B.E. Electronics & Communication / Telecommunication Engineering (Model Curriculum)
Semester-VII

ET705M-1 - OE-3 - Internet of Things

P. Pages : 2 **GUG/S/25/14253**

Time : Three Hours * 2 5 3 8 * Max. Marks : 80

Notes : 1. All questions carry marks as indicated.
2. Assume suitable data wherever necessary.
3. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Define M2M. Explain reasons of shifting from M2M to IoT. **8**

b) Explain the conceptual Framework and architecture of IoT with a suitable diagram. **8**

OR

2. a) Explain "sensor" and its's working. Describe any five types of sensors. **8**

b) Define IoT. Explain characteristics and component of IoT. **8**

3. a) Describe in detail about MAC Addressing and static Addressing. **8**

b) Explain networked communication between two hosts following the TCP/IP suite with a block diagram. **8**

OR

4. a) Explain TCP/UDP ports in detail. **8**

b) Write short note on: **8**

i) SSH.

ii) SMTP.

5. a) What are the technological issues in RFID IoT system design? **8**

b) Classify sensing types based on the nature of the environment and the physical sensors. **8**

OR

6. a) Outline the basic differences between transducers, sensors, and actuators. **8**

b) Compare WSN and IoT. **8**

7. a) Write a program in python of blink on LED using Raspberry Pi development board. **8**

b) What is the use of SPI and 12C interface on Raspberry Pi? **8**

OR

8.	a)	Compare Raspberry Pi and Arduino.	**8**
	b)	Design an automatic refrigerator light system with LED, switch & raspberry Pi and write a python program to support the working of that design.	**8**
9.	a)	Explain the importance and metrics of service- level Agreement (SLA) in Cloud Computing.	**8**
	b)	Explain architecture of a sensor - cloud platform with bock diagram.	**8**

OR

10.	a)	Explain the architecture and components of healthcare IoT with block Diagrams.	**8**
	b)	Explain application of IoT in home automation systems.	**8**

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