



'সমানো মন্ত্র: সমিতি: সমানী'

**UNIVERSITY OF NORTH BENGAL**  
B.Sc. Honours 3rd Semester Examination, 2023

**CC7-COMPUTER SCIENCE (33)**  
**COMPUTER NETWORKS**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.*

**GROUP-A**

**Answer any five questions**

1×5 = 5

1. What is protocol?
2. What is a packet?
3. Explain bit rate and baud rate.
4. What is Clad?
5. Expand CRC.
6. What is flow control?
7. Expand MAC.
8. What is congestion?

**GROUP-B**

**Answer any three questions**

5×3 = 15

9. Discuss functions of data link layer.
10. Find out the maximum data rate of a noiseless channel where the frequency is 4kHz.
11. Generate the transmitted bit pattern for the unit 1101001 using Vertical Redundancy Check (VRC).
12. Write down the different steps in generating checksum.
13. Discuss ALOHA.

**GROUP-C**

**Answer any two questions**

10×2 = 20

14. Explain layered network architecture. Why do we need a layered network architecture? 5+5
15. Explain different types of wireless transmission media with the help of examples.
16. Generate the Hamming code for the data unit 1001011100.
17. Write short notes on any *two* of the following: 5×2 = 10
  - (a) TDM
  - (b) Datagram Switching
  - (c) Hubs.

—x—