O.P.Code: 20EC0422	R20	H.T.No.									

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech. III Year II Semester Regular & Supplementary Examinations June-2025
EMBEDDED SYSTEMS AND IOT
(Electronics & Communications Engineering)

Time: 3 Hours **Max. Marks: 60**

(Answer all Five Units **5 x 12 = 60** Marks)

		UNIT-I			
1	a	Explain the different classifications of embedded systems. Give an example for each.	CO1	L4	6M
	b	Describe the IDE tools for developing application on embedded system.	CO1	L2	6M
		OR			
2	a	Distinguish between Von-Neumann and Harvard architecture.	CO1	L2	6M
	b	Write the features of Bluetooth and Wi-Fi.	CO1	L1	6M
		UNIT-II			
3	a	Illustrate the Physical design with an generic block diagram of an IoT device and explain it briefly.	CO2	L5	6M
	b	Compare the protocols associated with transport layer of IoT.	CO2	L2	6M
		OR			
4	a	With the help of neat diagrams, describe the level1 to level3 of IoT and Deployment Templates with an example.	CO2	L2	6M
	b	Describe the implementation of IoT technology in Health and life style as health and fitness monitoring.	CO2	L2	6M
		UNIT-III			
5	a	Explain the Key elements of Software defined network for IoT.	CO3	L4	6M
	b	Develop a program to control DC motor using PWM technique.	CO3	L6	6M
		OR			
6	a	Write a program to perform ADC with the sensor inputs.	CO3	L3	6M
	b	Construct a program in Arduino to work as a counter.	CO3	L5	6M
		UNIT-IV			
7	a	List out the various steps involved in IoT system design methodology.	CO4	L1	6M
	b	Explain the control flow statements such as if ,for,while and Range with an example.	CO4	L4	6M
		OR			
8	a	Describe the packages used in python.	CO4	L2	6M
	b	Distinguish between procedure-oriented programming and object-oriented programming.	CO4	L2	6M
		UNIT-V			
9	a	Classify the various frequently used commands during operation of Linux OS.	CO5	L2	6M
	b	Compare the various single board computers which are alternatives to Raspberry pi.	CO5	L2	6M
		OR			
10	a	Illustrate how to interface a switch to raspberry pi.	CO5	L5	6M
	b	Write a short note on various raspberry pi interfaces used for data transfer.	CO5	L3	6M

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