National University of Computer and Emerging Sciences, Lahore Campus

	Course Name:	Computer Networks	Course Code:	CS 3001
	Program:	BS (Software Engineering)	Semester:	Spring 2024
	Duration:	15 minutes	Total Marks:	15
	Paper Date:	2-Apr-2024	Section	BSE-6A
	Exam Type:	Quiz 4 - Chapter 4	Page(s):	2

Student Name **Roll No.** **Section:**

Q1. <u>Encircle the correct option:</u> **[5 marks] [CLO 1]**

1. What is the purpose of a subnet mask in IP addressing?
   a) To identify the network / subnet portion of an IP address
   b) To encrypt IP traffic
   c) To define the default gateway
   d) To allocate dynamic IP addresses

2. Which TCP/IP model layer does DHCP work at?
   a) Internet
   b) Session
   c) Application
   d) Transport

3. An IP layer packet has arrived with the first 8 bits as 0110 0110. Which of the following is correct?
   a) IPv4, Header Length: 24 bytes
   b) IPv4, Header Length: 32 bytes
   c) IPv6, Header Length: 40 bytes
   d) IPv6, Header Length: 24 bytes

True/False:

i. DHCP can provide not only IP addresses but also subnet masks, gateways, and DNS server information [T / F]
ii. Class A IP addresses have the first octet (8-bits) reserved for the network portion, and the remaining 3 octets for hosts. [T / F]

Question 2

For each of the following IP address ranges, specify the network address, broadcast address, and maximum number of host IPs available. (Show all your work).**[5+5=10 Marks] [CLO 1]**

a) 192.168.100.0/24

Network Address:

Broadcast Address:

Number of Assignable IP addresses:

b) 100.10.8.0/22

Network Address:

Broadcast Address:

Number of Assignable IP addresses: