



# CBCS SCHEME

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18CV34

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

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. What are the factors that cause deterioration of stones and explain the methods commonly adopted to preserve the stones. (08 Marks)
- b. Briefly explain the various field and laboratory tests conducted on bricks to find its suitability for construction. (08 Marks)
- c. What are the advantages of cement concrete blocks? (04 Marks)

OR

- 2 a. Lists the tests conducted on fine aggregates and explain any one of them in detail. (08 Marks)
- b. Explain impact and abrasion tests conducted on coarse aggregates. (08 Marks)
- c. What are the characteristics of good timber used for construction? (04 Marks)

### Module-2

- 3 a. What are the functions of a foundation? Mention the situations during which pile foundations are adopted. (08 Marks)
- b. Write a note on:  
i) Spread footing ii) Strap footing (08 Marks)
- c. Write the advantages of cavity walls. (04 Marks)

OR

- 4 a. Sketch the elevation of a brick wall built in i) English bond ii) Flemish bond. Compare the merits and demerits of English bond and Flemish bond. (08 Marks)
- b. Write a note on classification of stone masonry. (08 Marks)
- c. Write a note on partitions walls. (04 Marks)

### Module-3

- 5 a. Draw a neat sketch of an arch and explain the technical terms used. (08 Marks)
- b. Explain i) Chejja ii) Canopy iii) Balcony iv) Lintel. (08 Marks)
- c. Write a note on stability of arch. (04 Marks)

OR

- 6 a. List the types of flooring and explain the method of laying of cement concrete flooring in detail. (08 Marks)
- b. List the classification of pitched roof. With neat sketches explain any two of them. (08 Marks)
- c. What are the factors to be considered while selecting a roof covering? (04 Marks)

### Module-4

- 7 a. With the help of a neat sketch explain  
i) Paneled door ii) Collapsible door. (08 Marks)
- b. Write a note on  
i) Bay window ii) Steel window (08 Marks)
- c. What are the guidelines to be followed while locating doors and windows? (04 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.

OR

- 8 a. Write a note on  
i) Shoring      ii) Underpinning. (08 Marks)
- b. Plan a dogged stair for a building in which vertical distance between the floors is 3.6m. The stair hall measures 2.8m×5.0m (internal dimension). (08 Marks)
- c. With the help of a neat sketch explain  
i) Tread and Riser      ii) Flight and Landing. (04 Marks)

**Module-5**

- 9 a. What are the objectives of plastering? Explain the defects in plastering. (10 Marks)
- b. Briefly explain the methods of damp proofing. (10 Marks)

OR

- 10 a. Explain the method of laying stucco plastering and lathe plastering. (10 Marks)
- b. Explain the constituents of a paint and explain the procedure of painting on new wood works. (10 Marks)

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