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First Semester B.Arch. Degree (CBCS) Examination, Dec.2016/Jan.2017
Materials and Methods in Building Construction - I

Time: 4 hrs.

Max. Marks:100

Note: Answer FIVE full questions, selecting ONE questions from each module.

Module – 1

- 1 a. What are load bearing and framed structures? Explain with the help of sketches. (05 Marks)
- b. To a suitable scale, draw a typical wall section of a load bearing structure and mark the various parts from foundation to parapet wall. (15 Marks)
- 2 a. Draw a queen closer and a bevelled bat in an appropriate scale. (05 Marks)
- b. Explain the various stages in the manufacture of burnt clay bricks. (15 Marks)

Module – 2

- 3 Draw the plans (odd and even course) and elevations (four courses high) of a corner (L junction) of a one and a half brick thick wall using the following bonds:
i) English bond ii) Flemish bond. (20 Marks)
- 4 a. Construct and mark the parts of a stone masonry segmental arch of span room to a suitable scale. (10 Marks)
- b. Write a short note on the types of stones and uses of stone in building construction. (10 Marks)

Module – 3

- 5 Explain the properties and uses of the following materials in building construction :
a. Hollow concrete blocks b. Fly ash blocks
c. Glass blocks d. Solid concrete blocks. (20 Marks)
- 6 a. Explain with sketches wall construction with stabilized mud blocks. (10 Marks)
- b. With sketches, list the various uses of hollow clay blocks in buildings. (10 Marks)

Module – 4

- 7 a. Draw to a suitable scale, brick masonry foundation details for a one brick thick load bearing wall. (08 Marks)
- b. Draw to a suitable scale, stone masonry foundation details for a one brick thick external load bearing wall. (12 Marks)
- 8 a. Illustrate the various defects commonly found in timber. (05 Marks)
- b. Explain in detail the process of seasoning and preservation of timber. (15 Marks)

Module – 5

- 9 Draw to a suitable scale, the plan, elevation, and a joinery detail of the following :
a. A wooden panelled door of width 1000mm and Height 2100mm
b. A wooden battened door of width 1200mm and Height 2100mm. (20 Marks)
- 10 Draw to a suitable scale, the plan elevation and joinery detail of the following :
a. A wooden glazed casement window of width 1200mm and height 1350mm.
b. A wooden glazed top hung window of width 800mm and height 600mm. (20 Marks)

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2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.