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

Autonomous Institute Affiliated to VTU

September / October 2023 Supplementary Examinations

Programme: B.E. **Semester: III**
Branch: Civil Engineering **Duration: 3 hrs.**
Course Code: 19CV3PCBMC **Max Marks: 100**
Course: Building Materials And Construction **Date: 13.09.2023**

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)	Explain the reasons for cement concrete used as a major building material in all branches of modern construction.	**05**
	b)	List the rules for getting a good bond in brick masonry.	**05**
	c)	List the advantages of Hoffman kiln.	**05**
	d)	Describe TMT bars. Mention its uses.	**05**

OR

2	a)	With a neat sketch and flow chart explain manufacturing process of dry cement.	**05**
	b)	How do you proceed to get lime putty, quick lime and slaked lime.	**05**
	c)	What are the field tests to find the suitability of bricks for construction.	**05**
	d)	List the qualities of a good building stone.	**05**

UNIT - II

3	a)	With the help of a neat sketch explain the different components of a building from foundation to parapet coping.	**08**
	b)	Design a size stone masonry wall footing for wall of three storied building with following data. i. Foundation to rest on a gravel soil with an angle of repose = 30^0 ii. Density of soil = 16.8 kN/m^3 iii. Thickness of load bearing wall = 300 mm iv. Loads due to roof = 15 kN/m v. Floor loads = 21 kN/m vi. Wall load = 75 kN/m vii. SBC of soil = 180 kN/m^2	**12**

UNIT - III

4	a)	Mention the requirements of an ideal material for damp proofing.	**05**
	b)	With neat sketches explain any four types of joints in stone masonry.	**05**
	c)	List the different types of brick masonry and stone masonry.	**05**
	d)	Discuss the preventive measures for water leakage.	**05**

UNIT - IV

5	a)	Explain with neat sketches any four types of roofs. Give their advantages and disadvantages.	**08**
	b)	List the conditions for good acoustics of a hall.	**04**
	c)	Differentiate between stone lintel and RCC lintel.	**04**
	d)	Explain the elements of an arch with a neat sketch.	**04**

OR

6	a)	List and explain any two types of doors based on materials used.	**05**
	b)	Explain the standards to be followed while designing a window.	**05**
	c)	Explain briefly canopy and balcony.	**05**
	d)	Explain industrial flooring.	**05**

UNIT - V

7	a)	Design a dog legged stair for a building having floor to floor height 3.5 m and stair case room measuring 2.6 X 5.6 m. Draw the plan and section of dog legged stair.	**12**
	b)	What are the objects of pointing and plastering?	**04**
	c)	List the characteristics of an ideal paint.	**04**

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