

Paper: Geology

GENERAL INSTRUCTIONS:

1. All questions are compulsory. There are 27 questions in all.
2. This question paper has four sections: Section A, Section B, Section C and Section D.
3. Section A contains five questions of one mark each, section B contains seven questions of two marks each, section C contains twelve questions of 3 marks each and section D contains three questions of 5 marks each.
4. There is no overall choice. However, internal choices have been provided in two questions of one mark, two questions of two marks, four questions of three marks and three questions of 5 marks weightage. You have to attempt only one of the choices in such questions.

Section A (1*5= 5 marks)

1. Define Geology?
2. Explain the term water table.

OR

The topography produced by the action of ground water. (Give one word substitution)

3. Name two lakes of Kashmir.
4. Define an ore.

OR

Give the hardness of quartz and topaz.

5. Write the correct statement in the answer book.
 - a. Basalt is a volcanic rock.
 - b. Basalt is a plutonic rock.

Section B (2*7=14 marks)

6. Differentiate porosity and permeability.
7. Describe luster and Fracture of minerals.
8. Give the physical properties of the following ore minerals
 1. Chalcopyrite
 2. Hematite
9. Differentiate igneous and sedimentary rocks.

OR

Name two igneous and sedimentary rocks.

10. Explain Dip and Strike.
11. Define Dam and Tunnel.
12. Name Epochs of the Quaternary period.

OR

What are the Eras in the Geological Time Scale?

Section C(3*12= 36 marks)



13. What is soil? Explain soil formation through weathering?
14. Enumerate exfoliation as a type of weathering.
15. Write short notes on:
 - a. Juvenile water
 - b. connate water.
16. Discuss in concise form any three types of springs with suitable diagrams.
17. What are river meanders? Explain how Oxbow lakes are formed?

OR

Describe various types of lake deposits.

18. What is a mineral? Describe cleavage and streak as physical properties of minerals.
19. Define specific gravity. How is the specific gravity of a mineral determined by walker's steel yard?
20. What is hardness of the mineral? Discuss Mohs' scale of hardness.

OR

Give the chemical composition and physical properties of the following minerals

1. Quartz
 2. Calcite
21. What is Rock? Give description of the following rocks.
 1. Granite
 2. Limestone.
 22. What is texture of rocks? Explain Porphyritic and poikilitic textures?

OR

Discuss any two structures of sedimentary rocks.

23. What is fault? Differentiate Normal fault and reverse Fault.

OR

What is fold? Discuss Syncline and Anticline fold.

24. Define fossils? Give uses of fossils.

Section D (5*3=15 marks)

25. What is weathering? Name different types of weathering. Describe chemical weathering in detail.

OR

Discuss in detail any five branches of geology.

26. What is underground water? Give an account of geological work of underground water.

OR

Define an Aquifer. Discuss Unconfined and confined Aquifers.

27. Define river? Enumerate salient characters of Youth, Mature and Old stages of rivers.

OR

What is glacier? Describe various types of Glaciers with Suitable examples.