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15ARC7.2

Seventh Semester B.Arch. Degree Examination, June/July 2019 Materials and Methods in Building Construction – VII

Time: 4 hrs.

Max. Marks: 100

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

Module-1

- 1 A ward to be of size $1.8\text{m} \times 2.1\text{m} \times 0.6\text{m}$ depth is required for a residence prepare the following details:
- Plan cross sectional elevation, transverse sectional elevation to 1:20 scale. (10 Marks)
 - Any two important details to 1:5 scale. (10 Marks)

OR

- 2 A wooden room divider cum showcase is required for a residence. The size is $2\text{m} \times 1.5\text{m} \times 0.6\text{m}$. Provide the following details.
- Plan, cross sectional elevation and transverse sectional elevation to 1:20 scale. (10 Marks)
 - Any two important details to 1:5 scale. (10 Marks)

Module-2

- 3 Design a kitchen for a residence of size $3\text{m} \times 6\text{m}$ and it is attached to dining hall. Provide the following details:
- Floor plans below and above counter level to scale 1:20. (10 Marks)
 - Two important sections with details 1:20 scale. (10 Marks)

OR

- 4 Design a work station for a computer lab to accommodate for 4 people. Provide the following details.
- Plan and sections to 1:20 scale. (10 Marks)
 - Any two important details. (Assume suitable scale). (10 Marks)

Module-3

- 5
- Write a brief note on acoustical ceiling. (05 Marks)
 - Sketch any two false ceiling details with aluminium members (with dimensions). (10 Marks)
 - Write a brief note on pre stressing. (05 Marks)

OR

- 6 A room of size $4.5\text{m} \times 6.2\text{m}$ is required to be provided with 600×600 false ceiling materials.
- Draw a reflected F/C plan to scale 1:20. (06 Marks)
 - Show any two important details of the false ceiling (Assume suitable scale). (08 Marks)
 - Write a brief note on post tensioning. (06 Marks)

Module-4

- 7
- Explain mat foundation with neat sketches, with dimensions. (05 Marks)
 - Sketch and explain different types of concrete pillar, with dimensions. (15 Marks)

OR

- 8 a. Explain the process of execution of cast in situ pile foundation with sketches. (10 Marks)
b. Explain sheet pile foundation with neat sketches, with dimensions. (10 Marks)

Module-5

- 9 a. Discuss the various truss configurations that can be made with Bamboo, with neat sketches: (10 Marks)
b. What is prefabrication? Explain with sketches. (10 Marks)

OR

- 10 a. Discuss the non-chemical or traditional methods of preservation of Bamboo. (10 Marks)
b. Explain pre fabrication with reference to slabs, beams and columns with neat sketches. (10 Marks)
