PVP 12

Code: CE1T4

I B.Tech-I Semester – Regular Examinations-February 2014

INTRODUCTION TO CIVIL ENGINEERING

(FOR CIVIL ENGINEERING)

Duration: 3 hours Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

1 a) A steel bar of 300mm diameter carries an axial tensile force of 50kN. Find the axial strain and lateral strain of the rod. Take E= 200 GPa, Poisson's ratio (μ) = 0.30. 6 M

b) Define the terms stress, strain, Hook's law, volumetric strain, Poisson's ratio and modulus of elasticity 8 M

2 a) Briefly explain the laboratory tests done on bricks 7 M

b) List out and explain the characteristics and qualities of stones. 7 M

3 a) Explain about different types of bonds used in brick masonry. 7 M

b) Write different types of stone masonry with neat sketches 7 M

4 a) Explain various methods available to calculate bearing capacity of soils 7 M

b) Write different types of foundations with neat sketches. 7 M

5 a) What are the basic principles of surveying? 7 M

b) Briefly explain the methods of measurement of distance. 7 M

6 a) Name the different types of roads and briefly explain them. 7 M

b) Draw the cross section of road and mention its components. 7 M

7 a) Describe the different types of bridges 7 M

b) Explain in detail the necessity of bridges 7 M

8 a) Name the different types of dams and briefly explain them. 7 M

b) Explain briefly about the components and purpose of dams. 7 M