



KIIT Deemed to be University
Online End Semester Examination(Autumn Semester-2020)

Subject Name & Code: Internet of Things & IT-4021
Applicable to Courses: B.Tech(CSE,IT,CSCE,CSSE)

Full Marks=50

Time:2 Hours

SECTION-A(Answer All Questions. Each question carries 2 Marks)

Time:30 Minutes

(7×2=14 Marks)

<u>Question No</u>	<u>Question Type (MCQ/SAT)</u>	<u>Question</u>	<u>CO Mapping</u>	<u>Answer Key (For MCQ Questions only)</u>
<u>Q.No:1</u>	<u>SAT</u>	Which IoT layer protocol determines how data is physically sent over the physical medium in the network?	1	
	<u>SAT</u>	Why do IoT Systems have to be self-adapting and self-configuring?	1	
	<u>MCQ</u>	Which of the following is not a data link layer technology? a) UART b) Bluetooth c) HTTP d) WiFi	2	C
	<u>MCQ</u>	Which of the following is not a Network Device? a) Switch b) Traffic Analyzer c) Router d) Bridge	1	B
<u>Q.No:2</u>	<u>SAT</u>	What is purpose of digitalWrite() and digitalWrite() functions?	1	
	<u>SAT</u>	What is purpose of setup() and loop() functions?	1	
	<u>SAT</u>	What is the purpose of pinMode() and delay() function	2	
	<u>MCQ</u>	Which language is	2	B

		preferred for IoT Analytics a) C++ b) Python c) HTML d) PHP		
Q.No:3	<u>SAT</u>	Write any two differences between Raspberry pi and Desktop Computer	3	
	<u>SAT</u>	What is the importance role of Zigbee in IOT.	3	
	<u>MCQ</u>	MQTT stands for _____ a) MQ Telemetry Things b) MQ Transport Telemetry c) MQ Transport Things d) MQ Telemetry Transport	2	D
	<u>SAT</u>	Name few services offered by Cloud Computing.	3	
Q.No:4	<u>SAT</u>	Which protocol is used to operate over REST Services?	4	
	<u>SAT</u>	What is UART? What is its purpose?	1	
	<u>SAT</u>	Name few sensors which are used in Weather Monitoring system of IOT?	2	
	<u>SAT</u>	What are the entities present in Domain Model Specification in IoT design methodology?	3	
Q.No:5	<u>SAT</u>	What is the role of Operational view specification in IoT design methodology?	2	
	<u>SAT</u>	Name few sensors which are used in Pollution Monitoring system of IOT?	1	
	<u>SAT</u>	Explain the role of 6LoWPAN?	3	
	<u>SAT</u>	Name few sensors which are used in Forest fire Detection system of IOT?	2	
Q.No:6	<u>SAT</u>	Write in short differences between web socket and HTTP.	1	

	<u>SAT</u>	What is 802.15.4 in Link layer of IoT Protocols?	2	
	<u>SAT</u>	What is Dweet? What is its role in IoT?	3	
	<u>SAT</u>	Name few server side web technologies Used for IoT.	2	
<u>Q.No:7</u>	<u>SAT</u>	What is LDR? What is its purpose?	2	
	<u>SAT</u>	What is the role of Namenode in HDFS Architecture?	4	
	<u>SAT</u>	Write any two differences between Wireless Sensor Network and Internet of Things network sensor?	2	
	<u>MCQ</u>	Which of the following is Raspbian? a) OS b) Assembler c) Language d) Compiler	1	A

SECTION-B(Answer Any Three Questions. Each Question carries 12 Marks)

Time: 1 Hour and 30 Minutes

(3×12=36 Marks)

<u>Question No</u>	<u>Question</u>	<u>CO Mapping (Each question should be from the same CO(s))</u>
<u>Q.No:8</u>	Explain any four Communication models in IOT with diagram?	1,2,3
	Define IOT? Explain the logical design of IOT with diagram?	
	Explain different layers in IOT Protocols with diagram?	
<u>Q.No:9</u>	What are the benefits of an IoT oriented approach over M2M by considering a Health band as the real world use case example? Compare the Main characteristics of M2M and IoT.	2,3,4
	What is the role of Thinkspeak in IOT. Explain differences and	

	similarities between M2M and IOT?	
	Explain the components of IOT Device with diagram?	
<u>Q.No:10</u>	Write the IoT Design Methodology steps for Weather Monitoring IOT system.	2,3,1
	Write the IoT Design Methodology steps for Home Automation IOT System.	
	a) Name and Explain few Cloud Storage Models & Communication APIs in IOT? b) Explain Client-Server model and MVC in IOT?	
<u>Q.No:11</u>	Draw block diagram of Arduino Uno. Explain the working principle of interfacing an LED with switch using Arduino Uno.	2,3,4
	How Data Analytics and Big data plays important role in IOT? Explain few Wireless IoT Network Protocols?	
	Explain different IoT Levels & Deployment Templates?	