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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
III B.Tech I Semester Supplementary Examinations, June/July 2024
Internet of Things & Its Applications
(ME, CSE, IT, CSE-CS, CSE-AIML, CSE-DS, B.Tech-AIDS & B.Tech-AIML)

Roll No

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

1	**A**	Discuss the significance of Internet of Things technology with different application areas' aspects	**[7M]**
	B	Explain with the help of a diagram IoT World Forum standardized architecture.	**[7M]**

OR

2	**A**	Explain moderately the major use cases of M2M communication.	**[7M]**
	B	Explain with the help of a block diagram an IoT ecosystem	**[7M]**

SECTION-II

3	**A**	Discuss the detail about the 6 LoWPAN and SCADA.	**[7M]**
	B	Explain the Physical and Mac layer of 802.15.4 standard.	**[7M]**

OR

4	**A**	Using which technique security is achieved in 802.15.4? Explain.	**[7M]**
	B	Explain Constraint Application Protocol (CoAP) in detail.	**[7M]**

SECTION-III

5	**A**	Explain in detail embedded system hardware architecture while discussing its components separately.	**[7M]**
	B	Discuss the advantages of SoC over a microcontroller.	**[7M]**

OR

6	**A**	Explain the significances of the following in IoT technology i) Sensors ii) Actuators iii) Processors iv) Gateways	**[7M]**
	B	Discuss in detail the IoT Architecture layers (hint: four layers)	**[7M]**

SECTION-IV

7	**A**	Compare and contrast structured data and unstructured data in detail.	**[7M]**
	B	Compare and contrast data in motion and data at rest in detail.	**[7M]**

OR

8	**A**	Explain different approaches of data analysis	**[7M]**
	B	"IoT data is volatile" what do you mean by this? And how will you handle the volatility of the IoT data?	**[7M]**

SECTION-V

9	**A**	Give a list of components used to health care facility a smart one. Interpret the purpose of your selection for each of the components.	**[7M]**
	B	Present your design procedure for making a health care facility a smart health care facility using IoT technology.	**[7M]**

OR

10	**A**	What different components will you use to make agriculture to be supported by IoT technology? Give reason for each of your selection.	**[7M]**
	B	Discuss the challenges faced by IoT technology to be used for industry applications	**[7M]**

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