COMPUTER NETWORK - II

Paper Code	**CEN-604**
Course Credits	**4**
Lectures / week	**3**
Tutorial / week	**1**

Course Description

UNIT – I

Review of Physical & Data link layer, ISDN, X.25 Frame Relay, ATM, IP Addresses: Classful, Classless Addressing, CIDR Notation, Special Addresses, Private Addresses, Subnetting and Supernetting.

UNIT- II

The Transport Service, Elements of Transport Protocols, A Simple Transport Protocol, The Internet Transport Protocols; UDP, TCP, Flow control, Silly window syndrome, TCP timers, Performance Issues.

UNIT- III

Traditional Cryptography, Cryptographic Principles, Secret Key Algorithm: Substitution cipher, Transposition cipher, DES, Public Key Algorithm: RSA, Diffie- Helman , MD5, Authentication protocol, Digital Signature, Security in the Internet, Firewalls.

UNIT- IV

Datagram, Fragmentation, Delivery , Forwarding, Routing of IP Packets, ARP and RARP, ICMP, IGMP. IPV4 Protocols , IPV6 (over view), Security in the Internet: IPSec, PGP, VPN.

UNIT – V

Domain Name System , Remote Login , Simple Network Management Protocol, File Transfer Protocol, Electronic Mail: Simple Mail Transfer Protocol, Post Office Protocol, Internet Mail Access Protocol, WWW, HTTP.

References / Text Books:

- B. A. Forouzan, "TCP/IP Protocol Suite", TMH, 3rd Edition., 2006.
- Andrew S. Tanenbaum " Computer Networks" by Pearson Education ,fourth edition.
- William Stallings " Cryptography and Network security" by PHI, Third edition
- William Stallings " High speed Networks and Internets" by Pearson education, second edition.
- Comer E. Doughlas, "Internetworking with TCP/IP, Vol. 1, PHI, 2000