

CBCS SCHEME



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15CV36

Third Semester B.E. Degree Examination, Jan./Feb. 2021 Building Materials and Construction

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. List four factors causing deterioration of stones. (04 Marks)
- b. Explain the requirements for a good building bricks. (06 Marks)
- c. Briefly explain the classification of cement concrete blocks. (06 Marks)

OR

- 2 a. List the types of mortar used in masonry work. (04 Marks)
- b. Briefly explain the following terms :
 - i) Bulking of sand
 - ii) Deleterious materials. (06 Marks)
- c. Define "Grading of aggregates", what is the importance of grading of aggregate in the manufacture of quality concrete. (06 Marks)

Module-2

- 3 a. Discuss various functions served by foundations. (04 Marks)
- b. Explain various methods of improving the bearing capacity of soils. (06 Marks)
- c. With reference to masonry construction, explain the following terms :
 - i) Header and stretcher
 - ii) Bond and course
 - iii) King closer and queen closer. (06 Marks)

OR

- 4 a. Draw the plan and elevation of 1½ brick thick wall of English bond. (06 Marks)
- b. Give the classification of stone masonry. (04 Marks)
- c. Describe partition walls. (06 Marks)

Module-3

- 5 a. How arches are classified? How do you assess the stability of an arch? (06 Marks)
- b. Where and why are the following components of buildings used?
 - i) Chejja
 - ii) Canopy
 - iii) Balcony. (06 Marks)
- c. Write short notes on marble flooring. (04 Marks)

OR

- 6 a. List the types of roof covering materials used for pitched roofs. (04 Marks)
- b. Explain lean-to-roof for a cycle stand with sketch. (06 Marks)
- c. Explain King Post Roof Truss with neat sketch. (06 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. Explain the salient features of a framed paneled door. (06 Marks)
 b. Define the technical terms used in doors and windows : Frame, Panel, Horn, Shutter, Transom, Holdfast. (06 Marks)
 c. Draw neat and proportionate sketch showing the elevation of Glazed window with ventilator. (04 Marks)

OR

- 8 a. Define "scaffolding" and explain its component parts. (06 Marks)
 b. Distinguish between :
 i) Helical stair
 ii) Spiral stair. (04 Marks)
 c. List the different types of staircase and explain under what circumstances they are used. (06 Marks)

Module-5

- 9 a. Explain integral damp proofing method in a structure. (06 Marks)
 b. Describe the ingredients of an oil paint. (04 Marks)
 c. Explain the steps involved in painting on old wooden surfaces. (06 Marks)

OR

- 10 a. What are the objects of painting? (04 Marks)
 b. Describe the procedure for carrying out the plastering with cement mortar in two coats. (06 Marks)
 c. Enumerate the defects found in plastering work. (06 Marks)

