EqTC

PRN:		Course Code:	ECE 401R1

Final Year **B. Tech** End Semester Examination Winter 2023

Internet of Things

Day and Date: Tuesday, 28/11/2023 Max Marks: **100**

Time: 2.00 to 5.00 PM Duration: **03** hrs

Instructions: All questions are compulsory.

			Marks	Bloom's Level	CLO
Q.1		**Attempt the following**			
	a)	Illustrate the level 4 of IoT in detail.	08	L3	CLO2
	b)	List and explain the IoT protocols	08	L4	CLO1
		OR			
	b)	Elaborate the design principles of IoT	08	L4	CLO1
Q.2		**Attempt the following**			
	a)	Comment on classification of sensors	08	L3	CLO3
	b)	Discuss the purpose and requirements specification and information model specification of IoT design methodology in detail.	08	L2	CLO1
		OR			
	b)	Discuss the process specification and service specification of IoT design methodology in detail.	08	L2	CLO1
Q.3		**Attempt any two from the following**			
	a)	List and explain the features and pins of Arduino Uno	08	L4	CLO2
	b)	Elaborate the I/O commands for Arduino Uno	08	L4	CLO2
	c)	Explain the following terminal commands for Raspberry Pi with example i. mkdir ii. ifconfig iii. nano iv. sudo	08	L4	CLO3
Q.4		**Attempt any two from the following**			
	a)	Interface relay with Raspberry Pi and write a program for turning ON and turning OFF the LED every 3 sec.	08	L5	CLO3
	b)	Interface ultrasonic sensor with Arduino Uno and write a program for measuring distance of obstacle from the sensor.	08	L5	CLO3
	c)	Interface DHT11 with Arduino Uno and write a program to measure values of temperature and humidity	08	L5	CLO3
Q.5		**Attempt any Two of the following**			
	a)	Write a program for DHT11 Data Logger with ThingSpeak Server using Raspberry Pi.	09	L2	CLO3
	b)	Write a short note on RemoteXY application.	09	L2	CLO2
	c)	Comment on Blynk application	09	L2	CLO2
Q.6		**Attempt any Two of the following**			
	a)	Explain the applications of IoT for environment	09	L3	CLO4
	b)	Highlight the application of IoT in home automation.	09	L3	CLO4
	c)	Explain the applications of IoT for Agriculture and Health & Lifestyle	09	L3	CLO4

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