

CBCS SCHEME



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Sixth Semester B.Arch. Degree Examination, Dec.2023/Jan.2024 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 a. Describe in brief the process of glass manufacture. (10 Marks)
b. What are the various types of glass available in the market? Describe their salient features and their application in the construction industry. (10 Marks)

OR

- 2 A showroom in a shopping mall requires a frameless glass front to display their products. Design a frameless glass façade with a operable swing door hinged on top and bottom pivots for a door size of 1200 mm × 2400 mm. The pivots of shop is 6000 mm × 3500 mm. Draw to subjected scale.
(a) Plan, Elevation, Section
(b) Any two details. (20 Marks)

Module-2

- 3 What is the benefit of using structural glazing in buildings, where is it used? Explain using an example of a building where it can be applied and highlight the benefits of the application. (20 Marks)

OR

- 4 a. Draw two fixing details of structural glazing fixtures. Label the parts. (10 Marks)
b. Draw two fixing details of ACP cladding to proportionate scale, also highlight why ACP is a good option for cladding. (10 Marks)

Module-3

- 5 What is FRP? In brief discuss the properties of FRP mentioning its advantages over other conventional materials. Where does it find use in construction industry, describe using suitable examples. (20 Marks)

OR

- 6 A client as bought himself a new office space of 7000 mm × 8000 mm in a office complex. He wants to make himself a cabin of size 4000 mm × 5000 mm for his official meetings with a door size of 3000 mm × 2100 mm using a wood. Design a wooden partition with wooden door to scale draw the details of the wooden partition. Assume any missing data for the wooden partition where required. Draw to scale
(a) Plan, Section, Elevation
(b) Any two enlarged details. (20 Marks)

Module-4

- 7 a. What is a sliding folding door? Where can be it used and what are the benefits of installing or using such a door. What are various materials that it can be made up of, explain with examples from the construction industry with suitable sketches. (10 Marks)
- b. What is a sliding door? Why is it used? What are the benefits of using this kind of door? What the various materials which can be used to fabricate this door. Explain with suitable examples and sketches. (10 Marks)

OR

- 8 A doctors cabin needs a Aluminium sliding door to be installed. Draw the fixing detail of the Aluminium sliding door to suitable scale draw the following. Assume any missing data,
 (i) Plan, elevation, section.
 (ii) Any two enlarged detail. (20 Marks)

Module-5

- 9 What is a skylight? What are their benefits and why are they used? Describe their various application in the construction industry. Also describe the various types of skylights with respect to,
 (i) Shapes.
 (ii) Where they are used and operable details (opening etc).
 (iii) Material with which they can be made. (20 Marks)

OR

- 10 a. Explain alternative wall technology with various materials. (10 Marks)
- b. Draw a neat sketch of fixing details of using sandwich panel for wall construction for a factory. Assume suitable size. Draw
 (i) Plan, Elevation, Section
 (ii) Any two fixing detail. (10 Marks)

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