

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURAJADA VIZIANAGARAM
IV B. Tech I Semester Advanced Supplementary Examinations March 2025
INTRODUCTION TO INTERNET OF THINGS

(Open Elective)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**
All Questions Carry Equal Marks

UNIT-I

1. a) Explain the key technologies associated with Internet of Things (IoT). [7M]
b) Discuss the sources of IoT and provide real-world examples. [7M]
(OR)
2. a) Explain the design principles for connected devices in IoT. [7M]
b) Illustrate the functioning of application layer protocols like HTTP, HTTPS, and FTP in IoT? [7M]

UNIT-II

3. a) Explain the challenges in IoT data enrichment and consolidation. [7M]
b) Compare modified OSI stack differ for IoT/M2M systems? [7M]
(OR)
4. a) Explain the role of ETSI M2M domains and high-level capabilities in IoT. [7M]
b) Describe the importance of device management gateways in IoT systems? [7M]

UNIT-III

5. a) Explain the essential design principles for web connectivity in IoT. [7M]
b) Illustrate how message communication protocols enable IoT connectivity? [7M]
(OR)
6. a) Explain the significance of web communication protocols for connected devices. [7M]
b) Discuss various approaches to web connectivity for IoT devices. [7M]

UNIT-IV

7. a) Explain the role of business models in IoT-driven business processes. [7M]
b) Illustrate how data integration benefits enterprise IoT systems? [7M]
(OR)
8. a) Explain the key methods for acquiring and organizing IoT data [7M]
b) Discuss the importance of transactions and business process integration in IoT. [7M]

UNIT-V

9. a) Explain how cloud computing enhances IoT applications and services. [7M]
b) Illustrate the concept of Participatory sensing and its applications in IoT? [7M]
(OR)
10. a) Explain the role of Xively, Nimbits and other platforms in IoT cloud-based services. [7M]
b) Describe the role of RFID and wireless sensor network technology in IoT? [7M]
