

III B. Tech I Semester Regular/Supplementary Examinations, April -2025
INTERNET OF THINGS

(CSE(Artificial Intelligence and Data Science))

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**

All Questions Carry Equal Marks

		<u>UNIT-I</u>	
1.	a)	What is the role of things and internet in IoT?	[7M]
	b)	Outline the basic differences between transducers, sensors, and actuators.	[7M]
		(OR)	
2.	a)	What are some innovative applications which a smart city can deploy?	[7M]
	b)	Explain the role of HTTP and HTTPS in IoT communication. How do these protocols ensure data transfer between IoT devices and servers?	[7M]
		<u>UNIT-II</u>	
3.	a)	Draw ETSI M2M domains and high-level architecture. List the capabilities and functions of each domain	[7M]
	b)	Explain how IoT transforms traditional business processes. Provide examples of industry-specific IoT business models and discuss their economic and operational impact.	[7M]
		(OR)	
4.	a)	Explain the concepts of data enrichment and data consolidation in IoT. How do these processes enhance raw sensor data for meaningful analytics and decision-making?	[7M]
	b)	Explain the need for a modified OSI stack in IoT/M2M systems. What are the key differences between the traditional OSI model and its adaptations for IoT environments?	[7M]
		<u>UNIT-III</u>	
5.	a)	What are the functions of GET, POST, PUT, and DELETE?	[7M]
	b)	Explain the design principles that must be followed to enable effective web connectivity for connected devices in an IoT environment.	[7M]
		(OR)	
6.	a)	How do RESTful services, APIs, and URI addressing help integrate IoT devices with the web?	[7M]
	b)	Compare and contrast traditional web communication protocols with lightweight IoT protocols. Why are protocols like CoAP preferred in certain IoT applications over HTTP?	[7M]
		<u>UNIT-IV</u>	
7.	a)	How do data collection and analysis approaches differ in M2M and IoT.	[7M]
	b)	Evaluate the importance of data analytics in IoT/M2M. How do	[7M]

		analytics tools help extract value from large volumes of IoT-generated data?	
		(OR)	
8.	a)	Illustrate how IoT data flows from sensor acquisition to enterprise integration. What are the key steps and technologies involved in this pipeline?	[7M]
	b)	Describe the impact of IoT on business process automation. How do connected devices contribute to more efficient and intelligent enterprise operations?	[7M]
		<u>UNIT-V</u>	
9.	a)	Discuss how cloud computing enhances the scalability, accessibility, and processing power of IoT/M2M systems.	[7M]
	b)	Describe the "Everything as a Service (XaaS)" model in the context of IoT.	[7M]
		(OR)	
10.	a)	Explain how cloud platforms support data collection, storage, and computing for IoT/M2M applications. What are the benefits of using the cloud in large-scale IoT deployments?	[7M]
	b)	What are Wireless Sensor Networks (WSNs), and how do they contribute to IoT? Explain their architecture, communication protocols, and real-world applications.	[7M]
