



P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Seventh Semester, B.E. - Civil Engineering

Semester End Examination; Jan. / Feb. - 2021

Building Science and Engineering

Time: 3 hrs

Max. Marks: 100

Note: Answer *FIVE* full questions, selecting *ONE* full question from each unit.

UNIT - I

- 1 a. What are the requirements of a good concrete? Describe the differences between the reinforced and plain cement concrete. 8
- b. What do you understand by the initial setting of cement? How is it determined? 6
- c. What do you understand by workability of concrete? How is it evaluated by slump cone test? 6
- 2 a. Discuss the requirements of good stair in detail. 6
- b. Discuss the provision of doors and windows with respect to location and purpose. 6
- c. With a neat sketch, briefly discuss any two types of doors and two types of windows. 8

UNIT - II

- 3 a. Discuss the requirements of good foundation in detail. 6
- b. Discuss the various causes of failure of foundation. Also discuss the measure to be taken to prevent such failures. 6
- c. List the various types of foundation generally used. Discuss in brief the construction of any two of the foundations. Also state where this type of foundation is used. 8
- 4 a. What is Lintel? What are the different materials used for the construction of lintels? Draw a neat sketch of an RCC lintel showing the details of reinforcement. 6
- b. What is the function of a roof? Compare flat roof and sloped roof. 6
- c. Discuss the various possible causes and effects of dampness. Mention the requirements of an ideal damp proofing material. 8

UNIT - III

- 5 a. With a neat sketch, explain the different components of a building. 8
- b. What is orientation of building? Explain in detail the importance of orientation in the planning of residential building. 6
- c. What is building bye-laws? What is a building line and what is its importance? 6
- 6 a. Distinguish between;
- i) Brick masonry and stone masonry 8
- ii) English bond and Flemish bond
- b. Write a note on the termite control in the existing building. 6
- c. Explain the preventive measure to be taken to control cracks in buildings 6

UNIT - IV

- 7 a. Discuss the functional requirement of interior designer. 6
- b. Write a note on interior design problems. 6
- c. Discuss the standards for interior design of spacious room and comfortable rooms. 8
- 8 a. Discuss the basic elements of interior design and explain any two. 8
- b. Discuss standard for interior design of drinking area and dining area. 6
- c. Discuss the standard for interior design of living area and cooking area. 6

UNIT - V

- 9 a. Discuss the principles of landscaping. 6
- b. Mention the elements of landscape architecture. 6
- c. Discuss the various types of landscaping. 8
- 10 a. Briefly discuss landscape products and landscape materials. 6
- b. Write a short note on water efficient landscaping. 6
- c. Mention the design guidelines for interior landscape. 8

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