Reg. No.												

Question Paper Code	13765

M.E. - DEGREE EXAMINATIONS, APRIL / MAY 2025

Second Semester

M.E. - Embedded Systems Technologies

24PESPC204 - INTERNET OF THINGS

Regulations - 2024

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	List any two business drivers for IoT adoption.	2	K1	CO1
2.	What are the various application areas of loT?	2	K1	CO1
3.	Mention any two differences between ZigBee and WiFi.	2	K1	CO2
4.	What is some common communication protocols used in IoT architectures?	2	K1	CO2
5.	Define NFC and give one application.	2	K1	CO3
6.	What is 6LoWPAN and why is it important in IoT?	2	K1	CO3
7.	Define maintainability in software systems.	2	K1	CO4
8.	What is descriptive analytics?	2	K1	CO4
9.	List the need for Smart grid.	2	K1	CO5
10.	Define open innovation.	2	K1	CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

			Marks	K – Level	CO
11.	a)	Explain the concept of Platform as a Service (PaaS) and its benefits.	13	K2	CO1
		OR			
	b)	Discuss in detail the various trends and implications of IoT with examples of typical applications.	13	K2	CO1
12.	a)	Explain the structure of an IoT node with respect to sensing, processing, communication, and powering.	13	K2	CO2
		OR			
	b)	Illustrate how mesh topology can be used for reliable data transmission in industrial IoT applications.	13	K2	CO2
13.	a)	Compare and contrast ZigBee, NFC, and Bluetooth Low Energy in terms of protocol and applications.	13	K2	CO3
		OR			

	b)	Explain with a diagram how MIPI interfaces are used in smart phone camera modules.	*13*	*K2*	*CO3*
14.	a)	Elaborate on the framework for data-driven decision making in IoT.	*13*	*K2*	*CO4*
		OR			
	b)	Differentiate between Descriptive, Predictive, and Prescriptive Analytics. Explain with IoT-based examples.	*13*	*K2*	*CO4*
15.	a)	Describe the impact of business intelligence on data-driven decision making.	*13*	*K2*	*CO5*
		OR			
	b)	Describe the role of dashboards and reports in Business Intelligence systems.	*13*	*K2*	*CO5*

PART - C (1 × 15 = 15 Marks)

16.	a)	Construct a smart farming setup using soil sensors and weather forecasts to increase yield.	*15*	*K3*	*CO6*
		OR			
	b)	Develop a smart solution to reduce traffic congestion in urban areas using smart city concepts.	*15*	*K3*	*CO6*