

# BCA-503(N)

## B. C. A. (Fifth Semester) EXAMINATION, 2022-23 Paper Third COMPUTER NETWORK

*Time : Two Hours ] [ Maximum Marks : 75*

**Note :** This paper consists of three Sections A, B and C. Carefully read the instructions of each Section in solving the question paper. Candidates have to write their answers in the given answer-copy only. No separate answer-copy (B Copy) will be provided.

### Section—A (Short Answer Type Questions)

**Note :** All questions are compulsory. Answer the following questions as short answer type questions. Each question carries 5 marks.

1. (A) Explain in brief the concept of parallel transmission.

- (B) What are the *two* types of services using in computer networks ?
- (C) Explain the Duties of Transport Layer.
- (D) Explain the different advantages of circuit switching.
- (E) Explain the drawbacks of Go back n.
- (F) What is the difference between Stop and Wait protocol and Sliding Window protocol ?
- (G) Write a short note on congestion control.
- (H) Explain jitter control in data communication.
- (I) Explain the components of Cryptography.

### Section—B

#### (Long Answer Type Questions)

**Note :** This section contains four questions from which *one* question is to be answered as long question. Each question carries 15 marks.

2. Explain in details the working of frequency division multiplexing with the help of suitable diagram

*Or*

3. What is Transmission Impairment ? Differentiate between noiseless and noisy channels.

*Or*

4. What is satellite ? Explain the satellite communication with proper diagram.

*Or*

5. What is Hamming Distance in code word ? The 7 bit hamming code word received by a receiver 1011011. Assuming the even parity, state whether the received codeword is correct or wrong. If wrong, locate the bit in error.

### Section—C

#### (Long Answer Type Questions)

**Note :** This section contains four questions from which *one* question is to be answered as long question. Each question carries 15 marks.

6. What is IPV4 ? Describe in brief the ISDN working to provide various services.

*Or*

7. What is routing ? Explain the shortest path of routing algorithm with example.

*Or*

8. What are the reasons for congestion ? Explain leaky bucket and token bucket algorithms.

*Or*

9. Write short notes on the following :

- (i) Firewalls
- (ii) Network interface card
- (iii) Modem
- (iv) Gateways