Roll No: | | | | | | | | | | | |

PRESIDENCY UNIVERSITY

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Presidency University Act, 2013 of the Karnataka Act No. 41 of 2013 | Established under Section 2(f) of UGC Act, 1956
Approved by AICTE, New Delhi | Approved By BCI
Bengaluru

Mid Term Examinations - October 2026

Date: 05/10/2026 **Time:** 09:30 AM - 11:00 AM

Course Code: DES2027 **Course Name:** Building Services

Semester: Fifth Semester **Max. Marks:** 50 **Weightage:** 50%

CO - Levels	CO1	CO2	CO3
Marks	26	42	22

PART A: Answer Following Questions. 10 M

Q.N.	Questions	M	CO	BT
1	Fire Fighters have to identify the source of the fire to deal safely with it. What is likely for the fuel to be if the professional uses sand to douse it? **A)** Electricity **B)** Kerosene **C)** Gas **D)** Coal	2	CO1	BT1
2	When you see an exposed pipe, painted yellow, it is a clear sign for ? **A)** Petrol / Gasoline **B)** Ice Water **C)** Pressurized Natural Gas **D)** Electrical Conduit	2	CO1	BT1
3	Electricity follows the path of least resistance. It is dangerous to have live wires hanging loose. Grounding the electrical system, makes it safer to operate and prevent electricity from ? **A)** Leakage **B)** Running **C)** Phasing **D)** Spreading	2	CO3	BT4
4	Gravity is the downward force responsible for the speed of clean water in pipes. If the water tank is placed at 12 meters height, and each floor is 3 meters high, which floor receives the highest speed? **A)** Terrace Floor **B)** Basement **C)** Last Floor **D)** None of the above	2	CO2	BT3
5	HVAC Systems are in general found to be useful for - **A)** Fire Control **B)** Lighting Regulation **C)** Plumbing Issues **D)** Moisture Control	2	CO1	BT2

PART B : Answer Any 1 Following Questions. 10 M

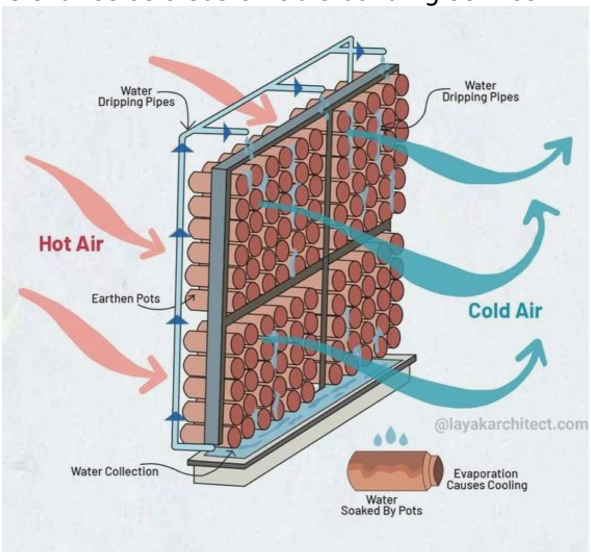
Q.N.	Questions	M	CO	BT
6	Describe the complete journey of wastewater in a residential drainage system, from fixtures to municipal sewer lines. Add a detailed labelled diagram.	10	CO2	BT2
7	Describe the components and functioning of a Water Supply System for a four-storeyed building. Include a labelled schematic.	10	CO2	BT4

PART C: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
8	A residential apartment houses 5 people. Using average Indian per-capita water consumption norms, calculate the total daily water requirement and suggest a suitable overhead tank capacity with basic dimensions. Justify your choice.	10	CO3	BT4

9	Calculate the HVAC tonnage required for a classroom of 30 students and justify the choice of system. Include a conceptual airflow diagram.	10	CO3	BT4

PART D: Answer Any 1 Following Questions. 10 M				
Q.N.	**Questions**	**M**	**CO**	**BT**
10	Explain why hidden services (MEP) are critical for spatial comfort even though they are not visible. Provide real-world examples.	10	CO2	BT3
11	Discuss the importance of correct pipe geometry in drainage systems. Why are 90° bends avoided? Illustrate with a diagram of pipe junctions.	10	CO2	BT3

PART E: Answer Any 1 Following Questions. 10 M				
Q.N.	**Questions**	**M**	**CO**	**BT**
12	Explain the significance of electrical conduits in building layouts. Why are they represented using dotted lines? Add a diagram showing conduit routing.	10	CO1	BT2
13	Using the diagram of the earthen-pot evaporative cooling system provided, explain the working principle of this passive cooling method. Describe how air temperature is reduced, identify all major components, and discuss its relevance as a sustainable building service in hot-dry climates.  (image link as on Sep 21, 2026- https://i.pinimg.com/736x/e8/77/43/e877439f766674aded464eac574ba4e9.jpg)	10	CO1	BT2