MCA/D-18

COMPUTER NETWAORKING AND DATA COMMUNICTION

MCA-14-32

1. Answer the following in brief :
   (a) What do you mean by the terms protocol, services and layers?
   (b) Give examples of any two wide area networking technologies.
   (c) Bring out a comparison between analog and digital transmission.
   (d) Distinguish between attenuation distoration and delay distortion.
   (e) If the bit string 00111110111111001111110 is bit stuffed, what is the output string?
   (f) What is the role of acknowledgement , timer and sequence number in error control?
   (g) What is a Datagram subnet?
   (h) What is Hierarchical Routing?

Unit I

2. (a) Distinguish between LANs, MANs and WANs.
   (b) What are the relevant design issues for a computer network?

3. Compare OSI and TCP/IP reference models specifying the layered architecture of both, Mention all the supporting protocols of the layers in TCP/IP model.

Unit II

4.(a) What is the need of multiplexing? Describe the various types of multiplexing techniques along with their advantages and disadvantages.
   (b) What is a Modem? What modulation technique are used by modems?

5. (a) Describe, how GSM technology for mobile telephone system works.
   (b) How does wireless transmission take place in a data communication network?

Unit III

6. (a) Explain any one sliding window protocol in

detail.

(b) Distinguish between ALOHA and CSMA protocols.

7. Describe Wavelength Division Multiple Access and Multiple Access with Collision Avoidance protocols for media access control.

Unit IV

8. How is shortest path identified using link state routing?
9. Describe the following congestion control techniques :

(a) Leaky bucket and Token bucket.

(b) Choke packets and hop-by-hop choke packets.