

# CBCS Scheme

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15ARC2.2

## Second Semester B.Arch. Degree Examination, June/July 2018 Materials and Methods in Building Construction – II

Time: 4 hrs.

Max. Marks: 100

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

### Module-1

- 1 Draw to suitable scale king post roof timber truss for a porch of 4M × 6M.
- Key plan (04 Marks)
  - Plan to enlarged scale (06 Marks)
  - Sectional elevation (06 Marks)
  - Any one important detail. (04 Marks)

OR

- 2
- Explain with sketches the use of G.I sheet for roofing. (05 Marks)
  - Explain steel trusses and its elements with neat sketches. (05 Marks)
  - Explain with neat sketches types of roof coverings. (10 Marks)

### Module-2

- 3 Write short notes on :
- Grades of concrete (07 Marks)
  - Water cement ratio. (07 Marks)
  - RMC. (06 Marks)

OR

- 4
- Describe in detail the ingredients of cement concrete. (10 Marks)
  - List various types of cement. State briefly the application of each type. (10 Marks)

### Module-3

- 5 Draw to suitable scale an RCC column of size 230 × 230 mm and RCC footing 1200 × 1200 × 600mm. Assuming necessary diameter and spacing draw the following :
- Plan. (07 Marks)
  - Section (07 Marks)
  - Isometric view. (06 Marks)

OR

- 6
- Differentiate between construction joints and expansion joints with sketches. (10 Marks)
  - Explain with neat sketches raft and grillage foundation. (10 Marks)



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**Module-4**

7 Define staircase and explain the types of staircase with neat sketches. (20 Marks)

**OR**

8 Draw double stringer timber staircase in 1 : 10 scale labeling all the parts. (06 Marks)

a. Plan (10 Marks)

b. Sectional elevation (04 Marks)

c. Any one important detail.

**Module-5**

9 Explain with neat sketches : (06 Marks)

a. Brick and stone stairs (07 Marks)

b. Concrete and wood stairs (07 Marks)

c. Steel and timber stairs.

**OR**

10 Design a dog leg RCC folded plate staircase for a building with floor height of 3000mm. Draw to suitable scale :

a. Plan (06 Marks)

b. Sectional elevation (10 Marks)

c. One important detail. (04 Marks)

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