

CBCS SCHEME

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18ARC42

Fourth Semester B. Arch. Degree Examination, June/July 2025 Materials and Methods in Building Construction - IV

Time: 4 hrs.

Max. Marks: 100

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

Module-1

- 1 Draw the plan and section with reinforcement detail of flat slab for the span of $6\text{m} \times 6\text{m}$. Assume capital, column, drop panel, slab thickness and other dimensions. (20 Marks)

OR

- 2 Explain moment resisting frame with neat sketches. (20 Marks)

Module-2

- 3 Draw the plan and section of waffle slab for the span of $7\text{m} \times 7\text{m}$. (20 Marks)

OR

- 4 Explain what is filter slab. Mention the materials used with neat sketches. (20 Marks)

Module-3

- 5 Explain roof covering for workshop of $30\text{m} \times 15\text{m}$ with steel column and beam with roof covering. Draw plan and section to suitable scale. (20 Marks)

OR

- 6 Explain steel as building materials, its advantages, properties and application. (20 Marks)

Module-4

- 7 Draw plan and elevation with 2 details of steel safety door for a residence building with wooden main frame size of door – $1.2\text{m} \times 2.1\text{m}$. (20 Marks)

OR

- 8 Draw plan, elevation, section of rolling shutter for a commercial shop with opening size $3.2\text{m} \times 2.8\text{m}$. Assume suitable scale. (20 Marks)

Module-5

- 9 Draw plan, elevation, section of sliding aluminium window of size $1.5 \times 1.2\text{mts}$ (Assume 3 track) (20 Marks)

OR

- 10 Explain aluminum as a building material its properties, uses and manufacturing method. (20 Marks)

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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