

Code: 19CS4801B

**IV B.Tech - II Semester – Regular Examinations-MAY 2023**

**ADVANCES IN INTERNET OF THINGS  
(COMPUTER SCIENCE & ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This question paper contains two Parts A and B.

2. Part-A contains 5 short answer questions. Each Question carries 2 Marks.

3. Part-B contains 5 essay questions with an internal choice from each unit. Each question carries 12 marks.

4. All parts of Question paper must be answered in one place.

BL – Blooms Level

CO – Course Outcome

**PART – A**

		BL	CO
1. a)	Describe the impacts of IoT.	L2	CO1
1. b)	Differentiate between data in motion and data at rest.	L2	CO2
1. c)	Express the role of IoT in improving business.	L2	CO3
1. d)	Relate the uses of IoT in smart cities.	L2	CO4
1. e)	Describe the challenges for Transportation Operators and Users?	L2	CO4

**PART – B**

			BL	CO	Max. Marks
<b>UNIT-I</b>					
2	a)	Explain the main elements of the oneM2M IoT Architecture.	L2	CO1	6 M
	b)	Describe Simplified IoT Architecture.	L2	CO1	6 M
<b>OR</b>					

3	a)	Discuss about Core IoT Functional Stack.	L2	CO1	6 M
	b)	Summarize Layer 2: Communications Network Layer.	L2	CO1	6 M
<b>UNIT-II</b>					
4	a)	Demonstrate about “three Vs” to categorize big data.	L2	CO2	6 M
	b)	Explain Machine Learning and Getting Intelligence from Big Data.	L2	CO2	6 M
<b>OR</b>					
5	a)	Explain Apache Kafka Data Flow.	L2	CO2	6 M
	b)	Illustrate the stages of data processing in an edge Analytics Processing Unit.	L3	CO2	6 M
<b>UNIT-III</b>					
6	a)	Appraise about an IoT Strategy for Connected Manufacturing.	L4	CO3	6 M
	b)	Explain The CPwE Reference Model.	L2	CO3	6 M
<b>OR</b>					
7	a)	Demonstrate the PROFINET Architecture.	L2	CO3	6 M
	b)	Explain about Connected Machine Model Based on MTConnect.	L2	CO3	6 M
<b>UNIT-IV</b>					
8	a)	Explain Smart Cities Layered Architecture.	L2	CO3	6 M
	b)	Demonstrate Connected street Lighting Architecture.	L2	CO3	6 M
<b>OR</b>					

9	a)	Illustrate about Street Layer Resiliency.	L3	CO3	6 M
	b)	Explain Connected Parking Architecture.	L2	CO3	6 M
<b>UNIT-V</b>					
10	a)	Explain about IoT Technologies for Roadways.	L4	CO4	6 M
	b)	Explain about Connected Rail IoT Architecture.	L4	CO4	6 M
<b>OR</b>					
11	a)	Demonstrate Connected Roadways IoT Network Architecture.	L2	CO4	6 M
	b)	Illustrate about DSRC General Communication Architecture.	L3	CO4	6 M