LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE

FIFTH SEMESTER – November 2009

CS 5506 - INTRODUCTION TO DATA COMMUNICATION

Date & Time: 7/11/2009 / 9:00 - 12:00 Dept. No. Max. : 100 Marks

PART - A

ANSWER ALL THE QUESTIONS (10 x 2 = 20 marks)

1. Define the three fundamental characteristics of a data communication system.
2. Define the three transmission modes.
3. Write down the difference between periodic signal and aperiodic signal.
4. Define interface.
5. Define Nonreturn to zero.
6. What is Differential Manchester?
7. Define Bandwith.
8. What are the advantages of UTP?
9. Define Multiplexing.
10. What are the four common methods of error detection?

PART-B

ANSWER ALL THE QUESTIONS (5 x 8 = 40 marks)

11. a) Write the disadvantages for each type of topology..

    (Or)

    b) What are the advantages of distributed processing?

12. a) What are the specific responsibilities of the application layer?

    (Or)

    b) Explain about peer-to-peer processes in OSI..

13. a) Explain asynchronous transmission of Serial transmission.

    (Or)

    b)What are the functions of pins in EIA-232 DB-25?

14. a) Explain the advantages and disadvantages of optical fiber.

    (Or)

    b) Explain the types of antennas used for terrestrial microwave communication.

15. a) Explain synchronous Time-Division Multiplexing.

    (Or)

    b) Explain about the Checksum Concept.

PART - C

ANSWER ANY TWO QUESTIONS **(2 x 20 = 20 marks)**

16. a) Describe the factors that affect the reliability and security of a network.

    b) Explain the functions of Session layer and presentation layer.

17. a) Explain the types of Bipolar encoding in detail.

    b) Explain the types of propagation of radio waves.

18. a) Explain in detail about the various types of errors used in error detection and correction.

    b) Explain the four types of redundancy checks used in data communication.

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