

Exam. Code : 208602

Subject Code : 8395

M.Sc. (Information Technology) Semester—II
NETWORK DESIGN & PERFORMANCE ANALYSIS
Paper—MIT-205

Time Allowed—3 Hours]

[Maximum Marks—100

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

1. Discuss the network design considerations and requirements from business, technical and user view points. 20
2. Describe the following topics :
 - Throughput calculation
 - Traffic characteristics
 - Source models. 20
3. Discuss network design consideration while designing for peak loads, networks delays and latency. 20
4. What is a network traffic matrix ? How is it created and used ? Also discuss some important components of design tools. 20

5. Compare and contrast the following :
 - Packet, frame and cell switching services
 - High speed LAN protocols. 20
6. What do you understand by network design layers and backbone network design ? Also discuss design and capacity of access network. 20
7. What do you understand by network tuning and network security ? Also discuss network security by design and network security by implementation. 20
8. Discuss the following in network optimization context :
 - Optimization tools and
 - Optimization techniques. 20