NCMTR

EDPR

Control System

Intelligent

Roll No. .....

Total Pages : 3

80361

B.Tech. 6th Semester

HIGH SPEED NETWORK

(IT-304)

Time : 3 Hours]

[Max. Marks : 60

Instructions :

(i) It is compulsory to answer the questions of Part-1. Limit your answers within 20-40 word in this part.

(ii) Answer any four questions from Part-2 in detail.

(iii) Different parts of the same question are to be attempted adjacent to each other.

(iv) Assume suitable standard data wherever required, if not given.

PART–1

1. (a) Draw RM Cell format. (2)

(b) Draw the graph for cell transfer delay *vs.* Probability density function. (2)

(c) Draw IEEE 802.11 protocol architecture. (2)

(d) Explain the filtering operation of RSVP. (2)

(e) What is MPLS? How it works? (2)

(f) What do you mean by EPD? (2)

(g) Give the recurrence relationship to summarize Processor sharing system evolvement in real time in integrated services architecture. (2)

(h) What are the functionalities of ATM adaptation layer? (2)

(i) What are the fiber channel protocol layers? (2)

(j) Draw flow chart for effect of error in cell header. (2)

PART–2

2. (a) What are various connection traffic descriptor parameters? (5)

   (b) Explain the working of RTP protocol in brief. (5)

3. (a) Explain the general expression $T_{Rn+1}=T_{Sn+1}+MAX [0, D_n-A_{n+1}]$ in queuing model. (5)

   (b) Explain the RED algorithm for congestion avoidance. (5)

4. What is the difference between integrated services and differentiated services? Explain the traffic conditioning function in differentiated services with diagram. (10)

5. (a) Why different ATM service categories are needed? Explain

   (i) nrt-VBR.

   (ii) CBR. (6)

   (b) What are the goals of RSVP? (4)

6. (a) What is the relationship between LAPB and the packet level? (5)

   (b) Explain Jacobson algorithm for RTT variance estimation. (5)

7. (a) Consider an instance of TCP's Additive Increase Multiplicative Decrease (AIMD) algorithm where the window size at the start of the slow start phase is 2 MSS and the threshold at the start of the first transmission is 8 MSS. Assume that a time out occurs during the fifth transmission. Find the congestion window size at the end of the tenth transmission. (5)

   (b) Explain the ABR feedback mechanism in detail. (5)