QP Code : 31134

(3 Hours)

Total marks : 80

Note:
- Question No. 1 is compulsory.
- Attempt any Three questions out of remaining questions.
- Make suitable assumptions whenever necessary.

Q 1:   [4 X 5]
 a) Compare connection oriented and connectionless services.
 b) Explain in short Subnetting.
 c) Explain in short different framing Methods.
 d) Explain in short TCP/IP Model.
 e) What is the use of SSH ?

Q 2:
 a) Explain any four functions of Data Link layer with example.   [10]
 b) What is IPv4 protocol? Explain the IPv4 Header format with diagram. [10]

Q 3:
 a) Explain Classless Inter Domain Routing (CIDR).   [10]
 b) Discuss the quality of service parameters in computer network.   [10]

Q 4:

 a) What are the steps involved in link state routing. Explain the contents
        and requirements of link state packets.   [10]
 b) Compare Open Loop congestion control, Closed Loop congestion control.[10]

Q 5:

 a) Write a Program for client-server application using Socket Programming(TCP).
                                                                          [10]
 b) An ISP is granted a block of addresses starting with 150.80.0.0/16.
    The ISP wants to distribute these blocks to 2600 customers as follows.
    a. The first group has 200 medium-size businesses; each needs 128
    b. The second group has 400 small businesses; each needs 16
    c. The third group has 2000 households; each needs 4 addresses. Design the
 subblocks and give the slash notation for each subblock. Find out how many
 addresses are still available after these allocations.   [10]

Q 6: Write short notes on the following.   [5 X 4]

     a) Virtual LAN
     b) FDDI
     c) BGP
     d) SNMP