

CBCS SCHEME

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15ARC1.2

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

Time: 4 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Explain with suitable sketches the following building components:
(i) Plinth (ii) Cill and Lintel (iii) Size stone masonry
(iv) Parapet wall with coping (v) Retaining wall. (10 Marks)
- b. Show the construction conventions (HATCH) used in the drawings to indicate the following:
(i) Stone wall (ii) R.C.C. (iii) P.C.C. (iv) Wood in section.
(v) Wood in elevation (10 Marks)

OR

- 2 a. Describe various advantages and disadvantages of types of bricks in construction. (12 Marks)
b. Describe the process of manufacturing of bricks. (08 Marks)

Module-2

- 3 Draw plans, sections, elevation and isometric view for a L cornered brick wall in stretcher bond length of wall can be taken as 1.20 m on either sides 6 courses in elevation (Scale 1:10) (20 Marks)

OR

- 4 Draw to a suitable scale the following and explain :
(i) Segmental Arch (ii) Chamfered Ashler and Flint Rubber masonry
(iii) Buttress (iv) Garden wall bond. (20 Marks)

Module-3

- 5 Explain with neat sketches different possibilities of hallow concrete block and describe their manufacturing process in brief. Also compare Hallow and Solid concrete blocks and elaborate their uses. (20 Marks)

OR

- 6 Describe the following with sketches :
(i) Hollow clay blocks
(ii) Perforated clay blocks
(iii) Stabilized mud blocks
(iv) Fly Ash bricks. (20 Marks)

Module-4

- 7 Draw to a suitable scale and explain with a typical section, the different types of brick and stone masonry foundations. (20 Marks)

Important Note : 1 On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.

OR

8 Explain with sketches :

- a. Types of composite masonry wall combinations with elevation and section details (any 2). (05 Marks)
- b. Details in timber and seasoning of timber. (05 Marks)
- c. Detailed and attached piers with supporting plan, section and elevation to suitable scale. (10 Marks)

Module-5

9 Draw to 1 : 10 scale for a battened door of size 1.0 m wide and 2.1m height of door.

- (i) Plan
- (ii) Elevation and section
- (iii) 2-enlarged details to 1:5 scale. (20 Marks)

OR

10 Draw to a scale of 1 : 10, a glazed window of 1.5m width and 1.5m height, illustrating the following requirements:

- (i) Plan
- (ii) Elevation
- (iii) Section
- (iv) Enlarged detail (1:5 scale) (20 Marks)

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