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17CV/CT35

Third Semester B.E. Degree Examination, Feb./Mar. 2022 Engineering Geology

Time: 3 hrs.

Max. Marks: 100

**Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Draw sketches wherever required.**

Module-1

- 1 a. What is Geology? Explain the important of Geology in Civil Engineering field. (10 Marks)
b. With a neat sketch, explain the internal structure of the Earth with discontinuities and composition of earth. (10 Marks)

OR

- 2 a. What is Mineral? Describe classification of Mineral. (05 Marks)
b. Explain the physical properties of given mineral
 i) Baukite
 ii) Haematite
 iii) Gypsum. (09 Marks)
c. Describe any two physical properties from the given following :
 i) HARDNESS
 ii) STREAK
 iii) CLEAVAGE
 iv) FRACTURE. (06 Marks)

Module-2

- 3 a. What are igneous rocks? Explain the classification of igneous rocks. (08 Marks)
b. Explain Sedimentary rocks and its formation. Describe Arenaceous and redaceous texture with example. (06 Marks)
c. What are Metamorphic rocks? Explain the agents of Metamorphism. (06 Marks)

OR

- 4 a. What are faults? Explain the types of faults with diagram. (10 Marks)
b. What are folds? Explain the parts and types of folds with diagram. (10 Marks)

Module-3

- 5 a. What is Weathering? Explain the different types of weathering with examples. (10 Marks)
b. What is Earthquake? Explain the causes and effects of Earthquake. (10 Marks)

OR

- 6 a. Explain Geomorphological aspects in the selection of site for Dam construction. (10 Marks)
b. Write a short on :
 i) Tsunami – its causes and effects
 ii) Landslides – Its causes and Remedial measures. (10 Marks)



Module-4

- 7 a. With a neat diagram, explain the vertical distribution of Groundwater. (06 Marks)
- b. Explain Hydrological cycle and its types. (05 Marks)
- c. Explain the ground water Exploration by Electrical Resistivity method with diagram. (09 Marks)

OR

- 8 a. What are Aquifers? Explain the types of Aquifers with diagram. (08 Marks)
- b. Write a note on Artificial recharge of Ground water by various methods. (06 Marks)
- c. Explain Sea water intrusion and its Remedial measures. (06 Marks)

Module-5

- 9 a. What is Remote Sensing? Explain application of Remote sensing in Civil Engineering. (08 Marks)
- b. Write a note on GPS and its applications. (06 Marks)
- c. Write a shot note on impact of mining on environment. (06 Marks)

OR

- 10 a. Write a note on Natural disaster and their mitigation. (06 Marks)
- b. Write the importance on study of topographic maps and contour maps in civil engineering. (08 Marks)
- c. Explain the applications of GIS in Civil Engineering. (06 Marks)

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