

Roll No:_____ Section:_____

Name:_____

Department: **Software Engineering**

Program: **B.S (SE)**

Assignment 1

SWE-306T: Computer Communication & Networks

Date: 13-11-2024

Due Date: 20-11-2024

Total Marks = 3

Marks Obtained =

Sr. No	Course Learning Outcomes	PLOs	Blooms Taxonomy
CLO_1	Describe the key terminologies, technologies of computer networks and key functions of different layers of a network.	PLO_1 (Knowledge for solving computing problem)	C2 (Understanding)

Teacher Name: Prof Dr. Muhammad Tahir, Mr. Hassan Zaki and Ms. Shazia Ilyas

Question 1: Name the seven layers of the OSI Reference Model. Why did the creators of the OSI Reference Model decide to have seven layers? Can you propose a better reference model for computer networks? **Indicate** four other models that have been proposed for the same purpose other than the OSI reference model.

Question 2: **Compare** and **contrast** between the physical layer and the data link layer.

Question 3: If a binary signal is sent over a 4 kHz telephone channel whose signal to noise ratio is 30 dB, **Estimate** the maximum achievable data rate?

Question 4: Television channels are 6 MHz wide. **Explain** how many bits/secs can be sent if 8 level digital signals are used? Assume a noiseless channel.

Question 5: **Given** a channel with an intended capacity of 25 Mbps. The bandwidth of the channel is 4 MHz. What signal to noise ratio is required in order to achieve this capacity?

Question 6: Why do we transform and study the signal from Time domain to Frequency Domain? **Explain** the advantages of Frequency Domain

*** The End ***