------ (Only for ODD roll numbers)------

SET-A

QUESTION 1

Q1.1: Differentiate among flow control mechanisms by taking suitable examples. **(5)**

Q1.2: An organization is granted a block of addresses with the beginning address 70.10.27.0/28. The organization needs to have 3 subblocks of addresses to use in its three subnets: Use VLSM. Design the network and plot it completely with respective subnets, IP range, Network IDs . (5)

QUESTION 2

Q2.1: Discuss the IPv6 Datagram with the help of suitable examples. **(5)**.

Q2.2: Find the first address, last address and the number of addresses of a network whose one of the IP addresses is 72.280.220.112 / 27. **(5)**

QUESTION 3

Q3.1: Consider a scenario where a **"Class C"** network is divided into 7 subnets of fixed length. Design each subnet and find the IP Range and subnet mask of each subnet. (Choose any class C address). **(5)**

Q3.2: A sender needs to send the two data items 110001 and 100110, find the checksum at sender and receiver to check if there is any error or not? **(5)**

Guidelines for CA-2 (CSE306_Assignment)

1. **Maximum marks of assignment are 30.**
2. **Evaluation will strictly be done based on the quality and novelty of the assignment solutions.**
3. **In case if solution is found copied either partially or completely, the marks will be deducted. If answers are totally under plagiarism then assignment would not be considered and marks would be 0.**
4. **Last date of submission is 28th March.**
Note: The marks for plagiarism will be deducted from obtained marks of student.

SET-B

QUESTION 1

Q1.(a): Discuss the IPv4 Datagram with the help of suitable examples.**(5)**

(b) An organization is granted a block of addresses with the beginning address 150.25.0.0/24. The organization needs to have 3 subblocks of addresses to use in its three subnets: one subblock of 11 addresses, one subblock of 40 addresses, and one subblock of 125 addresses. Design the network and plot it completely with respective subnets, IP range, Network IDs. **(5)**

QUESTION 2

Q2. Elaborate in detail the transition strategies from the IPv4 to the IPv6 with the help of a suitable example **(5)**

Q2.2: Compare the Go-back N protocol with the rest of the protocols for effective frame transmission in Data link Layer **(5).**

QUESTION 3

Q3.1: Error control and Flow control is critical in effective frame transfer in a data link layer. Discuss the types of errors in detail and suggest suitable solutions for the same **(5)**

Q3.2: Compare and contrast the medium access protocols and elaborate any one of them. **(5)**