B.E. (Civil Engineering) Eighth Semester (C.B.S.)

Elective - II : Advanced Engineering Geology

P. Pages : 1 **TKN/KS/16/7623**

Time : Three Hours * 0 6 8 7 * 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. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.
10. Diagrams and chemical equations should be given whenever necessary.
11. Illustrate your answers whenever necessary with the help of neat sketches.
12. Use of non programmable calculator is permitted.

1. What is R.Q.D? Describe the RQD with a suitable sketch and explain how RQD is useful in site selection for civil engineering constructions. **13**

OR

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

3. Describe different types of defects in rock masses? How are they treated; explain any one method in detail. **13**

OR

4. Discuss the method of water percolation test at dam site. **13**

5. Write short notes on the following. **14**

a) Groundwater trend and fluctuation. b) Safe yield.
c) Storatavity and transmissivity. d) Tube wells.

OR

6. Derive an expression for the steady state discharge of well fully penetrating into a confined aquifer. **14**

7. What is remote sensing? Discuss the basic principle of remote sensing technique. Explain how remote sensing is useful in groundwater investigation. **13**

OR

8. What do you understand by artificial recharging of groundwater. Describe various methods of groundwater recharging. **13**

9. Describe various modes of pollution of surface water and groundwater. **13**

OR

10. Discuss various criteria for waste disposal site selection for solid and liquid wastes. **13**

11. Discuss various causes of land slide. How landslide can be predicted and prevented? **14**

OR

12. Describe various seismic zones of India. What are the preventive measures to prevent losses due to an earthquake for a residential building? **14**

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