

B.E. Civil Engineering (Model Curriculum) Semester-IV  
**PCCCE403 - Engineering Geology**

P. Pages : 1

Time : Three Hours



**GUG/W/23/13717**

Max. Marks : 80

- Notes :
1. All questions carry equal marks.
  2. Assume suitable data wherever necessary.
  3. Diagrams and Chemical equation should be given wherever necessary.
  4. Illustrate your answers wherever necessary with the help of neat sketches.

1. What is earthquake? Describe the origin of earthquake. Give the examples of major earthquake in India. 16

**OR**

2. What are Rock Farming Minerals? Describe the various Physical properties that help in their megascopic identification. 16

3. What is fold? Describe the classification of fold. Add a note on their importance in Civil Engineering part of view. 16

**OR**

4. a) A limestone bed is dipping in a dam site at the rate of 1 in 4 along N15° W and its apparent dip along N 50° W. Give procedure scale 1 unit = 1 cm. 8

b) A sandstone formation is dipping at 30° east into a sloping ground 10°W. The width of its outcrop is 160 m. Find the true and vertical thickness of the sandstone formation. Write procedure scale 1 cm = 40 m. 8

5. What are igneous rocks? Discuss the tabular classification of igneous rocks with examples. 16

**OR**

6. What are metamorphic rocks? Describe the various agents of metamorphism with examples. 16

7. What is Prospecting? Explain the electrical resistivity method of geophysical exploration in detail. 16

**OR**

8. Discuss the brief account of the geological knowledge as applied in the construction of tunnels. 16

9. Describe the various zones of ground water in the rocks that occur below the earth surface. Explain aquifer, aquiclude and aquifuge. 16

**OR**

10. Write short notes on following: 16

- a) Hydrological cycle
- b) Water table maps
- c) Perched water table
- d) Springs

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