



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**B.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE**

**FIFTH SEMESTER – NOVEMBER 2011**

**CS 5506 - INTRODUCTION TO DATA COMMUNICATION**

Date : 04-11-2011

Dept. No.

Max. : 100 Marks

Time : 9:00 - 12:00

**PART - A**

**ANSWER ALL THE QUESTIONS:**

**( 10 x 2 = 20 marks )**

1. Define the term data communication.
2. Define multipoint network.
3. What is meant by open system?
4. Define amplitude.
5. What is meant by data encoding?
6. Write a note on Differential Manchester encoding.
7. What are the uses of co-axial cables?
8. Define Radio Government ratings.
9. Define Frequency Division Multiplexing.
10. What is meant by hamming distance?

**PART - B**

**ANSWER ALL THE QUESTIONS:**

**( 5 x 8=40 marks )**

11. a) Explain the components involved in data communication systems.  
(Or)  
b) List out the different transmission modes and explain it.
12. a) Differentiate between bit interval and bit rate.  
(Or)  
b) Explain the organization of the layers in the OSI model.
13. a) Explain in detail about Data Terminal Equipment(DTE).  
(Or)  
b) Write a note on EIA-232 standard.
14. a) Write down the specifications of the major Bell Modems.  
(Or)  
b) Explain the advantages and disadvantages of optical fiber.
15. a) Discuss in detail about the Frequency -Division Multiplexing.  
(Or)  
b) Explain in detail about the single-bit error correction.

**PART-C**

**ANSWER ANY TWO QUESTIONS**

**(2x20=40 marks)**

16. a) Explain the topologies with an example.

- i) Tree
- ii) Star

b) Explain the three criteria necessary for an effective and efficient network.

17. a) Discuss in detail about the services offered by session layer and Transport layer.

b) Describe in detail about analog - to - analog conversion.

18. a) Briefly explain about the Time-Division Multiplexing.

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

- a) Vertical Redundancy Check
- b) Longitudinal Redundancy Check

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