



# PRESIDENCY UNIVERSITY

BENGALURU

Roll No.														
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## End - Term Examinations – MAY/ JUNE 2025

Date: 02-06-2025

Time: 01:00 pm – 04:00 pm

School: SOE	Program: B Tech. CIV	
Course Code: CIV2020	Course Name: Alternative Building Materials	
Semester: IV	Max Marks:100	Weightage: 50%

CO - Levels	C01	C02	C03	C04
Marks	14	36	26	24

### Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

### Part A

Answer ALL the Questions. Each question carries 2 marks.

10Q x 2M=20M

1.	List the types of alternative building materials used in construction.	2 Marks	L1	C01
2.	Outline the qualities of a good fibre used to produce fibre reinforced composites.	2 Marks	L1	C01
3.	State the factors that influence the selection of green building materials.	2 Marks	L1	C02
4.	Describe trombe wall, a component used as passive architecture for green buildings.	2 Marks	L1	C02
5.	List any four green building rating systems used globally.	2 Marks	L1	C02
6.	Outline any four applications of mortar and name the proportions.	2 Marks	L1	C03
7.	Describe any four essential properties of masonry mortars.	2 Marks	L1	C03
8.	Outline the types of masonry mortars used in construction.	2 Marks	L1	C03
9.	Define ferrocement.	2 Marks	L1	C04
10.	Describe composite wall construction.	2 Marks	L1	C04

## Part B

### Answer the Questions.

Total Marks 80M

11.	Describe the production process of combination pozzolana using Honeycomb kiln.	10 Marks	L2	CO1
Or				
12.	Summarize the application of any two types of agricultural waste in the construction process.	10 Marks	L2	CO1
13.	Calculate the total embodied energy for an RCC column of size 230 x 450 mm and height 3m. Assume volume of steel used is 1.2%. Embodied energy of concrete and steel are 0.0075 MJ/kg and 6MJ/kg respectively.	10 Marks	L3	CO2
Or				
14.	Describe any four renewable energy solutions for a green building.	10 Marks	L2	CO2
15.	Explain any five characteristics of green building materials and also list the factors influencing its selection.	10 Marks	L2	CO2
Or				
16.	Explain the types of flooring materials for green building.	10 Marks	L2	CO2
17.	With the help of a flow chart explain the IGBC certification process of for green buildings.	10 Marks	L2	CO2
Or				
18.	Explain the health and economic benefits of green building design with LEED.	10 Marks	L2	CO2
19.	Outline the production process of table molded bricks used for masonry.	10 Marks	L2	CO3
Or				
20.	Write a note on Fal-G bricks. List any two applications.	10 Marks	L1	CO3
21.	Explain the methods of blending of lime and sand for the preparation of Lime mortar.	10 Marks	L2	CO3
Or				
22.	Explain the process of mixing of mortar by hand and machine.	10 Marks	L2	CO3
23.	Explain the properties of materials used in ferro cement construction.	10 Marks	L2	CO4
Or				
24.	Write a note on top-down construction process.	10 Marks	L2	CO4
25.	Describe the various methods of fabrication of ferro cement composites.	10 Marks	L2	CO4
Or				
26.	Write a note on Mivan construction technology.	10 Marks	L2	CO4