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20SCS15

First Semester M.Tech. Degree Examination, Jan./Feb.2021
Internet of Things and Applications

Time: 3 hrs.

Max. Marks: 100

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

Module-1

1   a. Define Internet of Things. Justify internet of things is "Just a concept" and "An infrastructure". **(10 Marks)**
     b. Explain any four applications of automotives. **(10 Marks)**

OR

2   a. Explain IOT framework with respect to high Level M2M System Architecture (HLSA). **(10 Marks)**
     b. Explain the role of IPV6 in IOT. **(10 Marks)**

Module-2

3   a. Compare contactless smart card and RFID tags. **(10 Marks)**
     b. Discuss structural aspects of IOT. **(10 Marks)**

OR

4   a. Explain the RPL ROLL routing protocols. **(10 Marks)**
     b. With a neat sketch, explain 3GPP service model and architecture. **(10 Marks)**

Module-3

5   a. List and explain IEEE 802.15.4 frames. **(10 Marks)**
     b. Describe the architecture of Bluetooth system with HDP and applications. **(10 Marks)**

OR

6   a. Explain the interaction between NFC interrogator and NFC device communicates. **(10 Marks)**
     b. With neat diagram, explain the overall network architecture of the Evolved Packet System (EPS) network elements. **(10 Marks)**

Module-4

7   a. With neat diagram, explain home automation IOT system-mode service and state service. **(10 Marks)**
     b. Show how the communication occurs between various components of the web socket implementation of the weather monitoring system. **(10 Marks)**

OR

8   a. With neat diagram, explain smart parking IOT system. **(10 Marks)**
     b. Explain smart irrigation system with python code for controller native service. **(10 Marks)**

Module-5

9   a. Explain the procedure to you setup Hadoop cluster. **(10 Marks)**
     b. Write note on : (i) Hadoop map reduce   (ii) Hadoop yarn. **(10 Marks)**

OR

10   a. Explain Oozie workflow for computing machine status error codes with min count. **(10 Marks)**
     b. Explain Apache storm for real time data analysis. **(10 Marks)**

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