Sardar Patel Institute of Technology

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

MidMid Semester Examination Synoptic/Breakup

September 2018

Max.Marks: 20 Duration: 60 mins
Class: B.E. Semester: VII
Course Code: EXC704 Branch: ETRX
Name of the Course: Computer Communication and Networks

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

Q No.		Max. Marks	CO
Q.1 (a)	Define congestion control and flow control. . What is RED? Discuss. OR Compare Leaky Bucket with Token Bucket Algorithm.	02 03 05	CO4 CO4 CO4
Q.1 (b)	Hidden Node Problem: In the case of wireless network it is possible that A is sending a message to B. But C is out of its range and hence while "listening" on the network it will find the network to be free and might try to send packets to B at the same time as A.So. there will be a collision at B.The problem can be looked upon as if A and C are hidden from each other.Hence it is called the "hidden node problem". Exposed Node Problem: If C is transmitting a message to D and B wants to transmit a message to A, B will find the network to be busy as B hears C transmitting. Even if B would have transmitted to A, it would not have been a problem at A or D. CSMA/CD would not allow it to transmit message to A, while the two transmissions could have gone in parallel. (2.5 Marks each)	05	CO1
Q.2 (a)	Height of the orbit = 22,300 mile;That is 36,000km = $3.6 * 10^7 m$ $orbital\ radius = 3.6 * 10^7 m + 6.38 * 10^6 m = 4.2 * 10^7 m$ $Now\ T = 2\pi\sqrt{r^3/4 * 10^{14}}$ $T = 86,000 sec = 86,000 seconds = 24 hours (rounded)$	05	CO1
Q.2 (b)	192.168.1.0 = 11000000.10101000.00000001.00000000 Class C : N.N.N.H 110xxxxx.xxxxxxxx.xxxxxxxx.xxxxxxxx Class C : 192.168.1.0 No. of Subnets: 6; No. of hosts: 30/subnets. if you convert 3 host bits to network bits. then customize subnet masks is 255.255.255.224 subnet range: 192.168.1.32 - 192.168.1.223 OR	05	CO5

Q.2 (b)	Class A: 0.0.0.0 to 127.255.255.255.Subnet masks: 255.0.0.0, priority bits 0;Class B: 128.0.0.0 to 191.255.255.255,Subnet masks: 255.255.0.0, priority bits 10; Class C: 192.0.0.0 to 223.255.255.255.Subnet masks: 255.255.255.0, priority bits 110.	05	CO5

----------Best of Luck----------