

**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION  
MAY 2012****CE 04 805 C—SOIL EXPLORATION, TESTING AND EVALUATION**

Time : Three Hours

Maximum : 100 Marks

*Assume any relevant data suitably.*

1. (a) What is meant by soil exploration ?
- (b) List out and explain the main objectives of soil exploration.
- (c) Write short notes on : (i) Different methods of boring.  
(ii) Rock core recovery.

(5 + 5 + 15 = 25 marks)

*Or*

2. (a) List out the various methods of soil exploration and explain any two in detail.
- (b) Explain briefly about handling, preservation and transportation of soil samples.
- (c) Explain the various main factors to be considered while preparing soil investigation reports.

(10 + 10 + 5 = 25 marks)

3. Write short notes on :

- (a) Compaction.
- (b) Consolidation.
- (c) Atterberg's limits.
- (d) Permeability.
- (e) Water content and specific gravity.

(5 + 5 + 5 + 5 + 5 = 25 marks)

*Or*

4. Write short notes on :

- (a) Direct shear test.
- (b) Triaxial test.
- (c) Unconfined compression test.
- (d) Vane shear test.
- (e) Cohesion and shear strength.

(5 + 5 + 5 + 5 + 5 = 25 marks)

5. Explain in detail the following :

- (a) Plate Load Test.
- (b) Static Cone Penetration Test.
- (c) Dynamic Cone Penetration Test.

(8 + 8 + 9 = 25 marks)

*Or*

Turn over

6. Explain in detail the following :

- (a) Field permeability Test.
- (b) Field Vane Shear Test.
- (c) Pressure meter Test.

(8 + 8 + 9 = 25 marks)

7. List out the various laboratory testing for rocks and explain any three in detail.

(1 × 25 = 25 marks)

*Or*

List out the various field testing for rocks and explain any three in detail.

(1 × 25 = 25 marks)