

## 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 difference between logical and physical address ?
  - (b) What is a virtual path in ATM ? List its advantages.
  - (c) What is Reverse path forwarding ?
  - (d) Explain structure of IPv6.
  - (e) What is the SYN flooding attack in TCP ?
  - (f) What is SIP ?
  - (g) What are the various delays suffered by a packet over a communication link ?

(7×4)

2.
  - (a) How is collision avoided using CSMA/CA ?
  - (b) Discuss token bucket algorithm.
  - (c) What is the significance of the flow label field in IPv6 header ?

(6+6+6)

3.
  - (a) How is traffic managed using Connection Admission Control in ATM ?
  - (b) Explain structure of User Datagram Protocol (UDP).

(8+10)

4.
  - (a) Explain Real Time Protocol operation ?
  - (b) Discuss the operation of tree splitting algorithm. What are the problems associated with this algorithm ?

(8+10)

5. (a) How does Integrated Service Architecture (ISA) manages QoS over IP networks ? What are the various components of ISA ?
- (b) What are the different modes of the PIM protocol ? Explain.

**(10+8)**

6. (a) Describe TCP header in detail.
- (b) How can we stream stored audio and video files ?

**(10+8)**

7. Describe the following briefly:

- (a) Voice over IP
- (b) DVMRP
- (c) TCP mechanism

**(6×3)**