

Faculty of Engineering & Technology
Eighth Semester B.E. (Civil)/Eighth Semester B.E.
P.T. (Civil) Examination
ADVANCED ENGINEERING GEOLOGY
Elective—II
Sections—A & B

Time : Three Hours]

[Maximum Marks : 80

INSTRUCTIONS TO CANDIDATES

- (1) Answer **THREE** questions from Section A and **THREE** questions from Section B.
- (2) Assume suitable data wherever necessary.
- (3) Illustrate your answers wherever necessary with the help of neat sketches.

SECTION—A

1. Explain creep in rock mass under combined loading condition. 13
2. What are the principal methods of Geophysical exploration ? Explain the Rock Quality Designation (RQD) method for classification of rocks. 13
3. (a) Describe Modulus of Elasticity and Poisson's Ratio. 6
- (b) Discuss Mohr's theory of Failure. 7

4. Describe in detail necessity and requirement of 'In-Situ' tests. Explain plate load test. 13
5. Write notes on any **THREE** :—
 - (a) Pressure Tunnel Test
 - (b) Dynamic properties of rock
 - (c) Rheological Model
 - (d) Ground water modeling. 14

SECTION—B

6. Describe the pumping test conducted for unconfined aquifer in the field. 13
7. What is Artificial recharging of Ground water ? Explain various methods of artificial recharging. 13
8. Describe various criteria for site location for solid and Biomedical waste from Municipal Corporation. 13
9. Describe the various natural Geological Hazards. Describe prevention and prediction system of land-slides. 13
10. Write notes on any **THREE** :—
 - (a) Rehabilitation system
 - (b) Application of Remote Sensing in Ground water exploration.
 - (c) Intensity and seismic zone of India
 - (d) Land use and land cover planning. 14