

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

May 2023 Semester End Main Examinations

Programme: B.E.

Branch: Civil Engineering

Course Code: 22CV3PCBMC

Course: Building Materials and Construction

Semester: III

Duration: 3 hrs.

Max Marks: 100

Date: 08.05.2023

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

UNIT - I

- 1 a. List any four defects in timber 5x4=20
b. Name the characteristics of good paint.
c. Describe annealing and case hardening of steel.
d. What are the qualities of a good building stone?

OR

- 2 a) Explain the wet process of manufacturing of ordinary Portland cement with a neat flow chart. 10
b) Illustrate various components of a load bearing wall with a neat cross section sketch. 10

UNIT - II

- 3 a) Define safe bearing capacity of soil. Explain in detail Plate load test for determining the safe bearing capacity of soil with a neat sketch. 10
b) What is dampness? What are its ill effects? Briefly explain how damp proofing is done in buildings. 10

OR

- 4 a) Define anti-termite treatment. Explain pre and post constructional anti-termite treatment to buildings. 07
b) Discuss the preliminary investigation of soil. 07
c) Explain the requirements of a good foundation. 06

UNIT - III

- 5 a) List and explain four different types of Masonry and mention their uses. 10
b) Explain flat arch and segmental arches with neat sketches. Mention other types of masonry arches. 10

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

UNIT - IV

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|---|----|--|-----------|
| 6 | a) | Explain any four types of roofs and with a neat sketch give their advantages and disadvantages. | 08 |
| | b) | List the different types of staircases and enumerate the requirement of ideal staircase. | 06 |
| | c) | Design a suitable staircase for a building having the vertical clear height between floor and roof has 3.0 m. The size of the stair hall measures 4.25 m x 5.25 m. | 06 |

UNIT - V

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| 7 | a) | Discuss the Sequences of Work in Building Construction. | 10 |
| | b) | Illustrate the fire and life safety guidelines in site as per the National Building code. | 10 |

B.M.S.C.E. - ODD SEM 2022-23