

VII / EXTC (REV)

Q.P. Code - 629002

(3 Hours)

Total Marks : 100

Note : (1) Q. 1 is compulsory

(2) Answer any four out of remaining six questions

(3) Figure to right indicate full marks

1. a) What is port address? What is significance of port address? 20
 b) Differentiate between circuit switching and packet switching.
 c) Compare Go back N and Selective repeat ARQ protocol.
 d) Explain ALOHA and Slotted ALOHA.
 e) Explain bit stuffing and byte stuffing.

2. a) What does the term error control mean in data link layer? Derive expression for efficiency of stop and wait flow control. (assume channel to be error free) 10
 b) Discuss various network topologies. Give advantages and disadvantages of each topology. 10

3. a) Explain in detail HDLC protocol with all the frame types supported by HDLC. Differentiate between HDLC and PPP protocols. 10
 b) What is OSI model of network architecture? Explain advantages and disadvantages of OSI model. Explain data encapsulation in OSI model. 10

4. a) What is exterior and interior routing? Explain in brief distance vector routing and Link state routing 10
 b) Write a note on IEEE 802.3 standard in detail. 10

5. a) Explain IP datagram format in detail. 10
 b) Discuss Queuing system classification. Explain M/M/1 queuing system. 10

6. a) Explain the meaning of various fields in the TCP header format. 10
 b) Explain Bellman ford Algorithm using graph. 10

7. Write short notes on 20
 - i) Count to infinity problem in routing protocol
 - ii) Collision and Broadcast domain
 - iii) ARP and RARP