

Registration No:

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E 1 – 2025

Subject  
Code

**37**

## GEOLOGY

Time : 3 Hours 00 Minutes]

[Total No. of Questions : 47]

[Max. Marks : 80

### Instructions:

1. All the parts are compulsory.
2. Draw neat and labelled diagrams wherever necessary.
3. Write correct question numbers.
4. For PART – A questions, only the first written answers will be considered for evaluation.

### PART – A

I. Answer all the following questions:

(5 × 1 = 5)

- 1) During rock cycle, how can sedimentary rock become metamorphic rock?  
(a) By pressure and temperature      (b) By direct exposure to atmosphere  
(c) By melting and solidification      (d) By erosion and weathering
- 2) Choose the hypabyssal rock among the following:  
(a) Gabbro  
(b) Dolerite  
(c) Granite  
(d) Basalt
- 3) • The rock consists of finest particles.  
• Average grain size is less than 0.01 mm.

Based on the above information, identify the rock.

- (a) Grit      (b) Arkose  
(c) Shale      (d) Sandstone
- 4) The rock which is formed by dynamothermal metamorphism is  
(a) Schist      (b) Slate  
(c) Marble      (d) Shale

5) Which of the following is the youngest era?

- (a) Mesozoic
- (b) Pre-cambrian
- (c) Paleozoic
- (d) Cenozoic

II. Fill in the blanks:

(5 × 1 = 5)

(Dip, Sills, Transport-direction, Brunton compass, Fossils, Strike)

- 6) \_\_\_\_\_ are thin, tabular concordant bodies.
- 7) Cross-bedding and ripple structures help us to know the \_\_\_\_\_ of sediments.
- 8) \_\_\_\_\_ is defined as the angle of inclination with horizontal bed.
- 9) \_\_\_\_\_ is used to measure attitude of beds.
- 10) \_\_\_\_\_ are the remains or traces of organisms of geologic past.

III. 11) Match the following:

**A**

**B**

(5 × 1 = 5)

- |                        |                    |
|------------------------|--------------------|
| (a) Primary rock       | i. Fold            |
| (b) Pegmatite          | ii. Cenozoic era   |
| (c) Limb               | iii. Granite       |
| (d) Himalayan mountain | iv. Gemstone       |
| (e) Glossopteris       | v. Mesozoic era    |
|                        | vi. Lower Gondwana |

IV. Answer all the following questions:

(5 × 1 = 5)

- 12) What are secondary rocks?
- 13) What is the composition of shale?
- 14) Give any two examples for metamorphic rocks.
- 15) Define axis of a fold.
- 16) What is corallum?

**PART – B**

V. Answer any seven of the following questions:

(7 × 2 = 14)

- 17) Define Texture.
- 18) What is Pahoehoe structure?
- 19) Write the uses of igneous rocks.
- 20) How are sedimentary rocks formed?
- 21) Define the roundness in sedimentary rocks.
- 22) Define Hypozone. Give an example.
- 23) What is Charnockite? Mention its texture.
- 24) Define Outlier.
- 25) Occurrence and distribution of Archaean rocks. Explain.
- 26) Define track and trails.
- 27) What is mummification? Give an example.
- 28) Define Carbonization.

VI. Answer any seven of the following questions:

(7 × 3 = 21)

- 29) Explain volcanic igneous rocks. Give an example.
- 30) Explain aphanitic grain size of igneous rocks.
- 31) Explain dynamothermal metamorphism. Give an example.
- 32) With a neat labelled diagram, explain symmetrical fold.
- 33) With a neat labelled diagram, explain the types of dips.
- 34) Write a note on the importance of geologic structures.
- 35) List the non-metallic deposits of Archaeans.
- 36) Explain the law of order of superposition.
- 37) Write a note on thorax.

38) Define the following.

- (a) Spire
- (b) Peristome
- (c) Suture

VII. Answer any five of the following questions:

(5 × 5 = 25)

- 39) With a neat labelled diagram, explain porphyritic texture.
  - 40) Discuss the physical properties of dolerite.
  - 41) Classify sedimentary rocks based on grain size.
  - 42) With a neat labelled diagram, explain granulose structure.
  - 43) Explain the types of joints.
  - 44) With a neat labelled diagram, explain the formation of fault.
  - 45) Describe the geology of Karnataka.
  - 46) With a neat labelled diagram, explain Terebratula.
  - 47) With a neat labelled diagram, explain Paradoxide.
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