

NAME _____

ROLLNO _____

2008-ANNA UNIVERSITY
B.E/B.TECH DEGREE EXAMINATION
HIGH SPEED NETWORKS
(ELECTRONICS AND COMMUNICATION ENGINEERING)

DECE-2008

TIME-3 HOUR
MARKS-100

ANSWER ALL QUESTIONS.

PART A - (10 * 2 = 20 MARKS)

1. What are the differences between X.25 packet switching and frame relay network?
2. What is the access method used by wireless LAN?
3. What is the difference between flow control and congestion control?
4. What is reactive congestion control and preventive congestion control?
5. What are the mechanisms used in ATM traffic control to avoid congestion conditions?
6. How is times useful to control congestion in TCP
7. What are the different queuing disciplines used?
8. How Random early detection helps in congestion avoidance?
9. What is the advantage of label switching?
10. What does RTCP provide to the sources?

PART B - (5 * 16 = 80 MARKS)

11.a) (i) Explain the physical layer access mechanisms. MAC layer protocol and the MAC layer frame format for wireless LAN 802.11.

(ii) Write short notes on : Gigabit Ethernet and Fast Ethernet.

(b)(i) Draw the NNI and UNI ATM header cell format and explain the significance of each field.

(ii) What is the need for AAL in ATM networks? Draw the AAL frame format which supports:

(1) Connection oriented data service

(2) CBR services

(3) VBR services

12.a) (i) What are open loop and closed loop congestion control?

(ii) Explain the congestion control mechanisms used in Frame relay and in Tcp.

or

b) Explain M/M/1 and M/D/1 queuing model and derive expression for

(i) Waiting time in the queue

(ii) Waiting time in the system.

(iii) Number of customers in the queue.

13. a) Explain the Retransmission timer management techniques used in TCP also explain the window management techniques used in TCP for congestion control.

or

b) Briefly explain the different types of traffic control functions used in ATM networks to maintain the promised QoS parameters.

14. a) Write short notes on the following queue discipline.

(i) Fair queuing.

(ii) Bit Round Fair Queuing (BRFQ)

(iii) Weighted Fair Queuing (WFQ).

or

b) Explain how Random Early detection is used to control congestion in networks.

15. a) Explain the Resource Reservation Protocol (RSVP) operation by giving its goals and characteristics.

or

b) Draw the RTP protocol architecture and explain the concept. Also draw the RTP header format and explain the significance of each field. What are the differences between RTP and RTCP.

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