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:
a. Manufacturing and use of tinted/decorative glass.
b. Laminated glass manufacturing and uses.
c. 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:
a. Plan, section, elevation (choose appropriate scale)
b. Section of the grazing profile (scale 1:5)
c. 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,
a. Plan section elevation at appropriate scale of the ACP cladding.
b. Detail of ACP panel fixing to wall at 1:10 scale.
c. 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.
a. Typical section of a sliding UPVC window frame.
b. Typical section of a casement UPVC door with door. **(20 Marks)**

OR

6 Draft to scale wooden sliding and folding door for a partition of 5000mm(length) and 4000mm(height) include the following detail:

a. Joinery detail scale (1:10)
b. Sliding track, roller detail (1:10)
c. 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:

a. Plan section and elevation at aggregate scale.
b. Steel frame detail at sliding junction (1:10).
c. 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

a. Plan section and elevation at appropriate scale.
b. Aluminum frame detail at sliding function (1:10).
c. 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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