



Sardar Patel Institute of Technology

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

(Autonomous College Affiliated to University of Mumbai)

Re-Examination

Jan 2019

Max.Marks: 100

Class: B.E.

Course Code: EXC704

Name of the Course: Computer Communication and Networks

Duration: 3Hrs

Semester: VII

Branch: ETRX

Instruction:

- (1) All questions are compulsory
- (2) Draw neat diagrams wherever required
- (3) Assume suitable data if necessary
- (3) CO – Course Outcomes

Q No.		Max. Marks	CO
Q.1 (a)	Define Multiplexing? Compare TDM and FDM.	10	CO1
	OR		
Q.1 (a)	With a neat diagram, discuss ISO-OSI model in brief	10	CO1
Q.1 (b)	Discuss data link layer protocols for noiseless (error-free) channels and those that can be used for noisy (error-creating) channels.	10	CO2
Q.2 (a)	What is NAT? Explain how address translation is done in NAT.	05	CO3
Q.2 (b)	Discuss 1) Pure Aloha and 2) Slotted Aloha protocols.	05	CO1
	OR		
Q.2 (b)	We have four sources, each creating 300 characters per second. If the interleaved unit is a character and 1 synchronizing bit is added to each frame, find (a) the data rate of each source, (b) the duration of each character in each source (c) the frame rate (d) the duration of each frame, (e) the number of bits in each frame.	05	CO1
Q.2 (c)	Compare GEO, MEO and LEO. Prove mathematically that the visibility of Geosynchronous Orbiting Satellite is 24Hrs.	10	CO1
	OR		
Q.2 (c)	Discuss 1 persistent, non-persistent and p-persistent. Also compare TCP with UDP	10	CO1
Q.3 (a)	Define Error control and Flow control. Compare and contrast byte-stuffing and bit-stuffing.	05	CO2
Q.3 (b)	Discuss exposed and hidden node terminal problems in wireless networks.	05	CO1
Q.3 (c)	What are the factors that causes congestion? Discuss any 2 congestion controlling mechanisms used by transport layer.	10	CO4
	OR		

Q.3 (c)	What is QoS? Define the flow characteristics for QoS. Also discuss any 2 scheduling techniques used for QoS improvements.		
Q.4 (a)	Draw and explain frame format of IEEE802.3.	05	
Q.4 (b)	Discuss Max-Min fairness algorithm with example.	05	
Q.4 (c)	Define Subnet Mask. Also discuss IP addressing concept and various classes of IP address.	10	
Q.5 (a)	What are cookies and cache? Discuss in brief about Domain Name Server.	10	CO5
Q.5 (b)	Compare OSI model with TCP/IP model. Also discuss the working of FTP.	10	CO1, CO5
OR			
Q.5 (b)	Discuss in brief about SMTP with a neat block diagram.	10	CO1, CO5

—Best of Luck—