



Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058, India
(Autonomous College Affiliated to University of Mumbai)

Makeup-Examination

January 2020

Max. Marks: 60

Class: B.E./BTech.

Course Code: ELE 73B

Name of the Course: Computer and Communication Networks

Duration: 3 Hrs.

Semester: VII

Branch: ETRX

Instruction:

- 1) All questions are compulsory
- 2) Assume suitable data if necessary
- 3) Figure to the right indicate full mark

Q. No.		Max. Marks	CO-BL-PI
1 a)	Do you agree that CSMA/CA works with both wired as well as wireless networks? Justify your answer with relevant reasoning.	5	2-3-2.2.4
b)	Identify the cable use to connect the following: 1) Router and Switch 2) Router and Router 3) Switch and Personal Computer 4) Modem and Router. Also compare: Hub and Switch	10	1-2-2.1.2
2 a)	What are the factors that causes congestion? Identify and brief on any two congestion detection mechanisms. OR What is ALOHA? Express the merits of slotted and pure ALOHA with neat labeled diagrams.	10 10	2-3-2.2.3 2-3-2.2.3
b)	Which layer of the OSI model is responsible to handle MAC addresses? Also what is the size of MAC address and how will you identify the vendor of the NIC card?	5	1-2-2.1.2
3a)	What is the significance of Default Subnet Mask? Assume IP Address :192.168.1.1 Now Assume that the administrators requirement is 2 Subnets and is using Class C network-id address : 192.168.1.0. Using the concept of Subnetting find the possible of host/subnets and subnet ranges. OR Identify the priority bits and thus IP address range for CLASS A, B and C IP addressing schemes.	10 10	3-3-3.1.6 3-3-3.1.6
b)	Categorize the following protocols under TCP and UDP: 1) DNS 2) HTTPS 3) FTP 4) DHCP 5) SMTP.	5	1-2-2.1.2

4a)	What is SNAT and DNAT? Identify the basic difference between firewall and DMZ.	5	4-3- 2.2.3
b)	Bob wants to send message "HELLO" to Alice and uses key "4" to encrypt the message. Use Mono Alphabetic Substitution algorithm and show the encryption and decryption process between Bob and Alice.	10	4-3- 2.2.3
	<p style="text-align: center;">OR</p> <p>Define the following with example: 1) Trojan Horse 2) WEP 3) DoS attacks 4) Zombie attacks</p>	10	4-3- 2.2.3