



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

**B.Sc., B.C.A. DEGREE EXAMINATION – COMPUTER SCIENCE & APPLI.**

**FIFTH SEMESTER – NOVEMBER 2014**

**CS 5404 / CA 5404 - DATA COMMUNICATION & NETWORKS**

Date : 10/11/2014  
Time : 09:00-12:00

Dept. No.

Max. : 100 Marks

**PART – A**

**ANSWER ALL THE QUESTIONS:**

**10 X 2 = 20**

1. Write any four characteristics of data communication systems.
2. Define protocol.
3. What are the services provided by application layer?
4. Write any two differences between analog and digital signals.
5. What are the conversion methods in data communication?
6. What is parallel transmission?
7. Define modem
8. What is STP cable? How cross talk is eliminated through STP cables?
9. Define multiplexing.
10. What are burst errors?

**PART – B**

**ANSWER ALL THE QUESTIONS :**

**5 X 8 = 40**

11. a) Explain the categories of networks.  
(OR)  
b) Write down the factors influences the performance of the networks.
12. a) Write down the basic functionalities provided by OSI model.  
(OR)  
b) Write down the characteristics of simple analog signals.
13. a) Explain polar encoding and unipolar encoding in digital to digital transmission.  
(OR)  
b) Explain DTE-DCE interface.
14. a) Write down the standards of Bell Modem.  
(OR)  
b) Explain the types of propagation in unguided medium.
15. a) Explain frequency division multiplexing.  
(OR)  
b) Explain time division multiplexing.

**PART – C**

**ANSWER ANY TWO:**

**2 X 20 = 40**

16. a) Explain the categories of network topologies in detail. (10)  
b) Explain the services provided by Data link layer and Transport layer. (10)
17. a) Explain analog to analog conversion and its types of modulations. (10)  
b) Explain optical fiber in communication. (10)
18. a) Explain the methods used for single bit error correction. (10)  
b) Explain the analog services and digital services provided by telephone systems. (10)

\*\*\*\*\*