

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
B.Tech. CSE & IT (Semester VI), Test 3 (June 2016)

Course Code: 10B11CI611
Course Name: Computer Networks
Course Credit: 4

Max. Marks: 35
Max. Time: 2:00 Hrs

Attempt all questions. Carrying of mobile phones will be treated as the case of unfair means. Question numbers 1 to 5 carry 3 marks each. Question numbers 6 part (a) to (d) carry 2.5 marks each.

- Ques 1. Compare and contrast TCP segment with SCTP packet in brief? Also discuss an SCTP Associations in details?
- Ques 2. Discuss the flow control, error control and congestion control in TCP? The following is a dump from a TCP header in hexadecimal format: 05 32 00 17 00 00 00 01 00 00 00 00 50 02 07 FF 00 00 00 00 (a) What is the destination port number (b) What is the control field. (c) What is the window size field?
- Ques 3. Write the algorithmic steps for link state routing algorithm? How does it differ from Distance vector routing algorithm? Consider the network shown below (Fig-1) and assume that each node initially knows the costs to each of its neighbors. Consider the link state routing algorithm and show the distance table entries at node X (Source node).

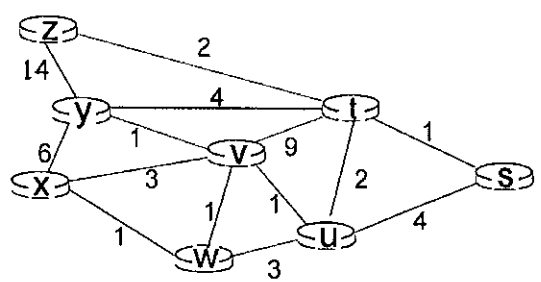


Figure 1: The Network

- Ques 4. Discuss the algorithmic steps of token bucket algorithm? Also, in what way token bucket algorithm is superior to leaky bucket algorithm? If the size of token bucket is 100k octets, the average rate of arrival of the token is 1 M/s, and the packet are sent at the peak rate of 11M octets/s, calculate the maximum burst size. Assume each token has authorization to send one octet of data.
- Ques 5. Explain the design issue for transport layer? Discuss stringent the quality-of-service requirements/major parameters for different applications such as Email, File transfer, web access, remote login, Audio on demand, video on demand, telephony and videoconferencing in terms of High (H), Low (L) and Medium (M).
- Ques 6. Write the short notes on following
 - (a) File Transfer Protocol (FTP)
 - (b) Border Gateway Protocol (BGP)
 - (c) Transition from IPV4 to IPV6
 - (d) ICMP