



Third Semester B.E. Degree Examination, June/July 2019 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. Explain the factors causing deterioration of stonework. (06 Marks)
- b. List the tests conducted on Fine aggregates. Explain any two tests in detail. (10 Marks)

OR

- 2 a. Write notes on :
(i) Stabilized Mud Blocks (ii) Grading of aggregates (iii) Timber as construction. (06 Marks)
- b. List the tests on coarse Aggregates. Explain (i) Aggregate Impact test (ii) Aggregate Abrasion test. (10 Marks)

Module-2

- 3 a. What are the functions of good foundation? (05 Marks)
- b. What are the requirements of good building stones? (05 Marks)
- c. Briefly explain load bearing walls and cavity walls. (06 Marks)

OR

- 4 a. Define safe Bearing capacity. List the methods of improving bearing capacity of soil and explain any two methods. (08 Marks)
- b. Find the dimensions of combined rectangular footing for two columns A and B carrying loads 1000 N and 1500kN respectively. Column A is 500mm × 500mm in size and column B is 600mm × 600mm in size. The centre to centre spacing of columns is 5.0m. The SBC of soil may be taken as 250 kN/m². The footing is not to project more than 250mm beyond the outer edge of smallest column. (08 Marks)

Module-3

- 5 a. Draw a neat sketch of an arch and explain various technical terms related to an arch. (08 Marks)
- b. List the types of roofs and explain any two with neat sketches. (08 Marks)

OR

- 6 a. Define Lintel. Explain different types of lintels with neat sketches. (10 Marks)
- b. Briefly explain the functions of Chejja, Canopy and Balcony. (06 Marks)

Module-4

- 7 a. What are the factors considered while locating Doors and windows? (05 Marks)
- b. State briefly the requirements of a good stair. (05 Marks)
- c. Explain with the help of sketches the following terms:
(i) Nosing (ii) Handrail (iii) Landing (iv) Newel post. (06 Marks)

OR

- 8 a. Explain in brief with neat sketches:
(i) Panelled door (ii) Revolving Door (iii) Corner window (iv) Louvered window (10 Marks)
- b. Plan a dog-legged staircase for a building in which the vertical distance between the floors is 3.0m. The stair hall measures 2.8m × 5.8m. (06 Marks)

Module-5

- 9 a. Discuss the defects in plastering. (06 Marks)
- b. Explain in brief the causes and effects of dampness. (10 Marks)

OR

- 10 a. List the methods of plastering and explain any two. (08 Marks)
- b. List the types of paints. Describe the procedure of painting on steel surfaces. (08 Marks)
