CBCS Scheme

USN | | | | | | | | | | |

15ARC1.2

First Semester B.Arch. Degree Examination, Dec.2017/Jan.2018
Materials & 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. Draw using a suitable scale, section through a 230 mm thick external wall. (From foundation to coping). Mentioning all levels and dimensions. **(15 Marks)**

b. Write material conventions for the following:
- (i) Brick
- (ii) Timber or wood in section.
- (iii) Concrete.
- (iv) Stone
- (v) Glass **(05 Marks)**

OR

2 a. Briefly explain the manufacturing process of brick. **(10 Marks)**

b. Explain the types and properties of brick. **(10 Marks)**

Module-2

3 Draw proper and neat sketches for the following:
- (i) Stretcher bond in bricks.
- (ii) Header bond in bricks.
- (iii) English bond in bricks.
- (iv) Flemish bond in bricks.
- (v) Types of rubble masonry (stone) **(20 Marks)**

OR

4 a. Explain with sketches the types of Ashlar stone masonry. **(10 Marks)**

b. Describe the uses and properties of stone. **(10 Marks)**

Module-3

5 With the help of sketches, explain the following:
- a. Hollow concrete blocks.
- b. Solid clay blocks.
- c. Fly ash blocks.
- d. Aerated concrete blocks.
- e. Glass blocks. **(20 Marks)**

OR

6 a. Write architectural uses and properties of stabilized mud blocks. **(10 Marks)**

b. Explain with neat sketches the types and variations in concrete blocks, clay blocks. **(10 Marks)**

Module-4

7 a. Draw sections of brick foundations for a 230 mm thick internal and external wall with suitable scale. **(10 Marks)**

b. Draw sections of stone foundations for a 230 mm thick internal and external wall with suitable scale. **(10 Marks)**

OR

8 Explain the following:

a. Types of wood
b. Quality of timber used in building
c. Defects
d. Seasoning
e. Preservation of timber **(20 Marks)**

Module-5

9 Draw the following for a wooden battened door with suitable scale. Door size is (1000×2100) mm.

(i) Plan
(ii) Elevation
(iii) Section
(iv) Two important details (Joinery) **(20 Marks)**

OR

10 Draw the following for a wooden glazed window with suitable scale. Window size is (1200×1350) mm.

(i) Plan
(ii) Elevation
(iii) Section
(iv) Two important joinery details **(20 Marks)**

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