		Concerning and	
		GBGS SGREME	170001
USN		Advar, Mangalore	1/0501
Eighth Semester B.E. Degree Examination, July/August 2022			
Internet of Things and Applications			
Tim	ne: 3	3 hrs. Max. Mar	ks: 100
	Ν	ote: Answer any FIVE full questions, choosing ONE full question from each mod	lule.
1		Module-1	(00.15 1)
I	a. h	What is IO1? Explain evolutionary phases of the internet. What are the different challenges of IOT?	(08 Marks) (07 Marks)
	с.	Explain the drivers behind new network architecture.	(07 Marks) (05 Marks)
		OR	
2	a.	With a neat diagram, explain one M2M architecture of IOT.	(08 Marks)
	b.	Explain Core IOT functional stack.	(07 Marks)
	c.	Compare and contrast IT and OT.	(05 Marks)
		Module-2	
3	a.	With a neat diagram, explain how actuators and sensors interact with Physic	al World.
	h	Classify actuators based on energy type. Evolution briefly the Wireless Sensor Network (WSN) and its Communication	(10 Marks) Protocols
	υ.	Explain oneny the wheress sensor freework (wsiv) and its communication	(10 Marks)
		OR	· · ·
4	a.	Briefly explain protocol stack utilization of IEEE 802.15.4.	(10 Marks)
	b.	Explain LoRaWAN standard and alliance MAC layer and security.	(10 Marks)
		Module-3	
5	a.	Explain 6LoWPAN protocol header compression and fragmentation in detail.	(10 Marks)
	b.	Explain 6Ti SCH architecture in detail.	(10 Marks)
		OR	
6	a.	Explain Tunneling legacy SCADA over IP networks and SCADA protocol translat	tion with a
	h	neat diagram. Explain MOTT framework and message format in detail	(10 Marks) (10 Marks)
	0.	Explain WQTT name work and message format in detail.	(10 14141 KS)
7	9	Explain the elements of Hadoon with a neat diagram	(10 Marks)
/	a. b	Explain the core functions of edge analytics with necessary diagram	(10 Marks) (10 Marks)
	Ċ		(101/11/10)
8	а	Explain the different components of FNF	(08 Marks)
U	b.	Describe Distributed Analytics Systems.	(07 Marks)
	c.	Describe Network Analytics.	(05 Marks)
		Module-5	
9	a.	Explain the different pins/parts of Arduino UNO Board.	(10 Marks)
	b.	With a neat diagram, explain the Wireless Temperature Monitoring System with R	aspberry
		P _i .	(10 Marks)
		OR	
10	a. h	Write a Python program on Raspberry P_i to blink an LED.	(10 Marks)
	υ.	Explain Small City Security Alchitecture in detail.	(10 wiarks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.