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Third Semester B.E. Degree Examination, June/July 2015
Building Materials and Construction Technology

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions, selecting
atleast TWO questions from each part.**

PART – A

- 1
 - a. Explain various types of shallow foundations. (05 Marks)
 - b. What is subsoil exploration? Explain any one method. (05 Marks)
 - c. Design a strip footing for a brick wall 230mm thick, and 3.2m high above ground level. The wall carries a superimposed load of 100kN per metre run. The soil has unit weight of 18 kN/m³, angle of repose 30°, SBC of 180 kN/m². The footing is provided with cement concrete base which has unit weight of 24 kN/m³ and modulus of rupture of 480 kn/m². Take unit weight of brick masonry as 19.5 kN/m³. (10 Marks)
- 2
 - a. Explain with sketches various types of closer bricks. (05 Marks)
 - b. Sketch plans of consecutive two layers of English bond for one and half brick thick wall. Also show the elevation of wall. (10 Marks)
 - c. Explain with a neat sketch Ashlar chamfered stone masonry. (05 Marks)
- 3
 - a. Explain with neat sketches, various types of Lintels. (10 Marks)
 - b. What are the advantages of arch over a lintel? (05 Marks)
 - c. What are the loads coming over a lintel and how they are estimated? (05 Marks)
- 4
 - a. Sketch a Queen post truss made of timber, which has to support tile roofing. Name the components of the truss and nature of force in them. (08 Marks)
 - b. Explain the requirements of a good floor. (06 Marks)
 - c. Explain with a neat sketch flat slab flooring. (06 Marks)

PART – B

- 5
 - a. Draw a neat sketch of a wooden door with shutter, name the parts. (08 Marks)
 - b. Write notes on: i) Revolving door; ii) Collapsible door; iii) Rolling shutter. (12 Marks)
- 6
 - a. Briefly explain the requirements of a good stair. (05 Marks)
 - b. Write a note on different types of stairs. (05 Marks)
 - c. Plan a stair case for a residential building in which the room size for the staircase is 3m × 4.5m and height between floor finishes is 3.30m. Draw neat sketches. (10 Marks)
- 7
 - a. What are the objects of plastering and pointing? (06 Marks)
 - b. Explain different types of plaster finishes. (06 Marks)
 - c. Describe types of paints available in market and their specific usage. (08 Marks)
- 8

Write short notes on:

 - a. Types of glasses.
 - b. Use of plastics in buildings.
 - c. Formworks.
 - d. Damp proofing in building. (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.