

B.E. (Civil Engineering) Third Semester (C.B.S.)  
**Engineering Geology**

P. Pages : 2

Time : Three Hours



**TKN/KS/16/7298**

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. a) What is plate tectonics? Discuss its salient features and various types of plate margins. **7**  
b) Describe various physiographic and tectonic divisions of India. **7**

**OR**

2. Describe in details the geological work of wind in respect of erosion, transportation and deposition. **13**  
3. What is mineral? Describe in detail the physical properties of minerals with typical examples. **13**

**OR**

4. What are sedimentary rocks? How are they formed? Describe in detail the classification of sedimentary rocks. Add a note on its importance in civil engineering works. **13**  
5. What are faults? Describe various types of faults and their importance in civil engineering projects. **14**

**OR**

6. a) A shale bed in a railway cutting is dipping at 1 in 3.5 along 545°w. Find the directions in which its dip is 1 in 6. State strike. Give procedure. Scale : 1 unit = 1cm. **7**  
b) A limestone bed is dipping at 45° in a slope 15° west with its outcrop 200m wide. Find the true and vertical thickness of limestone bed. Write procedure. Scale 1 cm = 40m. **7**  
7. What is an earthquake? Discuss various causes of earthquakes. Describe in brief the characteristics of various seismic waves. **13**

**OR**

8. What are landslides? How are they caused? Describe the various methods of prevention of landslides. **13**
9. a) What is hydrologic cycle? Describe various zones of groundwater. **7**
- b) Differentiate between confined aquifer and unconfined aquifer with the help of neat sketches. **6**

**OR**

10. What are various geophysical methods of site investigation. Describe in details about electrical resistivity method. **13**
11. Discuss the following. **14**
- a) Rock quality Designation (R. Q. D).
- b) Building stone.
- c) Railway Ballasts.

**OR**

12. a) Describe the problems that are met in construction of dam on inclined beds, folded rocks and faulted rocks. **7**
- b) Discuss the problems that are ment in construction of tunnel in inclined beds and folded rocks. **7**

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