Code No: R1932044 **R19** **SET - 1**

III B. Tech II Semester Regular Examinations, June-2022

INTERNET OF THINGS

(Electronics and Communication 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)	Define IoT. Explain the role of things and internet in IoT.	[8M]
	b)	What are the major layers in IoT Architecture?	[7M]
		(OR)	
2.	a)	Explain the advantages and disadvantages of an IoT.	[8M]
	b)	Explain the role of cloud in IoT.	[7M]
		UNIT-II	
3.	a)	Explain Arduino. What are the things need to be considered for developing on the Arduino?	[8M]
	b)	What are the Advantages of the ARM Cortex-M0 Processor?	[7M]
		(OR)	
4.	a)	Give a detailed overview of the ARM Processor families.	[8M]
	b)	What is the difference between x86, ARM and Intel processors?	[7M]
		UNIT-III	
5.	a)	Explain the benefits of using Python programming language in IoT.	[8M]
	b)	Explain the role of UDP and MAC Address in IOT.	[7M]
		(OR)	
6.	a)	Explain the constraint application protocol (CoAP).	[8M]
	b)	Draw and explain Bluetooth Low Energy architecture.	[7M]
		UNIT-IV	
7.	a)	What is device integration? Explain its implementation.	[8M]
	b)	Write key points about unstructured data storage on cloud.	[7M]
		(OR)	
8.	a)	Why is device authentication necessary for the IoT?	[8M]
	b)	Explain about authorization of devices.	[7M]
		UNIT-V	
9.	a)	What are the elements of a home automation system?	[8M]
	b)	Define how the IoT technology can be implemented in smart lightening.	[7M]
		(OR)	
10.	a)	Implement Remote medical assistance.	[8M]
	b)	Define how the IoT technology can be implemented in fire detection.	[7M]

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Code No: R1932044 **R19** **SET - 2**

III B. Tech II Semester Regular Examinations, June-2022

INTERNET OF THINGS

(Electronics and Communication 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)	What is internet of things? Describe the characteristics of IoT.	[8M]
	b)	Explain working of IoT gateways.	[7M]
		(OR)	
2.	a)	State and explain M2M communication with example.	[8M]
	b)	Explain in detail about XaaS (Everything as a Service).	[7M]
		UNIT-II	
3.	a)	Describe the procedure of building IoT with Raspberri Pi.	[8M]
	b)	Why we need various types of processors?	[7M]
		(OR)	
4.		Draw the functional block diagram of ARM Cortex-M0 processor and explain each block.	[15M]
		UNIT-III	
5.	a)	List and explain some python packages of interest for IoT.	[8M]
	b)	Give the brief introduction about Internet Protocol (IP), TCP.	[7M]
		(OR)	
6.	a)	What is ZigBee? Explain.	[8M]
	b)	List Bluetooth key versions. What are the difficulties associated with them.	[7M]
		UNIT-IV	
7.	a)	What do you mean by data storage? What are the different schemas for a data store?	[8M]
	b)	Discuss data acquiring and storage.	[7M]
		(OR)	
8.	a)	Explain the usage of cloud platforms for IoT applications and services.	[8M]
	b)	Why is device authentication necessary for the IoT?	[7M]
		UNIT-V	
9.	a)	Define how the IoT technology can be implemented in intrusion detection system.	[8M]
	b)	Define how the IoT technology can be implemented in industrial automation with any example.	[7M]
		(OR)	
10.	a)	Implement the smart irrigation system.	[8M]
	b)	Determine the IoT levels for designing structural health monitoring system.	[7M]

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Code No: R1932044 **R19** **SET - 3**

III B. Tech II Semester Regular Examinations, June-2022

INTERNET OF THINGS

(Electronics and Communication 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)	What are the design principles of IoT? Explain.	[8M]
	b)	What are examples of IoT devices? Explain.	[7M]
		(OR)	
2.	a)	With the help of neat diagram, describe the levels of IoT with an example each.	[8M]
	b)	Explain various Business Model Patterns in the IoT.	[7M]
		UNIT-II	
3.	a)	What are the things need to be considered for developing on the Raspberri Pi?	[8M]
	b)	What is Special About the ARM Ecosystem?	[7M]
		(OR)	
4.		Give an overview of ARM Cortex-M Processor family.	[15M]
		UNIT-III	
5.	a)	Give the brief introduction about Internet Protocol (IP), TCP.	[8M]
	b)	Why the python is the first choice for the Raspberry Pi language than C or C++?	[7M]
		(OR)	
6.	a)	Explain with example MQTT protocol. What is the role of MQTT protocol in IoT?	[8M]
	b)	Which protocol is used to link all the devices in IoT? Explain in detail.	[7M]
		UNIT-IV	
7.	a)	Discuss data acquiring and storage.	[8M]
	b)	Write key points about unstructured data storage on cloud.	[7M]
		(OR)	
8.	a)	How authentication and authorization of devices is achieved?	[15M]
		UNIT-V	
9.	a)	Define how the IoT technology can be implemented in industrial automation with any example.	[8M]
	b)	Explain the implementation of Heart Monitors with Reporting.	[7M]
		(OR)	
10.	a)	Explain service specification and information model for Home Intrusion Detection system using IoT Design Methodology.	[8M]
	b)	Explain the implementation of IoT technology in smart parking.	[7M]

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Code No: R1932044 **R19** **SET - 4**

III B. Tech II Semester Regular Examinations, June-2022

INTERNET OF THINGS

(Electronics and Communication 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)	Mention the applications of IoT.	[8M]
	b)	Explain the role of things in IoT.	[7M]
		(OR)	
2.	a)	Define IoT and M2M. Illustrate the differences between IoT and M2M.	[8M]
	b)	What are the major privacy and security issues in case of IoT?	[7M]

UNIT-II

3.	a)	Explain in detail about ARM Cortex-A class processor.	[8M]
	b)	Give the difference between Arduino and Raspberry Pi.	[7M]
		(OR)	
4.	a)	What are the key characteristics of the ARM Cortex-M0?	[8M]
	b)	Explain Cortex-M0 Processor Instruction Set.	[7M]

UNIT-III

5.	a)	What are the advantages and disadvantages of Bluetooth?	[8M]
	b)	Explain TCP/IP protocol suite with diagram.	[7M]
		(OR)	
6.	a)	Write a short note on: MQTT, CoAP, ZigBee.	[8M]
	b)	Write a Python program for blinking an LED.	[7M]

UNIT-IV

7.	a)	What do you mean by data storage? What are the different schemas for a data store?	[8M]
	b)	Write key points about unstructured data storage on cloud.	[7M]
		(OR)	
8.	a)	How authentication and authorization of devices is achieved.	[15M]

UNIT-V

9.	a)	Implement the smart irrigation system.	[8M]
	b)	Design process specification and domain for home intrusion detection system using IoT design methodology.	[7M]
		(OR)	
10.	a)	Explain the implementation of IoT technology in Structural health monitoring.	[8M]
	b)	Discuss about case study on IoT system for industrial automation.	[7M]

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