TED (21) -5151
(Revision- 2021)

2109230265

Reg.No…….....
Signature. .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE – APRIL - 2024

INTERNET OF THINGS

[Maximum Marks : 75] [Time : 3 hours]

PART–A

I. Answer **all** the following questions in one word or sentence. Each question carries 1 mark.

(9x1=9 marks)

		Module Outcome	Cognitive level
1	Layer in IoT stack is……..	M1.02	R
2	List any two messaging protocols in IoT.	M2.01	U
3	…….address is unique identification for a node which is connected to a network.	M2.04	R
4	Write down full form of URI.	M2.04	R
5	Define cloud computing.	M3.01	U
6	List any two well known cloud providers in IoT.	M3.03	R
7	Define sensors in IoT.	M4.01	U
8	Write down python statements to print the number ‘n’ is greater than 100.	M4.04	A
9	Define GPIO.	M4.05	R

PART B

II. Answer **any Eight** questions from the following. Each question carries 3 marks.

(8x3=24 marks)

		Module Outcome	Cognitive level
1	Define IoT and write down its Application areas.	M1.01	U
2	Write down advantages of IPv6 over IPv4.	M2.04	U
3	Write down types of messages in CoAP.	M2.02	R
4	Write down about Li-Fi and its features.	M2.03	U
5	Write down about SaaS, Paas, IaaS.	M3.01	U
6	Write down security aspects in cloud computing.	M3.05	U
7	Explain working of fog Computing.	M3.04	U
8	Define actuators and its role in IoT applications with an example.	M4.01	U
9	Write down a python program to print first ‘n’ numbers.	M4.04	A
10	Write down about any three sensors in IoT applications.	M4.01	U

PART C

Answer **all** questions from the following. Each question carries 7 marks.

(6x7=42marks)

		Module Outcome	Cognitive level
III	Define 'Things' in IoT' and explain various things in IoT with example.	M1.01	U
	OR		
IV	Explain Characteristics of IoT.	M1.02	U
V	Explain IoT Enabling Technologies.	M1.03	U
	OR		
VI	Explain the challenges in building an application with IoT.	M1.05	U
VII	Explain Message Queuing Telemetry Transport (MQTT) Protocol with a neat diagram.	M2.02	U
	OR		
VIII	Explain Bluetooth Low Energy (BLE) features and its protocol stack.	M2.03	U
IX	Explain public cloud, private cloud, hybrid cloud with advantages and disadvantages.	M3.01	U
	OR		
X	Explain challenges facing while using cloud computing in IoT applications.	M3.02	U
XI	Draw schematic diagram and explain program for interfacing any one of the basic analog sensors with adruino board.	M4.03	U
	OR		
XII	Differentiate Arduino and Raspberry Pi computing boards.	M4.03	U
XIII	Draw a schematic diagram and write down the python program to blink an LED, with a delay of 1s, connected to MCU – Arduino/Raspberry Pi.	M4.05	A
	OR		
XIV	Explain an industrial safety IoT Infrastructure to alert by red signal & alarm on fire as per temperature, flame, smoke; with the help of a block diagram.	M4.06	A

****