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Third Semester B.E. Degree Examination, Dec.2019/Jan.2020 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. (06 Marks)
- b. Explain the manufacture process of Brick with necessary flow chart. (08 Marks)
- c. What is Bulking of Sand? Explain its importance in construction field. (06 Marks)

OR

- 2 a. What are the requirements of good building stones? (06 Marks)
- b. What are the constituents of good brick earth? Explain. (06 Marks)
- c. Which are the methods of seasoning of Timber? Describe them brief. (08 Marks)

Module-2

- 3 a. Which are the functions of foundation? Explain them briefly. (06 Marks)
- b. Sketch the plan of alternate courses 1 brick thick wall in English bond. Mention its essential features. (08 Marks)
- c. What are the General principles to be observed in stone masonry? (06 Marks)

OR

- 4 a. Differentiate between strip footing and strap footing with sketches. (06 Marks)
- b. Sketch the elevation of Flemish bond and mention its special features. (08 Marks)
- c. Differentiate between uncoursed rubble masonry and Random rubble masonry with a sketch. (06 Marks)

Module-3

- 5 a. Draw a neat sketch of an arch and Label its parts. (06 Marks)
- b. Explain the procedure for laying Marble flooring in Grand floor with a sketch. (06 Marks)
- c. Mention the requirements of good roof. Draw the sketch of wooden king post truss (half part). (08 Marks)

OR

- 6 a. Discuss various modes of failure of an arch. What are the remedies? (06 Marks)
- b. Explain the procedure for laying Mosaic flooring in ground floor with a sketch. (06 Marks)
- c. Draw the sketch of wooden Queen post truss (half part) and label its parts. (08 Marks)

Module-4

- 7 a. Draw a sketch of a wooden door frame with shutter and label its parts. (06 Marks)
- b. What are the requirements of good stair? (06 Marks)
- c. What is meant by shoring? Explain Raking shore with a neat sketch. (08 Marks)

OR

- 8 a. Write a note on Bay window with a sketch. (06 Marks)
b. Plan a dog legged stair for a building in which the vertical distance between the floors is 3.6m. The stair hall measure $2.5\text{m} \times 5\text{m}$. (08 Marks)
c. Write a note on Revolving Door with a neat sketch. (06 Marks)

Module-5

- 9 a. What are the requirements of plastering? (06 Marks)
b. Explain various causes of Dampness in building. (06 Marks)
c. Describe the constituents of a paint, mentioning the specific functions of each. (08 Marks)

OR

- 10 a. Write a note on various defects in plastering. (06 Marks)
b. What are the ill effects of dampness in building? Explain them briefly. (06 Marks)
c. Describe the procedure of painting: i) Newly plastered surfaces ii) Iron and steel surfaces. (08 Marks)

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