LD-127

April-2014

T.Y.M.Sc. (CA & IT) Sem.VI

(Integrated)

Data Communication & Networking

Time : 3 Hours]   **[Max. Marks : 100**

1.   (A) Fill the following blanks :   **5**
   - (1) _____ Minimum Hamming Distance Require for correcting two errors.
   - (2) Anti Jamming & Privacy is goal of _____ technique.
   - (3) 255.255.255.0 is default subnet mask of _____.
   - (4) Process to Process Delivery is achieved by _____ layer of OSI model.
   - (5) Mobile Communication is example of _____ DataFlow Mode.

   (B) Answer the following Questions in short :   **10**
   - (1) Send data ##Thisis@@Data @@Communication@@## using Byte stuffing where # is Flag and @ is Esc
   - (2) Send data 111111 00 1111101 00 111111 00 using Bit stuffing where 01111110 is Flag
   - (3) IP address 128.72.45.123 is belong to which class ? Write Network id and Host id
   - (4) If a periodic analog signal is decomposed into five sine waves with frequencies of 700,200,600,400, 100 Hz. Find the Bandwidth of Medium
   - (5) In CRC divisor is 101111 then find the length of CRC.

   (C) Solve the following problems :   **5**
   - (1) The power of signal is 1000 mW and the power of Noise is 10 mW. Find SNR and SNR db.
   - (2) A block of classless IP addresses is granted to a small organization. We know that one of Addresses is 205.16.37.10/27. What is First, Last and Total number of address.

2.   (A) Answer the following questions : (Any **three**)   **18**
   - (1) What is Transmission impairment ? Explain in brief.
   - (2) What is Multiplexing ? Discuss Frequency Division Multiplexing.
   - (3) What is Spreading Technique ? Discuss Frequency Hopping Spread Spectrum.
   - (4) What is Guided media ? Explain Fiber optics cable.

   (B) Define Bandwidth.   **2**

3. (A) Answer the following questions : (Any **three**)   **18**

    (1) What is Switching Network ? Explain Circuit Switching Network in brief.

    (2) What is Sliding Window Protocol ? Explain Go Back N Protocol.

    (3) What is Error Detection ? Explain CRC method.

    (4) What is Error Correction ? Explain Hamming Code method.

    (B) Define Minimum Hamming Distance.   **2**

4. (A) Answer the following questions : (Any **three)**   **18**

    (1) What is Bridge ? Explain Transparent Bridge in detail.

    (2) What is IP address ? Discuss classful IP address.

    (3) What is Routing ? Explain Distance Vector Routing Algorithm.

    (4) What is Congestion ? Explain Close Loop Congestion Control Techniques.

    (B) Define Bursty Data rate.   **2**

5. (A) Write the difference between following : (Any **four**)   **12**

    (1) Go back N protocol-Selective Repeat

    (2) Error Detection – Error Correction

    (3) Virtual Circuit Switching-Datagram Switching

    (4) FDMA-TDMA

    (5) Classful IP address-Class Less IP address

    (B) Explain following term : (Any **four**)   **8**

    (1) Repeater

    (2) DataFlow mode

    (3) Piggybacking

    (4) Subnetting

    (5) Socket