CBCS Scheme

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

15ARC1.2

First Semester B.Arch. Degree Examination, June/July 2018
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 the following with sketches:
(i) Zig-Zag bond.
(ii) Silver lock bond. **(10 Marks)**

b. List any 5 components of building and explain them in detail with the help of sketches. **(10 Marks)**

OR

2 a. Explain the following:
(i) Brick & it's composition.
(ii) Properties.
(iii) Application. **(10 Marks)**

b. Sketch various conventions used for the following:
(i) Concrete (ii) Glass (iii) Wood (iv) Stone (v) Sliding door. **(10 Marks)**

Module-2

3 Draw plan, elevation and isometric view of, 1 Brick thick English bond. Considering the length of 2 mt's on both the sides of L-junction elevation of min 6 courses. Assume suitable scale. **(20 Marks)**

OR

4 a. Draw any 5 types of stone masonary with an explanation. **(10 Marks)**

b. Draw any two of the following with suitable scale. taking 1 from each section:
(i) R.C.C lintel
(ii) Timber lintel
(i) Stone Arch (segmental)
(ii) Horse shoe Arch **(10 Marks)**

Module-3

5 a. Sketch the following with its dimension and write the different sizes available in market.
(i) Hollow concrete block
(ii) Aerated concrete block **(12 Marks)**

b. Explain the properties and uses of,
(i) Stabilized mud blocks.
(ii) Fly ash blocks. **(08 Marks)**

OR

6 Explain the manufacturing process, properties and uses of the following:
(i) Glass blocks
(ii) Solid clay block. **(20 Marks)**

Module-4

7 a. Draw to the suitable scale,
(i) Simple foundation.
(ii) Stepped foundation
For load bearing wall, plan, elevation and section. (10 Mark

b. Explain the following :
(i) Simple footing (ii) Stepped footing (iii) Combined footing. (10 Mark

OR

8 Explain the following:
(i) Defects in timber.
(ii) Seasoning.
(iii) Preservation.
(iv) Hard wood and Soft wood with their names. (20 Mark

Module-5

9 Draw to 1 : 10 scale any one type of door from the following:
a. Battened & ledged door.
b. Flush door.
c. Glazed door.
Assuming the suitable details:
D = 1.2 ×2.1
W = 230 mm thick
-Plan
-Elevation
-Section.
2 Joinery details (1 : 5 scale) (20 Mark

OR

10 Draw to 1 : 10 scale wooden glazed window of size 1.2×1.5 m, Sill 0.9 m, W = 230 mm.
-Plan.
-Elevation.
-Section.
Any 2 details 1:5 scale . (20 Mark

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