

CBCS SCHEME

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15ARC5.2

Fifth Semester B.Arch. Degree Examination, Dec.2018/Jan.2019

Materials & Methods in Building Construction

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Write the advantages and disadvantages of trusses and sketch the components of the truss. (10 Marks)
b. Sketch any 5 different types of truss and label the components. (10 Marks)

OR

- 2 A mechanical workshop of size 15m×25m has to be covered by a tubular truss with AC sheet covering draw its plan, section and any two necessary details.
• Plan
• Section.
• Detail – 1
• Detail – 2 (20 Marks)

Module-2

- 3 A warehouse of size 30m×15m which has a clear height of 10 m has to be covered with pre-engineered structure provide the following details:
a. Plan
b. Section.
c. MS sheet cladding detail.
d. Butter detail at the roof edge. (20 Marks)

OR

- 4 a. What are large span roof structures, mention its advantages and disadvantages? (10 Marks)
b. Sketch the following : (i) Shell roof/Vaulted roof.
(ii) Geodesic dome.
(iii) Space frame.
(iv) Tensile structure. (10 Marks)

Module-3

- 5 Provide construction details for a geodesic dome structure,
(i) Plan (ii) Sectional elevation (iii) Joinery details. (20 Marks)

OR

- 6 Explain the construction details involved in hyperbolic paraboloid shell structures and folded plate structures with the help of sketches. (20 Marks)

Module-4

- 7 A Exhibition pavilion space of size 15m×25m has to be covered with tensile structure, provide its
(i) Plan (ii) Elevation and (iii) Construction details for fabric. (20 Marks)

OR

- 8 A college gathering space of 10 m×15m is to be constructed with the space frame roof covering draw its (i) Plan (ii) Sectional elevation (iii) Roof covering details.
(20 Marks)

Module-5

- 9 What are the different types of plastics used in construction industry? Mention its uses and properties.
(20 Marks)

OR

- 10 a. Mention the different types of water proofing components available for construction.
(10 Marks)
b. With the help of neat sketches, illustrate the method of water proofing for terrace garden.
(10 Marks)

