

14CS2007 Computer Networks

Set B

Time : 3 hrs
Total Marks: 100

1. a. List six access technologies. Classify each one as home access, enterprise access, or wide-area wireless access. (10)
b. How long does it take a packet of length 1,000 bytes to propagate over a link of distance 2,500 km, propagation speed $2.5 \cdot 10^8$ m/s, and transmission rate 2 Mbps?(6)
c. Provide and explain a formula for the total delay experienced in Internet.(4)

OR

2. a. With a help of a neat diagram , discuss the various functions of Circuit switched Networks.What advantage does a circuit-switched network have over a packet-switched network? (10)
b. What are the five layers in the Internet protocol stack? With relevant diagram discuss the principal responsibilities of each of these layers? (10)
3. Suppose Alice, with a Web-based e-mail account (such as Hotmail or gmail), sends a message to Bob, who accesses his mail from his mail server using any mail access protocol. Discuss how the message gets from Alice's host to Bob's host. Distinguish various mail access protocols. (20)

OR

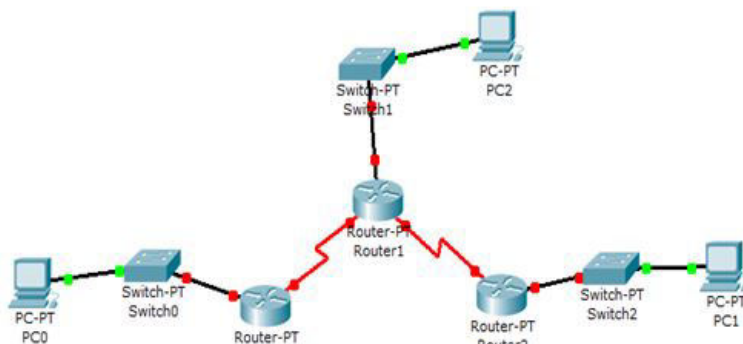
4. a.Elaborate all the services provided by DNS and explain its working. (10)
b. Define Socket. Write and explain a java program to establish a socket connection using connection oriented transport protocol. (10)
5. Write short notes on the following
a. Go back N (10)
b. Selctive Repeat (10)

OR

6. a. Describe the TCP Segment header format. (5)
b. With neat diagram discuss the TCP connection establishment process. (10)
c. Calculate UDP check sum for the following data. (5)

0110011001100000 - 0101010101010101 - 1000111100001100

7. a. Given Network Address is 192.168.74.0/24. Calculate all the subnet addresses and host addresses for each subnet. (10)



b. Sketch header format of IPV6. (5)

c. With Neat diagram, write short notes on Router architecture. (5)

OR

8. Write short notes on the following

a. Intra-AS Routing in the Internet (10)

b. Inter-AS Routing in the Internet (10)

9. a. Discuss about the various Error Detection and Correction techniques in Link Layer (10)

b. Describe and distinguish between Channel partitioning MAC and Random access MAC protocols. (10)

Wishing you All the Best
