Or

1. (a) In leaky bucket algorithm , should one packet independent of size of packet be allowed or constant amount of data be allowed to flow? Discuss. 4

(b) Imaging a flow specification that has a maximum packet size of 10 milliion bytes/sec, a token bucket -size of 1 million bytes, and a maximum transmission rate of 50 million bytes/Sec. How long can a burst at maximum speed last ? 5

(c) An ATM network uses a token bucket scheme for traffic shaping . A new token is put into bucket every 5 us. Each token is good for one cell of 53 bytes . What is the maximum sustainable data rate? 3

(d) For a hierarchical routing with 4500 routers , compute the size of cluster and region to minimize the routing table entries. Assume a maximum number of 3 levels. 4

Unit-II

2 (a) Under what circumstances the following internetworking technique will be preferred : 6

(i) Multiprotocal Router (ii) Tunneling.

(b) What are the values of DF and MF flags when a fragment is fragmented again? Show the flags in tabular frame. 3

(c) Assume that addresses starting 194.24.0.0 are to be allocated as under

Organization 1d	Ho. Of addres required	Interface
1	2048	1
2	4096	2
3	1024	3

(i) Design the address space and network for the about for CIDR. 4

(ii) To which interface a packet with destination address = 194.24.17.4 will be switched? Show all calculations. 3

Or

2 (a) Define network Address Translation. How the outgoing and incoming packets are made to reach to its destination in the presence of a MAT box? Explain. 1+3=4