Yanbu University College

General Studies Department

PHSC001 Course

Chapter8 (Basic Geology: Rocks and Minerals) Worksheet Solutions

Chapter 8 Worksheet

Part1: sentence completion

1. About 98% of the earth crust is made up of ___**8**___elements.
2. About 75% of these elements on earth's crust are _**silicon_**, and ___**oxygen**_ .
3. A mineral is defined as an element that is found ___**naturally**__, a __**solid**__ element or compound, and has a_**crystalline**_shape.
4. A crystal is an ordered 3D repetition of a building block called _**structural unit**__.
5. Both diamond and graphite are different crystal forms of ___**same element carbon**___.
6. The scale that describes a mineral hardness is called _**Moh's scale**____.
7. **_Cleavage_**describes the way a mineral breaks along its planes of weakness when it is under stress.
8. The tendency of a mineral to break along curved surfaces with irregular shapes is called __**fracture**___.
9. The mineral that has hardness 7 is called _**Quartz**_.
10. To compare minerals whether they are composed of silicon and oxygen or not, geologists divided minerals into groups of ____**silicate**___, and ____**nonsilicate**_ groups.
11. A physical combination of one or more minerals make up ___**a rock**___.

Part2: Multiple choices

12. Geologists divided minerals into two groups. These are **(A)**
    - **A.** Silicates and nonsilicates
    - **B.** Chemical and mixtures
    - **C.** Ferromagnesian and nonferromagnesian
    - **D.** Oxygen based and non oxygen based

13. Rocks **(B)**
    - **A.** Have a definite chemical composition
    - **B.** Are combination of one or more of minerals.
    - **C.** Are classified by their crystalline structure
    - **D.** Are formed when minerals chemically combine.

14. Rocks that are formed from a molten material are called **(B)**
    - **A.** Sedimentary.
    - **B.** Igneous.
    - **C.** Metamorphic.
    - **D.** Magma.

15. The result of weathering and eroding rock materials form **(B)**
    - **A.** Igneous rocks.
    - **B.** Metamorphic rocks
    - **C.** Sedimentary rocks
    - **D.** Magma

16. One of the following is a type of rock that has remained unchanged on Earth's surface throughout its history. **(D)**

A. Igneous
B. Sedimentary
C. Metamorphic
D. None of the above

Part 3: True/False

17. Silicate minerals make up nearly a 8% of the minerals in Earth's crust. **(B)**

A. True
B. False

18. Sedimentary rocks are formed from particles or dissolved materials from older rock. **(A)**

A. True
B. False

19. Basalt and granite are examples of metamorphic rocks. **(B)**

A. True
B. False

20. Nonferromagnesian minerals contain iron and magnesium**. (B)**

A. True
B. False

21. Rocks on earth are in a state of temporary, so that they can change overtime into another forms of rocks, this is called rocks cycle. **(A)**

A. True
B. False

Part4: Exercises

22. What is the most found mineral found on earth crust?
(Silicon)

23. What is the most found mineral in the earth?
Iron

24. Why did iron and nickel sank deep in earth interior? Why did not silicon?
Because their density is high.

25. What is the difference between a silicate and nonsilicate mineral?
Silicate contain silicon and oxygen, nonsilicate do not contain silicon and oxygen.

26. What makes ferromagnesians different from nonferromagnesians?

Ferromagnesians contain iron and magnesium and nonfermagnesian do not.

27. List two examples of igneous rocks, two of sedimentary rocks, and two of metamorphic rocks.
Granite and basalt are igneous rocks. Slate and schist are metamorphic.

28. Why do you think that rocks change overtime?
Because of heat and pressure.

29. Does the temperature increase or decrease if we go deep inside earth?
Increase.

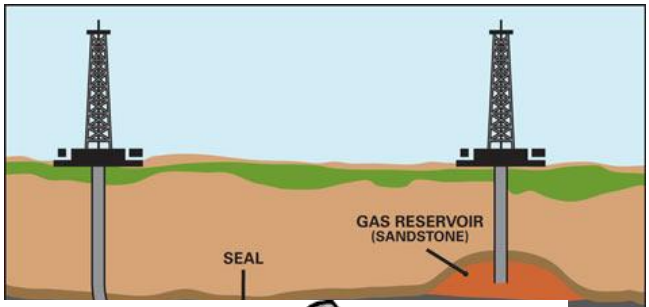
30. When water evaporates from a sample taken from red sea, what type of sediment is left behind?

Salt and other minerals.

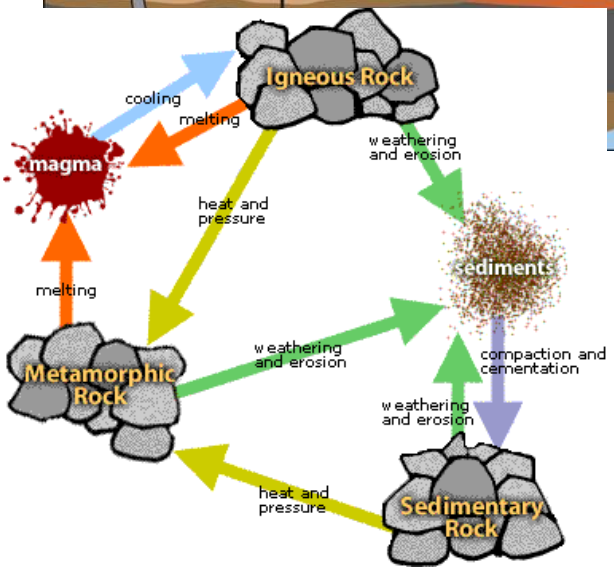
Part 5: Learn from observation: In two/three lines describe what is the idea behind these photos.

31.

Fossils of dead animals and plants remained Insides sedimentary rocks. Overtime, the fossils Transform into sources of energy like coal, oil and gas. Human drill deep inside the crust to have access to this source of energy.



32. Overtime rocks recycle due to environmenta
Conditions and heat and pressure.



33. Usually, scientists classify rocks to make their study easy. They use a written record of each.