

# CBCS SCHEME

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18ARC62

## Sixth Semester B.Arch. Degree Examination, Jan./Feb. 2023 Materials and Methods in Building Construction – VI

Time: 4 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing one full question from each module.*

### Module-1

- 1 Briefly describe glass manufacturing process with sketches. Explain in short the following:
- Manufacturing and use of tinted/decorative glass.
  - Laminated glass manufacturing and uses.
  - Etched glass manufacturing and uses. (20 Marks)

**OR**

- 2 Explain glass as a building material along with different types used in construction:  
Consider a lobby of 10000mm (wide) × 3000mm (height). Draft the details for a frameless glass partition. Partition should also have an access door of [2000mm(w) × 2450mm(h)].  
Draft i) Plan ii) Section at door iii) Elevation iv) Details at 1:5 scale (minimum 2) chose appropriate scale for plan, section and elevation. (20 Marks)

### Module-2

- 3 Consider an office elevation of 20000mm(wide) × 4500mm(height). Draft details of structural glazing for the length. Draft the following:
- Plan, section, elevation (choose appropriate scale)
  - Section of the grazing profile (scale 1:5)
  - Glass fixing detail to the gazing profile. (20 Marks)

**OR**

- 4 Consider a building façade which has an ACP cladding area of 3000mm(wide) × 12000mm(height) ACP cladding area starts from ground level and terminates at parapet level (12000mm height). Draw,
- Plan section elevation at appropriate scale of the ACP cladding.
  - Detail of ACP panel fixing to wall at 1:10 scale.
  - ACP termination detail at parapet at 1:10 scale. (20 Marks)

### Module-3

- 5 Explain the advantages of UPVC doors and windows over wooden sliding and folding doors and windows. Also state the disadvantages.  
Draft to appropriate scale.
- Typical section of a sliding UPVC window frame.
  - Typical section of a casement UPVC door with door. (20 Marks)

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.

OR

- 6 Draft to scale wooden sliding and folding door for a partition of 5000mm(length) and 4000mm(height) include the following detail:
- Joinery detail scale (1:10)
  - Sliding track, roller detail (1:10)
  - Key plan, section, elevation (appropriate scale).
- (20 Marks)

**Module-4**

- 7 Consider a partition of 6000 (length) × 3000 (height), detail a steel sliding and folding door for the same. Draft:
- Plan section and elevation at aggregate scale.
  - Steel frame detail at sliding junction (1:10).
  - Track and roller detail (1:10).
- (20 Marks)

OR

- 8 Consider a partition of 6000 (length) × 3000 (height) detail a aluminum sliding and folding door for the same. Profit
- Plan section and elevation at appropriate scale.
  - Aluminum frame detail at sliding function (1:10).
  - Track and roller detail (1:10).
- (20 Marks)

**Module-5**

- 9 Explain how skylights have influenced the design in urban scenarios. Draw sketches for different types of skylights and their uses.
- (20 Marks)

OR

- 10 a. Explain alternative wall technologies in brief with advantages and disadvantages.  
b. Explain with sketches uses, advantages and disadvantages of sandwich wall and roof panel walls.
- (20 Marks)

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