Total No. of Questions: 6

Seat No.:

BACHELOR OF TECHNOLOGY (CBCS - 2023)
B. Tech. Sem-V Computer Science & Engineering AI & ML : WINTER: 2025
SUBJECT: INTERNET OF THINGS

Day : Tuesday
Date : 16/12/2025

W-30736-2025

Time : 02:30 PM-05:30 PM
Max. Marks : 60

NB :
1. All questions are COMPULSORY.
2. Figures to the right indicate FULL marks.
3. Draw neat labelled diagrams WHEREVER necessary.

Q. 1	Which are the different Communication models in IoT.	(10)
	OR	
Q. 1	Identify and explain the functional blocks of IoT with neat, labeled diagram. How do these blocks contribute to the overall operation of an IoT system?	(10)
Q. 2	Explain the concept of fog computing within the IoT data management and compute stack. How does fog computing address limitations of cloud computing?	(10)
	OR	
Q. 2	Explain one M2M architecture with neat labeled diagram.	(10)
Q. 3	Explain the architecture and functioning of sensor networks with a focus on Wireless Sensor Networks (WSNs). What are their key features and challenges?	(10)
	OR	
Q. 3	What is the meaning of Smart Object? Explain the components and characteristics of smart object.	(10)
Q. 4	Discuss Zigbee protocol architecture in detail.	(10)
	OR	
Q. 4	Compare the MAC layer mechanisms of IEEE 802.15.4e (TSCH mode) and LoRaWAN. How do they address reliability and energy efficiency?	(10)
Q. 5	Explain working of STOMP in detail.	(10)
	OR	
Q. 5	Compare the IoT application layer protocols CoAP, MQTT, and AMQP based on their communication model, QoS, and resource requirements. Identify suitable applications for each.	(10)
Q. 6	Describe the applications of IoT in Enviornment.	(10)
	OR	
Q. 6	Analyze the role of IoT in Home Automation. Discuss how IoT-enabled devices improve energy efficiency, security, and user comfort, giving practical examples.	(10)