

Exam. Code : 208602

Subject Code : 5286

**M.Sc. Information Technology 2<sup>nd</sup> Semester  
NETWORK DESIGN AND PERFORMANCE  
ANALYSIS**

**Paper—MIT-205**

Time Allowed—3 Hours]

[Maximum Marks—100

**Note** :— Attempt any FIVE questions. All questions carry equal marks.

1. (a) What are different business requirements of planning and choosing networks ? Explain. 10
- (b) How traffic sizing is measured in network planning ? Elaborate. 10
2. (a) Discuss the procedure for throughput calculation of networks. 10
- (b) What are traditional traffic engineering methods ? Explain. 10
3. Explain the following by taking an example of each :
  - (a) Packet switched traffic modeling 10
  - (b) Traffic matrix. 10
4. Compare the following :
  - (a) Private vs Public Networking 10
  - (b) Packet switching and cell switching. 10

5. Discuss the following parameters for network comparison :
- (a) Throughput 5
  - (b) Burstiness 5
  - (c) Delay Tolerance 5
  - (d) Response time. 5
6. Discuss the procedure for tuning the network to optimize network and backbone design. 20
7. (a) How network optimization can be achieved ? Explain. 10
- (b) Discuss the tools for measuring network optimization. 10
8. Write short notes on the following :
- (a) Tools for securing the network. 10
  - (b) Network Modeling. 10