PAPER ID—21144

B.Tech. EXAMINATION, 2024

(Fourth Semester)

COMPUTER SCIENCE AND

Engineering Internet of Things and Cyber Security Including Block Chain Technology

Code : IIOT

Introduction to Internet of Things

Time : 3 *Hours* *Maximum Marks :* 70

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) What are the components of physical design of IoT ? 2

(b) List down any *four* communication models in IoT. 2

(c) How does Zigbee protocol work ? 2

(d) Provide any *four* features of python that could be used for implementation of IoT ? 2

(e) What is the purpose of IoT Architecture Reference Architecture ? 2

(f) In what ways Raspberry pi better than Arduino ? 2

(g) Name any *four* sensors used in smart healthcare systems. 2

Unit I

2. (a) Brief on differences and similarities between IoT and M2M. 7

(b) Write a short note on IoT system Management ? 7

3. Discuss in detail functional model IoT and its relationship with communication model. **14**

Unit II

4. How are Industrial automation, healthcare and home automation are related to IoT ? Explain. **14**

5. Illustrate how Raspberry Pi components and interfaces are used for programming IoT devices ? **14**

Unit III

6. Elaborate the following :
   (a) Role of coordinator in wireless sensor network 7
   (b) Role of coordinator in an IoT system. 7

7. Generalize on RFID Technology and embedded systems. **14**

Unit IV

8. Explain in detail about the security threats and attacks. **14**

9. Write short notes on the following :

   (a) MQTT and CoAP **7**

   (b) WSN and Digital sensors. **7**