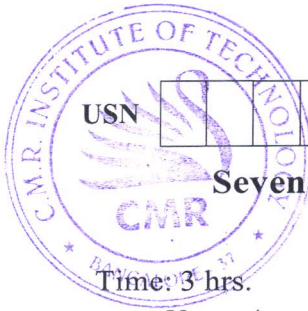


# CBCS SCHEME



17EC752

## Seventh Semester B.E. Degree Examination, Feb./Mar. 2022 IOT and Wireless Sensor Networks

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. Explain the IBM IOT conceptual Framework. Describing the function of each level. (08 Marks)
- b. What are the major components of IOT system? (08 Marks)
- c. Differential between software and Firmware. (04 Marks)

OR

- 2 a. What are the functions of gateway at data adaptation layer? (08 Marks)
- b. Explain the various wireless communication technologies. (08 Marks)
- c. State the 3 domains of M2M architecture. (04 Marks)

### Module-2

- 3 a. Explain 6LoWPAN protocols. (08 Marks)
- b. State and explain any 2 application layer protocols. (08 Marks)
- c. Differentiate cloud, grid and web computing. (04 Marks)

OR

- 4 a. Explain and compare the features of IPV4 and IPV6. (08 Marks)
- b. Explain IOT cloud service using Nimbits (08 Marks)
- c. State the function and DHCP protocol. (04 Marks)

### Module-3

- 5 a. Explain how temperature can be measured using Arduino UNO. (10 Marks)
- b. Explain the security homography and layer attack models. (10 Marks)

OR

- 6 a. Explain the steps involved in programming MQTT client and Server. (10 Marks)
- b. Explain the following: i) Use Miscues cases ii) IOT privacy and security. (10 Marks)

### Module-4

- 7 a. Explain about transceivers – structures, tasks and characteristics. (10 Marks)
- b. Explain about energy consumption and requirements of batteries for WSNs. (10 Marks)

OR

- 8 a. Explain the programming Paradigms and programming models. (10 Marks)
- b. Explain node mobility, sink mobility and event mobility. (10 Marks)

### Module-5

- 9 a. Explain SMACS protocol. Also explain the 4 cases of link setup. (10 Marks)
- b. Explain about multipath unicast routing. (10 Marks)

OR

- 10 a. Explain about hierarchical network of clustering. (10 Marks)
- b. Explain PAMAS and TRAMA. (10 Marks)

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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.

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