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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**B.Tech III Year I Semester Supplementary Examinations November-2020**

**COMPUTER NETWORKS**

(Computer Science & Information Technology)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

**UNIT-I**

- 1 a Explain the functions and protocols and services of each layer. 6M  
b Discuss various types of networks topologies in computer network. 6M

**OR**

- 2 a Write about network software & hardware. 6M  
b Compare Connection oriented and connectionless service. 6M

**UNIT-II**

- 3 Explain the operation of the bit-oriented protocol HDLC with the required frames. 12M

**OR**

- 4 a Explain MAC sub layer protocol and frame structure of IEEE 802.11. 6M  
b Discuss about data link layer design issues. 6M

**UNIT-III**

- 5 a Discuss about leaky bucket algorithm with a neat diagram. 6M  
b Explain the function of ARP & RARP. 6M

**OR**

- 6 a Discuss about Inter-network Routing. 6M  
b Write short notes on Internet protocols. 6M

**UNIT-IV**

- 7 a Explain the mechanism of three way handshake protocol for TCP. 7M  
b Discuss functionalities of Transport Layer. 5M

**OR**

- 8 a Explain the operation of TCP with neat sketch. 8M  
b List out the differences between TCP and UDP. 4M

**UNIT-V**

- 9 a Explain in detail about function, structure of E-mail. 8M  
b Write short notes on IMAP and MIME. 4M

**OR**

- 10 a Explain the encryption and decryption methods. 6M  
b Write briefly about World wide web. 6M

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