BTS-VI(SS)-07.19-0938 Reg. No. | | | | | | | | | |

B

B.Tech. Degree VI Semester Special Supplementary Examination July 2019

CS 15–1601 COMPUTER NETWORKS

(2015 Scheme)

Time: 3 Hours Maximum Marks: 60

PART A

(Answer *ALL* questions)

(10 × 2 = 20)

I. (a) Briefly describe the Star and Ring Topology and compare them.

(b) What is the role of SMI protocol in SNMP?

(c) The window size specified in the TCP header is 8. The value of window scale factor is 4.During a heavy throughput traffic, size of the window has to be increased. Estimate the new window size.

(d) How the carrier price and carrier technology leads to multiplexing of several transport layer process connections.

(e) Compare the features of TCP and UDP protocol

(f) "The major drawback of Distant vector routing is that it converges slowly to the result". Comment on this statement

(g) Compare the features of transparent and non transparent fragmentation.

(h) What is meant by piggybacking?

(i) Briefly describe the 3 modes of operations in HDLC.

(j) List the important system calls used in socket programming.

PART B

(4 × 10 = 40)

II. Explain how reliability is provided in TCP layer and data link layer of TCP/IP architecture. What are the 3 levels of identification of a communication between TCP/IP entities (10)

OR

III. (a) Explain about different Methods used in a http transaction (6)

(b) What is the role User agent and Mail transfer agent in SMTP protocol (4)

IV. (a) Both transport and network layer provides connection oriented and connectionless services. Justify the reason why a separate layer as Transport layer is needed above the Network layer in TCP protocol suite (4)

(b) Briefly explain TCP time out. Current segment transmitted by TCP at 5:30:30. It receives acknowledgment at 5:30:55. Later acknowledgment is delayed for the new segment. Calculate the retransmission time set for the timer, in order to retransmit the segment. Round trip time estimated for previous segments is 20 seconds.Value of α is 90% (6)

OR

V. What is sylly wndow syndrome? Explain Naggle's algorithm and clark's algorithm for solving sylly window syndrome (10)

(P.T.O.)

VI.	(a)	Compare virtual circuit and Datagram service	(6)
	(b)	Describe IP V4 packet format	(4)
		OR	
VII.		Explain the Link state routing algorithm and compare it with distant vector routing algorithm	(10)
VIII.	(a)	Compare packet switching and circuit switching	(5)
	(b)	Briefly describe the architecture of an ISDN network	(5)
		OR	
IX.		Write short notes on (i) Fast Ethernet and Gigabit Ethernet (ii) SONET	(10)

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