

## MCA 19 Data Communication and Computer Networks

### SET : 1

#### Section-A

(Very Short Answer Questions)

1. (i) Define Scalability.  
(ii) What is Bending of Light Ray?  
(iii) What is Time-to-live(TTL)?  
(iv) What is a Hypertext link?  
(v) What is spoofing?  
(vi) What is difference between Check Box and Radio Button?  
(vii) Name any two Message Digest algorithms?  
(viii) What is maximum size of UDP datagram.  
(ix) Name types of cabling supported by Ethernet standard?  
(x) What is Noise?

#### Section-B

(Short Answer Questions)

2. Compare Circuit Switching, Message Switching and Packet Switching
3. Explain the following:
  - a. X.25
  - b. Frame Relay
  - c. Broadband ISDN
4. What is DNS and its hierarchy .
5. Explain various cabling techniques used in IEEE 802.3 standard.
6. What is the number of links to connect n nodes in a mesh topology?
7. List out the advantages and drawbacks of bus topology.
8. Explain ATM reference model.
9. What is count to infinity problem?

#### Section-C

(Long Answer Questions)

10. Explain the differences between combinational circuit and sequential circuit.
11. What is ISO-OSI reference model ? Compare it with TCP/IP reference model. Why TCP/IP reference model is more popular than OSI model ? Which layer is used for the following :
  - a. to route packets
  - b. to convert packets to frame
  - c. to detect and correct errors
  - d. to run services like FTP, Telnet etc.
12. What is sliding window protocol ? Differentiate between stop-and wait ARQ and Go-back-N protocol.
13. Can a switch be used to connect two LANs with different network IDs ? Justify your answer.

## **MCA 19 Data Communication and Computer Networks**

### **SET : 2**

#### **Section-A**

(Very Short Answer Questions)

1. (i) What do you understand by Bandwidth capacity?  
(ii) What type of topology are used by FDDI.  
(iii) Name different mode of transmission?  
(iv) Define interference.  
(v) Is there any drawback of using piggybacking?  
(vi) What are the other names of IEEE 802.11 protocol or standard?  
(viii) What is the use of CSS?  
(viii) What is dialog box?  
(ix) What is client side scripting language?  
(x) What do you mean by JavaScript variables are loosely typed?

#### **Section-B**

(Short Answer Questions)

2. What are the basic functions of the data link layer? Write down the basic features of HDLC protocol? Could HDLC be used as a data link protocol for a LAN? Justify your answer.
3. Discuss the different factors affecting congestion control algorithms.
4. Write a short note on ISDN?
5. Explain the working of 3 bit sliding window protocol with suitable example?
6. Write two ways in which computer applications differ from network applications
7. Explain distance vector routing . What are its limitations and how are they overcome?
8. Explain the following :
  - a. Token ring
  - b. Difference between congestion control and QoS(or Quality of service)
9. Differentiate between SMTP and SNMP.

#### **Section-C**

(Long Answer Questions)

10. What do you mean by network topology? Discuss briefly each type of network topology.
11. Explain the working of TCP/IP layers. How TCP/IP model is differ than OSI model.
12. What is Asynchronous Transfer Mode (ATM)? Explain its architecture.
13. What types of risk related to security are present in Computer Network? How we cure them.