6th Sem. / Information Technology /CS&E / 2022(S)

Th2 Internet of Things

Full Marks: 80 Time- 3 Hrs

Answer any five Questions including Q No.1& 2
Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10

a. What is the concept behind Internet of Things?

b. List down the name of the fundamental components of IOT.

c. What are the different types of actuators are there in IOT?

d. Mention the name of various connectivity technologies that are used in IoT.

e. What does M2M stand for? Write down the three applications of M2M.

f. What is the importance of Raspberry Pi in IoT? Name the various versions of Raspberry Pi.(any two)

g. What does HAN stand for? Mention the name of the elements present in HAN.

h. What does SDN stand for? What is the goal of SDN?

i. Sum up the basic requirement to perform a case study on Traffic control system using Arduino Board.

j. Write down the applications of IIoT.

2. Answer **Any Six** Questions 6 x 5

a. Outline the characteristics of IoT.

b. Differentiate between Consumer Iot and Industrial IoT.(any five)

c. Define multihoming. Classify between classical multihoming and multihoming with multiple addresses.

d Portray the architecture of IEEE 802.15.4.

c. Illustrate the four modes by which sensors detect the objects.

f. What do you mean by smart home? Give four examples of smart homes in brief.

g Outline the benefits and challenges of IIoT.

3	What is the role of sensor in IoT? Write any 2 differences between static sensor and dynamic sensor. Explain about the various types of sensors in IoT.	10
4	What does MQTT stand for? Write down the components of MQTT with proper figure. Describe the working principle of MQTT.	10
5	Define WSN. Explain about Under Water Acoustic Sensor Networks.	10
6	Name any two types of Arduino board. Illustrate the various components of Arduino with proper diagram.	10
7	What do you mean by smart cities? Briefly explain about the functional layers in smart parking.	10