Subject : Basic Civil Engineering   Code : 59179 / 59935

First Year Engineering SEM. – I and II

(New Syllabus : Introduced from July 2013)

Day and Date : Friday, 23-05-2014   Time : 10 a.m. to 1.00 p.m.

Total Marks: 100

Instructions : 1) All questions are compulsory.

2) Figures to the right indicate full marks.

3) Make suitable assumptions wherever

Necessary and mention it clearly.

4) Use of non-programmable calculator is allowed.

SECTION - I

Q.1 a) "Civil Engineering is very much relevant to other branches of engineering." Explain this statement.   08

OR

a) Explain Aspect, Prospect, Grouping and Privacy as a building planning principles.   08

b) Write a short note on building bye laws and their importance.   04

(c) Write a note on safety of building against fire and lightening.   04

Q.2 **Answer the following.**

a) Explain substructure and superstructure as components of building with the help of neat sketch.   06

b) What are various factors affecting bearing capacity of soil?   06

c) Write a note on pile foundation.   06

Q.3 a) Write a note on defects of timber and seasoning of timber.   08

OR

a) Differentiate between

i) P.C.C. and R.C.C.

ii) Load bearing structure and   framed structure.   08

b) Draw neat figures of cross sections of rolled steel sections commonly used in steel framed structure.   04

c) Explain in brief types of loads considered in the design of building. 04

Q. 4 a) Define Surveying. What is object and principles of Surveying?   06

OR

a) Explain in detail temporary adjustments of dumpy level.   06

b) What is fore bearing and back bearing of a line?   04

OR

b) How will you find out area of a given figure by using Planimeter?   04

c) The following bearings were observed while running a closed compass traverse ABCDA.

Line	AB	BC	CD	DA
F.B.	44°30'	124°30'	181°0'	289°30'
B.B.	226°30'	303°15'	1°0'	108°45'

Calculate the included angles & corrected F.B. & B.B.   08

Q.5   Attempt any four of following.   16

a) What is local attraction ? Explain how will you detect the local attraction.

b) Distinguish between Plane & Geodetic Surveying.

c) Explain the following terms.

  i) RL &

  ii) B.M.

a) What are the Characteristics of Contour ?

b) What are the different types of 'Rail Gauges'?

c) Explain how will you carry out standardization of Chain.

Q. 6 a) The following consecutive reading were taken with a level & a staff on a continuously sloping ground at 20 m. interval.

  0.602 (BM = 192.12), 1.234, 1.860, (2.574 & 0.238) C.P., 0.914,

  1.936, (2.872 & 0.568) C.P., 1.824, 2.722.

Draw up a page of level book, by using rise & fall method find out R.L.S. of all points. Calculate gradient of line joining first & last station. Write sample calculation.   09

b) Draw a labeled cross section of bituminous & concrete pavement   04

c) Comment on uses of contour.   03