(3 Hours)   [Total Marks : 80

N.B. :1)   Question No. 1 is Compulsory
     2)   Attempt any 3 questions out of the remaining questions
     3)   Total 4 questions need to be solved.

1. (a) "A datagram cannot be larger than the MTU of network over which it is   5
        sent. 'Is the statement true or false? Explain with the help of suitable
        example.

   (b) Suppose you have to develop an error recovery protocol for a link that is   5
       unreliable and delay sensitive, which of the following protocol would you
       to choose? Justify your answer.
            (i)   Stop and wait
            (ii)   Selective repeat
            (iii) Go back

   (c) How congestion is controlled in TCP?

   (d) The size of option field of an IP datagram is 20 bytes. What is the value of   5
       HLEN ? What is the value in binary?   5

2 (a) What is OSI model ? Give the function and services of each layer.   10
   (b) What is routing in network? Explain shortest path routing protocol.   10

3 (a) Explain the different classes of IP addresses and need of subnetting with   10
       the help of example.
   (b) Differentiate between message switching, circuit switching and packet   10
       switching. a2zSubjects.com

4 (a) What is pure ALOHA and Slotted ALOHA? What is the efficiency. Justify   10
       your answer.
   (b) Draw and explain TCP Segment Header.   10

5. (a) Differentiate between TCP and UDP .   10
   (b) Explain the different transmission media in networking.   10

6. Write short notes on the following (any four) :   20
        (a) BGP
        (b) HDLC
        (c) TCP Timers
        (d) Hubs, Switches and Bridges   a2zSubjects.com
        (e) CRC and checksum.

JP-Con. : 9998-15.