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

PRESIDENCY UNIVERSITY

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Bengaluru

Mid Term Examinations - October 2026

Date: 06/10/2026 **Time:** 09:30 AM - 11:00 AM

Course Code: ECE3083 **Course Name:** Hardware and Software Architectures for IoT Systems

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

CO - Levels	CO1	CO2
Marks	68	22

PART A: Answer Following Questions. 10 M

Q.N.	Questions	M	CO	BT
1	Justify an example protocol for Request Response Model	2	CO1	BT2
2	With example discuss two Serial Wired Protocols	2	CO1	BT2
3	Explain the significance of the Private Cloud with example	2	CO1	BT2
4	Which are the elements of USB functioning system	2	CO1	BT2
5	Discuss any two ARM Processor modes.	2	CO2	BT2

PART B : Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
6	Discuss with Functional block diagram the Logical Design of IoT and any one Communication models	10	CO1	BT2
7	Explain the architecture and working of MQTT Protocol	10	CO1	BT2

PART C: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
8	With diagram discuss the working of SPI Protocol with its advantages and disadvantages	10	CO1	BT2
9	With diagram explain any 5 major ARM processor Segments	10	CO1	BT2

PART D: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
10	Justify the relevance of Cloud computing for IoT and Discuss any two Cloud Service models with applications	10	CO1	BT2
11	Justify with functioning and architecture of SCADA along with applications	10	CO1	BT2

PART E: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
12	Identify a Problem and Develop an IoT solution using Ultra Sonic sensor using Arduino.	10	CO2	BT3

13	Identify a Problem and Develop an IoT solution using Temperature sensor using Arduino.	10	CO2	BT3