

21792

Name:

Reg. No.

**EIGHTH SEMESTER B.TECH. DEGREE EXAMINATION, DECEMBER
2011**

CE.04.805C – Soil Exploration Testing and Evaluation

Time: Three hours

Maximum : 100 marks

(Answer all questions)

1. a. (i). How would you decide the depth, size and number of boreholes in soil exploration? (10 marks)
(ii). What are the factors affecting handling, preservation and transportation of samples? Explain. (15 marks)
OR
b. (i). Explain with neat sketch, the preparation of soil investigation reports. (10 marks)
(ii). Describe in brief various geophysical methods. Discuss their limitations and uses. (15 marks)
2. a. (i). What is particle size distribution curve? What are its uses in soil engineering? (10 marks)
(ii). What are the different methods for determination of the coefficient of permeability in a laboratory? Discuss their limitations. (15 marks)
OR
b. (i). What is the coefficient of consolidation? What is its use in settlement analysis and their validity? (10 marks)
(ii). Explain with neat sketch, the working procedure of vane shear test. (15 marks)
3. a. Discuss with neat sketch, the working procedure of standard penetration test. What are the various corrections? What is the importance of the test in soil engineering? (25 marks)
OR
b. Explain what are the various tests conducted to determine the permeability of soil in the field. (25 marks)
4. a. Explain the various laboratory tests for the determination of the strength of rocks. (25 marks)
OR
b. Explain what are the commonly used tests for the measurement of in-situ stresses in rocks. (25 marks)

(4x25=100 marks)

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