

Code No: **R20A0452****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech I Semester Supplementary Examinations, June 2025****Internet of Things & Its Applications****(ME, CSE, IT, CSE-CS, CSE-AIML, CSE-DS, B.Tech-AIDS & B.Tech-AIML)**

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**Time: 3 hours****Max. Marks: 70**

**Note:** This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing **ONE** Question from each SECTION and each Question carries 14 marks.

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**SECTION-I**

			BCLL	CO(s)	Marks
1	<i>A</i>	Discuss on the main challenges of Internet of Things	L3	CO-I	[7M]
	<i>B</i>	List out the interfaces used in IoT and also its Features	L2	CO-I	[7M]
OR					
2	<i>A</i>	Describe the characteristics of IoT and its applications	L2	CO-I	[7M]
	<i>B</i>	Explain on Smart Objects and Connecting Smart Objects of IoT.	L3	CO-I	[7M]

**SECTION-II**

3	<i>A</i>	Discuss the uses of IEEE 802.15.4, 802.11, its topology and Security aspects in IOT	L3	CO-II	[7M]
	<i>B</i>	Explain about Lora WAN standard, its MAC layer and security	L2	CO-II	[7M]
OR					
4	<i>A</i>	Explain any two IOT protocols in detail	L2	CO-II	[7M]
	<i>B</i>	Discuss on CoAP and MQTT framework and message format	L2	CO-II	[7M]

**SECTION-III**

5	<i>A</i>	Explain the microcontroller and chips involved in embedded devices	L3	CO-III	[7M]
	<i>B</i>	Explain the arduino board details and the steps for installation	L2	CO-III	[7M]
OR					
6	<i>A</i>	Describe various features of a Raspberry Pi device.	L2	CO-III	[7M]
	<i>B</i>	Discuss in detail the use of embedded computing in the design of IoT Systems.	L3	CO-III	[7M]

**SECTION-IV**

7	<i>A</i>	Discuss in detail about cloud platform for IoT applications.	L2	CO-IV	[7M]
	<i>B</i>	Compare the Data in Motion versus Data at Rest for IoT	L3	CO-IV	[7M]
OR					
8	<i>A</i>	Discuss in detail the significance of data analytics in IOT with necessary illustrations	L3	CO-IV	[7M]
	<i>B</i>	Compare and contrast on Structured Versus Unstructured Data analytics	L3	CO-IV	[7M]

**SECTION-V**

9	<i>A</i>	Discuss on any two case studies of IoT on Industrial applications	L2	CO-V	[7M]
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	<b><i>B</i></b>	Explain in detail on IoT based Home appliances	<b>L2</b>	<b>CO-V</b>	<b>[7M]</b>
		OR			
<b>10</b>	<b><i>A</i></b>	Discuss on case study related IoT based electronic equipment's	<b>L3</b>	<b>CO-V</b>	<b>[7M]</b>
	<b><i>B</i></b>	Write short notes on case study related to infrastructures and buildings	<b>L3</b>	<b>CO-V</b>	<b>[7M]</b>

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