



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.																			
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Mid - Term Examinations – March 2026

Date: 14-03-2026

Time: 02:00pm – 03:30pm

School: SOCSE	Program: B.Tech		
Course Code: CIT3416	Course Name: Fundamentals of IoT & Embedded Circuit Systems		
Semester: VI	Max Marks: 50	Weightage: 25%	

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	28	12	-	-	10

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 IoT Applications?	2 Marks	L1	CO1
2	Define Cognitive IoT?	2 Marks	L1	CO1
3	List Major IoT services?	2 Marks	L1	CO1
4	Types of Smart Car Sensors	2 Marks	L1	CO1
5	List Types of Electronic Parts	2 Marks	L2	CO2

Part B

Answer the Questions.

Total Marks 40M

6.	a.	Illustrate the evolution of Industrial Revolutions leading to Industry 4.0.	10 Marks	L2	CO1
Or					
7.	a.	With neat diagram Illustrate Cognitive IoT Infrastructure	10 Marks	L2	CO1

8.	a.	Explain smart healthcare applications of IoT.	10 Marks	L2	CO1
Or					
9.	a.	Explain Cloud Computing and its importance in IoT.	10 Marks	L2	CO1
Or					
10.	a.	Illustrate types of Electronics parts and its usage in IoT	10 Marks	L2	CO2
Or					
11.	a.	Explain the role of sensors in IoT with examples.	10 Marks	L2	CO2
Or					
12.	a.	Hadoop is a big data framework designed and deployed by Apache Foundation. It is an open-source software utility that works in the network of computers in parallel to find solutions to big data problems and process it using the MapReduce algorithm. Google released a paper on MapReduce technology in December 2004. This became the genesis of the Hadoop Processing Model. So, MapReduce is a programming model that allows us to perform parallel and distributed processing on huge data sets. The analyst wants to know how many times each words are repeated in the above mentioned paragraph. Assist the analyst by creating a map reduce program.	10 Marks	L3	CO5
Or					
13.	a.	Design and explain a Map sReduce program to compute the minimum temperature of different states based on data collected from IoT sensors.	10 Marks	L3	CO5