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# CBCS SCHEME

## Fourth Semester B.Arch. Degree Examination, Dec.2025/Jan.2026 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 Flat Slab  $3\text{ m} \times 3\text{ m}$  span – Draft plan and section for 1:20.  
Mention the specification in detail, draft two details to 1:5 scale. (20 Marks)

**OR**

- 2 RCC Moment Frame size  $3\text{ m} \times 3\text{ m}$  – Draft to scale 1 : 20, details to scale 1:5 (min 2). (20 Marks)

### Module-2

- 3 RCC filler slab – Use anyone filler material and draft to scale with details. Mention the detailed specification. (20 Marks)

**OR**

- 4 RCC waffle slabs – Make sketches and material specification and explain the concept and working principles of waffle slab. (20 Marks)

### Module-3

- 5 In detail explain the properties and types of structural steel. Also quote examples of where it is used in building industry. (20 Marks)

**OR**

- 6 With neat sketches showing joinery details steel construction. For eg. Steel composite structures. (20 Marks)

### Module-4

- 7 In detail sketch the joinery details of a steel door designed by you and mention the scale. (20 Marks)

**OR**

- 8 Design a steel window and give necessary joinery details to scale and label the parts. (20 Marks)

### Module-5

- 9 Explain in detail the properties of Aluminium as a building material, its applications, its pros and cons and sketch a detail of aluminium elements with detail. (20 Marks)

**OR**

- 10 Sketch to details the joinery details for aluminium door and window. Minimum 5 of them. (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,  $42 \div 8 = 50$ , will be treated as malpractice.