

B.Tech III Year I Semester (R13) Supplementary Examinations June 2016

**ENGINEERING GEOLOGY**

(Civil Engineering)

Time: 3 hours

Max. Marks: 70

**PART – A**  
(Compulsory Question)

\*\*\*\*\*

- 1 Answer the following: (10 X 02 = 20 Marks)
- Define weathering and its effects.
  - Enumerate the physical properties of minerals.
  - Describe the sills.
  - Illustrate the terminology of the folds.
  - What is cone of depression?
  - Illustrate the epicentre location by three circle method.
  - Write on Wenner and Schlumberger types of electrode configuration.
  - What is radio metric method? State its applications.
  - Explain the relationship between valley topography and types of dams.
  - State where the over brakes are more Geological.

**PART – B**  
(Answer all five units, 5 X 10 = 50 Marks)**UNIT – I**

- 2 (a) Explain the scope and importance of geology in civil engineering works.  
(b) Explain physical weathering.

**OR**

- 3 (a) Explain why the study of minerals by physical properties is advantage.  
(b) Write the physical properties of (i) Garnet. (ii) Hematite.

**UNIT – II**

- 4 (a) Describe the columnar, flow and sheet structures of Igneous rocks.  
(b) Describe the Megascopic study of: (i) Basalt. (ii) Marble.

**OR**

- 5 (a) Compare and describe similar and parallel, open and closed folds.  
(b) Describe the dykes and their importance in civil engineering works.

**UNIT – III**

- 6 (a) Explain the causes for landslides.  
(b) Explain the engineering significance of ground water.

**OR**

- 7 (a) Write on common types of ground water.  
(b) Write on the precautions to be followed for building construction in seismic areas.

**UNIT – IV**

- 8 (a) Explain briefly about Electrical Resistivity method.  
(b) Describe the grouting technique for site improvement.

**OR**

- 9 (a) Explain about the seismic refraction method.  
(b) Describe the Magnetic method of survey.

**UNIT – V**

- 10 (a) Explain the geological structural controls on selection of dam site.  
(b) Explain the methods to control reservoir silting.

**OR**

- 11 (a) Explain the geological structural controls in tunneling.  
(b) Nagajunasagar dam as a case history, explain the geological analysis.