Code No: R194105D **R19** **Set No. 1**

IV B.Tech I Semester Advance Supplementary Examinations, March – 2023

INTERNET OF THINGS

(Computer Science and Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions
ONE Question from Each unit
All Questions Carry Equal Marks

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UNIT I

1	a)	Explain the potential and benefits of an IoT oriented approach over M2M.	[7]
	b)	Summarise the IoT examples of usages in various fields	[8]
		(OR)	
2	a)	Explain the four levels in an architectural framework for a smart city.	[7]
	b)	List out the open-source software components for developing an IoT application.	[8]

UNIT II

3	a)	Describe and list the protocol features in Bluetooth v 4.2 BR/EDR and low-energy modes.	[7]
	b)	Explain protocol layers of BT LE and ZigBee IP.	[8]
		(OR)	
4	a)	How does an RF circuit connect to Bluetooth, ZigBee or Wi-Fi radios using ISM band transceivers?	[7]
	b)	Explain how to design with ease and affordability for local area network of M2M devices.	[8]

UNIT III

5	a)	How do the connected devices connect to server-end functions in IoT for business processes?	[7]
	b)	With neat sketch explain the communication gateway and proxies between CoAP objects and web applications.	[8]
		(OR)	
6	a)	Show diagrammatically how a device sends an SMS to a mobile terminal and how a mobile origin sends a message to an actuator device.	[7]
	b)	Explain the REST architectural style of coding for client/server interactions.	[8]

UNIT IV

7	a)	Figure out and explain the steps are needed for establishing wireless sensor network.	[7]
	b)	Write in detailed note on CoAP-SMS and CoAP-MQ	[8]
		(OR)	
8	a)	Explain about Extensible Messaging and Presence Protocol in detail	[7]
	b)	Write in detailed note on Service discovery protocols	[8]

UNIT V

9		Summarize the different types of transaction processing on databases, streaming data and events.	[15]
		(OR)	
10	a)	Outline the in-memory row format and column format database features and usages.	[7]
	b)	Write in detailed note on data validation and data categorization	[8]