

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 : 25E01408

Sub Code : 24PECA14

PG Degree - End Semester Examinations, April 2025

First Semester

M.C.A

Elective - Advanced Computer Networks

(For those who joined in July 2024 onwards)

Time : 3 Hours

Maximum : 75 Marks

PART - A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer :

1. A twisted pair consists of ____ conductors.
(a) Two (b) Three
(c) Five (d) Eight
2. The ___ layer coordinates the functions required to carry a bit

stream over a physical medium.

- (a) Network
- (b) Physical
- (c) Data link
- (d) Session

3. Which service is NOT provided by the Data Link Layer?

- (a) Error detection and correction
- (b) Framing
- (c) Network addressing
- (d) Flow control

4. Which generation of cellular telephony was mainly designed for digitized voice?

- (a) First
- (b) Second
- (c) Third
- (d) Fourth

5. The ___ addresses are used to define a group of hosts instead of just one.

- (a) Any cast
- (b) Reserved
- (c) Local
- (d) Multicast

6. ___ messages are designed for diagnostic purpose.

- (a) Echo-request and reply
- (b) Timestamp request and reply
- (c) Address mask request and reply
- (d) None of these

7. The numbering system allows TCP to use a byte-oriented ___ control.

- (a) Congestion (b) Error
(c) Flow (d) Transmission
8. Which of the following is a Quality of Service mechanism?
(a) Admission policy (b) Window policy
(c) Retransmission policy (d) Discarding policy
9. Which is the generic domain of international organization?
(a) Com (b) Org
(c) Coop (d) Int
10. The ___ is a 1-byte field that defines the type of field.
(a) Length (b) Tag
(c) Sequence of (d) Sequence

PART - B (5X5=25 Marks)

**Answer ALL Questions choosing either (a) or (b).
Answer should not exceed 250 words.**

11. (a) Briefly explain the types of network?

(OR)

- (b) Examine IP addressing in Computer networking.

12. (a) Examine Hamming error correcting code with example.

(OR)

- (b) Illustrate three types of satellites.

13. (a) State the difference between unicast and multicast routing.

(OR)

(b) Write the popular shortest path routing algorithm and illustrate with an example.

14. (a) Justify the Quality of Service (QoS).

(OR)

(b) Describe the service primitives of Transport Layer.

15. (a) Write short notes on name spaces.

(OR)

(b) Discuss or validate File Transfer Protocol (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 OSI model and its layers with neat diagram.

(OR)

(b) Summarize the guided media used in computer network.

17. (a) Explain the categories of multiplexing.

(OR)

(b) Illustrate the circuit switching network.

18. (a) Interpret the IPv6 addresses of network layer.

(OR)

(b) Illustrate the ICMP briefly.

19. (a) Compare open and closed loop congestion control.

(OR)

(b) Analyse the various User Datagram Protocol operations.

20. (a) Justify the DNS in the internet.

(OR)

(b) Construct the architecture of Email with diagram.