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First Semester B. Arch Degree Examination, Dec.2018/Jan.2019 Materials and Methods in Building Construction – I

Time: 4 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Explain with sketches the following building components.
- Plinth
 - Cill and Lintel
 - Size stone masonry
 - Parapet wall with coping
 - Chajjas
- (10 marks)
- b. Show the conventions used in the drawings to indicate the following :
- Stone wall
 - R.C.C
 - Brick wall
 - Wood in section
 - Wood in Elevation.
- (10 Marks)

OR

- 2 a. Describe manufacturing process of brick with neat sketches. (08 Marks)
- b. Describe the types of bricks and their advantages and disadvantages. (12 Marks)

Module-2

- 3 Draw plans, sections and elevations and isometric views of one brick thick wall (115mm thick) with English bond, L junction, Scale 1:10, Length of wall – 2m on either sides No: of courses – 6. (20 Marks)

OR

- 4 Draw to suitable scale and explain :
- Segmental arch
 - Coursed and uncoursed rubble masonry
 - Rat Trap Bond
 - Buttresses
- (20 Marks)

Module-3

- 5 Explain with sketches different possibilities of hollow concrete blocks and describe their manufacturing process in detail and also discuss the advantages and disadvantages of hollow concrete blocks. (20 Marks)

OR

- 6 Explain with sketches the following :
- Clay block
 - Perforated clay blocks
 - Glass blocks
 - Stabilized Mud blocks

(20 Marks)

Module-4

- 7 Draw to a suitable scale and explain with a typical sections, the different types of stone masonry foundations for an external and an internal wall.

(20 Marks)

OR

- 8 Explain with sketches :
- Types of timbers used in buildings
 - Seasoning of timbers
 - Defects in timber
 - Brick masonry foundation

(20 Marks)

Module-5

- 9 Draw to 1:10 scale ; for A battened door of size – 1.0m wide and 2.2m height the following :
- Plan
 - Elevation and section
 - Two enlarged joinery details – 1:5 scale.

(20 Marks)

OR

- 10 Draw to 1:10 scale ; Glazed window of 1.5m width and 1.5m height. The following :
(Casement window)
- Plan
 - Elevation
 - Section
 - Frame Detail – 1.5 scale.

(20 Marks)
