

CBCS SCHEME

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15ARC2.2

Second Semester B.Arch. Degree Examination, Dec.2017/Jan.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 A verandha 3m wide and 6m long is to be provided with lean to wooden roof finished with mangalore tiles laid over it. Draw to suitable scales.
- Plan (04 Marks)
 - Section (10 Marks)
 - Any two details (06 Marks)

OR

- 2 Explain with neat sketches:
- Steel Trusses (05 Marks)
 - King Post Truss (05 Marks)
 - Pitched roof in detail (10 Marks)

Module-2

- 3 a. What are the ingredients of reinforced cement? (10 Marks)
b. What are the types of cement? Explain briefly the application of each type. (10 Marks)

OR

- 4 Write short notes on :
- Water Cement ratio (05 Marks)
 - Explain Grade of Concrete (05 Marks)
 - Admixtures (05 Marks)
 - Bulking of sand (05 Marks)

Module-3

- 5 A column of size 230mm × 230mm has to be provided with an RCC isolated footing 1200mm × 1200mm. Draw the detailed drawing for the suitable scale. Assuming necessary diameter and spacing draw the following:
- Plan (06 Marks)
 - Section (06 Marks)
 - Isometric view (08 Marks)

OR

- 6 Write short notes on :
- Curing of concrete (05 Marks)
 - Grillage foundation (05 Marks)
 - Expansion Joint and Construction Joint (05 Marks)
 - Raft Footing (05 Marks)



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.

Module-4

- 7 Draw a single stringer timber staircase in 1:10 scale labeling all the necessary parts. Following are the requirements:
- a. Plan (05 Marks)
 - b. Sectional Elevation (05 Marks)
 - c. Two enlarged details (10 Marks)

OR

- 8 Explain with neat sketches:
- a. Types of stairs (05 Marks)
 - b. RCC Waist slab (05 Marks)
 - c. Stone stair (05 Marks)
 - d. Folded type stairs in RCC (05 Marks)

Module-5

- 9 Design a fire escape stair for an apartment building. Assuming the typical floor height to be 3150 mm. Draw to suitable scales.
- a. Plan (05 Marks)
 - b. Section (05 Marks)
 - c. Longitudinal section (05 Marks)
 - d. 2 enlarged details (05 Marks)

OR

- 10 Explain with neat sketches :
- a. Steel Spiral stair (07 Marks)
 - b. Brick Stone stair (06 Marks)
 - c. Steel Glass stair (07 Marks)

