



# CBCS SCHEME

18MCA542

## Fifth Semester MCA 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 the different system components of M2M solution. (04 Marks)  
b. Explain the different types of key application areas. (06 Marks)  
c. What are game changers? Explain the significance of game changers and their relationship to IOT. (10 Marks)

OR

- 2 a. What is IOT? Explain emerging IOT applications. (10 Marks)  
b. Compare and explain the main characteristics of M2M and IOT. (10 Marks)

### Module-2

- 3 a. Describe information driven value chain for IOT with suitable diagram. (10 Marks)  
b. Explain five fundamental roles about information driven global value chain. (10 Marks)

OR

- 4 a. Briefly explain information driven value chain for retail with suitable diagram. (10 Marks)  
b. Explain briefly about IOT architecture outline. (10 Marks)

### Module-3

- 5 a. Explain device properties and types with example. (10 Marks)  
b. Explain the gateways and additional tasks in detail. (10 Marks)

OR

- 6 a. How data is managed in M2M? With neat diagram and also discuss dealing with M2M data were decomposed into several stages. (10 Marks)  
b. Briefly explain the knowledge management reference architecture for M2M and IOT. (10 Marks)

### Module-4

- 7 a. Explain ETSI M2M high-level architecture with example. (10 Marks)  
b. Explain International Telecommunication Union Telecommunication (ITU-T) sector view IOT reference model. (10 Marks)

OR

- 8 a. Write a note on:  
(i) Service organization functional group. (10 Marks)  
(ii) Security functional group. (10 Marks)  
b. Describe the information handling procedure using patterns. (10 Marks)

### Module-5

- 9 a. With a neat diagram, describe the SOCRADES integration architecture. (10 Marks)  
b. Briefly explain IMC-AESOP cloud-based architecture vision. (10 Marks)

OR

- 10 a. Give an example of case study : Phase one-commercial building automation. (10 Marks)  
b. Explain the commercial building automation evolution cycle. (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 e.g, 42+8 = 50, will be treated as malpractice.