USN | | | | | | | | | | **15CS81**

Eighth Semester B.E. Degree Examination, June/Jule 2019
Internet of Things Technology

Time: 3 hrs.   Max. Marks: 80

Note: *Answer FIVE full questions, choosing one fidl question from each module.*

Module-I

1 a. What is 10T? Explain in detail on Genesis of   **(08 Marks)**
   b. What does IOT and digitaization mean? Elaborate on this concept.   **(04 Marks)**
   c. Write a short note on "IOT impact in Real World".   **(04 Marks)**

OR

2 a. Discuss IOT challenges.   **(08 Marks)**
   b. With a neat diagram, explain architecture of lOT.   **(04 Marks)**
   c. Explain Core IOT functional stack.   **(04 Marks)**

Module-2

3 a. List and explain different types of sensors.   **(08 Marks)**
   b. Elaborate on small physical objects and small virtual objects.   **(04 Marks)**
   c. Explain "IOT Access Technologies".   **(04 Marks)**

OR

4 a. Briefly explain protocol stack utilization IEEE 802.15.4.   **(08 Marks)**
   b. What is SANET? Explain some advantages and disadvantages that a wireless based solution
      offers.   **(08 Marks)**

Module-3

5 a. Explain working of IP as the IOT network layer.   **(08 Marks)**
   b. Write note on Busines case for IP.   **(04 Marks)**
   c. Discuss need for optimization.   **(04 Marks)**

OR

6 a. Describe application protocols for 10T.   **(08 Marks)**
   b. Discuss the various methods used in IOT application transport.t   **(08 Marks)**

Module-4

7 a. What do you mean by data and analytics for 10T? Explain.   **(04 Marks)**
   b. Discuss Bigdata analyties tools and technology.   **(04 Marks)**
   c. With a case study relate the concept of securing 10T.   **(08 Marks)**

OR

8 a. Explain in detail how IT and OT security practices and systems vary in real time. **(08 Marks)**
   b. Discuss OCTAVE and FAIR formal risk analysis.   **(08 Marks)**

15CSEI

Module-5

9   a.   Give a brief note on Arduino UNO.   (04 Marks)
     b.   With a neat diagram, explain Raspberry Pi board.   (04 Marks)
     c.   With a neat diagram, explain wireless temperature monitoring system using Raspberry Pi.
                                                                                                        (**08** Marks)

OR

10   a. Explain in detail smart city 101' architecture.   (08 Marks)
      b.   With the case study explain smart and connected cities using Raspberry Pi.   (08 Marks)