



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.C.A. DEGREE EXAMINATION – COMPUTER APPLICATIONS

THIRD SEMESTER – APRIL 2017

CA 3807- DATA COMMUNICATION AND NETWORKS

Date: 28-04-2017
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

PART – A

Answer all Questions

10 x 2 = 20

1. What is data communication? Mention the fundamental characteristics of data communication system?
2. What are the different types of address?
3. List the protocols for noiseless and noisy channels and channelization.
4. What is BLUETOOTH?
5. State the use of ARP and RARP.
6. What is forwarding? List its techniques.
7. What is DNS? List few generic domains
8. Define user agent. Mention its types.
9. Differentiate cryptography and steganography.
10. What is firewall?

PART – B

Answer all Questions

5 x 8 = 40

11.a. Explain the TCP/IP protocol suite.

(OR)

b. Illustrate the types of topology. Mention their advantages and disadvantages.

12.a. Explain the architecture of WLAN.

(OR)

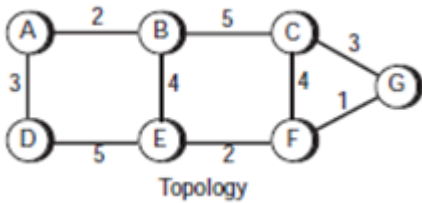
b. Write short notes on ATM architecture.

13.a. Explain the following

- i. advantages of IPv₆ over IPv₄.(2 marks)
- ii. Comparison Between IPv₄ and IPv₆ Headers (3 marks)
- iii. rules used in transforming an IPv₆ packet header to an IPv₄ packet header.(3 marks)

(OR)

b. Illustrate Dijkstra's algorithm to find the shortest path (from A to G) for the following tree



14.a. Elucidate the image compression JPEG.

(OR)

b. Illustrate the architecture of e-mail.

15.a. Illustrate DES algorithm.

(OR)

b. Explain the architecture of MPLS.

PART – C

Answer any TWO Questions

2 X 20 = 40

16. a. Explain in detail the various transmission mediums

(12 marks)

b. Discuss about Multiplexing.

(8 marks)

17.a. Explain in detail the standard Ethernet specifications.

b. Illustrate the following in TCP

i. three way handshaking for connection establishment

ii. half close.

18. Explain in detail the different approaches in streaming stored audio/video.

b. Discuss the techniques to improve the quality of service.
