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**PRESIDENCY UNIVERSITY  
BENGALURU**

**SET B**

**SCHOOL OF ENGINEERING  
END TERM EXAMINATION - JAN 2024**

**Semester :** Semester V - 2021

**Course Code :** CIV2021

**Course Name :** Design Concepts of Building Services

**Program :** B.Tech.

**Date :** 10-JAN-2024

**Time :** 9:30AM - 12:30 PM

**Max Marks :** 100

**Weightage :** 50%

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**Instructions:**

(i) Read all questions carefully and answer accordingly.

(ii) Question paper consists of 3 parts.

(iii) Scientific and non-programmable calculator are permitted.

(iv) Do not write any information on the question paper other than Roll Number.

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**PART A**

**ANSWER ALL THE QUESTIONS**

**4 X 5M = 20M**

1. Briefly give the classification of building services?

(CO1) [Knowledge]

2. What are the various types of Air conditioning systems?

(CO1) [Knowledge]

3. What are the various types of elevators used in buildings?

(CO2) [Knowledge]

4. Briefly explain the mechanical services provided in high rise buildings.

(CO3) [Knowledge]

**PART B**

**ANSWER ALL THE QUESTIONS**

**5 X 10M = 50M**

5. Water is an essential building service used for washing, cleaning, drinking, cooking and so on. Briefly explain Hot and Cold water systems. What are the factors influencing the choice of hot water supply systems?

(CO2) [Comprehension]

6. Explain the functional differences between an escalator and elevator.

(CO2) [Comprehension]

7. A warehouse has to be built to store combustible chemicals for a company that specializes in Pyrotechnics. Provide your inputs on materials to be used for construction and the measures to be taken to increase the fire resistance capacity of the proposed warehouse  
(CO3) [Comprehension]
8. A movie theater is a space designed to maximize sound efficiency for the entertainment and enjoyment of the audience. Briefly explain the common acoustic defects that has to be addressed for a pleasant aural experience.  
(CO3) [Comprehension]
9. Indian Government has now made it mandatory to install Rain Water Harvesting system in new buildings. How will you explain the pros and cons of the system to a client convincingly?  
(CO2) [Comprehension]

### **PART C**

#### **ANSWER ALL THE QUESTIONS**

**2 X 15M = 30M**

10. (a) What are Green buildings? List the methods to achieve energy efficiency in these buildings.  
(b) Explain LEED and GRIHA rating system for a green building  
(CO2) [Application]
11. As a building service professional you are assigned to design a restaurant with kitchen, restroom and dining area in the same floor. Draw the plan and also show electrical layout.  
(CO1) [Application]