Sardar Patel Institute of Technology

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

ReExam January2020 synoptic

Max. Marks: 60 **Duration: 3Hrs**
Class: F.Y.MCA **Semester:II**
Course Code: MCA22 **Branch: MCA**
Name of the Course: Computer Networks
Date: 6/1/20 **Time : 10 to 1 p.m.**

Instruction:
(1) All questions are compulsory
(2) Draw neat diagrams
(3) Assume suitable data if necessary

Q.No.	Questions	Max. Marks	CO_BL_PI
1.(A)	**Consider a noiseless channel with a bandwidth of 12000 Hz transmitting a signal with 2 signal levels and 4 signal levels .Calculate the maximum bit rate .** Data rate = 2*Blog2 L 240000 bps [3mks] 48000 bps [3mks]	6	1_3_1.1.2
1.(B)	**Classify and elaborate different types of Noise in digital communication** Thermal Noise [2mks] Intermodulation Noise[2mks] Cross talk[2mks]	6	1_3_1.2.1
2.(A)	**Categorize and elaborate different types of topology in Networking** Bus Star Ring Mesh Tree *Any 3, 2 marks each 1 mark diagram 1 mark explanation	6	2_3_2.2.2
2.(B)	**Compare any two networking devices** Repeater Hub Bridges (3 mks each)	6	2_3_2.2.5
3.(A)	**Compare OSI and TCP model** OSI and TCP comparison atleast 6 points	6	3_3-2.2.5
3.(B)	**Distinguish different types of wired media** Twisted pair cable (2 mks) Coaxial cable (2mks) Optical fibre cable (2 mks) OR Distinguish different between types of unwired media Microwave(2 mks) Radiowave (2 mks) Infrared (2 mks)	6	3_3_2.2.4

	Bit stuffing(2 mks) **OR** **On what basis different types of ALOHA is classified.** Explanation of Pure ALOHA Explanation of slotted ALOHA		
4.(B)	**What is the function working of Internet Controlled Message protocol in Networking** Types of messages(4 mks) Basic working and importance (2 mks)	6	3_3_2.2.2
5.(A)	**Elaborate how to overcome the shortcomings of Leaky bucket Algorithm** List shortcomings of Leaky bucket Algorithm(2 mks) Token bucket Algorithm(2 mks) Diagram (2 mks) **OR** **Choose an appropriate queue management algorithm which will put in practice both high priority and low priority queues.** Explanation for Fair queue (4 mks) Diagram (2 mks)	6	4_6_3.2.1
5.(B)	**Design model to establish communication between two hosts using TCP.** Draw diagram for Three way handshake . (2 mks) Explanation (4 marks)	6	4_6_3.3.1