

BE ELEC SEM-VII C-Scheme Nov-Dec '2025
Date: 26/11/2025

(03 Hours)

Total Marks (80)

Note:

- 1) Question No 1 is Compulsory.
- 2) Answer any three from the remaining questions.
- 3) Assume suitable data wherever required

- Q1. Answer **any FOUR** of the following (20)
- a. Discuss the differences between Grid Computing, SOA, and Cloud Computing.
 - b. Write a short note on how supervised algorithms can be applied to IoT-based healthcare monitoring systems.
 - c. What are Linked Analytics Data Sets? Explain their use in IoT data processing.
 - d. Compare Fog Computing, Edge Computing, and Cloud Computing with suitable example.
 - e. Write short notes on Data visualization and dash-boarding in IoT.
- Q2.a Explain the role of Key Management and Trusted Platform Modules (TPMs) in securing IoT devices. (10)
- b. Describe the Cloud of Things architecture and discuss how leading providers like Azure, AWS, and Google Cloud implement it in real-world IoT systems. (10)
- Q3.a Discuss various types of IoT attacks such as Denial-of-Service (DoS), Replay, and Man-in-the-Middle (MitM), Mirai and Stuxnet. (10)
- b. Explain the principles and components of the Software-Defined Perimeter architecture. (10)
- Q4.a Discuss how the core principles of Hadoop can be applied to enhance data processing in Fog Computing environments. (10)
- b. Explain the concept and architecture of Open Fog reference architecture. How does it overcome the latency issues in cloud-based IoT systems? (10)
- Q5.a Explain various types of data analytics used in IoT. Give one real time example for each (10)
- b. Explain how IoT and Machine Learning can be used for predictive maintenance in industrial automation. (10)
- Q6.a Explain the significance of test automation in the DevOps lifecycle. (10)
- b. Explain the integration of IoT and DevOps (10)