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## Seventh Semester B.Arch. Degree Examination, June/July 2023 Materials and Methods in Building Construction - VII

Time: 4 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.  
2. Answer the questions with relevant, neat sketches.**

### Module-1

- 1 a. Design a showcase with the following requirements :
- (i) TV Panels
  - (ii) Storage units.
  - (iii) Display Shelves
- Draw a plan at two levels and elevation (1 : 20) (15 Marks)
- b. Draw the detail of a glass shutter fixing to wood panel, scale 1 : 5. (05 Marks)

OR

- 2 Write short notes on the following with relevant sketches :
- a. Laminate.
  - b. MDPE
  - c. Particle Board.
  - d. Plywood.
- (20 Marks)

### Module-2

- 3 a. Design a wooden partition wall, for an office of dimension 21 m × 2.1 m space. The partition wall should have a door incorporated in it. Draw plan, section, elevation to a scale of 1 : 20. (15 Marks)
- b. Draw the joinery detail of the function of the wooden door and its fixing details. (05 Marks)

OR

- 4 a. Design a Modular kitchen with hob, sink, microwave oven space, fridge space for a kitchen dimension of 2.7m × 2.7m.
- b. Draw the plan at two levels (scale 1 : 20). Any one side elevation (scale 1 : 20) and section (scale 1 : 20). (20 Marks)

### Module-3

- 5 Design a false ceiling for an interior design showroom passage, of dimension 6.0m × 2.7m , showing the following details :
- a. Reflected ceiling plan to a scale of 1 : 20. (05 Marks)
  - b. Cross section to a scale of 1 : 10 (10 Marks)
  - c. Any one detail to a scale of 1 : 5 (05 Marks)

OR

- 6 Explain the following with neat sketches :
- a. Method of Pre-Tensioning.
  - b. Method of Post-Tensioning. (20 Marks)

**Module-4**

- 7 a. Draw a Typical sketch of a plain raft foundation, showing all the reinforcement details. (10 Marks)  
b. Explain, when the raft foundations are used listing out the advantages. (10 Marks)

**OR**

- 8 Write short notes on (with neat sketches) :  
a. Cast-in-situ piles in wood.  
b. Pre-cast piles  
c. Pile-caps  
d. Mechanically stabilized earth walls. (20 Marks)

**Module-5**

- 9 a. What are the preferred characteristics of a prefabrication system? (10 Marks)  
b. Explain any one advanced method of building construction. (10 Marks)

**OR**

- 10 a. Briefly explain the various types of Preservation of Bamboos, under Non Chemical (traditional) method of preservation, with relevant sketches. (10 Marks)  
b. Sketch different types of Bamboo walls. (10 Marks)

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