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Internal Assessment Test III – Jan. 2022

Sub:	Internet of Things							Sub Code:	20MCA32
Date:	22/01//2022	Duration:	90 min's	Max Marks:	50	Sem:	III	Branch:	MCA

Note : Answer FIVE FULL Questions, choosing ONE full question from each Module

		MARKS	OBE	
			CO	RBT
	PART I			
1	Explain Edge analytics in detail with a neat diagram.	[10]	CO4	L2
	OR			
2	With a neat diagram explain 6LoWPAN protocol header compression and fragmentation.	[10]	CO3	L2
	PART II	[10]	CO5	L2
3	Explain in detail the smart city IOT layer architecture.			
	OR			
4	Describe MQTT framework message format in detail.	[10]	CO3	L2

PART III

5	Describe the different components of FNF with a neat diagram **OR**	[10]	CO4	L2
6	Explain tunneling legacy SCADA over IP networks and SCADA protocol transition with a neat diagram.	[10]	CO3	L2

PART IV

7	Explain Formal Risk analysis structures (OCTAVE & FAIR) **OR**	[10]	CO4	L2
8	Explain Purdue model for control hierarchy.	[10]	CO4	L2

PART V

9	With a neat diagram wireless temperature monitoring system using Raspberry PI. **OR**	[10]	CO5	L2
10	Explain the advantages of IP as a network layer.	[10]	CO3	L2

	Scheme of Evaluation		CMRIT CMR INSTITUTE OF TECHNOLOGY, BENGALURU. ACCREDITED WITH A+ GRADE BY NAAC

	Internal Assessment Test III – Jan. 2022		
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Date:	**22/01//2022** Duration: 90 mins Max Marks: 50 **Sem:** III	**Branch:**	**MCA**

Question	Description	Marks Distribution	Max Marks
1	**Explain Edge analytics in detail with a neat diagram** Edge core analytics components with Explanation Diagram	 6 4	10
2	**With a neat diagram explain 6LoWPAN protocol header compression and fragmentation.** 6LoWPAN protocol header compression fragmentation	 5 5	10
3	**Explain in detail the smart city IOT layer architecture.** Explanation Diagram	 7 3	10
4	**Describe MQTT framework message format in detail.** MQTT Explanation Framework message format	 4 4 2	10
5	**Describe the different components of FNF with a neat diagram** Component's explanation Diagram	 7 3	10
6	**Explain tunneling legacy SCADA over IP networks and SCADA protocol transition with a neat diagram.** Explanation with 3 scenarios	 10	10
7	**Explain Formal Risk analysis structures (OCTAVE & FAIR)** Octave allergo steps and phases FAIR explanation	 7 3	10
8	**Explain Purdue model for control hierarchy.** **Explanation** **diagram**	 6 4	10
9	**With a neat diagram wireless temperature monitoring system using Raspberry PI.** DHT11 sensor Components Explanation with code	 2 3 5	10
10	**Explain the advantages of IP as a network layer.** The key advantages of the IP for the Internet of Things: • Open and standards-based • Versatile	 5*2	10

| | | • Ubiquitous
• Scalable
• Manageable and highly secure
• Stable and resilient
• Consumers' market adoption
• The innovation factors | | |