

KAMARAJ COLLEGE (Autonomous)

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(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

(3 Pages)

Reg. No:.....

Question Code: 26E01403

Course Code 24PECA14/25PECA14

PG Degree - End Semester Examinations, April 2026

First Semester

M.C.A

Advanced Computer Networks

(For those who joined in July 2024 and June 2025 onwards)

Time : 3Hours

Maximum : 75 Marks

PART - A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer :

- CO:1 1. Select the layer which provides service to the user
K:1 (a) Presentation (b) Application
(c) Session (d) Data link
- CO:1 2. How many layers are there in the ISO OSI reference model?
K:1 (a) 7 (b) 6
(c) 8 (d) 5
- CO:2 3. Name the network made of a set of switches connected by
K:1 physical links, in which each link is divided into n channels
(a) Circuit Switched (b) Datagram Networks
(c) Virtual Circuit (d) Packet Switches
- CO:2 4. Which pioneering low orbit satellite project was designed to
K:2 create a Universal broad band access?
(a) Teledesic (b) AMPS
(c) CGSM (d) LEO
- CO:3 5. Show the delivery method in which the sender and receiver are in
K:1 same network
(a) a connectionless (b) a direct
(c) an indirect (d) a connection oriented
- CO:3 6. What is the Length of IPv6 address?
K:1 (a) 16 (b) 32
(c) 128 (d) 64

- CO:4 7. Find the transport layer protocols used in networking
K:1 (a) TCP & FTP (b) UDP & HTTP
(c) TCP & UDP (d) HTTP & FTP
- CO:4 8. Select how many techniques used in Traffic shaping
K:1 (a) 1 (b) 2
(c) 3 (d) 4
- CO:5 9. Predict the role of primary server in domain name system
K:2 (a) Stores a file about the zone (b) Transfer a file about the zone
(c) Delete a file about the zone (d) Remove a file about the zone
- CO:5 10. Show the usage of port 21
K:1 (a) Control connection (b) Data Connection
(c) Command Connection (d) Escape Connection

PART - B (5 X 5 = 25 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not exceed 250 words.

- CO:1 11. (a) Illustrate the four basic topologies in terms of line with
K:3 suitable diagram.

(OR)

- (b) Identify the five components of a data communications system.

- CO:2 12. (a) Explain the Datagram networks and illustrate their structure
K:3 with a neat diagram.

(OR)

- (b) Discuss the concept of satellite network and their features.

- CO:3 13. (a) Illustrate the concept of Network Address Translation (NAT)
K:3 with diagram.

(OR)

- (b) List out the three forwarding techniques and give a brief description of each with neat diagram.

- CO:4 14. (a) Categorize the different approaches to controlling network
congestion.

K:4

(OR)

- (b) Explain UDP Operation and Provide the list of scenarios where UDP is used.

CO:5 15. (a) List the five functions of network management system.

K:2

(OR)

- (b) List the services of user agent in electronic mail.

PART - C (5 X 8 = 40 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not exceed 600 words.

CO:1 16. (a) Explain the seven layers of OSI model with neat diagram.

K:3

(OR)

- (b) List out the three major classes of guided media with example diagram.

CO:2 17. (a) Illustrate circuit-switched network with neat diagram.

K:3

(OR)

- (b) Explain the concept of channelization and list three associated protocols.

CO:3 18. (a) Explain the general format of ICMP message.

K:3

(OR)

- (b) Explain in detail about multicast routing protocols.

CO:4 19. (a) Discuss about the process-to-process delivery in transport layer.

K:3

(OR)

- (b) Discuss the concept of QoS and List out the techniques to improve QoS.

CO:5 20. (a) Explain in detail about DNS with neat diagram.

K:3

(OR)

- (b) Illustrate in detail about the concept of Simple Network Management Protocol (SNMP).