GK, KK additional Main.

D 28422 **(Pages :** 2) Name.....

Reg. **No**.....

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, FEBRUARY 2007

Computer Science

CS 303—NETWORK PROGRAMMING AND ADMINISTRATION

(2005 admission onwards)

Time : Three Hours Maximum : 80 Marks

Part A

Answer any **five** *questions.*
Each question carries 8 *marks.*

1. With a neat sketch, explain how data connection is established between FTP client and Server.
2. List out the command and response exchange between the client and server in FTP communication.
3. (a) Define LAN and WAN. Bring out the difference between the two.

   (b) What are the considerations in designing RPC ? Write a pseudocode which simulate a simple RPC.
4. Suppose a process P wants to wait for two messages, *one* from mailbox A and one from mailbox B. What sequence of send and receive should it execute ?
5. Explain the connection established and communication between a TFTP client and server. Also discuss error control in TFTP.
6. (a) Explain the procedure for creating a socket.

   (b) When is the listen call important ?
7. What are the major conceptual differences between transport layer interface and socket interface ?

(5 x 8 = 40 marks)

Part B

Answer any **four** *questions.*
Each question carries 10 *marks.*

8. (a) What are the activities involved in Domain name servicing ?

   (b) Explain stream and messages.
9. (a) How is addressing used in internet class structure ?

   (b) Explain the IP packet structure.
10. **Is** it required to have many ports when a machine is communicating with many application from different sources ? Explain socket programming in UNIX.
11. (a) A router has an IP address of 140.15.8.25. It sends a direct broadcast packet to all host in this network. What are the source and destination IP addresses used in this packet ?

    (b) Briefly summarize how connection is established when an e-mail message is being send from sender to receiver.

Turn over

12. Explain how RPC works. Draw the block diagram.

13. Write short notes on :

(i) Stream Pipes.

(ii) Message Queue.

(iii) Semaphore.