

(FOR THE CANDIDATES ADMITTED

24PCS2E1

DURING THE ACADEMIC YEAR 2024 - 2026 ONLY)

REG.NO

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : May 2025

M.Sc. Computer Science(SF)

MAXIMUM MARKS: 75

SEMESTER: II

TIME : 3 HOURS

**24PCS2E1-ADVANCED NETWORKS**

Section - A

(10 X 1 = 10 MARKS)

**ANSWER THE FOLLOWING QUESTIONS.****MULTIPLE CHOICE QUESTIONS.**

1) Length of Port address in TCP/IP is \_\_\_\_\_ (K1)  
 a) 4bit long    b) 16bit long    c) 32bit long    d) 8 bit long

2) TCP/IP layer is equivalent to combined Session, Presentation and \_\_\_\_\_ (K1)  
 a) Network layer    b) Application layer    c) Transport layer    d) Physical layer

3) A device operating at Network layer is called \_\_\_\_\_ (K1)  
 a) Router    b) Equalizer    c) Bridge    d) Repeater

4) Which of the following protocols uses both TCP and UDP? (K1)  
 a) FTP    b) SMTP    c) Telnet    d) DNS

5) Connection authentication is offered for ensuring that the remote host has the likely Internet Protocol (IP) \_\_\_\_\_ & \_\_\_\_\_ (K1)  
 a) address, name    b) address, location    c) network, name    d) network, location

**ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES**

6) What is TCP/IP in internet? (K2)

7) Define: “ARP Protocol”.(K2)

8) What the use of IP routing algorithm? (K2)

9) Relate the need of TCP checksum computation. (K2)

10) What is the function of the DHCP? (K2)

SECTION – B

(5 X 5 = 25 MARKS)

**ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.**

11) a) Discover the different types of Internet Services. (K3)  
 (OR)  
 b) Examine the two approaches to Network Communication. (K3)

12) a) Determine the weakness in Internet Addressing. (K3)  
**(OR)**  
b) Evaluate the ARP encapsulation and identification. (K3)

13) a) Summarize the process of routing with IP addresses. (K3)  
**(OR)**  
b) Estimate the Error reporting and Error correction in ICMP. (K3)

14) a) Show the properties of the Reliable Delivery Service. (K3)  
**(OR)**  
b) Outline the characteristics of BGP. (K3)

15) a) Illustrate the Alias expansion and mail forwarding. (K3)  
**(OR)**  
b) Describe the purpose of mailbox names and Aliases. (K3)

**Section-C (5 X 8 = 40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.****(K4 (Or) K5)**

16) a) Elaborate the general architecture of IEEE 802.3 Ethernet. (K4)  
**(OR)**  
b) Compare and contrast the Wide Area and Local Area Networks. (K5)

17) a) Demonstrate the connectionless Datagram Delivery in IPv4. (K4)  
**(OR)**  
b) Assess the implementation of ARP protocol with diagram. (K5)

18) a) Draw and explain the ICMP message format. (K5)  
**(OR)**  
b) Elucidate the UDP encapsulation and protocol layering. (K4)

19) a) Analyze the requirements of TCP segment format with diagram. (K5)  
**(OR)**  
b) Enumerate the acknowledgement and retransmission in TCP protocol. (K4)

20) a) Integrate the general architecture of Simple Mail Transfer Protocol (SMTP). (K4)  
**(OR)**  
b) Evaluate the Mail retrieval and Mailbox manipulation protocols. (K5)

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