Register No : _____

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026

Second Semester

Electronics and Communication Engineering

PAPT2422 INDUSTRIAL INTERNET OF THINGS

Regulations - 2024

Duration: 3 Hrs. ***Maximum: 100 Marks***

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

Q.No	Questions	BLT	CO	Marks
1.	List few characteristics IoT.	L1	1	2
2.	Mention any two challenges faced in IoT development.	L1	1	2
3.	What is the significance of IIoT in the manufacturing industry?	L1	2	2
4.	Give two communication protocols used in IIoT.	L2	2	2
5.	What is Software Defined Networking (SDN)?	L1	3	2
6.	Write a simple syntax to define a function in Julia.	L2	3	2
7.	List the type of services does the cloud offer in industrial IoT	L1	4	2
8.	How threats originate and how it affects the systems?	L2	4	2
9.	How does IIoT help in monitoring chemical processes?	L2	5	2
10.	What is the role of IIoT in UAVs.	L2	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No			Questions	BLT	CO	Marks
11.	a		Analyze in detail about the IoT and its characteristics with real-world examples.	L1	1	16
			Or			
	b		Describe the functional components of an IoT system. And also analyses their roles and interactions.	L2	1	16
12.	a	i	Sketch the reference architecture of Industrial IoT briefly with few illustrations.	L2	2	8
		i i	What is the role of IIoT in transforming industrial business operations and explore its needs.	L1	2	8
			Or			
	b	i	Compare and contrast the IIoT sensing and processing layers.	L2	2	8
		i i	Illustrate how IIoT communication and networking layers support real-time data flow in industrial environments.	L2	2	8

13.	a		Develop the architecture of SDN network and discuss its benefits in a real time scenario.	L3	3	16
			Or			
	b		Compare Julia with Python and R in terms of performance, syntax, and use cases.	L2	3	16
14.	a	i	Discuss the role of cloud computing in Industrial IoT with benefits and use cases.	L1	4	8
		i	Differentiate fog computing and cloud computing in the context of IIoT.	L4	4	8
		i				
			Or			
	b	i	Discuss the major security challenges in Industrial IoT and how they can be addressed.	L2	4	8
		i	Analyze the layered approach which is relevant to IIoT security systems	L3	4	8
		i	with examples.			
15	a		Discuss how UAVs integrated with IIoT help in real-time data collection and decision-making?	L3	5	16
			Or			
	b		Discuss the real-time uses cases of IIoT in industrial sectors and their outcomes.	L4	5	16

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