LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.C.A. DEGREE EXAMINATION – COMPUTER APPLICATION

THIRD SEMESTER – NOVEMBER 2018

CA 3807 – DATA COMMUNICATION AND NETWORKS

Date: 26-10-2018   Dept. No.   Max. : 100 Marks
Time: 09:00-12:00

PART – A

Answer all Questions: **10 x 2 = 20**

1. What are the characteristics of data communication?

2. List the types of transmission medium.

3. Mention the protocols for noisy and noiseless channels.

4. What are the categories of connecting devices?

5. Write the steps involved in ARP process.

6. Differentiate unicasting, multicasting and multiunicasting.

7. What is URL?

8. List the generic domains.

9. What are the goals of security?

10. Mention the flow characteristics of QoS.

PART – B

Answer all Questions: **5 x 8 = 40**

11.a. Explain TCP/IP protocol suite.

(OR)

b. Illustrate the types of multiplexing with neat diagram.

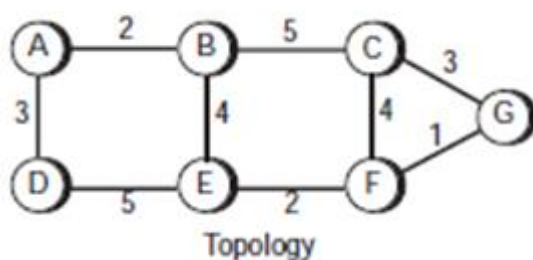12.a. Illustrate with example any two error detection methods.

(OR)

b. Write short notes on channelization protocols.

13.a. Illustrate TCP state transition diagram.

(OR)

b. Explain the Dijkstra's algorithm to find the shortest path of the following network

Topology

14.a. Elucidate MPEG compression with an example.

(OR)

b. Explain the architecture of e-mail with different scenarios.

15.a. Illustrate substitution and transposition ciphers.

.   (OR)

b. Write short notes on Techniques to improve QoS .

PART – C

Answer any TWO Questions: **2 X 20 = 40**

16. Explain the functions of the layers of OSI Model.

17.a. Illustrate the following

   i. Fast Ethernet

   ii. Gigabit Ethernet.

b. Explain the following

   i. DHCP state transition diagram

   ii. Exchange of messages.

18.a.Explain in detail Streaming stored audio/video approaches.

b. Write short notes on the security attacks.

$$$$$$$$$