

Study Questions: Sedimentary Processes, Rocks, and Environments

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The quiz about sedimentary processes, rocks, and environments will involve questions like the ones that follow.

Note: Whenever you see reference to *Tarbuck*, in the following questions, that means the eText of the textbook by Tarbuck and others, **Earth**

1. What are the major steps in the development of a typical clastic sedimentary formation? A: weathering, erosion, transportation, deposition, burial, compaction and cementation. Compaction and cementation are the primary processes in the *lithification* of a sedimentary rock.
2. What geologic process involves the breakdown and alteration of rocks at Earth's surface through interaction with water and the atmosphere?
3. What are two main types of weathering?
4. Name a common non-marine depositional environment.
5. Name a common depositional environment along the coastline of an ocean.
6. Name a common marine depositional environment.
7. The highest peak in Texas, Guadalupe Peak, is composed of rock that was once part of a large reef complex. At the time it was formed, was this reef part of a *continental* or *marine* depositional environment?
8. What is the category of sedimentary rocks that are composed of the broken and worn particles of older geologic materials that have been deposited by wind or water?
9. What is the type of sedimentary rock that is composed primarily of gravel-size particles?
10. How big are gravel-sized particles (Answer: 2 mm across or larger)?
11. How big are sand-sized particles?
12. What is the name of the sedimentary rock formed by micro-crystalline quartz?
13. What are some of the organisms with silica tests (shells) that contribute to deep-sea layers of micro-crystalline quartz?
14. What is the name of a sedimentary deposit formed under conditions of high evaporation and composed of sodium chloride?
15. What is the name of a sedimentary deposit formed under conditions of high evaporation and composed of hydrous calcium sulfate ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$)?
16. What is the general name of sedimentary deposits formed under conditions of high evaporation?
17. What sort of bedding develops as particles move in wind or water currents, forming ripple marks or dunes?
18. What sort of bedding develops as particles of different sizes settle out of turbulent sediment-laden water as it loses velocity?
19. What feature, that is commonly encountered in continental sedimentary strata, indicates that the fine-grained sediments were initially wet but then dried in contact with the air?
20. What is the type of sedimentary rock that is composed primarily of sand-size particles?
21. What is the type of sedimentary rock that is composed primarily of silt-size particles?
22. Which is bigger: clay-sized or silt-sized particles?
23. What is the common name for a sedimentary deposit that is composed of a mixture of silt and clay?
24. What do we call a very fine-grained sedimentary rock that breaks along irregular surfaces that are approximately parallel to each other and to the original bedding surfaces (*laminae*)?
25. What is the name for the property of some very fine grained sedimentary rocks to break easily into thin layers along more-or-less parallel surfaces?
26. What is the most common mineral in a sandstone whose grains have been subjected to prolonged transportation, or perhaps to repeated cycles of deposition, erosion and transportation?
27. What is the primary mineral in limestone?
28. In what type geological environment does limestone typically form?
29. What is the name of the sedimentary rock formed from the calcium-magnesium carbonate mineral *dolomite* ?
30. What is a fossil? (<https://www.baylor.edu/geosciences/index.php?id=953452#fossil>)

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