Roll No ................................

## CE/FT-305

## B.E. III Semester

Examination, June 2014

## Building Design and Drawing

*Time : Three Hours*

***Maximum Marks : 70***

*Note:* Answer five questions. All parts of each question are to be attempted at one place. All questions carry equal marks. Assume suitable data, if required and state them clearly.

1. a) Draw a neat, labelled and proportionate diagram of an under-reamed pile foundation. Show all the details of stem, bulbs, spacing etc.    10

   b) Draw the dimensioned sketch of a door frame with double door along with the fastenings.    4

OR

2. Design and draw a dog-legged staircase with the following details – Floor to ceiling height = 3.3m size of staircase room– 4.5m×2.5m. Follow N.B.C. provisions.    14

3. Explain the following terms with their significance and give provisions laid down in N.B.C for them:    14

   a) Mezzanine Floor        b) Basement
   c) FAR                    d) Ventilation Shaft
   e) Parking Space          f) Loft
   g) Building Line

OR

4. a) Explain the principles of building planning along with their significance.    10

   b) Describe unity and contrast in context with the architectural design of buildings.    4

5. a) What do you mean by the fire resistance of a building and how can it be measured, as per the N.B.C.? How the fire-safety in the public buildings can be ensured.    10

   b) What is the reverberation time and how can it be measured.    4

OR

6. a) Explain acph in context with the ventilation in the buildings. Give typical values of acph for various occupancy buildings.    7

   b) Explain various methods of building construction which will provide thermal insulation in buildings. Also draw neat sketches for each of them.    7

7. Draw working plan and a section of a single roomed, building with front verandah, showing all the details at various levels.    14

OR

8. Design a primary school building and draw its plan to scale and give schedule of joinery.    14

9. Draw an oblique perspective view of a flight of 5 steps each 1.5m wide with a tread of 30cm and rise of 20cm. Assume suitable position and height of the observer.    14

OR

10. a) Define the following terms of perspective drawing    4
    i)   Station point        ii) Picture plane
    iii) Vanishing point      iv) Parallel perspective

    b) Draw an oblique perspective view of a building rectangular in plan and seen from top.    10

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