



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.C.A. DEGREE EXAMINATION – COMPUTER APPLICATION

THIRD SEMESTER – NOVEMBER 2018

16/17PCA3MC02 – DATA COMMUNICATIONS AND NETWORKING

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 is data communication? Mention its components.
2. Define Multiplexing? List its types.
3. What are the types of error? Mention the error detecting codes.
4. List the implementations of Ethernet.
5. Differentiate unicast, multicast and multiunicast.
6. Mention the messages of ICMP.
7. State the use of DNS. Mention few generic and country domains.
8. Define URL. What are its components?
9. What are the components of modern block ciphers?
10. What are the verification categories for entity authentication?

PART – B

Answer all Questions:

5 x 8 = 40

11.a. Describe TCP/IP protocol suite.

(OR)

b. Write short notes on unguided transmission media

12.a..Illustrate the architecture of IEEE802.11 WLAN.

(OR)

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

13.a. Write short notes on the following

i. RIP.

ii. Timers of RIP.

(OR)

b. Explain the following

i. comparison between IPv4 and IPv6 headers(2 marks)

ii. transition from IPv4 to IPv6.(6 marks)

14.a. Describe the TCP state transition diagram.

(OR)

b. Explain the following in UDP

i. queueing technique

ii. package

15a. Explain the categories of traditional symmetric key 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 networks. (5 marks)

17.a. Illustrate the protocols for noiseless and noisy channel

b. Explain the following with example

i. unicast routing

ii. source based tree.

iii. group shared tree.

18.a. Explain the architecture of email with different scenarios.

b. Explain the techniques to improve QoS.

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