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**Third Semester B.Arch. Degree (CBCS) Examination, Dec.2016/Jan.2017**  
**Materials & Methods in Building Construction – III**

Time: 3 hrs.

Max. Marks:100

**Note: 1. Answer FIVE full questions, selecting ONE full question from each module.****2. Use only drawing sheet supplied for answering all Questions.****Module – 1**

- 1 a. Differentiate with sketches one way and two way RCC slab, explain with sketches. (06 Marks)
- b. Draw a plan and section of one way slab for a room measuring 3.0m × 4.5m. Show all the reinforcement detail with neat labeling. The thickness of the slab is 150mm and scale 1:25. (14 Marks)
- 2 Suggest the slope roof type for a residence located in a heavy rainfall area, measuring 4m × 6m. Draw the plan and section with reinforcement detail of the roof with labeling. The thickness of the slab is 125mm and scale 1:25. (20 Marks)

**Module – 2**

- 3 a. Draw a section (scale 1:25) and a detail (scale 1:5) with reinforcement detail for the RCC segment dome having a diameter of 8m and height of the dome is 2m. Assume thickness of the slab. (12 Marks)
- b. Explain the methods of construction of form work for a dome in detail. (08 Marks)
- 4 a. Discuss the concept of vaults using sketches. (05 Marks)
- b. Draw a plan, section (scale 1:25) of brick barrel vault roof for a hall measuring 5m × 15m with the form work detail in elevation. (15 Marks)

**Module – 3**

- 5 a. List out any 6 materials used for the flooring and factors affecting the choice of flooring materials. (08 Marks)
- b. Design any one type of the wooden flooring for a bedroom measuring 3.5m × 3.0m. Draw the plan (scale 1:25) and detailed section (1:5). (12 Marks)
- 6 Design and draw a plan of pavers patterns for porch measuring 3m × 4m using following materials and sketch the laying detail.
  - a. Stone
  - b. Concrete tile
  - c. Interlocking block
  - d. Clay tile
 (20 Marks)

**Module – 4**

- 7 Mention the objective of applying paint and characteristics of an ideal paint. Write a brief note on any 4 types of paints. (20 Marks)
- 8 a. Describe the process of painting on plastered surface, New wood works and metal surfaces. (12 Marks)
- b. Write the properties of distemper. (08 Marks)

**Module – 5**

- 9 a. Explain the plastering for internal wall and ceiling with the material details. (10 Marks)
- b. Discuss with sketches about the art cladding in stone. (10 Marks)
- 10 a. What are advantages and disadvantages of the alternate roofing system? (04 Marks)
- b. Draw the detail of the following with neat labeling (scale – 1:5)
  - i) Jack arch roof for space measuring 3.25×4mts.
  - ii) Madras terrace roof for a room measuring 4mt × 5mt. (16 Marks)