Name **24U303**

B.Sc. DEGREE END SEMESTER EXAMINATION - OCTOBER 2024
SEMESTER 3 : COMPUTER APPLICATION
COURSE : **19U3CRCAP5 : DATA COMMUNICATION AND COMPUTER NETWORKS**
(For Regular 2023 Admission and Improvement/Supplementary 2022/2021/2020/2019 Admissions)

Time : Three Hours   Max. Marks: 75

PART A
Answer All (1 mark each)

1. Define cipher.
2. Categorize standard Ethernet.
3. List out the types of unguided transmission media.
4. The period of a signal is 100ms. Evaluate its frequency in kilohertz.
5. Define random access.
6. List out Ethernet evolution.
7. Which is the type of transmission impairment in which signal loses strength due to the resistance of transmission medium?
8. List out the types of multiplexing.
9. Find the hamming distance d (10101, 11110).
10. Define TELNET.

(1 x 10 = 10)

PART B
Answer any 8 (2 marks each)

11. Explain remote logging.
12. Write about port address.
13. Which of the following is unreliable – Ethernet, IP, TCP, UDP? Explain why.
14. Define hamming distance.
15. Explain the functions of Network Layer of OSI model.
16. Illustrate ESS.
17. Distinguish forward error correction and retransmission.
18. Illustrate TDM.
19. "Bridge is an intelligent computer network device". Justify
20. A signal travels through an amplifier, and its power is increased 10 times. Calculate the amplification (gain of power).

(2 x 8 = 16)

PART C
Answer any 5 (5 marks each)

21. Distinguish the different phases of sine waves with same amplitude and frequency.
22. Compare the two types of data connection.
23. Illustrate and explain Select Repeat ARQ.
24. Explain about AES.

25. Summarise the merits and demerits of fibre optical cable.

26. Explain modular arithmetic.

27. Explain linear block codes.

(5 x 5 = 25)

PART D
Answer any 2 (12 marks each)

28. Illustrate the categories of network.

29. Define random access and categorize its types in detail.

30. Explain cellular telephony and satellite networks.

31. Explain in detail about various transmission modes.

(12 x 2 = 24)