LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**M.Sc.** DEGREE EXAMINATION – **COMPUTER SCIENCE**

THIRD SEMESTER – NOVEMBER 2010

# CS 3813 - TCP/IP PROTOCOL

Date : 01-11-10 Dept. No. Max. : 100 Marks

Time : 9:00 - 12:00

**SECTION-A**

**ANSWER ALL THE QUESTIONS: (10 X 2 = 20)**

1. State the significance of RARP.

2. Find the class of the following address and also convert it into binary notation.

227.12.14.87

3. Mention the usage of traceroute.

4. Draw the IP Datagram format.

5. What is a well known port number?

6. Define Connection Oriented Service.

7. Write down the best features of TCP.

8. What is a SCTP association?

9. List out the steps involved in control connection in FTP.

10. Illustrate the Sorcerer’s Apprentice Bug with an example.

**SECTION-B**

**ANSWER ALL THE QUESTIONS**: **(5 X 8 =40)**

# 11. a) Explain about the different forwarding techniques of IP Packets.

# (OR)

# b) Mention and explain the salient features of ARP with its packet format.

12. a) Explain about the checksum calculation in IP.

(OR)

b) Discuss in brief the ICMP Query messages.

13. a) Draw the format of a TCP Segment and explain its fields.

(OR)

b) What is Congestion Control and highlight the points related to Congestion control in TCP.

14. a) Draw the State Transition Diagram of SCTP and explain the scenario of simultaneous close.

(OR)

b) Explain the concept of Error control in SCTP with examples.

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15. a) Discuss in brief about the types of TFTP messages.

(OR)

b) Explain briefly the following:

(i) HTML (ii) CGI

**SECTION-C**

**ANSWER ANY TWO QUESTIONS: (2 X 20 = 40)**

16. (a) Distinguish Subnetting and Supernetting. (4)

(b) Discuss in brief about the different methods of delivery of IP packets. (6)

(c) Explain the structure of a router with special focus on Banyan switch. (10)

17. (a) Explain the IGMP Package with a neat diagram. (10)

(b) Discuss in detail about the TCP connection with a neat diagram. (10)

18. (a) Draw the common layout of a chunk. (3)

(b) Explain the SCTP features and services. (7)

(c) Write the importance and purpose of the following: (5) + (5)

(i) SNMP (ii) MIME

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