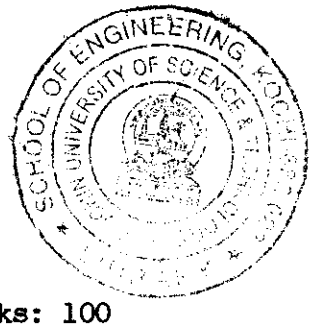
Code No. BTS 019(C)



B.TECH DEGREE VII SEMESTER EXAMINATION IN ELECTRONICS AND COMMUNICATIONS ENGINEERING
APRIL 2000

EC 702 **COMPUTER NETWORKS**

Time: 3 Hours Maximum Marks: 100

I. (a) Explain the three basic functions that must be provided in a distributed data processing system. (15)
(b) What is a null modem? (5)

OR

II. (a) Compare a Baseband LAN and a Broadband LAN. (8)
(b) With a neat sketch explain the architecture of a typical PBX. (12)

III. (a) Explain the layered approach of Network Architecture implemented between two host computers. (10)
(b) Compare Simplex, Half duplex and Full duplex schemes in data transmission. (10)

OR

IV. (a) Explain the fundamental functions performed by a protocol. (10)
(b) Explain x.25 interface and its link control protocol. (10)

V. (a) Explain the terms Circuit Switching, Message Switching and Packet Switching. Compare the total delay time in the above three switching schemes when multilink paths are used for data transmission. (10)
(b) Explain briefly the different services provided through ISDN. (10)

OR

VI. Write short notes on :

(a) N-ISDN
(b) B-ISDN
(c) ATM
(d) Packet switching on PBX Networks. (20)

VII. (a) What are the components of a Simple Network Management Protocol? Explain. (10)
(b) Briefly explain the technique of loop back testing. (10)

OR

VIII. (a) With a neat sketch explain the working of a network test equipment. (10)
(b) Explain the various considerations in system planning. (10)

IX. (a) A duplicating machine maintained for office use is operated by a student assistant who earns $3 per hour. The time to

(Turn Over)

complete each job varies according to an exponential distribution with mean 6 min. Assume a Poisson input with an average arrival rate of 5 jobs/hr. If an 8-hr. day is used as a base, determine

(a) The percent idle time of the machine
(b) The average time a job is in the system
(c) The average cost/day for the student assistant to operate the duplicating machine. (12)

(b) Explain the terms 'Queueing time', 'Waiting time' and System Utilization. Explain the procedure to be adopted for increasing the system throughout. (8)

OR

X. Write a computer program for the queueing system; Finite queue-infinite source multiple server model. (20)

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