B.Tech(Integrated M.Tech/MBA) 1st Semester Examination
Jan.2014
Elements of Civil Engineering
Subject Code: CEL-101

Time Allowed: 03 hours.              Maximum Marks: 100

Before answering the question paper the candidate should ensure that they have been supplied the correct question paper. Complaints in this regard, if any, shall not be entertained after the examination.

Note: Question No. 1 is Compulsory and attempt two questions from each section. All questions carry equal marks.

1. a) What do Civil Engineer Do?
b) What is the difference between a Civil Engineering and An Architech? c) Write a short note on Civil Engg. History. d) Name basic component of any Building Structure. (4 x 5)

SECTION - A

b) Explain the method of Plane Table Survey? c) What is orientation? Explain the method of orientation? 

3. a) What is a set-back? b) explain Light Plane. c) What is Floor Space Index? d) What is the importance of Bye-Laws? (4 x 5)

4. a) How, presence of termites can be defected on a building site? (4)
b) A Residential plot of area 600 m² in the city area with permissible. FSI of 2 is be constructed i) what is the Maximum built-up are which can be put up on the plot? (3) ii) How this built-up area can be consumed? (3)

c) Explain composite structure with the help of a neat sketch. (5+5)

SECTION - B

5. a) What is Topographical Surveying? (5) b) Name Classification based on Surveying Instruments used and Methods employed. (5) c) Explain with sketches the principle of surveying to fix or to locate new points or station by at least two independent measurements or process. (10)

6. Explain the following.
a) Stress strain curve of mild steel with a neat sketch. b) Difference between Isotropic material and anisotropic materials with practical example. c) Define ductility, Brittleness, Young’s Modules and shear modules? d) What is Beam? Explain various types of beam according to their end condition. (4 x 5)

7. a) What is the different between Normal Concrete and Pre-Stressed concrete? Explain the advantage of Pre-Stressed concrete? (10) b) Draw the SF and BM diagram of the simply supported beam of length 6m, carrying a full span udl of 3.5 KN/m. (10)