

(Time: 3hrs)

( Marks 80)

N.B.: (1) Question No. 1 is compulsory .

(2) Attempt any three questions out of remaining questions .

(3) Make suitable assumptions whenever necessary.

Q1: a) Explain the need of layered design for communication and networking .Compare the OSI reference model &TCP/IP. (10)

Q1: b) i) How does the token Bucket Algorithm work? (5)

ii) Explain in short different framing methods. (5)

Q2: a) What is IPV4 Protocol ?Explain the Ipv4 Header format with diagram. (10)

b) Explain sliding window protocol using Go Back –N technique. (10)

Q3: a) What are transport service primitives? Explain (10)

b) What is congestion control? Explain various Congestion prevention policies. (10)

Q4: a) Explain CSMA Protocols. How are collisions handled in CSMA/CD (10)

B) What are the steps involved in link state routing ? Explain the contents and requirements of link state packets. (10)

Q5: a) Explain with the help of suitable diagram TCP connection management and release (10)

b) Write a program for client server application using socket programming (TCP) (10)

Q6: Write a Short notes on the Following (20)

i) Virtual LAN

ii) SNMP

iii) SMTP

iv) DNS