10EC/TE71

Seventh Semester B.E. Degree Examination, Dec.2018/Jan.2019
Computer Communication Networks

Time: 3 hrs. Max. Marks:100

Note: ***Answer FIVE full questions, selecting at least TWO questions from each part.***

PART – A

1 a. Describe ISO-OSI reference model of computer network. Discuss the function of each layer. **(10 Marks)**

b. Explain the operation of ADSL using multitone modulation with a neat diagram. **(06 Marks)**

c. List different types of addressing in TCP/IP. Explain any one type of addressing with suitable example. **(04 Marks)**

2 a. What is framing? Explain bit and character stuffing with help of example. **(06 Marks)**

b. Explain different types of HDLC frames. **(06 Marks)**

c. Explain design of stop and wait automatic repeat frames for a noisy channel. **(08 Marks)**

3 a. With a flow diagram, explain 1-persistent, P-Persistent and non-persistent MAC procedures. **(06 Marks)**

b. Discuss with an example CDMA channelization protocol. **(08 Marks)**

c. Explain Token passing controlled access technique. **(06 Marks)**

4 a. Explain IEEE802.3 MAC frame format. **(06 Marks)**

b. Compare and contrast standard, fast and Gigabit Ethernet. **(06 Marks)**

c. Explain in detail IEEE 802.11 MAC protocol. **(08 Marks)**

PART – B

5 a. Discuss different inter connecting devices on the basis of the layers they operate. **(08 Marks)**

b. Explain bus back bone and star back bone networks. **(04 Marks)**

c. What are virtual LAN's? What is the basis for membership in VLAN? Enumerate advantages of having VLAN's. **(08 Marks)**

6 a. Compare between IPV4 and IPV6 packet headers along with extension headers. **(08 Marks)**

b. Discuss three strategies proposed by IETF to help the transition between IPV4 and IPV6. **(08 Marks)**

c. Write short notes on logical addressing. **(04 Marks)**

7 Write short notes:

(i) Forwarding techniques.

(ii) Routing Information Protocol.(RIP)

(iii) Border Gateway Protocol (BGP).

(iv) Multicasting distance vector routing protocol (DVMRP) **(20 Marks)**

8 a. Explain TCP and UDP datagram. **(12 Marks)**

b. Describe TCP connection establishment using three way handshakes. **(08 Marks)**