

# CBCS SCHEME

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18AI731

## Seventh Semester B.E. Degree Examination, Dec.2023/Jan.2024 Internet of Things

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. Explain one M2M IoT standardized architecture with an eat diagram. (10 Marks)  
b. With a neat diagram explain the IoTWF standardized architecture. (10 Marks)

OR

- 2 a. Explain IoT management and compute stack. (10 Marks)  
b. Explain the following with examples : i) Sensors ii) Actuators. (10 Marks)

### Module-2

- 3 a. Write short notes on Zigbee. (10 Marks)  
b. Explain the classification of smart objects with examples and also explain different communication criteria's in IoT. (10 Marks)

OR

- 4 a. Describe the characteristics and attributes considered when selecting and dealing with connection smart objects. (10 Marks)  
b. Explain the various network topologies with examples. (10 Marks)

### Module-3

- 5 a. Explain COAP with standard track specification for COAP and message format. (10 Marks)  
b. Explain raw rocket scenarios for tunneling legacy SCAPA over IP networks. (10 Marks)

OR

- 6 a. Discuss the advantages of MQTT protocol. (10 Marks)  
b. Write short notes on profiles and compliances for IoT constrained nodes and network. (10 Marks)

### Module-4

- 7 a. Explain Big Data Analytics Tool. (10 Marks)  
b. What are the common challenges in IoT security? (10 Marks)

OR

- 8 a. Explain Purdue model for control hierarchy. (10 Marks)  
b. Explain edge analysis core functions and explain the common applications of machine learning of IoT. (10 Marks)

### Module-5

- 9 a. Write short notes on DSI 8B20 temperature sensor with its applications. (10 Marks)  
b. With a neat block diagram, explain a four layered architecture of a smart city IoT infrastructure. (10 Marks)

OR

- 10 a. Explain fundamentals of Arduino programming with example program. (10 Marks)  
b. Explain smart city architecture. (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.