



# PRESIDENCY UNIVERSITY

BENGALURU

Roll No.														
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## Mid - Term Examinations - March 2026

Date: 13- 03-2026

Time: 11.45am to 01.15pm

<b>School:</b> SOCSE	<b>Program:</b> B. Tech		
<b>Course Code:</b> CIT3403	<b>Course Name:</b> Embedded Sytem for IoT		
<b>Semester:</b> VI	<b>Max Marks:</b> 50	<b>Weightage:</b> 25%	

CO - Levels	C01	C02	C03	C04	C05
Marks					

### 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	List the four I/O ports of 8051 and mention their width.	2 Marks	L1	C01
2	What is the function of the Program Status Word (PSW)?	2 Marks	L1	C01
3	What is context switching?	2 Marks	L2	C03
4	Define an IoT device.	2 Marks	L1	C03
5	Explain priority-based scheduling policies.	2 Marks	L2	C02

## Part B

Answer the Questions.

Total Marks 40M

6.	a.	Discuss different addressing modes of 8051 with suitable examples.	10 Marks	L3	C01
Or					
7.	a.	Discuss various issues involved in adding two 8-bit numbers using 8051 ports.	10 Marks	L4	C01

8.	a.	Explain the architecture of the 8051 microcontroller with a neat block diagram.	10 Marks	L2	C01
Or					
9.	a.	Describe the TMOD and TCON registers in detail.	10 Marks	L2	C02

10.	a.	Describe Arduino UNO board architecture with pin diagram.	10 Marks	L2	C03
Or					
11.	a.	Explain the working of an IoT system with a suitable diagram.	10 Marks	L2	C03

12.	a.	Discuss RTOS scheduling with suitable examples.	10 Marks	L4	C03
Or					
13.	a.	Define Instruction sets and discuss the types of instruction sets available in 8051.	10 Marks	L3	C01