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3E1623

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B.Tech. III Semester (Main/Back) Examination Dec. - 2016

Civil Engg.

3CE3A Engg. Geology

Time : 3 Hours

Maximum Marks : 80

Min. Passing Marks : 26

Instructions to Candidates:

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Unit - I

1. Give a brief account of internal structure and constitution of earth. What are the major characteristics of each region? (16)

OR

1. a) Distinguish between weathering and erosion. Enumerate the various mechanisms of rock weathering. (8)
b) Write a short note on various physical properties of Mineral. (8)

Unit - II

2. a) What is a metamorphic rock? Discuss the various agents of metamorphism. (8)
b) Describe the textures & structures of Sedimentary rocks. (8)

OR

2. a) Discuss about Tabular classification of Igneous rocks. (8)
b) Write a short note on any two :
i. Schistose & Gneissose Structure
ii. Sill, Dyke & Batholith
iii. Engineering properties of rocks. (8)

Unit - III

3. Sketch the different elements of folds, classify and describe the different types of fold with neat sketches. (16)

OR

3. Write short notes on following :

- a) Unconformities & their types
- b) Dip & strike
- c) Heave, Throw, Hanging wall & Foot wall
- d) Primary & Master Joints.

(4×4=16)

Unit - IV

4. Explain the importance of the geological investigation of dams. Describe the various geological factors that may cause trouble in the construction of a dam. (16)

OR

- 4. a) Give a brief outline of the geological survey of tunnels. (8)
- b) Discuss about "Seismic Method" for sub - surface analysis. (8)

Unit - V

5. What is Remote sensing? Write an essay on Electromagnetic Spectrum & Energy Interactions with earth's surface materials. rtuonline.com (16)

OR

5. Write short note on following :

- a) G.I.S Application (8)
- b) Advantages and Limitation of Remote Sensing. (8)

