

CBCS SCHEME



USN

17CV36

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. List the requirements of good building stones. (04 Marks)
- b. Briefly explain the manufacturing process of clay bricks. (08 Marks)
- c. Explain briefly (i) Cement Concrete blocks (ii) Stabilized Mud blocks. (08 Marks)

OR

- 2 a. With a neat sketch explain the cross-section of an exogenous tress. (06 Marks)
- b. What do you mean by bulking of fine aggregate? Explain the importance of bulking of fine aggregates in the construction industry. (08 Marks)
- c. Explain the importance of size, shape and texture of coarse aggregates. (06 Marks)

Module-2

- 3 a. List the essential requirements of a good foundation. (04 Marks)
- b. Explain the following :
(i) English bond (ii) Flemish bond (iii) Cavity walls (iv) Partition walls. (08 Marks)
- c. Explain briefly the requirements of good stone masonry. (08 Marks)

OR

- 4 a. What do you mean by safe bearing capacity of soil? Briefly explain various methods adopted to improve SBC. (08 Marks)
- b. Explain briefly classification of stone masonry. (06 Marks)
- c. With the help of neat sketch explain 1½ (one-half) brick thick wall constructed by using English bond. (06 Marks)

Module-3

- 5 a. Define Lintel. How are they classified according to the materials of construction? (04 Marks)
- b. Draw a neat sketch of a segmental arch and explain various technical terms used in arch work. (08 Marks)
- c. Explain briefly the factors influencing the selection of flooring materials. (08 Marks)

OR

- 6 a. Explain briefly the advantages of arch over lintel. (04 Marks)
- b. Explain the following :
(i) Lintel (ii) Canopy (iii) Chejja (iv) Balcony (08 Marks)
- c. With the help of neat sketch explain the parts of King Post truss. (08 Marks)

Module-4

- 7 a. Plan a dog-legged stair between two floors of 3.15m height with roof thickness of 15 cms. The size of staircase room is 2.5m × 5m. Draw the plan of the stair. (10 Marks)
- b. Explain the following with neat sketches:
(i) Bay window (ii) Dormer window. (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.

OR

- 8 a. With a neat sketch, label the different parts of a stair. Explain the terms involved. (10 Marks)
b. Write short notes on :
(i) Scaffolding (ii) Under pinning (10 Marks)

Module-5

- 9 a. What do you mean by plastering? Explain the purpose of providing plastering. (05 Marks)
b. Explain the causes and effects of dampness in a building. (07 Marks)
c. Explain briefly the various constituents of a good paint. (08 Marks)

OR

- 10 a. Explain briefly the various defects in plastering. (08 Marks)
b. What do you mean by damp proof course? List the necessity of damp proof course in building. (04 Marks)
c. Describe the procedure of painting on new wood work. (08 Marks)

