Sardar Patel Institute of Technology

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

(Autonomous College Affiliated to University of Mumbai)

Re- Examination

July 2019

Max. Marks: 60	Duration: 180 Minutes
Class: TE	Semester: V
Course Code: ITC52	Branch: IT
Name of the Course: Computer Networks	

Instructions:
(1) All Questions are Compulsory
(2) Draw neat diagrams
(3) Assume suitable data if necessary

Question No.		Max. Marks	CO
Q 1 (a)	a) Explain OSI communication model with neat diagram. b) Differentiate between connectionless and connection oriented services for 3 different points. **OR** Differentiate between LAN, MAN,WAN for 2 different points	5 + 3	1
Q 1 (b)	Explain with neat diagram unguided transmission medias. Explain radio waves in detail.	4	2
Q2 (a)	What is CRC stands for ? Why it is needed? Calculate CRC for the data word X^3+1 at the sender as well as receiver side.	6	4
Q2 (b)	Why Aloha is needed? Explain its types with neat diagram.	6	4
Q3 (a)	Find the error if any in following IPv4 address. 1) 111.56.045.78 2) 221.34.7.8.20 3) 75.45.301.14 **OR** Given a fragmented datagram with an offset of 120, how can you determine the first and last byte numbers?	3	3

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Q3 (b)	Draw IPv4 datagram format. Explain any 7 fields of it.	9	3
Q4 (a)	What is UDP stands for? Explain 5 uses of UDP. Explain flow control and error control mechanism of UDP? **OR** What is TCP stands for? Explain TCP connection termination establishment with neat diagram.	9	4
Q4 (b)	In TCP, if the value of HLEN is 0111, how many bytes of option are included in the segment?	3	4
Q5 (a)	Explain TCP congestion control with neat diagram.	6	4
Q5 (b)	Draw the basic model of FTP. Explain communication over Data connection and Control connection .	6	4