



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**M.C.A. DEGREE EXAMINATION – COMPUTER APPLICATIONS**

**FOURTH SEMESTER – APRIL 2016**

**CA 4958 - NETWORK ADMINISTRATION**

Date: 25-04-2016  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**PART A**

**Answer ALL Questions**

**10 X 2 = 20**

1. What is a hub?
2. Mention the layers of TCP/IP model.
3. What is Network Address Translation?
4. Mention any two private IP addresses
5. Give the range of Class A, B and C addresses in dotted decimal notation?
6. What is the purpose of network mask?
7. What is Domain Name System?
8. Why DHCP is needed in a network?
9. What is the necessity for MPLS?
10. Mention the types of messages sent by ICMP Protocol.

**PART B**

**Answer ALL Questions**

**5 X 8 = 40**

- 11a. Why is it necessary to have congestion control in Transport Layer? Explain  
(or)
- b. Explain the POP Protocol in detail.
- 12a. Describe the Ethernet frame format.  
(or)
- b. Give a summary of ARP Protocol.
- 13a. Explain two level and three level addressing in classless addressing  
(or)
- b. An organization is granted a block of addresses with the beginning address 14.24.74.0/24. The organization needs to have 3 subblocks of addresses to use in its three subnets as shown below:  
(a) one subblock of 120 addresses      (b) one subblock of 60 addresses  
(c) one subblock of 10 addresses
- 14a. Explain the static and dynamic address allocation by DHCP server.  
(or)
- b. Describe the errors handled by ICMP protocol
- 15a. What are functional units of ATM networks?  
(or)
- b. Discuss Frame Relay technology.

**PART C**

**Answer ANY TWO Questions**

**2 X 20 = 40**

16a. Discuss the header format of TCP Protocol.

b. Discuss the UDP datagram.

17a. Explain in detail Ethernet evolution.

b. Discuss the IP protocol in detail.

18a. How checksum is calculated? Explain.

b. Write a note on MPLS.

\*\*\*\*\*