BACHELOR OF TECHNOLOGY (CBCS) (2020 COURSE)
B.Tech.Sem - VII COMPUTER SCIENCE & ENGINEERING : SUMMER : 2024
SUBJECT: ITC-V: INTERNET OF THINGS

Day : Wednesday
Date : 15/05/2024

S-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 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)**

OR

Q.1 Explain the principles of Radio Frequency Identification (RFID) technology and its role in the internet of things (IoT) landscape. With 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 Discuss the methodology for designing IoT systems. Explain the key steps involved in the design process. **(10)**

Q.3 Discuss the importance of protocol standardization in the IoT ecosystem. What are the major standardization bodies and initiatives driving interoperability IoT devices and platforms? **(10)**

OR

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

Q.4 Discuss common vulnerabilities in IoT systems. Explain the process of conducting a threat analysis and outline the security requirements for mitigating potential threats. **(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 Explain the process of conducting a threat analysis and outline the security requirements for mitigating potential threats. **(10)**

Q.6 Write Short Note on: a) Raspberry Pi. b) API. C) Beagle Bone. **(10)**

OR

Q.6 Discuss the importance of online component APIs and Web APIs in accelerating IoT application development and integration with cloud services. **(10)**

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