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15ARC4.2

Fourth Semester B.Arch. Degree Examination, June/July 2019

**Materials and Methods of 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 a flat slab of span  $6 \times 5$  m showing all the reinforcement details. (20 Marks)

OR

- 2 Draw a moment frame structure of  $5\text{m} \times 4\text{m}$  useable area, showing all the reinforcement details. (20 Marks)

Module-2

- 3 Explain the principles and methods of construction of a filler slab with examples. (20 Marks)

OR

- 4 Draw to a suitable scale, a waffle slab showing all the reinforcement details and formwork details. (20 Marks)

Module-3

- 5 Explain steel as a building material. (20 Marks)

OR

- 6 Draw the types of column and beam connections in a steel structure. (20 Marks)

Module-4

- 7 Draw details of a collapsible shutter of an opening of size  $2.4\text{m} \times 2.4\text{m}$  keeping effective height of door  $2.1\text{m}$ . (20 Marks)

OR

- 8 Draw to a suitable scale, plan, elevation, section and details of a steel window of size  $1.2 \times 1.5\text{m}$ . (20 Marks)

Module-5

- 9 Explain aluminium as a building material. (20 Marks)

OR

- 10 Draw to a suitable scale, plan, elevation and details of a casement Al.Window of size  $1.2 \times 1.3\text{m}$ . (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.