Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058, India

(Autonomous College Affiliated to University of Mumbai)

Q1

Mid Semester Examination

13th March 2018

Max. Marks: 30 | Duration: 1.5Hr

Class: F.Y.M.C.A. | Semester: II

Course Code: MCA22 | Branch: M.C.A.

Name of the Course: Computer Networks

Instruction:

(1) All questions are compulsory.

Q No.	Question	Max. Marks	CO
Q.1	Outline the term "Computer Networks"? Discuss various types of network topologies in computer networks along with its advantage & disadvantage.	8	CO2
Q.2	An analog signal has a bit rate of 8000 bps and a baud rate of 1000 baud. How many data elements are carried by each signal element? How many signal elements do we need?	5	CO1
	OR		
	We have a channel with a 1-MHz bandwidth. The SNR for this channel is 63. What are the appropriate bit rate and signal level?	5	CO1
Q.3	Compare OSI and TCP/IP model.	7	CO3
Q.4	A bit stream 10011101 is transmitted using the standard CRC method described in the text. The generator polynomial is x3 + 1. Show the actual bit string transmitted. Suppose the third bit from the left is inverted during transmission. Show that this error is detected at the receiver's end.	5	CO4
	OR		
	Calculate LRC and VRC for following bit pattern using even parity: 1001011 0001100 1000000 1110111	5	CO4
Q.5	Construct the Hamming code for the bit sequence 1001101 & check error bit position for bit sequence 10001100101 at receiver side	5	CO4
	OR		
	Compare time domain & frequency domain.	5	CO1