(3 Hours) [Total Marks :80

N.B. : (1) Question No.1 is compulsory

(2) Write any three question from Q. 2 to Q.6.

(3) Draw neat diagram if necessary.

1. Solve following 20

    (a) Compare between pure ALOHA and Slotted ALOHA

    (b) Explain working principle of selective repeat ARQ

    (c) What is the use of subnetwork in IP addressing

    (d) What is bit and byte stuffing explain with example.

2. (a) Discuss various scheduling methods used in MAC 10

   (b) Explain need of fragmentation and field related to fragmentation in IP datagram 10

3. (a) Solve the following related of IP datagram

    (a) Which field shows number of hop count 10

    (b) If HLEN value is 5 and length of data is 24 bytes. Calculate option

    (c) What are differentiate services?

    (d) Packet version of 010 is discarded. Justify.

   (b) Draw and explain connection establishment using 3 way handshaking in TCP. 10

4. (a) What is DSL and HFC? Describe in brief 10

   (b) What is IEEE 802.11? Explain features of IEEE 802.11. Draw the architecture 10

    of IEEE 802.11 10

5. (a) What do you mean by decentralized peer to peer file sharing? How it is
different from centralized system. 5

   (b) What are the components of ATM? Explain in brief.

   (c) What is the role of ICMP protocol? Explain the error messages of ICMP 5

    10

6. (a) An ISP are granted a block of address starting with 127.60.4.0/20. The ISP
wants with each organization receiving 8 address only Design subblock and 10
give the slash notation for each subblock.

   (b) Which protocol gives mapping of name with IP address? Explain working of
such protocol with different records. 10