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B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

October 2024 Supplementary Examinations

Programme: B.E.

Branch: Institutional Elective

Course Code: 22EE6OE1IT

Course: IoT and Applications

Semester: VI

Duration: 3 hrs.

Max Marks: 100

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

			UNIT - I	CO	PO	Marks
Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.	1	a)	Define IoT? Explain characteristics, Security and Design challenges associated with Internet of things (IoT)?	CO1	PO1	10
		b)	Write a detailed note on Industrial IoT with the help of illustrations	CO2	PO1	10
			UNIT - II			
	2	a)	Classify and explain the different types of sensors based on datatype and output.	CO3	PO1	10
		b)	With the help of advantages, disadvantages and applications, write a note on Pneumatic and Electric Actuators	CO3	PO1	10
			UNIT - III			
	3	a)	What is an IoT Protocol? What is the need of these protocols? Explain clearly TCP and UDP protocols	CO4	PO3	10
		b)	What are the Network Topologies used in Zigbee? Explain each of them with neat diagrams.	CO4	PO3	10
			OR			
	4	a)	Write a detailed note on IPv4 and IPv6	CO4	PO3	10
		b)	Write a short note on <ul style="list-style-type: none"> • IEEE 802.3 • 6LoWPAN 	CO4	PO3	10
			UNIT - IV			
	5	a)	Explain about COAP and differentiate it with MQTT Protocols (Five differences)	CO4	PO3	10
		b)	How does HTTP/CoAP proxying work, and what are its benefits?	CO4	PO3	10
			OR			

	6	a)	What is MQTT? How does it work? What are the drawbacks of using MQTT?	CO4	PO3	10
		b)	Explain in detail messaging model and Request/Response model of CoAP protocol.	CO4	PO3	10
			UNIT - V			
	7	a)	Write a short note on <ul style="list-style-type: none"> • Structured Data • Unstructured Data • Data in Motion • Data in Rest 	CO5	PO2	10
		b)	Differentiate between Platform as a Service with Function as a Service as well as with Infrastructure as a Service	CO5	PO2	10
