Total No. of Pages : 2

Seat No.	

S.E. (Civil) (Semester - III) Examination, December - 2014
BUILDING CONSTRUCTION
Sub. Code : 42657

Day and Date : Wednesday, 17 - 12 - 2014 **Total Marks : 100**

Time : 9.30 a.m. to 1.30 p.m.

Instructions : 1) **Q.No. 1 is compulsory.**
2) **Attempt any two questions from the remaining question from Section - I.**
3) **Use full imperial sheet to solve Section - II.**

SECTION - I

Q1) a) What are the basic requirements of a building as a whole? **[10]**

b) Enlist various loads on the building. **[4]**

c) Enlist four types of cement. **[4]**

Q2) a) When combined footings are used? Explain with an example. **[8]**

b) Differentiate between load bearing structure and framed structure. **[8]**

Q3) a) Explain methods of compacting and curing of concrete for slab. **[8]**

b) What is mortar? Give its types. Give typical proportion of mortars for various types of masonry. **[8]**

P.T.O

Q4) Write notes on ***any four***. **[16]**

a) Formwork.

b) Use of timber construction.

c) Requirement of good building stone.

d) Components of a stair.

e) Composite masonry.

SECTION - II

Q5) Draw complete details of a R.C.C. staircase for an office building leading from the ground floor to first floor. Height of the floor is to be 3.60 m and the width of step is to be 1.20 m. Provide a lift well 1.20 m × 1.80 m. Write the design steps on the drawing sheet. Assume suitable data wherever necessary. Use scale 1:20. **[25]**

OR

Design a R.C.C. dog-legged stair for residential building in which the distance between floors is 3.00 m and the stair hall measures 2.1 m × 4.50 m internally. Draw plan and section with scale 1:20. Write the design steps on the drawing sheet. Assume suitable data wherever necessary.

Q6) Draw to a scale of 1:10 sectional plan, elevation and sectional side view for a Teak Wood paneled door, secured in a brick masonry of 230 mm thick, using the following data:

Clear opening of door – 900 mm × 2100 mm.

Frame cross section – 125 mm × 75 mm.

Styles – 125 mm × 40 mm.

Top rail and Bottom rail – 125 mm × 40 mm.

Intermediate Rail – 125 mm × 40 mm.

Lock Rail – 150 mm × 40 mm.

No. of Shutters – 2 Nos.

No. of Panels – 6 Nos. (3 in each shutter)

Show all dimensions, label various parts and different fixtures at proper locations of the door. **[25]**

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