

**Code No.: ETIT 306**  
**Paper: Computer Networks**

**L T C**  
**3 1 4**

**INSTRUCTIONS TO PAPER SETTERS:**

**MAXIMUM MARKS: 75**

1. Question No. 1 should be compulsory and cover the entire syllabus. This question should have objective or short answer type questions. It should be of 25 marks.
2. Apart from question no. 1, rest of the paper shall consist of four units as per the syllabus. Every unit should have two questions. However, student may be asked to attempt only 1 question from each unit. Each question should be of 12.5 marks.

**UNIT – I**

Uses of Computer Networks, Network Architecture, Reference Model (ISO-OSI, TCP/IP-Overview, IP Address Classes, Subnetting), Domain Name Registration & Registrars

The Physical Layer: Theoretical basis for data communication, transmission media-Magnetic Media, Twisted Pair, Baseband Coaxial Cable, Broadband Coaxial Cable, Fibre Cable, Structured Cabling, Cable Mounting, Cable Testing, Wireless transmission, the telephone system, narrowband ISDN, broadband ISDN and ATM. **[No. of Hrs.: 11]**

**UNIT – II**

The Data Link Layer: Data link layer design issues, error detection and correction, data link protocols, sliding window protocols, Examples of Data Link Protocols. **[No. of Hrs.: 11]**

**UNIT - III**

The Medium Access Sublayer: The channel allocation problem, multiple access protocols, IEEE standard 802 for LANS and MANS, high-speed LANs, satellite networks, Network devices-repeaters, hubs, switches and bridges. **[No. of Hrs.: 11]**

**UNIT – IV**

The Network Layer: Network layer design issues, routing algorithms, congestion control algorithm, internetworking, the network layer in the internet, the network layer in ATM networks. **[No. of Hrs.: 11]**

**TEXT BOOKS:**

1. A. S. Tananbaum, “Computer Networks”, 3<sup>rd</sup> Ed, PHI, 1999.

**REFERENCE BOOKS:**

1. U. Black, “Computer Networks-Protocols, Standards and Interfaces”, PHI, 1996.
2. W. Stallings, “Computer Communication Networks”, PHI, 1999.
3. Laura Chappell (ed), “Introduction to Cisco Router Configuration”, Techmedia, 1999.
4. Michael A. Miller, “Data & Network Communications”, Vikas Publication, 1998.
5. William A. Shay, “Understanding Data Communications & Networks”, Vikas Publication, 1999.