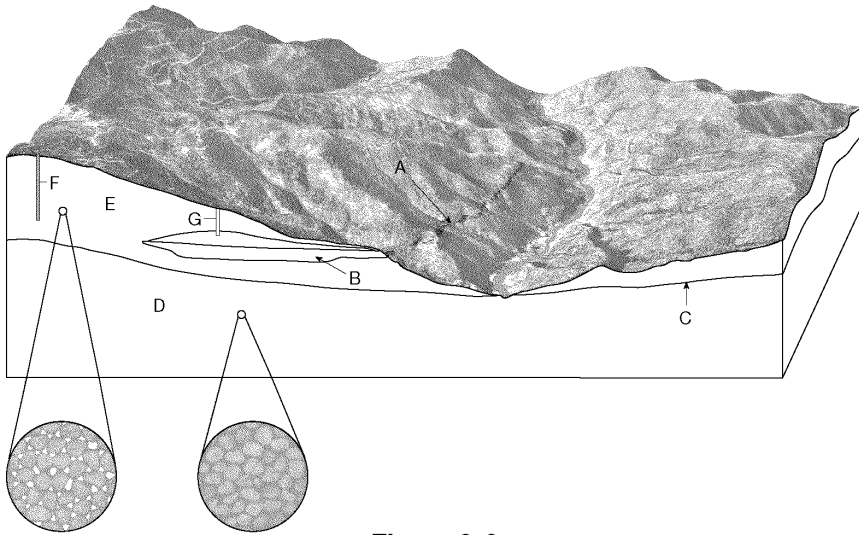


Figure 6-2

22. In Figure 6-2, what letter labels the zone of saturation?
23. What feature is labeled C in Figure 6-2?
24. In Figure 6-2, which of the wells shown will NOT be able to pump water?
25. Groundwater is found underground in the zone of ____.
26. The ability of a stream to erode and transport material depends largely on its ____.
27. If a river's gradient because becomes less steep, what will happen to the velocity of the river?
28. The flat portion of a valley floor adjacent to a stream channel is called a ____.
29. A loop-like bend in the course of a stream is called a(n) ____.

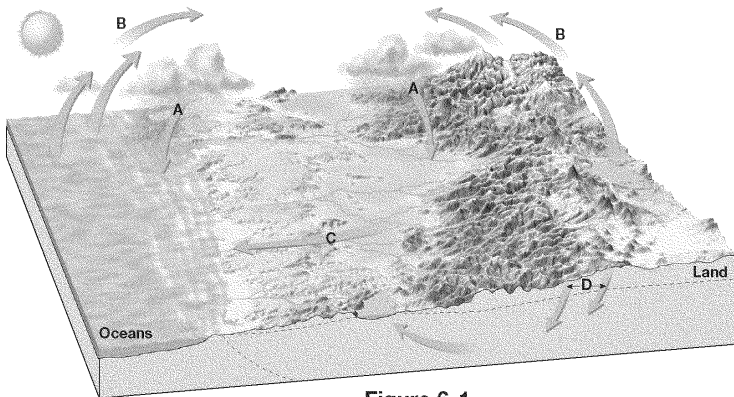


Figure 6-1

30. What process is illustrated by the arrows labeled A in Figure 6-1?
31. In Figure 6-1, what process is illustrated by the arrows labeled D?
32. What is the energy source for the water cycle shown in Figure 6-1?
33. The water cycle is the ____.

Ch 7: Glaciers

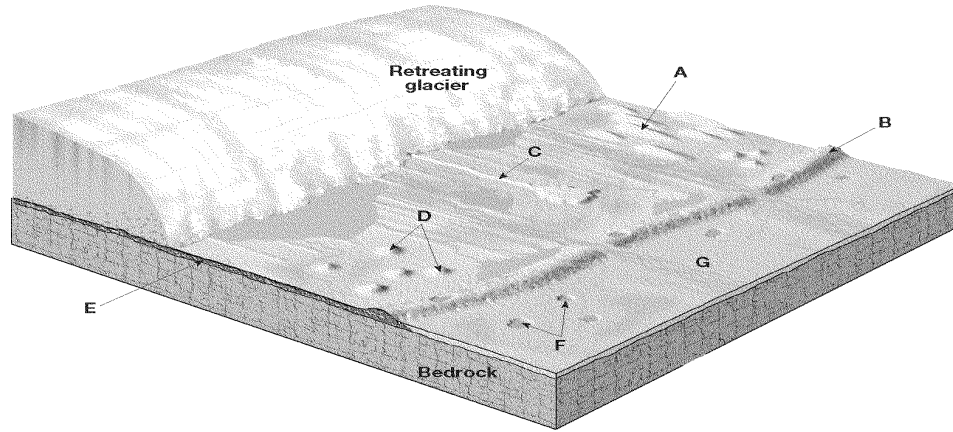


Figure 7-1

34. Identify the features labeled in figure 7-1.

35. Define a glacier.

Ch 8: Earthquakes

36. A zone of weakness or a break in Earth's crust is known as what?

37. Where do most present-day faults occur?

38. A tectonic plate boundary where colliding plates slide past each other (such as the San Andreas fault in California) is an example of:

39. What is the minimum number of seismograph stations from which scientists must collect data to locate the epicenter of an earthquake?

