20IT3501-COMPUTER NETWORKS

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| **UNIT I:**  **Introduction:** Uses of Computer Networks, Network Hardware, LANs, MANs, WANs, Network Software. The Network core  Reference Models: The OSI Reference Model, TCP/IP Reference Model, the comparison of OSI, and TCP/IP reference models |
| UNIT II:  Application Layer: Principles of network applications, The Web and HTTP, FTP, E-Mail in the internet, DNS-The internet’s directory service.  Transport Layer: Connectionless Transport: UDP, Connection-Oriented Transport: TCP, Principles of congestion control, TCP Congestion Control. |
| UNIT III:  The Network Layer: Introduction, Virtual circuits and Datagram Networks, The Internet Protocol(IP), Routing Algorithms  Case studies-Distance Vector, Link State algorithms  The Link Layer and Local Area Networks :Introduction and services, Error Detection and Correction Techniques,Switched Local Area Networks |
| UNIT IV:  Wireless and Mobile Networks: Introduction, Wireless links and Network characteristics, Wi-fi, Mobile IP  Network Security: Cryptography, Symmetric-key algorithms-DES, AES, Public- key algorithms- RSA, Firewalls. |