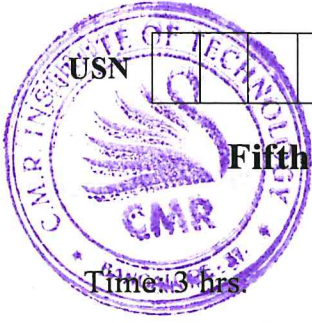


# CBCS SCHEME



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16/17MCA552

## Fifth Semester MCA Degree Examination, Jan./Feb. 2021 Internet of Things (IoT)

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. Explain the three reasons how M2M and IoT has up taken. (03 Marks)
- b. List and explain key application areas of M2M devices. (07 Marks)
- c. Differentiate M2M with IoT. (06 Marks)

OR

- 2 a. With neat diagram, discuss IoT and emerging its applications. (08 Marks)
- b. Explain the trends in information and communication technologies. (08 Marks)

### Module-2

- 3 a. Differentiate between ECO systems and Value-chains. (04 Marks)
- b. Describe the steps involved in IoT value chain with neat diagram. (08 Marks)
- c. What is global value chain? With a diagram. (04 Marks)

OR

- 4 a. Explain IoT architecture outline with a diagram. (08 Marks)
- b. With a neat diagram, explain information driven global value chain. (08 Marks)

### Module-3

- 5 a. Define Device. List and explain the properties of device. (04 Marks)
- b. How data is managed in M2M? With neat diagram. (08 Marks)
- c. List and explain cloud computing deployment model. (04 Marks)

OR

- 6 a. Explain CRISP\_DM process diagram. (06 Marks)
- b. Explain Everythings as a Service (XaaS). (05 Marks)
- c. Explain the following : (05 Marks)
  - (i) Business understanding
  - (ii) Data understanding
  - (iii) Data preparation
  - (iv) Modelling
  - (v) Evaluation

### Module-4

- 7 a. Briefly explain the ETSI M2M high-level architecture. (08 Marks)
- b. With a neat diagram, explain the IoT Reference model. (08 Marks)

OR

- 8 a. Discuss IoT service functional group and Virtual Entity functional group. (04 Marks)
- b. Describe the information handling procedure using patterns. (08 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.

- c. Write a note on :  
(i) IoT Service Resolution (ii) Virtual Entity Service Resolution. (04 Marks)

**Module-5**

- 9 a. Explain how remote interaction and control over IoT applications. (04 Marks)  
b. Explain service-oriented architecture-based device integration. (08 Marks)  
c. What are the purpose of Building Automation System (BAS) (04 Marks)

**OR**

- 10 a. Give an example of case study : Phase one – Commercial building automation. (08 Marks)  
b. With a neat diagram, describe the SOCRDES integration architecture. (08 Marks)

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