

8E4088**8E4088****B.Tech. VIII Semester (Back) Examination, April/May - 2017****Electronics & Communication Engg.****8EC1 Computer Network****Time : 3 Hours****Maximum Marks : 80****Min. Passing Marks : 26****Instructions to candidates :**

Attempt any five questions, selecting one question from each unit. All Questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitable be assumed and stated clearly). Units of quantities used/calculated must be stated clearly.

Unit - I

1. a) State and explain little's theorem for Queuing system in detail. (10)
- b) A rural telephone exchange usually experiences four calls originates per minutes evaluate the probability that exactly 8 calls occur in 30 sec. interval. (6)

OR

1. a) Explain pure birth and pure death process. (10)
- b) Explain the Mathematical Model for M/M/1/K Queues. (6)

Unit - II

2. a) Explain the stop and wait protocol and also discuss the piggy backing method. (8)
- b) Explain in brief the concept of framing. What are the different framing methods? (8)

OR

2. a) What is HDLC and also explain frame structure and frame types in HDLC. (8)
- b) Draw the following reference Models used in computer communication. (8)
 - i) OSI Model
 - ii) TCP/IP Model

Unit - III

3. a) Measurement of slotted ALOHA channel with an infinite number of users show that 20% slots are idle. (3×4=12)
- i) What is the channel load?
 - ii) What is the through put?
 - iii) Is the channel under load or overload? Show with graph.
- b) Define Fiber Distributed Data Interface (FDDI). (4)

OR

3. a) Consider Building a CSMA/CD network running at 1 Gbps over a 1km cable with no repeaters. The signal speed in the cable is 2,00,000 km/sec. What is the minimum frame size. (12)
- b) Explain the different types of channel allocation problem. (4)

Unit - IV

4. a) Write short note on Adaptive and non-adaptive routing algorithm. (8)
- b) An address in a block is given as 73.22.17.25. (8)
- i) Find the total number of address in the block.
 - ii) First and last address.

OR

4. a) Write short note on : (2×4=8)
- i) OSPF
 - ii) BGP
- b) A company is granted a site address 201.70.64.0 the company needs six subnets. Design the subnets. (8)

Unit - V

5. a) What is the difference between open-loop congestion control and closed loop congestion control? (8)
- b) What is ATM architecture? Where it is used? Describe various switching fabrics used to the route the cell from a source end point to the destination end point. (8)

OR

5. a) Explain clearly the AAL protocol AAL- Type 1. (8)
- b) Write short note on (8)
- i) B- ISDN
 - ii) Frame Relay

