

Exam. Code : 208602

Subject Code : 4671

**M.Sc. Information Technology 2nd Semester**  
**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 requirement and planning phases in network design. Also describe various types of requirements that play a role in network design. 20
2. What do you understand by network performance ? Describe different parameters for measuring performance of a network. Also describe “network performance modeling”. 20
3. Describe various network design considerations. Also discuss traffic modeling in packet switched networks. 20
4. Answer following parts :—
  - (a) Traffic size characteristics of a network. 10
  - (b) Designing for peak traffic and network delay. 10

5. Discuss following :—
- (a) Differentiate between circuit switching, packet switching and message switching. 12
  - (b) Design issues in public and private networking. 8
6. Discuss in detail network security issues. Also describe security by design and security by implementation. 20
7. Discuss and compare various protocols for high speed LANs. 20
8. What do understand by access network and backbone network ? Also discuss access network design and capacity. 20

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