BE IT | Sem-VII | R-19 | 'C' scheme | sub:-IOE | SH-2023 | Dt-28|12|2023

Time : [3 hrs]   [80 Marks]

Note : 1. Question 1 is compulsory   Q·p code

         2. Answer any three out of remaining questions   10038114

         3. Assume suitable data where required

Q1   Solve any 4
- a) Explain ZigBee in brief.   5
- b) Explain the Need of lightweight new communications protocols for IoT.   5
- c) Explain data retention strategy.   5
- d) Write a short note on I-IoT   5
- e) Explain functional blocks of IoT   5

Q2 a) Elaborate in detail the strategies to organize Data for IoT Analytics.   10
    b) Illustrate the role of Data refineries in preventing data lakes to turn into data swamps   10

Q3 a) Describe the communication system and protocols involved in long range communication system of IoT   10
    b) With neat diagram, elaborate briefly the simplified 3 layered IoT architecture.   10

Q4 a) Differentiate and give Hierarchy between Edge, Fog, and Cloud computing   10
    b) Consider Smart Irrigation system. Elaborate its working with block diagram and list down the different types of sensors and actuators required during the deployment scenario.   10

Q5 a) Elaborate MQTT with its working in details and two advantages over COAP.   10
    b) Illustrate 3 methods for effective Data Visualization.   10

Q6 a) Define sensor, actuators and their role and classifications in brief.   10
    b) Explain the following access technologies with applications area of each
1) IEEE 802.15.4 2) RFID   10

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