

Exam. Code : 208604

Subject Code : 4763

M.Sc. Information Technology 4th Sem. (Batch 2020-22)

NETWORK SECURITY

Paper—MIT-402

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. (a) What is a Perimeter ? What are its components ?
Explain in detail. 10
- (b) What do you understand by a well-structured Defense Architecture ? How the components of defense in depth make the network more secure ?
10
2. (a) Explain :
 - (i) TCP and UDP Ports
 - (ii) TCP Three-way Handshake. 2×5=10
- (b) How CISCO Router is different from IP chains as a Packet Filter ? 10

SECTION—B

3. Define the concept of State. Explain different states of TCP connection in detail. 20
4. What do you understand by Proxy Firewalls ? How they may fit into your security architecture ? 20

SECTION—C

5. (a) How to develop a security policy ? Explain the risk-based approach required to secure information in detail. 10
- (b) How security policy can be implemented in one's perimeter architecture ? Explain. 10
6. Define the term Host Hardening. How to use hosts to help detect and isolate attacks on the network security perimeter ? 20

SECTION—D

7. What is Intrusion Prevention System ? How NIPS is different from HIPS ? Explain in detail. 20
8. (a) Explain the fundamentals of secure perimeter design. What are the resources which need protection while designing the perimeter architecture ? 10
- (b) Explain the concept of Resource Separation. How this technique can be used to secure client stations ? 10