Reg. No.															

Question Paper Code	12717

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024

Sixth Semester

Electronics and Instrumentation Engineering

(Common to Artificial Intelligence and Data Science , Computer Science and Engineering, Electronics and Communication Engineering & Information Technology,)

20EIEL901 - EMBEDDED SYSTEM FOR CONNECTED DEVICES

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	List the characteristics of an embedded system.	2	K1	CO1
2.	Which type of memory is suitable for embedded systems? Justify your answer.	2	K2	CO1
3.	What is the difference between the Internet, Intranet, and Extranet?	2	K1	CO2
4.	Explain briefly TCP/IP Model.	2	K2	CO2
5.	Mention the different models used for the development of an embedded system.	2	K1	CO3
6.	Enumerate briefly the processes involved in Co-design.	2	K2	CO3
7.	Define Synchronization	2	K1	CO4
8.	Briefly explain the different ways in which a thread can be cancelled.	2	K2	CO4
9.	List few applications of IOT.	2	K1	CO5
10.	How is Raspberry Pi used in IoT?	2	K2	CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

			Marks	K – Level	CO
11.	a)	With neat sketch, discuss about the structural units in embedded processor.	13	K2	CO1
		OR			
	b)	Explain the memory selection for an embedded system with the help of an example.	13	K2	CO1
12.	a)	What is OSI standard and explain its layers in detail.	13	K2	CO2
		OR			
	b)	Explain in detail about SPI communication protocol and its interfacing techniques.	13	K2	CO2

13. a) Illustrate with functional description about the different phases of EDLC. *13 K2 CO3*

OR

b) Write detailed notes on software and hardware interface techniques. *13 K2 CO3*

14. a) Explain in detail about multi threaded programming. *13 K2 CO4*

OR

b) Discuss in detail about preemptive and non-preemptive multitasking. *13 K2 CO4*

15. a) Illustrate in detail the IOT layered architecture. *13 K2 CO5*

OR

b) Describe in detail 6LoWPAN and its features. *13 K2 CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Explain in detail the need of timer and counting devices in embedded system. *15 K2 CO1*

OR

b) Explain the types of Serial and parallel ports with neat diagrams. *15 K2 CO2*