

KAMARAJ COLLEGE (Autonomous)

Accredited with A+ Grade by NAAC

(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

THOOTHUKUDI – 628 003

(5 Pages)

Reg. No:

Question Code No: 25001405

Course Code: 25PECA14

PG Degree - End Semester Examinations, November 2025

First Semester

M.C.A

Advanced Computer Networks

(For those who joined in July 2025 onwards)

Time : 3 Hours

Maximum : 75 Marks

PART – A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer:

1. Which of the following is a set of rules that govern data communications?
(a) Receiver (b) Protocol
(c) Sender (d) Message
2. Label the guided media that are used in telephone lines to provide voice and data channels.
(a) Coaxial cable (b) Fiber optics cables

- (c) Twisted-Pair cables (d) Radio cables
3. Choose the network that made of a set of switches connected by physical links, in which each link is divided into 'n' channels.
- (a) Datagram (b) Virtual circuit
(c) Circuit-switched (d) PAN
4. Show the feature of cellular telephony that a user can have access to communication or can be reached where there is coverage.
- (a) Transmitting (b) Receiving
(c) Sending (d) Roaming
5. Relates the Internet addresses that are 32 bits in length and gives us a maximum of 2^{32} addresses.
- (a) IPv4 (b) IPv6
(c) ICMP (d) Logical
6. Find the delivery method that the final destination of the packet is a host connected to the same physical network as the deliverer.
- (a) Indirect delivery (b) Forwarding
(c) Routing (d) Direct delivery
7. Which ports ranging from 0 to 1023 are assigned and controlled by IANA?

12. (a) Identify the significances of MAC sublayer.

(OR)

(b) Examine the purposes of satellite networks in data link layer.

13. (a) Identify the significance of IGMP operation.

(OR)

(b) Apply multicasting in network layer?

14. (a) Analyze the TCP connection with diagram.

(OR)

(b) Examine the functions of traffic shaping to improve QoS.

15. (a) Differentiate generic domains from country domains.

(OR)

(b) Examine the working principle of FTP.

PART - C (5 X 8 = 40 Marks)

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

Answer should not exceed 600 words.

16. (a) Examine the functionalities of OSI model.

(OR)

(b) Analyze the functionalities of unguided media.

17. (a) Identify the significance of datagram networks and virtual circuit networks.

(OR)

(b) Make use of bluetooth layers in wireless LAN.

18. (a) Analyze IPv6 addressing in network layer with diagram.

(OR)

(b) Classify unicast routing protocols.

19. (a) Determine the ports of UDP and checksum.

(OR)

(b) Evaluate the performance of open-loop and closed-loop congestion control.

20. (a) Discuss name space and domain name space with examples.

(OR)

(b) Why do we need SNMP? Discuss the SNMP protocol with diagram.

