

Nov-Dec
2011



[4063] – 353

T.E. (Information Technology) (Semester – I) Examination, 2011
COMPUTER NETWORK TECHNOLOGY
(2008 Pattern) (New)

Time : 3 Hours

Max. Marks : 100

SECTION– I

1. A) What are different ways by which networks can differ ? Explain it in brief. 10
B) Why there is a limitation on the size of packet ? State the reasons. 6

OR

2. A) Explain in detail link state routing algorithms with example. 8
B) Differentiate between Virtual circuit subnet and Datagram subnet. 8
3. A) Compare between IPv4 and IPv6. Draw header diagram. 8
B) For a given class B network 144.155.0.0 with default subnet mask, how can you divide it into 8 equal subnets ? How many hosts can be accommodated in each sub-network ? 10
- 1) Give the range of each subnet
2) Give the network IP for 7th subnet
3) Give the First usable host of 7th subnet
4) Give the Last usable host of 7th subnet
5) Give the Broadcast IP for the 7th subnet

OR

4. A) Explain stepwise the procedure carried out by DHCP client and DHCP server. Draw diagrams showing the above communication. 8
B) What is ICMP ? Explain the operating of ICMP with suitable example. 10
Explain any four error messages of ICMP.

P.T.O.



5. A) How Nagle's algorithm helps in TCP transmission policy ? Explain the Clark's solution to overcome the silly window syndrome. 8
- B) What is a Socket ? Explain various socket primitives used in client-server interaction (for both TCP and UDP). Explain different types of Sockets with example. 8

OR

6. A) Explain the three way handshake algorithm for TCP connection establishment. 8
- B) What are the different quality of service parameters present at transport layer ? 8

SECTION – II

7. A) What is the purpose of SMI and MIB in relation to SNMP ? 8
- B) Differentiate between POP3 and IMAP. 8

OR

8. A) Explain how name resolution happens in DNS. 6
- B) Enlist all the resources records and its functions. 6
- C) Write a short note on SMTP. 4
9. A) What is meant by interactivity for streaming stored audio/video ? What is meant by interactivity of real time interactive audio/video ? 8
- B) What is the essence of RSVP ? Explain the suitable example. 8

OR

10. A) What is the need of scheduling and policing techniques in multimedia networking ? 8
- B) What is the need of RTCP protocol along with RTP protocol in multimedia communication ? 8



11. Write a short note on **any three** :

18

- 1) Frame Relay
- 2) B-ISDN
- 3) Bluetooth and Limitations of Bluetooth
- 4) X.25

OR

12. A) Explain WAN architecture in detail.

8

B) Write a short note on :

10

- 1) Hidden Station Problem
 - 2) Gigabit Ethernet.
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