Q.P.Code: 23CS0545   R23   H.T.No. ☐☐☐☐☐☐☐☐☐☐☐

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech. III Year I Semester Regular Examinations December-2025
INTERNET OF THINGS
CSE(Artificial Intelligence & Data Science)

Time: 3 Hours   Max. Marks: 70

PART-A
(Answer all the Questions 10 x 2 = 20 Marks)

1	a	What is the role of embedded systems in IoT?	CO3	L2	2M
	b	Mention the four IoT communication models with one-line descriptions.	CO2	L2	2M
	c	Define a sensor. Give one example used in IoT.	CO1	L1	2M
	d	State two advantages of Bluetooth communication in IoT.	CO3	L1	2M
	e	Define and write the D2D.	CO3	L1	2M
	f	Define the Host-to-Network Layer.	CO3	L1	2M
	g	Define and write LLDP, SNMP.	CO1	L1	2M
	h	Define the Business Services.	CO1	L1	2M
	i	Differentiate between fixed-wing and rotary-wing drones.	CO1	L2	2M
	j	Write short notes on IMU sensors used in UAV.	CO2	L2	2M

PART-B
(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

2	a	Define IoT and Describe the characteristics of IoT.	CO1	L2	5M
	b	Explain the function of each block of communication system.	CO2	L2	5M

OR

3	a	Explain major services used in cloud computing technology.	CO2	L2	5M
	b	Explain the role of Big data analysis in IoT and list out its Characteristics.	CO2	L2	5M

UNIT-II

4	a	Explain different types of actuators used in IoT with examples.	CO2	L2	5M
	b	Discuss the role of actuators in home automation systems.	CO4	L4	5M

OR

5	a	Write a program to read temperature data from a sensor and send it over Bluetooth.	CO3	L3	5M
	b	Explain an IoT use case where Wi-Fi communication is essential.	CO2	L2	5M

UNIT-III

6	a	List the Requirements for IoT Networks.	CO3	L1	5M
	b	Write and explain the Actuators.	CO3	L2	5M

OR

7	a	Illustrate the Internet Layer And protocols.	CO3	L3	6M
	b	Discuss Features of 6LoWPAN Applications.	CO3	L2	4M

UNIT-IV

8		Explain the Device Discovery Capabilities in IOT and Register a device in IoT.	CO4	L2	10M

OR

9		Define and explain the SaaS and write Advantages and Disadvantages of SaaS cloud computing layer.	CO4	L2	10

UNIT-V

10	a	Discuss how UAVs can be used for disaster management.	CO4	L4	5
	b	Explain the features and importance of Mission Planner software.	CO2	L2	5

OR

11	a	Explain about ArduPilot flight control software.	CO2	L2	5
	b	Explain a case study on FlytBase IoD platform.	CO2	L2	5

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