

MODEL QUESTION PAPER

Question 1: Multiple choice (20 Marks)

1. Which of the following is true about rocks?
 - a. Rocks are composed of only one mineral.
 - b. Rocks do not contain any non-mineral matter.
 - c. Coal is not considered a true rock.
 - d. **Most rocks are a mixture of minerals.**
2. Which of the following is NOT one of the three types of rock?
 - a. Igneous
 - b. Sedimentary
 - c. **Magma**
 - d. Metamorphic
3. Which of the following is an example of an extrusive igneous rock?
 - a. **Rhyolite**
 - b. Diorite
 - c. Granite
 - d. Coal
4. A rock that forms from cooling lava is classified as an.
 - a. Intrusive igneous rock
 - b. **Extrusive igneous rock**
 - c. Extrusive metamorphic rock
 - d. Intrusive volcanic rock
5. When large masses of magma solidify far below Earth's surface, they form igneous rocks that have a
 - a. glassy texture
 - b. fine-grained texture
 - c. clastic texture
 - d. **coarse-grained texture**
6. The igneous rock texture that is characterized by two distinctly different crystal sizes is called
 - a. Coarse-grained texture
 - b. Glassy texture
 - c. Fine-grained texture

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d. **Porphyritic texture**

7. As the rate of cooling of igneous rocks increases, the size of the crystals that form

- a. **Decreases**
- b. Is not affected
- c. Increases
- d. Cannot be determined

8. Igneous rocks that crystallize from magma and are composed almost entirely of quartz and feldspars have a(n)

- a. **Granitic composition**
- b. Ultramafic composition
- c. Andesitic composition
- d. Basaltic composition

9. Why can two igneous rocks have the same minerals but different names?

- a. The rocks may have different colors.
- b. The rocks may be found in different areas.
- c. The rocks may be of different sizes.
- d. **The rocks may have different textures.**

10. Which of the following represents the correct order of the processes involved in sedimentary rock formation?

- a. Erosion, weathering, compaction, cementation, deposition
- b. Compaction, cementation, deposition, weathering, erosion
- c. Deposition, cementation, compaction, erosion, weathering
- d. **Weathering, erosion, deposition, compaction, cementation**

11. What type of sedimentary rock is formed from weathered particles of rocks and minerals?

- a. **Clastic sedimentary rock**
- b. Chemical sedimentary rock
- c. Biochemical sedimentary rock
- d. Intrusive sedimentary rock

12. Which of the following is a required characteristic of minerals?

- a. Inorganic solid
- b. Naturally formed

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- c. Distinct chemical formula and ordered arrangement of atoms
 - d. **All of the above**
13. What are the two most common elements in the earth's crust?
- a. Carbon and nitrogen
 - b. Hydrogen and helium
 - c. Iron and nickel
 - d. **Silicon and oxygen**
14. What do we call atoms with the same number of protons but different numbers of neutrons?
- a. Anions.
 - b. Cations.
 - c. Compounds
 - d. **Isotopes**
15. What kind of a silicate mineral is Olivine (the main mineral in the earth's mantle)?
- a. **Single tetrahedra**
 - b. Single chain silicate
 - c. Double chain silicate
 - d. Sheet silicate
16. Which of the following is an example of a ferromagnesian (mafic) silicate mineral?
- a. Feldspar.
 - b. Halite
 - c. **Hornblende**
 - d. Muscovite
17. What mineral family does magnetite belong to?
- a. Carbonates
 - b. Halides
 - c. **Oxides**
 - d. Sulfates.
18. Which of the following minerals is lowest on Mohs hardness scale?
- a. Calcite.
 - b. Quartz.
 - c. **Talc**

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d. Diamond.

19. What rock is defined as having angular-shaped clasts?

- a. **Breccia**
- b. Conglomerate.
- c. Sandstone.
- d. Shale.

20. Which sedimentary rock tends to be fissile?

- a. Conglomerate.
- b. Sandstone
- c. Breccia
- d. **Shale**

Question 2: Match the following (10 Marks)

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|-------------------------------|------------------------------|
| 1. Outer Core (d) | a) Ultramafic Rock |
| 2. Sodium Chloride (e) | b) Ore Mineral |
| 3. Pyroxene (g) | c) Conchoidal fracture |
| 4. Moh's Scale (j) | d) Liquid |
| 5. Galena (b) | e) Ionic bond |
| 6. Quartz (c) | f). Three sets of cleavage |
| 7. Gypsum (h) | g). Single chain tetrahedra |
| 8. Peridotite (a) | h). Sulfate mineral |
| 9. Limestone (i) | i) Chemical sedimentary rock |
| 10. Calcite (f) | j) Hardness |

Question 3: True or False (7 Marks)

- 1. Calcite is not a silicate mineral **TRUE**
- 2. Sedimentary rock containing the smallest clasts is called Sandstone **FALSE**
- 3. Feldspar is the name of a igneous rock. **FALSE**
- 4. The planet Mars lies between the Earth and Jupiter. **TRUE**
- 5. The composition of a basalt is felsic. **FALSE**
- 6. The highest temperature mineral on Bowen's Reaction Series is quartz. **FALSE**

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7. Granite has an Aphanitic texture. **FALSE**