CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐   15ARC1.2

First Semester B.Arch. Degree Examination, June/July 2019
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 the various building components with the help of neat sketches.   **(10 Marks)**
    b.   Show the conventions used in the drawings to indicate;
      (i)   Brick wall
      (ii)   Stone wall
      (iii) RCC
      (iv) PCC   **(10 Marks)**

OR

2   a.   Write the manufacturing process of bricks and their properties.   **(10 Marks)**
    b.   Explain with sketches:
      (i)   Queen closer
      (ii)   Header
      (iii) Stretcher
      (iv) Frog   **(10 Marks)**

Module-2

3   Draw in 1:10 scale the following of flemish bond which is 2 brick thick wall and 6 courses high with 1 m on each side.
    a.   Odd and even course   **(06 Marks)**
    b.   Front and side elevation   **(06 Marks)**
    c.   Isometric view.   **(08 Marks)**

OR

4   Explain the following with sketches :
    a.   Brick Lintels   **(05 Marks)**
    b.   Stone Lintels   **(05 Marks)**
    c.   Rubble masonry (uncaused random)   **(05 Marks)**
    d.   Segmental arch   **(05 Marks)**

Module-3

5   a.   Explain the manufacturing process of stabilized mud blocks.   **(10 Marks)**
    b.   Write the advantages of mud blocks.   **(10 Marks)**

OR

6   a.   Explain advantages and disadvantages of Hallow and Solid concrete blocks.   **(10 Marks)**
    b.   Explain advantages and disadvantages of fly ash and glass blocks.   **(10 Marks)**

Module-4

7 a. Draw a simple footing of an internal wall (230 thick brick) of a load bearing structure upto plinth level in 1:10 scale. **(10 Marks)**

b. Draw a asymmetrical effects footing of an external wall (230 thick brick) in stone masonry upto plinth level, in 1:10 scale. **(10 Marks)**

OR

8 What are the natural defects in timber and explain how to preserve it. **(20 Marks)**

Module-5

9 Draw to a scale of 1:10 Battened and ledged door of 1.0m wide and 2.2m high the following:

(i) Plan   (ii) Elevation   (iii) Section   **(20 Marks)**

OR

10 Draw to scale 1:10 a glazed window 2.0m wide and 1.5m high the following :

(i) Plan   (ii) Elevation   (iii) Section.   **(20 Marks)**

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