

PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT — I

- III (a) Explain history of development of soil mechanics. 5
- (b) Explain the procedure for determining water content of soil by oven drying method. 5
- (c) Explain consistency limits of soil. 5

OR

- IV (a) Explain the procedure to determine the Shrinkage limits of soil. 8
- (b) Define the terms Shrinkage ratio and plasticity index of soil. 7

UNIT — II

- V (a) Explain the procedure for determining the coefficient of permeability of soil by constant head permeability test. 7
- (b) Describe various field compaction methods for different types of soil. 4
- (c) Explain factors affecting compaction of soil. 4

OR

- VI (a) List the factors affecting permeability. 6
- (b) Find Max. dry density of soil sample having sp. gr. of 2.7 and OMC = 16%. 9

UNIT — III

- VII (a) State Terzaghi's theory of bearing capacity. 8
- (b) Describe Plate load test with sketch. 7

OR

- VIII (a) What is the need of General Exploration and Detailed Exploration. 8
- (b) Briefly explain different types of Boring methods. 7

UNIT — IV

- IX (a) Explain the procedure for design of a continuous footing based on Rankine's theory. 8
- (b) Classify and explain Pile foundations. 7

OR

- X (a) Explain well foundation and well curb with figure of components. 8
- (b) Identify causes of failure of well foundations and rectifying methods. 7