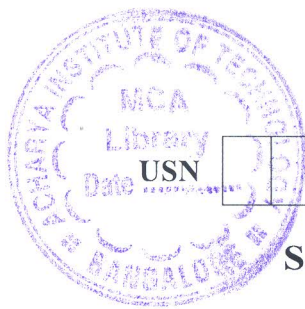


CBCS SCHEME

17EC752



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Seventh Semester B.E. Degree Examination, Jan./Feb. 2023 IOT and Wireless Sensor Network

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Explain ORACLE IOT conceptual framework with equation. (10 Marks)
b. Explain CO-AP/MQ and COAP/SMS messaging protocol (10 Marks)

OR

- 2 a. Explain the features of MQTT protocol. (10 Marks)
b. Explain the function of data-management and consolidation function With respect to IOT. (10 Marks)

Module-2

- 3 a. Explain IP addressing in the IOT. (10 Marks)
b. List the features of Nimbits. (10 Marks)

OR

- 4 a. Explain 6 LOW PAN protocol used in data adaptation layer. (10 Marks)
b. Explain cloud computing, services features and concerns. (10 Marks)

Module-3

- 5 a. Write a program to read analog sensor data (temperature) at SPI pot using Arduino board. (10 Marks)
b. Explain security tomography of large network and layered attack model. (10 Marks)

OR

- 6 a. Explain Prototyping Embedded Device using Arduino. (10 Marks)
b. What are the security requirements in IOT architecture and threat analysis using microsoft threat model. (10 Marks)

Module-4

- 7 a. Explain the challenges with respect to characteristics and the required mechanism in Wireless Sensor Network. (10 Marks)
b. Explain energy consumption of sensor node. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

OR

- 8 a. Explain design principles for Wireless Sensor Network. (10 Marks)
b. Explain Gateway concept used in communication. (10 Marks)

Module-5

- 9 a. Explain energy problems in MAC protocol. (06 Marks)
b. Explain TRAMA protocol. (06 Marks)
c. Explain any two consideration in energy efficient Unicast Routing with example. (08 Marks)

OR

- 10 a. Explain simple forwarding strategies and its problems in Geographical routing. (10 Marks)
b. With neat schematic diagram, explain CSMA protocol. (10 Marks)

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