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Third Semester B.E. Degree Examination, Dec.2016/Jan.2017 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. Write the requirements of good building stones. (04 Marks)
b. Explain the factors causing deterioration of stonework and preservation of stonework. (06 Marks)
c. Briefly explain the tests conducted on bricks. (06 Marks)

OR

- 2 a. Write the requirements of good mortar. (04 Marks)
b. Briefly explain the tests conducted on fine aggregates.
i) Sieve analysis; ii) Specific gravity test. (06 Marks)
c. Briefly explain the importance of size, shape and texture on coarse aggregates. (06 Marks)

Module-2

- 3 a. Write the essential requirements of good foundation. (04 Marks)
b. With neat sketches, explain the following types of foundation:
i) Combined footing; ii) Strap footing. (06 Marks)
c. With neat sketch, write the features of English bond and Flemish bond. (06 Marks)

OR

- 4 a. Briefly explain classification of stone masonry. (06 Marks)
b. With neat sketch, explain various joints provided in stone masonry. (06 Marks)
c. Write the advantages of cavity walls. (04 Marks)

Module-3

- 5 a. Define lintel and write the function of lintel. (04 Marks)
b. With neat sketch explain various components of a segmental arch. (06 Marks)
c. Write the requirements of good floor and factors affecting selection of flooring material. (06 Marks)

OR

- 6 a. Write the requirements of good roof. (04 Marks)
b. Write the advantages and disadvantages of flat roof compared to pitched roof. (06 Marks)
c. With the help of neat sketch, explain various components of queen post truss. (06 Marks)

Module-4

- 7 a. Explain the following doors with neat sketches:
i) Partly paneled and glazed door; ii) Revolving door. (06 Marks)
b. Explain the following windows with neat sketches:
i) Bay window; ii) Corner window. (06 Marks)
c. Write the requirements of good stair. (04 Marks)

OR

- 8 a. Briefly explain classification of stairs. (04 Marks)
b. Plan a dog legged stair for a building in which the vertical distance between the floors is 3.6mt. The stair hall measures 2.5m × 5m. (06 Marks)
c. Write short notes on: i) Shoring; ii) Under pinning. (06 Marks)

Module-5

- 9 a. Write the objectives of plastering and requirement of good plaster. (06 Marks)
b. Discuss the defects in plastering. (06 Marks)
c. Briefly explain method of applying stucco plastering. (04 Marks)

OR

- 10 a. Briefly explain the methods of damp proofing. (06 Marks)
b. Explain in brief defects in painting and constituents of a paint. (06 Marks)
c. Describe the procedure of painting on new wood work. (04 Marks)

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