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14ARC1.2

## First Semester B. Arch Degree Examination, June/July 2015

### Materials and Methods in Building Construction - I

Time: 4 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions,  
Choosing ONE question from each module.  
2. All questions carry equal marks.  
3. Use only drawing sheet supplied for answering all questions.**

#### MODULE I

- 1 a. Name the various components of a building and illustrate the same with a sectional sketch. (10 Marks)  
b. Give conventions for any five different building materials used in Architectural drawings (10 Marks)
- 2 a. Write the manufacturing process of burnt bricks. (08 Marks)  
b. Explain following with sketches.  
i) Queen closer ii) Frog  
iii) half brick bat iv) Course. (12 Marks)

#### MODULE II

- 3 Draw plans, elevation and section of a one brick thick masonry wall with English bond with 1.80m length and six courses. Use a scale of 1:10. (20 Marks)
- 4 Draw elevation and section of a 450mm thick coursed random rubble masonry wall, with 1.80 length and six courses. Use a scale of 1:10. (20 Marks)

#### MODULE III

- 5 a. Write on hollow and solid concrete blocks (bricks) and explain their uses. (10 Marks)  
b. Explain stabilized mud blocks (bricks) with their uses in construction. (10 Marks)
- 6 Explain Fly ash bricks with its manufacturing method. (20 Marks)

#### MODULE IV

- 7 Draw to a scale of 1:10 the of foundation for 230 mm thick load bearing wall. Assume suitable data. (20 Marks)
- 8 a. Explain the different types of defects found in timber. (10 Marks)  
b. Write on seasoning and preservation of timber. (10 Marks)

#### MODULE V

- 9 a. Draw plan, front elevation and section of ledged and braced door, measuring 1.00 × 2.10m in size, to a scale 1:10 (10 Marks)  
b. Highlight any two joinery details for the same ledged and braced door to a scale of 1:2. (10 Marks)
- 10 a. Draw plan elevation and section of wooden glazed window of size 1.20m × 1.20m. (10 Marks)  
b. Highlight any two joinery details for the same glazed window to a scale 1:2. (10 Marks)

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