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Third Semester B.E. Degree Examination, July/August 2021 Mineralogy, Petrology and Stratigraphy

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1
 - a. Discuss the scope of Geology in the field of Mining Engineering. (08 Marks)
 - b. Explain the Internal Structure and composition of earth, with neat sketch. (12 Marks)

- 2
 - a. What are glaciers? Explain the geological work of glaciers. (10 Marks)
 - b. Explain Seismic hazards. Describe engineering protection against earth quakes. (10 Marks)

- 3

Define Mineral. Explain the physical properties chemical composition and uses of quartz group of minerals. (20 Marks)

- 4

Write physical properties, chemical composition and uses of following ore minerals
i) Magnetite ii) Chalcopyrite iii) Chromite iv) Galena (20 Marks)

- 5

What are Igneous rocks? How are they formed? Explain the classification of igneous rocks. (20 Marks)

- 6

Describe the texture, structure, mineralogical composition and their engineering uses :
i) Granite ii) Rhyolite iii) Dolerite iv) Pegmatite (20 Marks)

- 7
 - a. Briefly explain the classification of sedimentary rock based on grain size. (08 Marks)
 - b. Explain the physical properties of following rocks
i) Sandstone ii) Shale iii) Limestone (12 Marks)

- 8
 - a. Define Metamorphism. Explain the factors effecting metamorphism. (08 Marks)
 - b. Explain: i) Gneiss ii) Schist iii) Marble. (12 Marks)

- 9
 - a. Define Stratigraphy. Explain the principles of stratigraphy. (10 Marks)
 - b. Define Palaeontology. Explain the different kinds of fossils and uses. (10 Marks)

- 10
 - a. Define Correlation. Explain the factors affecting correlation (10 Marks)
 - b. Define Index fossil. Explain the conditions to form fossil assemblages. (10 Marks)