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**Question Paper Code : 71189**

M.E/M.Tech.. DEGREE EXAMINATION, JUNE/JULY 2013.

First Semester

Computer Science and Engineering

CS 9213/CS 913 — COMPUTER NETWORKS AND MANAGEMENT

(Common to M.E. Software Engineering M.Tech. Information Technology and  
M.Tech Information and Communication Technology)

(Regulation 2009)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Compare frame relaying with X.25.
2. List and define the planes of ATM protocol reference model.
3. Mention the need for queuing analysis.
4. List out the objectives of frame relay congestion control.
5. Write the service categories of ATM defined by ATM forum.
6. Mention the parameters of GFR traffic contract.
7. Define inelastic traffic with its requirements.
8. Write the elements of traffic conditioning function.
9. What is the use of reservation style?
10. Draw the header of RTP.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain how call establishment is done using virtual paths. (8)  
(ii) Discuss in detail about the protocol architecture of fibre channel with a neat diagram. (8)

Or

- (b) (i) Explain the operation of CSMA/CD with a detailed description of frame format and protocol. (10)  
(ii) Draw the cell format of ATM and explain various fields. (6)

12. (a) (i) Briefly explain about the single server queue with formulae to calculate M/G/1 and M/D/1. (8)

(ii) Discuss the effects of congestion and explain how congestion control is performed in a packet switching network. (8)

Or

(b) (i) Write an overview of the considerations used for congestion control techniques. (8)

(ii) Illustrate the operation of committed information rate with a definition for traffic rate management with a neat sketch. (8)

13. (a) Explain the method and table involved in the calculation of RTO for ABR traffic (16)

Or

(b) Describe the various techniques used to calculate the retransmission timer (RTO). (16)

14. (a) (i) Explain the components and services of ISA. (10)

(ii) Explain processor sharing and bit round fair queuing with an example. (6)

Or

(b) (i) Using RED algorithm, calculate average queue size and determine the probability of packet discard. (8)

(ii) Describe the architecture of differentiate services network. (8)

15. (a) (i) Discuss the goals and characteristics of RSVP in detail. (8)

(ii) Explain the operation of MPLS with respect to packet forwarding with a neat diagram. (8)

Or

(b) (i) Illustrate architecture of RTP in terms of header and operation. (8)

(ii) Explain the formats of RTCP with a neat diagram. (8)