CBCS SCHEME

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18RA731

Seventh Semester B.Tech. Degree Examination, Dec.2023/Jan.2024

IoT Technology

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Module-1

1	a.	List and explain the difference between IT and OT networks.	**(08 Marks)**
	b.	List and explain the few most significant challenges and problem that IoT currently facing.	**(10 Marks)**
	c.	Define what is IoT?	**(02 Marks)**

OR

2	a.	With an neat diagram, explain M2M, IoT standardized Architecture.	**(10 Marks)**
	b.	Explain with with an neat block diagram of a simplified of IoT architecture.	**(10 Marks)**

Module-2

3	a.	Explain with diagram, how sensors and Actuator interact with physical world also compare sensor and Actuator functionality with human.	**(12 Marks)**
	b.	List and explain the communication criteria being used in connecting smart object.	**(08 Marks)**

OR

4	a.	List and explain the characteristics of an smart object with a circuit.	**(08 Marks)**
	b.	List advantages and disadvantages of wireless based sensor network.	**(07 Marks)**
	c.	List and explain any five types of sensor.	**(05 Marks)**

Module-3

5	a.	List and explain the key advantages of Internet protocol.	**(07 Marks)**
	b.	Discuss the need for optimization of IP in IoT.	**(08 Marks)**
	c.	Discuss the Application protocol for IoT.	**(05 Marks)**

OR

6	a.	Illustrate with a neat block diagram, How to optimize IP for IoT using adaptation layers.	**(10 Marks)**
	b.	Discuss the various methods, used in IoT applications transport methods.	**(10 Marks)**

Module-4

7	a.	Explain with an block diagram, the types of data analysis.	**(12 Marks)**
	b.	List and explain the common challenges face in OT security system.	**(08 Marks)**

OR

8	a.	List and explain the benefits of network analysis.	**(06 Marks)**
	b.	List and explain the domains which revolve around the common application of ML for IoT.	**(06 Marks)**
	c.	With neat diagram, explain format Risk Analysis structure Octave and fair.	**(08 Marks)**

Module-5

9	a.	Write a short notes on DS18B20 temperature sensor.	**(06 Marks)**
	b.	Explain the fundamentals of Arduino program.	**(08 Marks)**
	c.	With neat diagram, explain about the Raspberry Pi Board.	**(06 Marks)**

OR

10	a.	With neat block diagram, explain the smart cities layered Architecture.	**(15 Marks)**
	b.	Explain the operating system installation procedure in Raspberry Pi.	**(05 Marks)**

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