

CBCS Scheme

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15ARC3.2

Third Semester B. Arch Degree Examination, June/July 2017

Materials and Methods in Building Construction – III

Time: 4 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing one full question from each module.

2. Use only drawing sheet supplied for answering all questions

Module-1

- 1 A hall is to be covered with a RCC slab. It measures 3m×7m in effective span.
- Determine whether it is a one way slab or two way slab. Reason your answer (05 Marks)
 - Draw plan and sections showing all types of reinforcement with thickness being 150mm. Use 1:50 scale. (15 Marks)

OR

- 2
- Describe what cantilevered slabs are and explain the types of reinforcement provided for the same. (08 Marks)
 - Draw plans and sections for a cantilevered balcony of 3m×2m dimension for a residence showing all the reinforcement. Use 1:50 scale. (12 Marks)

Module-2

- 3
- Explain the evolution of vaults with neat sketches. (08 Marks)
List out the types of reinforcement used in a vault for the types of loads acting on it.
 - Draw plans and sections, showing the various reinforcement for a RCC vaults covering a room of 12m×24m. Decide the number of vaults according to the span. Use 1:50 scale. (12 Marks)

OR

- 4 A library building 10m×10m is to be covered using a RCC dome. Detail and design to a scale of 1:50 the following :
- Plan showing different components with reinforcement. (10 Marks)
 - Section to show the profile of reinforcement detail. (10 Marks)

Module-3

- 5
- Differentiate between the qualities of materials required for internal flooring and external flooring. (06 Marks)
 - Explain the laying procedure of flooring for a hall which is semi covered. Explain the material you choose and the reason with sketches. (14 Marks)

OR

- 6 What are the types of flooring materials used in indoor conditions? Elaborate any two finishes in detail drawing. (20 Marks)

Module-4

- 7 Explain the following briefly :
- Applying method of Varnish French polish (05 Marks)
 - Constituents of oil paints (05 Marks)
 - Good characteristics of paints (10 Marks)

Important Note: 1. On completion your name on, respectively, draw diagram, case study, or the answering blank pages.
2. Any revealing or communication, appeal to evaluator and/or equations written e.g. 4+2=8 = 20, will be treated as malpractice.

OR

- 8 Enumerate the various types of paints commonly used and briefly explain any four types of paints and its areas of application. (20 Marks)

Module-5

- 9 With respect to its constituents and application process, distinguish : (10 Marks)
- a. Internal plastering (10 Marks)
 - b. External plastering. (10 Marks)

OR

- 10 a. Appraise in detail about the Madras terrace using suitable sketches. (08 Marks)
- b. Summarize the process of cladding in a toilet and mention the materials you choose for the same. (12 Marks)

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