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Third Semester B.E. Degree Examination, July/August 2022 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. Mention the importance of Stones, Bricks and Timber as construction materials. (05 Marks)
b. Write a brief note on stabilized mud block. (05 Marks)
c. List the different tests conducted on bricks. Explain any two of them. (10 Marks)

OR

- 2 a. Lists the tests conducted on fine aggregates and explain any one of them in detail. (08 Marks)
b. What are the requirements of good building stones? (06 Marks)
c. Explain the requirements of good bricks. (06 Marks)

Module-2

- 3 a. Briefly explain various methods of sub soil exploration. What are the factors on which the choice of a particular method depends? (10 Marks)
b. Define Foundation. Explain different types of foundation with suitable sketches. (10 Marks)

OR

- 4 a. Write a note on classification of stone masonry. (06 Marks)
b. Write a note on partitions walls. (04 Marks)
c. Find dimension of a combined rectangular footing for two column A and B carrying a load of 500kN and 750kN column A 300 × 300mm, column B 400 × 400mm in size centre to centre of column is 3.4 mts SBC soil 150kN/m². Width of footing is limited to 1.8m. (10 Marks)

Module-3

- 5 a. Explain : i) Chejja ii) Canopy iii) Balcony iv) Lintel. (08 Marks)
b. Explain various modes failures of an arch. (08 Marks)
c. Highlight the important qualities of good flooring materials. (04 Marks)

OR

- 6 a. What are the factors to be considered while selecting a roof covering? (05 Marks)
b. Explain different types of lintels. (05 Marks)
c. What are the requirements of good roof? Draw a neat sketch of king post truss and show important elements. (10 Marks)

Module-4

- 7 a. Explain briefly the guidelines to be followed while locating doors and windows. (10 Marks)
b. What are the requirements of good stair? (05 Marks)
c. Discuss importance of formwork in constructional activity. (05 Marks)

OR

- 8 a. Plan a dog legged stair for a building in which the vertical distance between the floors is 3.6m. The stair hall measure 2.5m × 5m. (10 Marks)
b. Write short notes on the following :
i) Ranking shore
ii) Underpinning by pit method. (10 Marks)

Module-5

- 9 a. What are the objectives of plastering? Discuss the defects in plastering. (10 Marks)
b. Explain the method of applying :
i) Stucco plastering
ii) Lathe plastering. (10 Marks)

OR

- 10 a. What are the defects in painting? (08 Marks)
b. Explain different types of plaster finishes. (06 Marks)
c. What are the characteristics of ideal paint? (06 Marks)
