CBCS SCHEME

USN | | | | | | | | | |

18SCS/SCN14

First Semester M.Tech. Degree Examination, Dec.2019/Jan.2020
Internet of Things

Time: 3 hrs.

Max. Marks: 100

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

Module-1

1 a. Explain IoT framework with respect to high level M2M system Architecture (HLSA). **(10 Marks)**

   b. Write a note on following IoT Application i) Home Automation ii) Smart metering. **(10 Marks)**

OR

2 a. What is Internet of Things? Explain the role of IPV6 in IoT? **(10 Marks)**

   b. Explain the characteristics of an object. Discuss classification of objects with a diagram. **(10 Marks)**

Module-2

3 a. Write a note on along with a neat sketch
      i) Smart card   ii) RFID tags. **(10 Marks)**

   b. Explain the RPLROLL routing protocol. **(10 Marks)**

OR

4 a. Explain the request/Response model used in COAP. And list out the advantages of COAP in IoT. **(10 Marks)**

   b. With a neat sketch, describe 3GPP service model and the architecture. **(10 Marks)**

Module-3

5 a. Explain IEEE 802.15.4 acknowledgment frame format and data frame format. **(10 Marks)**

   b. List and explain the advantages of IPV6 over IPV4. **(10 Marks)**

OR

6 a. With a neat sketch, explain the overall network architecture of the Evolved Packet System (EPS) network elements. **(10 Marks)**

   b. Write a note on : i) IPV6 tunneling   ii) IPSec in IPV6 **(10 Marks)**

Module-4

7 a. With a neat sketch, explain deployment design of the weather monitoring IoT system. **(10 Marks)**

   b. With a neat sketch, discuss service specification for home automation in IoT system for mode and state service. **(10 Marks)**

OR

8 a. Briefly explain the IoT for agriculture. **(10 Marks)**

   b. Write a Python program for smart parking controller native service. **(10 Marks)**

Module-5

9 a. Describe the steps involved in setting up a Hadoop cluster. **(10 Marks)**

   b. Write a note on : i) Hadoop Map Reduce ii) Hadoop YARN. **(10 Marks)**

OR

10 a. With a neat sketch, explain the components of the spark cluster. **(10 Marks)**

   b. Explain OOZie workflow for computing machine/error code with maximum count. **(10 Marks)**

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