Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations – October 2025

Date: 11-10-2025 **Time:** 02.00pm to 03.30pm

School: SOCSE	**Program:** B.Tech	
Course Code : CIT2501	**Course Name:** Wireless Communication in IoT	
Semester: V	**Max Marks**: 50	**Weightage**: 25%

CO - Levels	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Marks	**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 2marks. **5Q x 2M=10M**

1	Identify two enabling technologies that made WSN possible.	**2 Marks**	**L2**	**CO1**
2	Describe the IoT conceptual equation for making umbrella a living entity	**2 Marks**	**L2**	**CO1**
3	Interpret “smart” device?	**2 Marks**	**L2**	**CO1**
4	Discuss source and sink nodes in a Wireless Sensor Network.	**2 Marks**	**L2**	**CO2**
5	Describe the three types of mobility in WSNs.	**2 Marks**	**L2**	**CO2**

Part B

Answer the Questions. **Total Marks 40M**

6.	**a.**	Explain the main challenges in implementing WSNs in IoT.	**10 Marks**	**L2**	**CO 1**
		Or			
7.	**a.**	Differentiate between IoT and M2M with examples.	**10 Marks**	**L2**	**CO 1**

8.	**a.**	Explain the functions at each level in the Oracle IoT framework for the processes and services using the cloud?	**10 Marks**	**L2**	**CO 1**
		Or			
9.	**a.**	Discuss various applications for Wireless Sensor Networks (WSNs)?	**10 Marks**	**L2**	**CO 1**

10.	**a.**	Compare process-based concurrency and event-based programming in WSN operating systems. Which is more suitable and why?	**10 Marks**	**L2**	**CO 2**
		Or			
11.	**a.**	Interpret in-network processing in WSNs? Explain its importance and energy-saving potential. Illustrate with an example how aggregation reduces the number of transmitted messages compared to raw data transmission	**10 Marks**	**L2**	**CO 2**

12.	**a.**	Explain Quality of Service (QoS) in WSNs? Discuss different QoS metrics such as event detection probability, event classification error, detection delay, and tracking accuracy with suitable examples.	**10 Marks**	**L2**	**CO 2**
		Or			
13.	**a.**	Explain the two approaches for interfacing applications with the protocol stack in WSNs: a) Treating the application as just another component b) Using a deliberately designed service interface Discuss the advantages and disadvantages of each approach.	**10 Marks**	**L2**	**CO 2**