



MALLA REDDY UNIVERSITY

Department of Computer Science and Engineering

Subject Name: INTERNET OF THINGS

Subject Code: MR22-1CS0106

Year & Semester: III-I

Unit-Wise Question Bank

Q.No	QUESTION	MARKS	SECTION	UNIT
1.	Sketch and explain the Architecture of IoT.	8	Section-1	1
2.	Briefly explain “One M2M” architecture with a neat diagram.	8	Section-1	1
3.	Sketch and explain the concept of IoT World Forum Standardized.	8	Section-1	1
4.	Differentiate between IoT and M2M.	8	Section-1	1
5.	Explain about various stages of IoT Evolution with a diagram?	8	Section-1	1
6.	Briefly explain about IoT Enabling Technologies?	8	Section-1	1
7.	Briefly explain about IoT Networking Components?	8	Section-1	1
8.	Briefly explain the sensor characteristics and sensorial deviations.	8	Section-1	1
9.	Explain different sensing types of a sensor	8	Section-1	1
10.	List out the differences between sensors and actuators.	8	Section-1	1
11.	Explain the concept of IEEE 802.15.4 wireless technology with a neat diagram in comparison to the OSI stack.	8	Section-2	2
12.	Explain about Zigbee connectivity technology.	8	Section-2	2
13.	Differentiate between Zigbee and Z-wave connectivity technologies.	8	Section-2	2
14.	Explain the concept of RFID with a neat diagram	8	Section-2	2
15.	Briefly explain about IPv6 communication technology	8	Section-2	2
16.	Discuss about REST communication technology.	8	Section-2	2
17.	Explain about SOAP communication technology.	8	Section-2	2
18.	Explain the concept of MQTT communication technology with a neat diagram.	8	Section-2	2
19.	Discuss about AMQP communication technology.	8	Section-2	2

20.	Briefly explain about CoAP communication technology.	8	Section-2	2
21.	Briefly explain about hardware layout of Arduino UNO board with a neat diagram.	8	Section-3	3
22.	Explain about Digital I/O functions and Analog I/O function with examples.	8	Section-3	3
23.	Sketch and explain about Inter Integrated Circuit (I2C) Bus.	8	Section-3	3
24.	Sketch and explain about Parallel Interface Bus.	8	Section-3	3
25.	Breifly explain about Serial Peripheral Interface Bus.	8	Section-3	3
26.	Describe the Arduino Uno and explain how to sketch and implement the blinking of LED using the Arduino Uno.	8	Section-3	3
27.	Describe the Arduino Uno and explain how to sketch and implement the traffic light signal control using Arduino Uno.	8	Section-3	3
28.	Sketch and explain movement detection using PIR sensor and Arduino Uno.	8	Section-3	3
29.	Sketch and implement the Servo motor control using Arduino Uno.	8	Section-3	3
30.	Write a program to describe a seven-segment display for LED using push button and Arduino Uno.	8	Section-3	3
31.	List out the difference between Arduino boards to Raspberry Pi boards.	8	Section-4	4
32.	Explain any few operating systems supporting to Raspberrypi board.	8	Section-4	4
33.	Briefly explain about hardware layout of Raspberrypi board with a neat diagram.	8	Section-4	4
34.	Briefly explain about the GPIO pins of the Raspberrypi board with a neat diagram.	8	Section-4	4
35.	Explain the features and use cases of the following Raspberrypi operating systems a) Raspberry Pi OS b) Ubuntu c) Kali Linux d) Windows 10 IoT Core	8	Section-4	4
36.	Explain the step-by-step procedure involved in configuring the Raspberrypi.	8	Section-4	4
37.	Sketch and implement a program to blink an LED using a Raspberry Pi in Python	8	Section-4	4
38.	Write and explain a Python program to measure distance using an Ultrasonic Sensor with a Raspberry Pi.	8	Section-4	4
39.	Develop a Python program to detect the motion using a PIR sensor with a Raspberry Pi.	8	Section-4	4
40.	What is the architecture of agricultural IoT.	8	Section-5	5
41.	What are the key components of the agricultural IoT architecture?	8	Section-5	5

42.	What role does IoT play in the architecture of a Smart Irrigation Management System?	8	Section-5	5
43.	What are the advantages of the agricultural IoT.	8	Section-5	5
44.	Briefly discuss about vehicular IoT architecture with a diagram.	8	Section-5	5
45.	What are the key components of the vehicular IoT architecture?	8	Section-5	5
46.	List out the advantages of the vehicular IoT.	8	Section-5	5
47.	Sketch and explain the architecture of healthcare IoT.	8	Section-5	5
48.	What are the key components of the healthcare IoT architecture?	8	Section-5	5
49.	What are the advantages and risks of healthcare IoT.	8	Section-5	5