

BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)
B. Tech. Sem - VII Computer Science & Engineering : SUMMER : 2025
SUBJECT: ITC-V: INTERNET OF THINGS

Day : Friday
Date : 16/05/2025

S-25603-2025

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Assume suitable data **WHEREVER** necessary.
- 4) Draw neat diagrams **WHEREVER** necessary.

Q.1 Discuss various IoT communication models with suitable examples. (10)

OR

Q.1 What are the different cloud service models (IaaS, PaaS, SaaS)? How are IoT-specific cloud services different? (10)

Q.2 Write a short note on 6LoWPAN and explain how it enables IPv6 over low-power networks. (10)

OR

Q.2 Describe the role and functionality of ICMP, RPL, and CoAP in IoT networks. (10)

Q.3 Discuss the importance of the session layer in IoT. Compare HTTP, MQTT, and CoAP. (10)

OR

Q.3 Explain the steps of an IoT design methodology from concept to deployment. (10)

Q.4 Describe the working and advantages of MQTT protocol. How is it secured? (10)

OR

Q.4 What is LoRa? Compare LoRa with 6LoWPAN in terms of communication range and efficiency. (10)

Q.5 Discuss various identity management and access control techniques in IoT. (10)

OR

Q.5 Describe the key IoT security protocols and how they ensure secure message communication. (10)

Q.6 What are online component APIs and web APIs? How are they used in IoT application development? (10)

OR

Q.6 Explain the role of emulators, simulators, IDEs, and debuggers in prototyping IoT systems. (10)
