7. Explain about the Routing algorithms.

8. Explain the encryption and decryption methods.

9. Discuss about :

   (a) Concept of leaky bucket algorithm.

   (b) Token bucket algorithm with neat diagram

----- x -----

Roll No. : .....

Total No. of Questions : 9] [Total No. of Printed Pages : 4

BCA-5003

BCA (Semester-V) (NEP) Examination, 2024-25

(Major)

COMPUTER NETWORK

Time : 2 Hours] [Maximum Marks : 75

Note : 1. Attempt questions from **all** sections as directed.

2. The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

3. "B" copy will not be provided.

Section-A

Short Answer Type Questions

Note : All questions are **compulsory**. Each question carries **5** marks. [9×5=45]

1. (a) What is a network? Write are the benefits of the networks.

(b) What are the fundamental characteristics for effective data communication?

(c) What is the difference between MAC address and IP address?

(d) What are the responsibilities of Network Layer?

(e) What is an Error? Explain types of error.

(f) What are different services provide by data link layer?

(g) Explain Point to Point protocol in detail.

(h) What is meant by congestion? List the ways of avoiding congestion.

(i) Discuss the services offered by the application layer.

Section-B

Long Answer Type Questions

Note : Attempt **only one** question from the following. Each question carries **15** marks. [1×15=15]

2. Compare the following networking devices -

(a) Hub and Switch

(b) Router and Bridge

3. Explain different types of switching techniques.

4. Explain the various transmission media in detail.

5. What is framing? Explain different types of framing protocols with their formats.

Section-C

Long Answer Type Questions

Note : Attempt **only one** question from the following. Each question carries **15** marks. [1×15=15]

6. Write short notes on the following :

(a) IPV4 addressing

(b) IPV6 addressing

(c) Routing Table