

**A-838**

Total Pages : 3

Roll No. ....

**MCS-506/MIT (CS)-403**

**MCA/MSBIT/MSCCS**

**(Introduction to Computer Networks/  
Introduction to Networks)**

2nd/4th Semester Examination, 2024 (June)

Time : 2:00 Hrs.

Max. Marks : 70

**Note** :- This paper is of Seventy (70) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

**Section-A**

**(Long Answer Type Questions) 2×19=38**

**Note** :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

1. Describe briefly the various layer and functions of OSI model. Demonstrate all the layer of OSI model in details.
2. What is Firewall ? What are the limitations of Firewall ? Explain the types of firewall.
3. How does UDP differ from TCP ? List the applications of UDP.
4. What are the different types of network devices ? Explain all the network devices with their functionalities.
5. Compare and contrast IPv4 Network Addresses and IPv6 Network Addresses.

### **Section–B**

**(Short Answer Type Questions)**      4×8=32

**Note** :- Section ‘B’ contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. What is Computer Network ? Explain the different types of computer network.

2. Explain flow control and error control with example.
3. Compare Connection oriented and connectionless services.
4. Discuss various types of networks topologies in computer network.
5. Define the basic principal of Cryptography.
6. What is Switching ? Draw difference between circuit and packet switching.
7. Define transmission media. Discuss different guided and unguided transmission in detail.
8. Write short notes on the following :
  - (i) Open Shortest Path First (OSPF)
  - (ii) Border Gateway Protocol (BGP)
  - (iii) Cryptography
  - (iv) Virtual Private Network (VPN)

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