

Exam. Code : 208603

Subject Code : 4718

M.Sc. Information Technology 3<sup>rd</sup> Semester

NETWORK PROTOCOLS

Paper— MIT—301

Time Allowed—3 Hours]

[Maximum Marks—100

**Note** :— Candidates are required to attempt **five** questions, 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. Briefly explain about layered architecture of internet.
2. Define internet address. What is ARP and RARP? Explain in detail. Explain the difference between ARP and RARP.

**SECTION—B**

3. What is address resolution problem and explain resolution through direct mapping and dynamic binding ?
4. (a) Differentiate primary and backup RARP services.  
(b) Define routing IP with the connectionless datagram delivery.

**SECTION—C**

5. Describe the following terms :
  - (a) Connectionless delivery system.
  - (b) Direct and indirect delivery using datagram.
  - (c) Difference between next hop routing and table driven IP routing.
6. Explain ICMP in detail. Write down error reporting versus error detection technique. Explain ICMP message format with example.

**SECTION—D**

7. Explain briefly TCP header frame format. Describe the process of establishing a TCP connection.
8. Explain about the features of TCP and UDP with diagrams.