Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – December 2025

Date: 12-12-2025 **Time:** 01:00pm– 04:00pm

School: SOE	**Program:** B.Tech Civil Engineering	
Course Code: CIV2021	**Course Name:** Design Concepts of Building Services	
Semester: V	**Max Marks**: 100	**Weightage**: 50%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	16	20	20	24	20

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 2marks. **10Q x 2M=20M**

1.	Give two examples of commercial buildings.	**2 Marks**	**L1**	**CO1**
2.	What is artificial lighting?	**2 Marks**	**L1**	**CO1**
3.	What is HVAC?	**2 Marks**	**L1**	**CO1**
4.	State the need for building services.	**2 Marks**	**L1**	**CO1**
5.	State any two advantages of LED lighting.	**2 Marks**	**L1**	**CO1**
6.	What is a radiator?	**2 Marks**	**L1**	**CO1**
7.	List any two classifications of building services.	**2 Marks**	**L1**	**CO1**
8.	List any two classifications of air conditioners.	**2 Marks**	**L1**	**CO1**
9.	What are “Dead spots”?	**2 Marks**	**L1**	**CO4**
10.	Name two fire detection systems	**2 Marks**	**L1**	**CO4**

Part B

Answer the Questions. **Total Marks 80M**

11.	**a.**	Explain the differences between direct and indirect cold water supply systems.	**20 Marks**	**L2**	**CO2**
	b.	Discuss the factors influencing the choice of hot water supply systems		**L2**	**CO2**
		Or			
12.	**a.**	Explain the importance of plumbing and electrical services.	**20 Marks**	**L2**	**CO2**
	b	Differentiate between the One Pipe System and the Two Pipe System for drainage in terms of design, venting, and typical building applications.		**L2**	**CO2**

13.	**a.**	Prepare two plans and show the electrical layout for a single-story 3 BHK and 2 BHK residential home. Mention all the legends as per NBC 2016 and label them carefully.	**20 Marks**	**L3**	**CO3**
		Or			
14.	**a.**	Prepare two plans and show the electrical layout for a single-story two-room commercial building and a 4 BHK residential home. Mention all the legends as per NBC 2016 and label them carefully.	**20 Marks**	**L3**	**CO3**

15.	**a.**	Discuss the advantages and disadvantages of lifts and escalators.	**20 Marks**	**L2**	**CO4**
	b.	Explain the different types of lifts.		**L2**	**CO4**
		Or			
16.	**a.**	Describe the control measures to arrest fire in residential buildings.	**20 Marks**	**L2**	**CO4**
	b.	Describe the mechanical services provided in high-rise buildings.		**L2**	**CO4**

17.	**a.**	Explain the components of an elevator with a neat diagram.	**20 Marks**	**L3**	**CO5**
		Or			
18.	**a.**	Describe the concept of green buildings and their benefits, with various methods to achieve energy efficiency in green buildings.	**20 Marks**	**L3**	**CO5**