

**PAPER-I: Computer Networks**

**Unit I**

Introduction: Use of computer networks, network hardware, network software, reference models, example networks, example data communication services, network standardization.

**Unit II**

The Physical Layer: The theoretical basis for data communication, transmission media, wireless transmission, the telephone system, narrowband ISDN, broadband ISDN and ATM, cellular radio, communication satellites.

**Unit III**

The Data Link Layer: Data link layer design issues, error detection and correction, elementary data link protocols, sliding window protocols, protocol specification and verification, example data link protocols.

**Unit IV**

Network Layer: Network layer design issues, routing algorithms, congestion control algorithms, internetworking, the network layer in the internet, the network layer in the ATM networks.

**Unit V**

The Transport Layer: The transport service, elements of transport protocols, a simple transport protocol, the internet transport protocol (TCP and UDP), the ATM AAL layer protocols, performance issues.

**Suggested Book**

1. Tanenbaum A.S., Computer Networks, Prentice Hall of India Private Limited New Delhi.