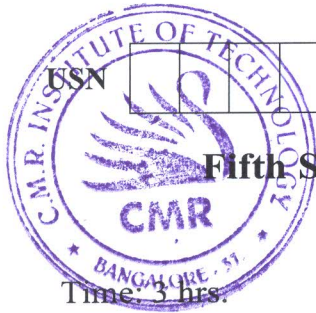


CBCS SCHEME



18MCA542

Fifth Semester MCA Degree Examination, June/July 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. Describe as typical M2M system solution with a neat diagram. (06 Marks)
- b. What are the key application areas for moving M2M to IoT? (06 Marks)
- c. Summarize the Megatrends, capabilities and the implications of IoT in the Global context. (08 Marks)

OR

- 2 a. How the advances in Science and Technology has impacted the growth in ICT sector? (06 Marks)
- b. What are the differing characteristics of M2M and IoT? (06 Marks)
- c. Explain the IoT - oriented stress analysis of a person. (08 Marks)

Module-2

- 3 a. How do the Technical and Financial factors do have the impact on the emerging industry of IoT. (06 Marks)
- b. Describe the Information Driven Global value chain for IoT with a neat diagram. (08 Marks)
- c. Explain the terms :
(i) Global Value Chain
(ii) Ecosystems
(iii) Industrial Structure (06 Marks)

OR

- 4 a. Describe the common partitioning the architecture work and solution work depending on the level of abstraction. (06 Marks)
- b. Explain in brief the main design principles and needed capabilities for the architecture from M2M to IoT. (08 Marks)
- c. Design the IoT outline architecture derived from the reference architecture. (06 Marks)

Module-3

- 5 a. What are the Devices and Gateways used in IoT? (06 Marks)
- b. Illustrate the M2M functional architecture with a neat diagram. (08 Marks)
- c. Explain some of the key characteristics of M2M data. (06 Marks)

OR

- 6 a. How do you say that cloud of things has become an enablers for new value added services and apps. (08 Marks)
- b. What are the essential characteristics of cloud computing? (06 Marks)
- c. Explain the terms with respect to analytics:
i) Descriptive Analytics ii) Clustering iii) Anomaly detection (06 Marks)

Module-4

- 7 a. Explain the ETSI M2M high-level architecture with a neat diagram. (06 Marks)
b. What are M2M service capabilities, nodes and open interfaces? Explain. (08 Marks)
c. Describe the Architecture Reference model with a neat diagram. (06 Marks)

OR

- 8 a. Explain the function view of the IoT Reference architecture. (08 Marks)
b. How the information handling is done in IoT reference architecture with respect to device, service and virtual entities? (06 Marks)
c. Explain the deployment and operational view of parking lot as an example. (06 Marks)

Module-5

- 9 a. Outline the design constraints that need to be taken into account for developing M2M and IoT solutions in the real world. (08 Marks)
b. Describe the Service-Oriented Architecture (SOA) paradigm for M2M technology Integration. (06 Marks)
c. Explain the levels in SOCRADES Integration architecture. (06 Marks)

OR

- 10 a. Explain how user roles will interact with the envisioned architecture in IMC-AESOP cloud-based architecture. (06 Marks)
b. What is Building Automation System (BAS)? Explain the central parts in a BAS. (06 Marks)
c. Explain the building automation evolution life cycle in commercial building automation. Also explain the evolved value chain for building automation. (08 Marks)
