CE 221 (R-22)

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II/IV B. Tech. DEGREE EXAMINATIONS, AUGUST - 2024

Second Semester

CIVIL ENGINEERING

ENGINEERING GEOLOGY

Time : **Three Hours** Maximum : **70** Marks

Answer ONE question from each Unit. 5x14=70 M

All Questions carry equal marks.

UNIT - I

1. a) Give a brief account of the importance of geology in civil engineering. Explain your answer by giving suitable example.

   b) Write the importance of different physical properties in mineral identification.

(OR)

2. a) Explain the Branches of Geology ?

   b) Write the civil engineering importance of weathering and erosion.

UNIT - II

3. Describe following Rock properties in detail :

   (i) Sand stone (ii) Marble (iii) Basalt (iv) Pegmatite (v) Gneiss (vi) Laterite (viii) Quartzite.

(OR)

4. a) Explain civil engineering importance of petrology.

   b) Explain how are the sedimentary rocks formed ? Describe the various structures present in the rocks ?

UNIT - III

5. Explain classification of structures associated with rocks like folds, faults, joints and unconformities and their civil engineering importance.

(OR)

6. Enumerate the classification and causes of landslides and give their safety measures.

P.T.O.

UNIT - IV

7. a) What are source and forms of ground water ?

   b) Explain Darcy's law and assumptions ?

(OR)

8. a) What are various types and distribution of physiographic regions.

   b) Explain any method to lower water table.

UNIT - V

9. a) Explain Seismic Refraction Method.

   b) Discuss the geological investigations that are carried out for tunneling.

(OR)

10. a) What are materials used in grouting. Explain any one method of grouting.

    b) Explain geology of some dam sites.