

Assignment #2-4: Geology

1. Porphyritic texture forms from
 - A. initial rapid cooling then slow cooling of magma
 - B. initial slow cooling then rapid cooling of magma
 - C. extremely rapid cooling of magma
 - D. escape of gas bubbles during cooling of lava

2. During crystallization of a basaltic magma _____ is the first mineral to crystallize.
 - A. olivine
 - B. pyroxene
 - C. plagioclase
 - D. quartz

3. How does water influence the formation of magma?
 - A. rocks with higher water content melt at higher temperatures
 - B. rocks with higher water content melt at lower temperatures
 - C. rocks with higher water content produce basaltic magma
 - D. rocks with higher water content produce rhyolitic magma

4. According to theory, if fractional crystallization occurs (e.g. by early-formed crystals settling to the bottom of the magma chamber)
 - A. the remaining magma becomes more mafic-rich
 - B. the remaining magma does not change in composition
 - C. the remaining magma becomes more rich in silica
 - D. the magma cools faster

5. A very large igneous intrusion, such as the one that forms the core of the Sierra-Nevada mountain range, is called a
 - A. sill
 - B. dike
 - C. stock
 - D. batholith

6. Obsidian, or volcanic glass forms by
 - a. lava cools so fast minerals can't crystallize
 - b. lava cools so fast minerals are very fine-grained
 - c. rock is shattered during an eruption
 - d. volcanic mudflow deposition

7. Extrusive igneous rocks have smaller crystals than intrusive igneous rocks because _____.
 - A. Intrusive igneous rocks cool slower than extrusive rocks
 - B. Extrusive igneous rocks cool slower than intrusive rocks
 - C. Intrusive igneous rocks melt slower than extrusive rocks
 - D. Extrusive igneous rocks melt slower than intrusive rocks

8. Most common rock-forming minerals are _____.
- A. carbonates
 - B. oxides
 - C. silicates
 - D. sulfides
9. What type of rocks form from the solidification of molten rock?
- A. igneous B. mineralogic C. sedimentary D. metamorphic
10. What types of rocks form from pre-existing rocks that are subjected to high temperature and pressure?
- A. igneous B. mineralogic C. sedimentary D. metamorphic
11. A basalt is an example of a(n) _____ rock.
- A. igneous B. mineralogic C. sedimentary D. metamorphic
12. Which best describes basalt?
- A. a foliated metamorphic rock
 - B. a non-foliated metamorphic rock
 - C. a coarse-grained light colored igneous rock
 - D. a fine-grained dark colored igneous rock
13. Clastic sediments form from _____.
- A. rapid cooling of molten sediments
 - B. physically deposited particles of sediment
 - C. precipitation of sediments from sea water
 - D. accumulation of calcium carbonate shells
14. Limestone, a rock that forms from the shelly remains of organisms, is an example of a(n) _____.
- A. extrusive igneous rock
 - B. intrusive igneous rock
 - C. clastic sedimentary rock
 - D. chemical sedimentary rock
15. An igneous rock that is coarse-grained and contains abundant quartz is _____.
- A. granite
 - B. rhyolite
 - C. basalt
 - D. gabbro
16. Which of the following properties is diagnostic of a sedimentary rock?
- A. layering
 - B. foliation
 - C. glassy texture

D. orogeny

17. Sediment forms as a result of rock weathering.

- A) TRUE
- B) FALSE

18. Clastic sedimentary rocks do not contain particles that have been altered as a result of chemical weathering.

- A) TRUE
- B) FALSE

19. Weathering is an important part of the process whereby sediment becomes sedimentary rock.

- A) TRUE
- B) FALSE

20. Sedimentary rocks never contain valuable natural resources because they are highly weathered.

- A) TRUE
- B) FALSE

21. Sediments only form as a result of the weathering of igneous rocks.

- A) TRUE
- B) FALSE

22. Quartz is a common component of sedimentary rocks because it is resistant to chemical weathering.

- A) TRUE
- B) FALSE

23. There is no upper limit to the size a sediment particle can have.

- A) TRUE
- B) FALSE

24. Chemical sedimentary rocks are less common than Detrital sedimentary rocks.

- A) TRUE
- B) FALSE

25. Chemical sedimentary rocks are formed as a result of chemical weathering of other rocks.

- A) TRUE
- B) FALSE

26. Chemical sedimentary rocks typically form as precipitates from solutions.

- A) TRUE

B) FALSE

27. Sedimentary rocks reveal a great deal about Earth surface conditions as they were forming.

A) TRUE

B) FALSE

28. Ripple marks preserved in a sandstone may be used to determine the direction a current was flowing.

A) TRUE

B) FALSE

29. Sediment can be transported great distances from its source area before being deposited.

A) TRUE

B) FALSE

30. Cement that forms to bind sediments is usually precipitated from solution.

A) TRUE

B) FALSE

31. Boulders cannot be transported or deposited to form sedimentary rocks.

A) TRUE

B) FALSE

32. The grain size of clastic sedimentary rocks may provide clues to the environment in which the sediments were deposited.

A) TRUE

B) FALSE

33. Geologists use sedimentary rocks to reconstruct the geologic history of Earth.

A) TRUE

B) FALSE

34. Some successions of sedimentary rocks allow geologists to interpret the history of sea-level oscillations on Earth.

A) TRUE

B) FALSE

35. Coral reefs are a type of chemical sedimentary rock.

A) TRUE

B) FALSE

36. Earth is the only planet with sedimentary rocks.

A) TRUE

B) FALSE