

TILAK MAHARASHTRA VIDYAPEETH, PUNE
MASTER OF COMPUTER APPLICATIONS (MCA)
EXAMINATION : DECEMBER/JANUARY- 2025-26
SEMESTER - II

Sub : Advanced Computer Network (MCA24-202/MCA206-22)

Date : 02/01/2026**Total Marks : 60****Time: 10.00 am To 12.30 pm**

Instruction:

1. All questions are compulsory unless and otherwise stated.
2. Bold figures to the right of every question are the maximum marks for that question.
3. Candidates are advised to attempt questions in order.
4. Answers written illegibly are likely to be marked zero.
5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
6. Draw neat and labelled diagram wherever necessary.

Q. 1. Answer the following in 2 - 3 lines. (Any 5) (10)

1. Define PAN.
2. What does FTP stand for?
3. Mention one advantage of proxy servers.
4. Define Wi-Fi.
5. Define Fast Ethernet.
6. Expand UTP and STP.
7. Name one switching method.

Q. 2. Answer the following in short. (Any 4) (20)

1. Explain the role of NIC in a network.
2. What are the functions of a router and a gateway?
3. Discuss the differences between centralized and decentralized networking models.
4. Differentiate between TCP and UDP.
5. What is a personal firewall? Explain its primary purpose.
6. Write a short note on SSL and TLS.

Q. 3. Answer the following in detail. (Any 3) (30)

1. What is a VPN? Explain its types, tunneling methods, and protocols.
2. Compare IPv4 and IPv6. Describe IP addressing and subnetting in detail.
3. Describe the OSI model with functions of each layer.
4. Compare and contrast different network topologies with diagrams.
5. Compare 10Base2 and 10Base5 media standards.
