



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.C.A. DEGREE EXAMINATION – COMPUTER APPLICATIONS

THIRD SEMESTER – NOVEMBER 2017

CA 3807 – DATA COMMUNICATION AND NETWORKS

Date: 03-11-2017

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART – A

Answer all Questions:

10 x 2 = 20

1. What are the components of data communication system?
2. What are the addresses used in the internet ?
3. What are the different types of error?
4. Mention the categories of connecting devices.
5. List the ICMP error messages.
6. Differentiate multicasting and multiunicasting.
7. What are the generic domain sections in DNS ?
8. Define user agent. What are the services provided by it?
9. What are the goals of security?
10. Define IPSec. What are the services provided by IPSec?

PART – B

Answer all Questions:

5 x 8 = 40

- 11.a. Explain the categories of topology. Mention their advantages and disadvantages.

(OR)

- b. Illustrate the types of transmission media.

- 12.a. Explain the hidden and exposed terminal problem and how MAC avoids it.

(OR)

- b. Write short notes on protocols of noiseless channel

- 13.a. With a neat diagram explain the TCP state transition diagram.

(OR)

- b. Illustrate the following

i. transition from IPv4 to IPv6.

ii. comparison between IPv4 and IPv6 headers

- 14.a. Elucidate the video compression MPEG.

(OR)

- b. Write short notes on email architecture.

- 15.a. Illustrate RSA with a neat diagram.

(OR)

- b. Explain the types of security attacks

PART – C

Answer any TWO Questions:

2 X 20 = 40

16. Explain in detail the functionalities of different layers of OSI model.

17.a. Explain in detail the BLUETOOTH network.

b. Write short notes on the following

i. Different states of DHCP

ii. Exchange of messages.

18.a. Explain the three way handshaking connection establishment and three way handshaking connection termination of TCP.

b. What are the characteristics of QoS? Explain the techniques to improve it.
