

Nov – Dec 2025		
(B. Tech) Program: Information Technology Scheme II B		
Regular Examination: LY Semester: VII		
Course Code: ITC702	Course Name: Internet of Everything	
Date of Exam: 29 /11/24	Duration: 02.5 Hours	Max. Marks: 60

Instructions: (1) All questions are compulsory.
(2) Draw neat diagrams wherever applicable.
(3) Assume suitable data, if necessary.

Q. No.	Question	Max. Marks	CO	BT level
Q 1	Solve any two questions out of three: (05 marks each)	10		
a)	Explain how IoE architecture and key network drivers contribute to achieving scalability, interoperability, and security in IoE systems.		CO 1	U
b)	Analyze the working principles of RFID and Near-Field Communication (NFC) and discuss their applications in IoT environments.		CO2	An
c)	Explain the role of prototyping in IoT and M2M systems with reference to a smart home intrusion detection system.		CO5	U
Q 2	Solve any two questions out of three: (05 marks each)	10		
a)	Explain the concept of a data lake and discuss how it supports efficient data storage and processing in IoT systems.		CO4	U
b)	Analyze an I-IoT solution of a factory scenario and discuss how it improves efficiency, safety, and decision-making.		CO5	An
c)	Explain the MQTT and MQTT-SN in terms of architecture, message size, and suitability for constrained devices.		CO3	U
Q.3	Solve any two questions out of three. (10 marks each)	20		
a)	Analyze the relationship between Edge and Cloud computing in IoT systems. Compare their roles, processing capabilities, latency levels, storage capacity, and suitable applications.		CO1	An
b)	Explain the architecture, features, power-saving mechanisms, coverage enhancements, and deployment modes of NB-IoT. Discuss its advantages in large-scale IoT deployments.		CO2	U

K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Nov – Dec 2025

(B. Tech) Program: Information Technology Scheme II **B**

Regular Examination: LY Semester: VII

Course Code: ITC702

Course Name: Internet of Everything

Date of Exam: 29 /11/24

Duration: 02.5 Hours

Max. Marks: 60

c)	Explain the architecture and core components of the Advanced Message Queuing Protocol (AMQP), Discuss its reliability features, highlighting its use in enterprise IoT applications.		CO3	U
Q.4	Solve any two questions out of three. (10 marks each)	20		
a)	Apply the concept of alerts in IoT systems to agricultural soil monitoring applications, and explain how threshold-based, rule-based, and predictive alerts can be created and visualized.		CO4	A
b)	Analyze the architecture and operation of an IoT-based forest fire detection system. Explain how sensors, wireless networks, and alert mechanisms help in early detection and prevention of forest fires.		CO5	An
c)	Differentiate between attacks on application components and network components in IoT system. Provide suitable examples for each type of attack.		CO6	An
