

CBCS Scheme

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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)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

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)
