Darshan Institute of Engineering & Technology
B.Tech. | Sem-6 | Summer-2024

Course Code	: 2101CS631	**Date**	: 20-04-2024
Course Name	: Internet of Things	**Duration**	: 150 Minutes
		Total Marks	: 70

Instructions:
1. Attempt all the questions.
2. Figures to the right indicates maximum marks.
3. Make suitable assumptions wherever necessary.

Q.1	**(A)**	List out IoT Level components.	**4**
	(B)	Explain the Characteristics of IoT.	**3**
		OR	
		What is the sensor? Explain the types of sensors.	
	(C)	Explain Communication Models in IoT in brief with a diagram.	**7**
		OR	
		Explain wireless sensor Networks in brief.	
Q.2	**(A)**	Explain the Difference between IoT and M2M	**4**
	(B)	Why SDN (Software define Network) is important? Where is SDN used?	**3**
		OR	
		What do IoT Data Acquisition platforms provide	
	(C)	Explain the Basics of Raspberry Pi Architecture	**7**
		OR	
		Write Arduino Uno Specifications.	
Q.3	**(A)**	Explain UART serial communication in detail.	**4**
	(B)	What is IoT communication? Why is communication between smart devices important in IoT?	**3**
		OR	
		Write the principal of the light sensor.	
	(C)	What is MQTT? Why is the MQTT protocol important? What are MQTT components?	**7**
		OR	
		Comparison between I2C and SPI Communication Protocols.	

Q.4	(A)	Define Actuators and explain the Relay module with Pin-Out.	4
	(B)	How do I connect a Buzzer to an LED light?	3

OR

How do I connect devices with the relay?

| | (C) | Explain the working of the Bluetooth Module in brief. | 7 |

OR

Explain the working of the Zigbee Module in brief.

Q.5	(A)	Explain the common architecture of IoT applications.	4
	(B)	What are the benefits of Fog Computing?	3

OR

What are the service models of the Cloud?

| | (C) | Explain Healthcare Applications with IoT. | 7 |

OR

Write Explain IoT-Based Application for Water Quality Monitoring.

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