

CBCS Scheme

USN

--	--	--	--	--	--	--	--	--	--

15ARC2.2

Second Semester B.Arch. Degree Examination, June/July 2017 Materials and Methods in Building Construction – II

Time: 3 hrs.

Max. Marks: 100

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

Module-1

1 Draw detailed drawings for the following with suitable scale:

- Eaves details
- Hip details
- Ridge details
- Valley details.

(20 Marks)

OR

2 Draw detailed drawings for the following with suitable scale:

- Cap detail of steel column to steel truss
- Base detail of steel column to truss
- Connection detail of purlin to truss
- Typical gutter details of steel roof.

(20 Marks)

Module-2

3 Describe in detail of following types of cement and their uses in construction industry:

- Ordinary Portland cement
- Rapid hardening cement
- Sulphate resistant cement.
- Portland pozzolana cement.

(20 Marks)

OR

4 Explain with relevant sketches wherever relevant:

- Reinforced cement concrete
- Grades of concrete
- Differences between fine and coarse aggregate
- Batching of materials.

(20 Marks)

Module-3

5 Explain with relevant sketches:

- Deformation of concrete
- Form work
- Construction joints
- Water reducing admixture.

(20 Marks)

OR

6 A column of 230mm × 300mm has to be provided with R.C.C. isolated footing 2000mm × 2000mm. Draw the detailed drawings to suitable scale.

- Plan showing reinforcement details
- Section
- Isometric view.

(06 Marks)

(06 Marks)

(08 Marks)

Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any recycling or reutilisation, appeal to evaluator and/or equations written e.g. 4+5=9 will be treated as inappropriate.

Module-4

- 7 Draw a dog-leg wooden staircase to a suitable scale.
- Plan of stairs
 - Section
 - Joinery details of tread and raisers
 - Balustrade details.
- (20 Marks)

OR

- 8 Draw the dog-legged R.C.C. waist slab staircase from ground floor to first floor. The width of the stair is 1.2m and floor to floor height is 3.15m to a suitable scale.
- Plan
 - Sectional elevation
 - Isometric view
 - Any two details.
- (20 Marks)

Module-5

- 9 Design a spiral staircase for a residential house with floor to floor height is 3.15m. Draw plan, elevation, section and with one enlarged section.
- (20 Marks)

OR

- 10 Draw a steel stringer beam staircase of width 1.2m and floor to floor height is 3.15m that includes the following details:
- Plan
 - Longitudinal section
 - Cross section
 - Two enlarged sections.
- (20 Marks)

* * * * *