

**Code No.: ETIT 401**  
**Paper: Advanced 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**

Review of Physical & Data link layer, ISDN, Frame Relay, ATM **[No. of Hrs.: 11]**

**UNIT – II**

Network Layer: ARP and RARP, Routing algorithms and protocols, Congestion control algorithm, Router Operation, Router configuration, Internetworking, IP Protocol, IPv6 (an overview). **[No. of Hrs.: 11]**

**UNIT – III**

Transport Layer: UDP, TCP (Flow Control, Error Control, Connection Establishment) **[No. of Hrs.: 11]**

**UNIT – IV**

Application layer: DNS, SNMP, RMON, Electronic Mail, WWW.

Network Security: Firewalls (Application and packet filtering), Cryptography, Virtual Print, **[No. of Hrs.: 11]**

**TEXT BOOKS:**

1. B. A. Forouzan, “TCP/IP Protocol Suite”, TMH, 2<sup>nd</sup> Ed., 2004.

**REFERENCE BOOKS:**

1. U. Black, “Computer Networks-Protocols, Standards and Interfaces”, PHI, 1996.
2. W. Stallings, “Computer Communication Networks”, PHI, 1999.
3. W. Stallings, “SNMP, SNMPv2, SNMPv3, RMON 1&2”, 3<sup>rd</sup> Ed., Addison Wesley, 1999.
4. Michael A. Miller, “Data & Network Communications”, Vikas Publication, 1996.
5. William A. Shay, “Understanding Data Communications & Networks”, Vikas Publication, 1999.
6. A. S. Tananbaum, “Computer Networks”, 3<sup>rd</sup> Ed, PHI, 1999.
7. Laura Chappell (ed), “Introduction to Cisco Router Configuration”, Techmedia, 1999.