

**ENGINEERING GEOLOGY**

1. Give an account of the geological work of River. Describe various Geomorphologic features created by the river. (14)

OR

2. (a) What is Stratigraphy ? Describe various principles of stratigraphic correlations.
- (b) Discuss the Plate Tectonic Theory, along with various types of plate margins. (14)
3. What is a Mineral ? Describe various physical properties of Minerals. (13)

OR

4. What is Rock Cycle ? Describe the formation of Igneous rocks in nature along with their tabular classification. (13)
5. What are Folds ? Describe various types of fold and their importance in civil engineering projects. (14)

OR

6. (a) Dip of a limestone bed at a tunnel site is found to be 1 in 2.5 along N 20°W. Find its apparent dip along N 60°W. State strike. Scale : 1 unit = 1 cm. (7)
- (b) A sandstone bed is dipping at 30° east on a sloping ground of 10° west. Its outcrop was measured as 160 m wide. Find the true and vertical thickness of sandstone. (7)
- Scale : 1 cm = 40 m.

7. What is an earthquake ? Discuss the cause of its origin.  
Add a note on characteristics of the Seismic Waves. (13)

**OR**

8. What are Landslides ? Discuss various causes of landslides and methods of their prevention. (13)

9. Discuss the following :  
(a) Types of Aquifer  
(b) Porosity and Permeability  
(c) Zones of groundwater occurrence. (13)

**OR**

10. Discuss how geophysical method of Seismic exploration helps in site investigation for civil engineering projects. (13)

11. Write short notes on the following :  
(a) Rock Quality Designation  
(b) Road Metals  
(c) Railway Ballasts. (13)

**OR**

12. Describe the geological factors that influence the stability and safety of a dam project. (13)