Computer Science & Engineering

BACHELOR OF TECHNOLOGY (CBCS) (2020 COURSE)
B.Tech.Sem - VII CS&E : WINTER : 2024
SUBJECT: ITC-V: INTERNET OF THINGS

Day : Wednesday
Date : 11/12/2024

W-24342-2024

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 What are the primary enabling technologies driving the Internet of Things ecosystem? Discuss their significance in the development and deployment of IoT Solutions. **(10)**

OR

Q.1 Compare and construct the different communication models used in IoT deployments, such as point to point, star, mesh and hybrid. Give any one example. **(10)**

Q.2 Explain Wireless HART, ZWave, Bluetooth low energy and Zigbee protocols in term of their suitability for IoT Applications. **(10)**

OR

Q.2 Describe the role of each component (IPv4, IPv6, WPAN, RPL) in the network layer of IoT architecture. How do these protocols facilitate communication and routing in IoT networks? **(10)**

Q.3 Compare and construct TCP, UDP, DCCP and SCTP Protocols in the context of IOT Communication. **(10)**

OR

Q.3 Explain the functionality and use cases of HTTP, CoAP, XMPP, AMQP and MQTT protocols in IoT systems. **(10)**

Q.4 What are the 3 major factor affecting IoT Security? Explain in detail. **(10)**

OR

Q.4 What are the Security issues in IoT? Explain in detail. **(10)**

Q.5 Explain the concepts of identify management, access control and secure communication in the context of IoT security. **(10)**

OR

Q.5 Discuss the strategies and protocols for authentication devices and ensuring secure data exchange. **(10)**

Q.6 Explain the concepts of software development prototyping in IoT projects. Discuss the importance of online components APIs And web APIs in accelerating IoT application. **(10)**

OR

Q.6 Explain the concept of Raspberry Pi, Beagle Bone and Intel Galileo. **(10)**

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