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Sixth Semester B. Arch. Degree Examination, June/July 2024 Materials and Methods in Building Construction – VI

Time: 4 hrs.

Max. Marks: 100

- Note:** 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Assumed all suitable scales for drafting purposes.
3. Assume all missing data suitably.

Module-1

- 1 a. Explain briefly the manufacturing process of glass with neat sketches. (10 Marks)
b. Mention the properties and uses of the following :
i) Laminated glass
ii) Fibre glass
iii) Tinted glass
iv) Glass blocks
v) Mirrored glass (10 Marks)

OR

- 2 Design and detail a frameless glass door for a showroom with a double door of size 2m × 2.1m (ht) with suitable fittings.
a. Draw and detail the elevation. (06 Marks)
b. Draw one detail of the fitting (07 Marks)
c. Draw a section showing the detail of fixing the toughened glass to slab. (07 Marks)

Module-2

- 3 a. Differentiate between structural glazing and curtain wall systems, explaining the advantages and disadvantages of both system using sketches. (08 Marks)
b. Draw two details of fixing DGU in case of curtain wall system. (12 Marks)

OR

- 4 a. Explain the properties and uses of ACP cladding for both interior and exterior purposes. (08 Marks)
b. Draw a four way spider fitting and its fixing to toughened glass in plan and section. (12 Marks)

Module-3

- 5 A balcony of size 2.7m × 4.5m has to be partitioned with a 3-track UPVC sliding Door with mosquito mesh.
a. Draw key plan and Elevation (10 Marks)
b. Draw any one detail of the UPVC partition (05 Marks)
c. Mention the advantages of UPVC in building industry. (05 Marks)

OR

- 6 Design a suitable wooden sliding and folding partition for a living room of size 5m × 4m extending by 2.5m into an open balcony on the shorter side.
a. Key plan (02 Marks)
b. Elevation (04 Marks)
c. Section (04 Marks)
d. Any two details (10 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.

Module-4

- 7 Draft a MS steel garage door for an opening of size 4.5m wide × 2.8m height. (05 Marks)
- a. Elevation (05 Marks)
 - b. Section (10 Marks)
 - c. Any two joinery details

OR

- 8 Design and detail an aluminum sliding and folding partition for a warehouse, having width of 7.5m and height 3.2m (05 Marks)
- a. Elevation (05 Marks)
 - b. Section (10 Marks)
 - c. Any two details

Module-5

- 9 Design and detail a skylight for an atrium 2.5m × 2.5m. (05 Marks)
- a. Key plan (05 Marks)
 - b. Cross section (10 Marks)
 - c. Two enlarged details

OR

- 10 a. Discuss the application and advantages and disadvantages of PUF sandwich panels. (10 Marks)
- b. Illustrate using neat proportionate sketches the construction details of fixing of PUF sheets. (10 Marks)
