



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.C.A. DEGREE EXAMINATION – COMPUTER APPLICATIONS

THIRD SEMESTER – APRIL 2018

16PCA3MC02- DATA COMMUNICATIONS AND NETWORKING

Date: 26-04-2018
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

PART – A

Answer all Questions:

10 x 2 = 20

1. What are the criteria for network?
2. What is multiplexing? Mention its types.
3. List the protocols for random access, controlled access and channelization.
4. Mention the types of error and error detecting codes.
5. Mention the messages of ICMP.
6. Differentiate multicast and multiunicast.
7. State the use of DNS. Mention few generic and country domains.
8. Write URL and its components
9. List the various security attacks.
10. What is firewall?

PART – B

Answer all Questions:

5 x 8 = 40

- 11.a. Illustrate the polar encoding techniques.

(OR)

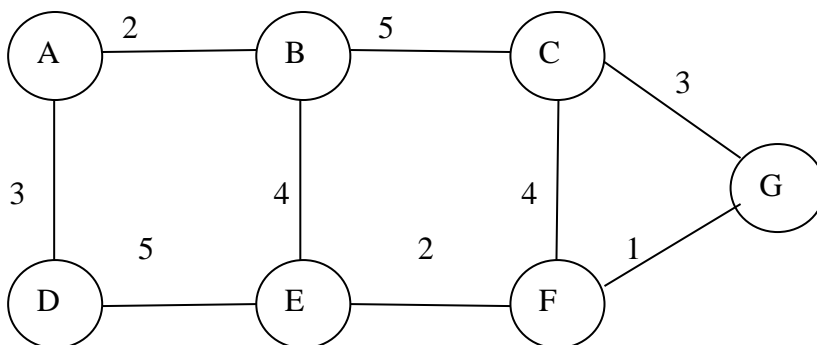
- b. Write short note on TCP/IP model.

- 12.a. What is BLUETOOTH? Explain its networks.

(OR)

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

- 13.a. Illustrate the dijkstra's algorithm to find the shortest path(from A to G) for the following



(OR)

- b. Explain the transition from IPv4 to IPv6.

14.a. Describe the architecture of email.

(OR)

b. Illustrate TCP state transition diagram.

15a.. Explain the components of modern block ciphers.

(OR)

b. Explain RSA algorithm.

PART – C

Answer any TWO Questions:

2 X 20 = 40

16. a. Explain the different functionalities of the layers of the OSI model.(15 marks)

b. Write short notes on the types of topology (5 marks)

17.a. Explain in detail the protocols for noiseless and noisy channels

b. Explain the link state routing algorithm with an example.

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

b. Explain in detail the categories of traditional symmetric key ciphers.

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