



Seat No. : _____

DA-108
December-2025
M.Sc. (CA & IT), Sem.-VII
Advance Networking

Time : 2:30 Hours]

[Max. Marks : 70

1. Write answer of following questions : (Any **Two**) **14**
 - (1) What is Virtual Private Network ? Explain in detail.
 - (2) What is advantage of FIREWALL ? Explain in detail.
 - (3) What is Network Address Translation (NAT) ? Explain in detail.

2. Write answer of following questions : (Any **Two**) **14**
 - (1) What is File Transmission Protocol ? Explain in detail.
 - (2) What is Advantage of TELNET ? Explain in detail.
 - (3) Explain header of IP DATAGRAM in detail.

3. Write answer of following questions : (Any **Two**) **14**
 - (1) What is Domain Name System ? Explain Name Resolution.
 - (2) Explain Three-way handshaking Protocol in TCP connection.
 - (3) Explain header of TCP in detail.

4. (A) Explain following in detail : (Any **Four**) **12**
 - (1) DHCP
 - (2) ARP
 - (3) NAME SERVER
 - (4) RARP
 - (5) GENERIC DOMAIN

4. (B) Explain anonymous FTP. **2**

5. (A) Do subnetting : (Any **Two**) **10**
- (1) A service provider has given you the Class C Network range 209.50.1.0. Your company must break the network into 30 separate subnets.
 - (2) A service provider has given you the Class C Network range 209.50.1.0. Your company must break the network into as many subnets as possible as long as there are at least 62 clients per network.
 - (3) Your company would like to break the Class B private IP address range 172.16.0.0 into as many subnets as possible, provided that they can get at least 500 clients per subnet.
5. (B) Do Fragmentation : (Any **one**) **4**
- (1) An IP message 12,000 bytes wide (including the 20-byte IP header) that needs to be sent over a link with an MTU of 3,300. Do IP fragmentation.
 - (2) An IP message 3300 bytes wide (including the 20-byte IP header) that needs to be sent over a link with an MTU of 1300. Do IP fragmentation.
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