Chapter 6: Sedimentary Rocks

Multiple Choice

1. Sedimentary rocks _____.
   a. may contain fossils
   b. hold important clues to Earth's history
   c. are layered
   d. may be economically important
   e. all of the above

2. Detrital sedimentary rocks are classified (named) primarily on the basis of _____.
   a. color
   b. type of bedding
   c. mineral composition
   d. particle size

3. Sedimentary rocks compose approximately _____ (by volume) of Earth's outermost 10 miles.
   a. 20%
   b. 30%
   c. 50%
   d. 75%
   e. none of the above

4. Which rock type is associated with a high-energy environment (such as a very turbulent stream)?
   a. conglomerate
   b. shale
   c. both conglomerate and shale
   d. neither conglomerate nor shale

5. Which pair of minerals is most common in detrital sedimentary rocks?
   a. quartz and olivine
   b. calcite and clay
   c. halite and feldspar
   d. clay and quartz
   e. dolomite and gypsum

6. Detrital sediments would predominate in all of the following environments except a _____.
   a. swamp
   b. salt flat
   c. river floodplain
   d. delta

7. Compaction would probably be most significant as a lithification process for _____.
   a. shale
   b. sandstone
   c. conglomerate
   d. chert
   e. breccia

8. Sedimentary rocks account for about ____ percent of rock exposures on the continents.
   a. 5
   b. 20
   c. 35
   d. 50
   e. 75

9. The most abundant chemical sedimentary rock is _____.
   a. limestone
   b. dolomite
   c. chert
   d. rock salt
   e. sylvite

10. Which of the following lists presents forms of coal in the correct order from the lowest grade to the highest grade?
    a. lignite, bituminous, anthracite
    b. bituminous, anthracite, lignite
    c. anthracite, lignite, bituminous
    d. lignite, anthracite, bituminous
    e. anthracite, bituminous, lignite

11. Which one of the following is NOT a process whereby sediment is lithified into solid sedimentary rock?
    a. compaction
    b. foliation
    c. cementation

12. Which one of the following minerals is rapidly changed by chemical weathering?
    a. feldspar
    b. quartz
    c. clay
    d. hematite

13. Common detrital sedimentary rocks, in order of increasing particle size, are _____.
    a. shale, sandstone, conglomerate
    b. sandstone, shale, conglomerate
    c. conglomerate, shale, sandstone
    d. sandstone, conglomerate, shale
    e. shale, conglomerate, sandstone

14. A black shale is black because it contains abundant _____.
    a. clay
    b. hematite
    c. sulfur
    d. carbon
    e. silica

15. A sedimentary rock that is made of clay and breaks into chunks or blocks is called _____.
    a. shale
    b. blockstone
    c. siltstone
    d. mudstone
    e. sandstone

16. The degree of similarity in particle size in a sedimentary rock is referred to as _____.
    a. sorting
    b. porosity
    c. rounding
    d. permeability
    e. none of the above

17. Which origin of limestone is by far the most common?
    a. inorganic
    b. detrital
    c. marine biochemical
    d. evaporite
    e. none of the above

18. Stagnant swamp water is _____, therefore the complete decay of plant material is not possible.
    a. warm
    b. shallow
    c. chemically-rich
    d. oxygen-deficient
    e. muddy

19. Rounded grains in a sedimentary rock likely indicate transportation by _____.
    a. glaciers
    b. wind
    c. either a. or b.
    d. water
    e. either b. or d.

20. The most abundant sedimentary rock is _____.
    a. sandstone
    b. limestone
    c. siltstone
    d. conglomerate
    e. shale

21. When the particles within a single sedimentary layer gradually change from coarse at the bottom to fine at the top, the layer exhibits a type of bedding called _____ bedding.
    a. ripple
    b. regular
    c. angular
    d. graded
    e. selective

22. Earth materials that are not used as fuels or processed for the metals they contain are referred to as _____ mineral resources.
    a. exceptional
    b. essential
    c. nonmetallic
    d. secondary
    e. chemical

23. If the gravel size particles in a rock are angular rather than rounded, the rock is called _____.
    a. sandstone
    b. conglomerate
    c. siltstone
    d. breccia
    e. coquina

24. Separating sedimentary strata are _____, flat surfaces along which rocks tend to separate or break.
    a. contour planes
    b. sills

c. surfaces
d. inclusions
e. none of the above

25. _____ is a soft, porous sedimentary rock made up almost entirely of the hard parts of microscopic marine organisms no larger than the head of a pin.
a. Claystone
b. Breccia
c. Travertine
d. Shale
e. Chalk

True-False:

26. The most abundant sedimentary rock is sandstone.

27. Anthracite coal is a metamorphic rock.

28. When a sandstone contains appreciable quantities of feldspar, the rock is called arkose.

29. Evaporites have a biochemical origin.

30. Particle size is the primary basis for distinguishing among various detrital sedimentary rocks.

31. Mineral composition is the primary basis for distinguishing among various detrital sedimentary rocks.

32. Particle size is the primary basis for distinguishing among the various chemical sedimentary rocks.

33. Mineral composition is the primary basis for distinguishing among the various chemical sedimentary rocks.

34. The particles in breccia are primarily silt-sized.

35. Most limestone has a biochemical origin.

36. Compaction is most significant as a lithification process for sedimentary rocks composed of sand-sized particles.

37. Perhaps the most important inclusions found in sedimentary rock are fossils.

Completion:

38. The two most common minerals in detrital sedimentary rocks are _____ and _____.

39. The most abundant chemical sedimentary rock is _____.

40. When a sedimentary rock consists of angular, gravel-sized particles, it is called _____.

41. The type of limestone commonly seen decorating caves is known as _____.

Sedimentary Rocks

42. Rock salt and rock gypsum are common examples of a group of chemical sedimentary rocks called _____.

43. _____ refers to the processes by which unconsolidated sediments are transformed into solid sedimentary rocks.

44. Two common ways in which sediments are lithified are compaction and _____.

45. Probably the single most common and characteristic feature of sedimentary rocks is _____.

46. The partial decomposition of plant remains in an oxygen-poor swamp creates a layer of soft, brown material that is not yet coal. This material is known as _____.

47. The term _____ refers to the silt- and clay-sized particles found in spaces between larger sand grains in a sedimentary rock.

48. Organic (life) processes of water-dwelling organisms form chemical sediments, said to be of _____ origin.

49. Nonmetallic mineral resources are commonly divided into two broad groups: _____ materials and _____ minerals.

50. The two basic conditions that all oil traps have in common are a porous, permeable _____ rock and an impermeable _____ rock.

Answers to Chapter 6 Test Questions

Multiple Choice:

1. e
2. d
3. e
4. a
5. d
6. b
7. a
8. e
9. a
10. a
11. b
12. a
13. a
14. d
15. d
16. a
17. c
18. d
19. e
20. e
21. d
22. c
23. d
24. e
25. e

True-False:

26. false
27. true
28. true
29. false
30. true
31. false
32. false
33. true
34. false
35. true
36. false
37. true

Completion:

38. clay, quartz
39. limestone
40. breccia
41. travertine
42. evaporites
43. Lithification
44. cementation
45. strata (or beds)
46. peat
47. matrix
48. biochemical
49. building, industrial
50. reservoir, cap