

26

ANNA UNIVERSITY CHENNAI
B.TECH DEGREE END SEMESTER EXAMINATIONS APR/MAY 2011
INFORMATION TECHNOLOGY
FIFTH SEMESTER

(Regulations: 2004)

IT 374-COMPUTER NETWORKS

Time: 3Hrs

Max.Marks: 100

Answer all questions
PART A (10 x 2 = 20 Marks)

1. How reliable transmission is carried out in a communication? How errors are detected by the receivers?
2. What is the need for data encoding before transmission?
3. State the role of a bridge in the network. How it differs from a Switch?
4. Compare Ethernet and Token Ring in terms of data rate and installation.
5. Why there is no ICMP error message for an ICMP packet loss?
6. Why IP is unreliable? How reliable communication can be carried out?
7. Compare congestion control and flow control in a network.
8. Why the sequence number range in the header is limited in TCP communication protocol?
9. What is the role of DNS? List down few of its contents.
10. Give the various SNMP commands.

PART B (5 x 16 = 80 Marks)

11. i. Explain the characteristics and modes of operation of Fiber optic communication media in detail. (8)
ii. Discuss about the similarities and differences between TCP/IP and OSI network models. (8)
12. a) i) Describe the collision avoidance mechanism used in 802.11 wireless LAN. How such a mechanism solves the hidden terminal problem (8)
ii) Explain about various LAN topologies in detail. (8)

Or

- b) Write note on
- i. FDDI (8)
 - ii. IEEE 802.11 (8)

13. a) i) Write notes on Internetworking device in network layer. (8)
ii) Explain X.25 network architecture in detail. (8)

Or

- b) Discuss the role of ICMP messages with their formats. (16)

14. a) Explain the various congestion control mechanisms implemented in Transport layer. (16)

Or

- b) i. Compare TCP and UDP in terms of their functionality (12)
ii. Show the TCP connection establishment and termination with sequence diagram (4)

15. a) Write notes on

- i. DNS (8)
ii. SMTP (8)
iii.

Or

- a) Discuss in detail about any four multimedia applications which imposes a heavy challenge by consuming large number of network resources. (16)