

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



M.C.A. DEGREE EXAMINATION – COMPUTER APPLICATIONS

THIRD SEMESTER – NOVEMBER 2019

18PCA3MC02 – DATA COMMUNICATIONS AND NETWORKING

Date: 01-11-2019

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

PART-A

Answer ALL the questions

(10 x 2 = 20 marks)

1. Define data communication. What are its characteristics?
2. What are the key elements of protocols?
3. Define flow and error control.
4. What are the categories of connecting devices?
5. Differentiate subnetting from supernetting.
6. Mention the timers of RIP.
7. List the steps to map host name to IP address.
8. Define Hypertext and Hypermedia.
9. What are the services provided by IPSec?
10. List down the components of modern block cipher?

PART-B

Answer ALL the questions

(5 x 8 = 40 marks)

11. a. Illustrate the digital to digital encoding schemes.
(OR)
b. Write short note on the switching networks
12. a. Explain the protocols for noisy channel.
(OR)
b. Describe the controlled access protocols.
13. a. Illustrate the transition from IPV₄ to IPV₆.
(OR)
b. Explain the following with necessary diagram
 - i. source based tree.
 - ii. group shared tree.
14. a. Explain the Image compression with necessary diagram.
(OR)
b. With neat diagram explain the TCP state transition diagram.

15. a. Write short note on the protocols of SSL.
(OR)

b. Explain DES algorithm.

PART-C

Answer any TWO questions

(2 x 20 = 40 marks)

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

b. Write short note on the topologies of network.(5 marks)

17. a. Explain the following

i. standard Ethernet implementations

ii. Bluetooth networks

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

18. a. With necessary diagrams explain streaming stored audio video.

b. Explain in detail the techniques to improve Quality of service.
