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18CV36

Third Semester B.E. Degree Examination, July/August 2022
Engineering Geology

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain briefly the Internal structure of the Earth. (08 Marks)
b. Explain the role of Geology in the field of Civil Engineering. (08 Marks)
c. Name the different branches of Geology which are related to Civil Engineering. (04 Marks)

OR

- 2 a. Define a Mineral. Briefly explain the physical properties of a Mineral. (12 Marks)
b. Describe any two of the following Minerals : (08 Marks)
i) Quartz ii) Hematite iii) Pyrite iv) Mica.

Module-2

- 3 a. Explain the different forms of Igneous Rocks with neat sketches. (12 Marks)
b. Enumerate the classification of Igneous Rocks. (08 Marks)

OR

- 4 a. What is Sedimentation? Explain the Primary Sedimentary structures, with neat sketches. (10 Marks)
b. What is Metamorphism? Explain the different kinds of Metamorphism with example. (10 Marks)

Module-3

- 5 a. Define the terms Dip, Strike and Outcrop. (06 Marks)
b. Explain with a neat sketch, Mural Joints and Columnar Joints. (06 Marks)
c. What are Folds? Explain briefly the different types of folds with neat sketches. (08 Marks)

OR

- 6 a. What are Faults? Name different types of faults. What are the Engineering considerations of faults in the Civil Engineering Projects? (10 Marks)
b. What are the factors considered for the selection of site for dams and reservoirs? (10 Marks)

Module-4

- 7 a. Explain the vertical distribution of ground water with a neat sketch. (10 Marks)
b. Define Aquifer. Explain briefly the different types of Aquifer, with a neat sketch. (10 Marks)

OR

- 8 a. Explain the ground water exploration by Electrical Resistivity method. (10 Marks)
b. Define the terms : (06 Marks)
i) Porosity ii) Permeability iii) Transmissibility.
c. Write short note on Flood control. (04 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-5

- 9 a. What are Earthquake? Add a note on causes and effects of Earthquake. (10 Marks)
b. Write short notes on :
i) Tsunami – causes and effects. (10 Marks)
ii) Landslides – Causes and remedial measures.
- OR**
- 10 a. What is Remote Sensing? What are its application in Civil Engineering? (08 Marks)
b. What is GIS? Name the different components of GIS. (06 Marks)
c. What are the applications of GPS in Civil Engineering? (06 Marks)
