

B.E.Eighth Semester (Civil Engineering) (C.B.S.)
Elective - II : Advanced Engineering geology

P. Pages : 2

Time : Three Hours



NKT/KS/17/7537

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Assume suitable data whenever necessary.
 9. Illustrate your answers whenever necessary with the help of neat sketches.

1. What is RQD? Describe the rock quality designation with a suitable diagram and discuss its importance in civil engineering projects. **13**

OR

2. Describe various engineering classification of rocks. **13**

3. What do you understand by rock strengthening? Describe how geological defects in rock masses are treated? Explain the method of grouting and rock bolting. **14**

OR

4. Describe the method of water percolation test conducted at dam foundation site. **14**

5. Explain safe yield. Describe the pumping test conducted for unconfined aquifer at the field. **13**

OR

6. Write short notes on **any three**. **13**

a) Transmissivity and storage capacity of aquifer.

b) Water budget.

c) Ground water fluctuation.

d) Ground water modelling.

7. What is artificial recharging of groundwater? Describe various methods of artificial recharge. **13**

OR

8. What is remote sensing? Describe the basic principle of remote sensing. Add a note on its application in ground water investigation. **13**
9. Describe various sources of ground water pollution and suggest the methods to control the ground water pollution. **13**

OR

10. Discuss various criteria, which are considered for site selection for solid / liquid waste disposal. **13**
11. Explain different types of slides and discuss the causes of landslides. Add a note on preventive measures of slides in the hilly region. **14**

OR

12. Write short notes on **any three**. **14**
- a) Seismic zones of India.
 - b) Rehabilitation process.
 - c) Seismic resistance structures.
 - d) Disaster management after an earthquake.
