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# 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; Dec. - 2019**

**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. List the different types of cement with their function and usage in different scenarios. 10
- b. List the types of steel available in the market and mention their properties. 10
- 2 a. What are the different types of stairs used in building? Explain any one in detail with sketches. 10
- b. Discuss the provision of doors and windows in a structure with respect to, 10
- i) Location            ii) Purpose            iii) Size

## UNIT - II

- 3 a. What do you understand by the term foundation? What are the objectives? Mention the essential requirements of good foundation. 10
- b. Enumerate the various causes of the failure of foundation. What measures are to be taken to prevent such failures? 10
- 4 a. What is the function of roof in a building? Compare the advantage and disadvantages of flat roof and sloped roof. 10
- b. Mention the different types of floors. Explain any four. 10

## UNIT - III

- 5 a. Discuss the merits and demerits of English bond and Flemish bond with neat sketches. 8
- b. What points should be kept in mind while doing construction of building so that in future cracks should not develop on it. 6
- c. Write a note on termite control in existing building. 6
- 6 a. List and explain the different components of a building with neat sketch. 8
- b. What is ventilation and what are the functional requirements? 6
- c. What is orientation of building? Explain in detail the importance of orientation in the planning of residential buildings. 6

## UNIT - IV

- 7 a. Briefly explain the functional requirement of interior design. 10
- b. Mention the basic elements of interior design. Explain any two. 10

- 8 a. List the standard for a interior design of,
  - i) Spacious rooms 10
  - ii) Theme rooms
- b. List the requirement for a interior design of,
  - i) Living area 10
  - ii) Dining area

**UNIT - V**

- 9 a. Mention the elements of landscape architecture. Explain any two. 10
- b. Write a note on;
  - i) Specialization in landscape 10
  - ii) Water efficient landscaping
- 10 a. Mention the design guidelines for interior landscape. 10
- b. Write a note on;
  - i) Landscape products 10
  - ii) Landscape materials

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