B.E. Civil Engineering Sem-III (Old Pattern)

CL301 - Engineering Geology

P. Pages : 1 **GUG/S/19/1469**

Time : Three Hours * 1 1 4 3 * 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 an earthquake. Give the examples of major earthquake in India. **16**

OR

2. What is mineral? Describe various physical properties that help in their megascopic identification. **16**

3. What are faults? Describe the classification of fault with neat sketches. Add a note on recognition of fault in the field. **16**

OR

4. a) A sandstone bed in a bridge abutment is dipping at 1 in 5 along N 45º west. Find the directions in which its apparent dip is 1 in 8. Give procedure scale 1 unit = 1 c. m. **8**

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

5. What is rock cycle? Discuss the formation of igneous rock. Give the tabular classification of igneous rocks. **16**

OR

6. What is sedimentary rock? Describe the classification and structures of sedimentary rocks with examples. **16**

7. What is prospecting? Explain the electrical resistivity method of geophysical prospecting in detail. **16**

OR

8. Discuss the geological conditions which leads to location, design and construction of successful dam. **16**

9. Describe hydrological cycle with different components. Describe the occurrence of ground water below the earth surface. **16**

OR

10. Write short notes on:- **16**

a) Confined and Unconfined aquifer.
b) Water table map and their uses.
c) Porosity and permeability of rocks.
d) Perched water table.

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