

## C2-R4 : ADVANCED COMPUTER NETWORKS

**NOTE :**

1. Answer question 1 and any FOUR from questions 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

Time: 3 Hours

Total Marks: 100

1. (a) What is the major function of the network access layer ?  
(b) What is Pulse stuffing ?  
(c) Explain the Little's Formula.  
(d) Explain forward explicit congestion signaling.  
(e) What is the difference between traffic policing and traffic shaping ?  
(f) What is the autonomous system ?  
(g) What is the Session Description Protocol ? (7x4)
  
2. (a) Explain the Kendall's notation in detail.  
(b) Explain Tree Algorithm for Multiple access networks. (9+9)
  
3. (a) List and describe the ATM network service model.  
(b) Explain frame relay congestion control techniques. (9+9)
  
4. (a) Explain the different categories of service offered by ISA.  
(b) Explain IPv4 header using diagram. (9+9)
  
5. (a) Explain the three main approaches to routing.  
(b) Explain Destination Based Forward Mechanism in MPLS with an example. (9+9)
  
6. (a) Explain the three-way handshake mechanisms during
  - (i) Normal
  - (ii) Delayed Sync
  - (iii) Delayed Sync+ACK with suitable diagram.  
(b) Explain TCP flow control mechanism. (9+9)
  
7. (a) Explain the major components in an SIP network.  
(b) What is the purpose of RTP and RTCP ?  
(c) What is the difference between soft and hard real time applications ? (6+6+6)

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