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: Classfull, Classless Addressing, CIDR Notation, Special Addresses, Private Addresses, Sub-netting and Super-netting. **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