

**Exam. Code : 206701**  
**Subject Code : 4784**

**M.Sc. Computer Science 1<sup>st</sup> Semester (Batch 2021-23)**  
**NETWORK DESIGN & PERFORMANCE**  
**ANALYSIS**

**Paper –MCS-103**

Time Allowed—3 Hours] [Maximum Marks—100

**Note :—** Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The **fifth** question may be attempted from any section. All questions carry equal marks.

**SECTION–A**

1. Explain the following concepts for network design :
  - (a) Requirement identification 10
  - (b) Traffic sizing 10
2. (a) How network performance modeling is carried out ? Explain. 10
- (b) Explain the various types of design projects for networks. 10

**SECTION–B**

3. (a) What is meant by traffic modelling ? Explain. 10
- (b) How traffic engineering is employed in network design ? Explain. 10

4. Discuss the following concepts :
  - (a) Capacity planning of networks 10
  - (b) Network design for peaks 10

**SECTION–C**

5. (a) Discuss the key factors to be considered before selecting service provider. 10
- (b) What are different packet switching services ? Explain. 10
6. Explain the following :
  - (a) Private vs public networking 10
  - (b) Protocols for High speed LANs 10

**SECTION–D**

7. Discuss the following :
  - (a) Network design 10
  - (b) Design for Network tuning 10
8. Write short notes on the following :
  - (a) Role of backbone in networks 10
  - (b) SNMP for Network Management 10