40. What is the difference between the Focus and Epicenter?

41. A tsunami is typically caused when

42. The Mexico City earthquake caused much damage because many structures were built on an old sandy lake bed. When the earthquake struck, many foundations settled unevenly or sank into the ground causing the buildings to collapse. What type of seismic wave did most of the damage?

43. P-waves from a seismic event can be detected on the other side of the globe, but S-waves from the same disturbance cannot be detected on the other side of the globe. This indicates to geologists that.

- S-waves are slower than P-waves
- the continents are drifting apart
- the middle of Earth is liquid
- the earthquake causing the waves was especially severe.

44. The largest earthquake ever recorded was in Chile. Using the Richter scale this number would be close to what?

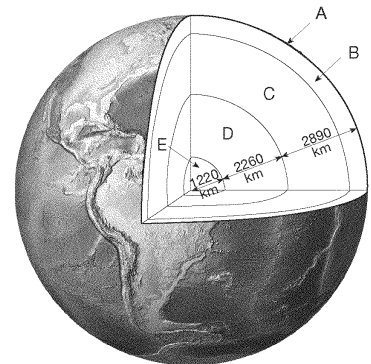
45. Thousands of earthquakes take place every day. Most earthquakes

- kill large numbers of people
- occur in California
- kill few but cause much damage
- can't even be felt by people

Ch 9: Plate Tectonics

46. What causes the tectonic plates of earth to move?
47. The Atlantic Ocean is growing larger. How does paleomagnetism proves this?
48. What forms when one oceanic plate is forced beneath another plate?
49. Why is coal, which comes from life that died a long time ago found in parts of Illinois?
 - a. Illinois once had a tropical climate
 - b. Illinois once had an arctic climate
 - c. Illinois is located on a subduction zone
 - d. Illinois is located near a large body of water
50. List the evidences for Wegener's Continental Drift hypothesis?
51. What type of boundary occurs where two plates move together, causing one plate to descend into the mantle beneath the other plate?

52. In Figure 1-1, Identify each letter.



53. What are the three main parts of the geosphere?

Figure 1-1

Ch 10: Volcanoes

54. List 3 factors that helps determine whether a volcanic eruption will be violent or quiet.
55. Highly explosive volcanoes tend to have what type of magma?
 - a. magma with high silica, high viscosity, and higher gas content
 - b. magma with low silica, low viscosity, and lower gas content
 - c. magma with low silica, high viscosity, and lower gas content
 - d. magma with no silica, high viscosity, and no gas content
56. The broad, slightly dome-shaped volcanoes of Hawaii are what type of volcanoes?
57. A volcano that is fairly symmetrical and has both layers of lava and pyroclastic deposits is a ____.
58. What is a caldera?
59. The volcanic features formed at divergent ocean plate boundaries are ____.
 - a. oceanic ridges
 - b. volcanic island arcs
 - c. continental volcanic arcs
 - d. ocean trenches

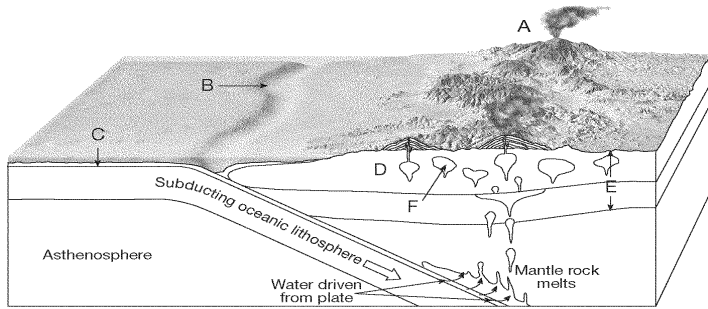


Figure 10-2

60. What type of plate boundary resulted in the volcanic activity illustrated in Figure 10-2?
61. Which type of landform develops at plate boundaries where one oceanic plate descends beneath another oceanic plate?

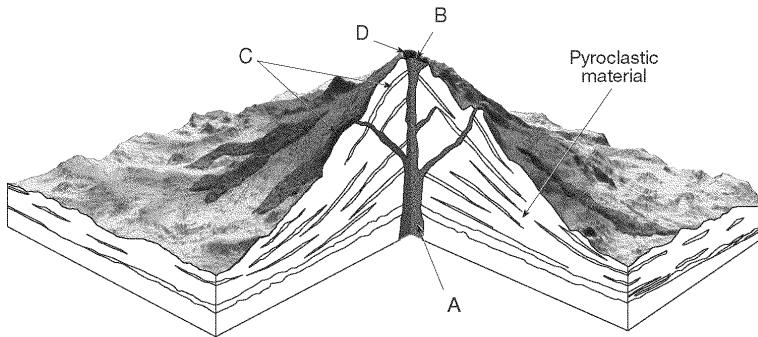


Figure 10-1

62. What feature is labeled D in Figure 10-1?
63. What feature is labeled A in Figure 10-1?
64. What type of volcano is illustrated in Figure 10-1?

Minerals

65. Define mineral.
66. Why is color not often a useful property in identifying minerals?
67. Define each property of a mineral.

Color	
Streak	
Luster	
Hardness	
Cleavage/Fracture	
Density	