

**B.Tech. Civil (Construction Management) /
B.Tech. Civil (Water Resources Engineering)**

Term-End Examination

June, 2016

00600

ET-501(B) : FOUNDATION ENGINEERING

Time : 3 hours

Maximum Marks : 70

Note : Attempt any **five** questions. All questions carry equal marks. Use of scientific calculator is permitted. Assume any missing data suitably.

1. (a) What are the different types of borings used for soil investigation ? Explain any one with neat sketches. 7
- (b) Describe the method of conducting Standard Penetration Test. 7
2. (a) Define the following : 7
 - (i) Ultimate bearing capacity
 - (ii) Net bearing capacity
 - (iii) Safe bearing capacity
- (b) Explain different modes of failure of foundation with neat sketches. 7

3. (a) Name the various criteria governing the selection of type of foundation for a building. 7
- (b) How will you design an eccentrically loaded footing? 7
4. (a) What is settlement? What are the different types of settlement? 7
- (b) What is consolidation settlement and creep settlement? 7
5. (a) What is earth pressure? Explain clearly Coulomb's theory of earth pressure. 7
- (b) What are the types of retaining walls? Explain clearly any one of them. 7
6. (a) What are the forces acting on foundations? Explain with neat sketches. 7
- (b) Explain the difference between the following: 7
- (i) Pier and Well foundations
- (ii) Floating foundations and Normal foundations
7. (a) How are piles driven at site? 7
- (b) What is negative skin friction? Explain its effect with a neat sketch. 7
8. (a) Explain Wave Propagation Test. 7
- (b) What are the loads acting on well foundations? 7