USN

Internal Assesment Test - II

Sub:	COMPUTER COMMUNICATION NETWORKS					Code:	15EC64
Date:		Duration:	90 mins	Max Marks: 50	Sem: VI	Branch:	TCE

Answer Any FIVE FULL Questions

		Marks	OBE	
			CO	RBT
1.	a.) In slotted ALOHA network transmits 200 bit frames on a shared channel of 200 Kbps. What is the throughput if the system produces: - a) 1000 frames/sec b) 500 frames/sec c) 250 frames/sec. b.) Show the behavior of the three persistence methods of CSMA with a neat diagram	[6+4]	CO1	L1
2.	a. Explain the frame format of standard Ethernet (802.3). b. Identify if the following Ethernet MAC addresses are unicast, multicast or broadcast. i) 41:20:1B:2E:08:EE ii) 4A:FF:10:01:11:00 iii) FF:FF:FF:FF:FF:FF.	[7+3]	CO1	L3
3.	a. Explain the datagram approach in case of connectionless service to route the packet. b. Explain VLAN and membership of VLAN.	[5+5]	CO1	L2
4.	Explain how the collisions are avoided through use of IFS, contention window and acknowledgements in CSMA/CA with neat figure.	[10]	CO2	L2
5.	Explain the implementation of Network Address translation (NAT) and explain the address translation using different procedure with neat diagram.	[10]	CO1	L2
6.	List the goals of fast Ethernet and also explain the encoding schemes of fast Ethernet.	[10]	CO3	L1
7.	Explain the loop problem in learning switch. A system with four LANs and five switches are shown in the below. Choose S1 as the source node. Show the forwarding and blocking ports, after applying the spanning tree procedure with proper steps. a. Actual system	[10]	CO2	L2
			CO2	L2

8. An organization is granted a block of addresses with the beginning address 14.24.74.0/24. The organization needs to have 3 subblocks of addresses to use in its three subnets: one subblock of 10 addresses, one subblock of 60 addresses, and one subblock of 120 addresses. Design the subblocks and also find the first and last address of organization. [10]

Course Instructor   Chief Course Instructor