

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 to tunneling.
(b) Nagajunasagar dam as a case history, explain the geological analysis.
