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First Semester M.Tech. Degree Examination, February 2013
Network Programming

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1
 - a. Show the relationship of the protocols in the internet protocol suite along with their approximate mapping into the OSI model through the neat diagram. Also briefly explain each protocol. (10 Marks)
 - b. Bring out the benefits of layering. (04 Marks)
 - c. Write note on client- server model. Explain the two different type of server processes. (06 Marks)

- 2
 - a. Write the diagrams which show a time line of the socket system calls for connection oriented and connection less protocols. (08 Marks)
 - b. Explain the structure of socket offers for internet family. (06 Marks)
 - c. Explain the different byte ordering routines with their prototypes. (06 Marks)

- 3
 - a. Discuss the following socket programming system calls with their prototypes
 i) Bind ii) Connect iii) Accept. (10 Marks)
 - b. What is the need for internet super server? With the neat diagram, explain the steps performed by inetd. (10 Marks)

- 4
 - a. How do you handle input/output multiplexing of different input /output channels? Explain the system call provided by 4 – 3 BSD to handle multiplexing. (10 Marks)
 - b. What are the different packets used by TFTP? Explain in detail, with their formats. (10 Marks)

- 5
 - a. Explain the sorcerer's apprentice syndromes with example. What is the correction suggested for this syndrome? Explain with example. (10 Marks)
 - b. What are the different commands provided by client implementation of TFTP to an interactive user? Explain each command. (10 Marks)

- 6
 - a. Explain the steps performed by the rshd server to handle the security issues. (06 Marks)
 - b. Differentiate between rcmd and rexec functions. Explain rcmd function, in detail. (10 Marks)
 - c. What are the different security holes exists in using rexec function. (04 Marks)

- 7
 - a. Explain the functionalities of a line discipline module. Discuss the different versions of line discipline module provided by 4.3 BSD. (10 Marks)
 - b. Write a program to implement recording process with stream pipes to demonstrate the involvement of Unix terminals in remote logins. (10 Marks)

- 8
 - a. Discuss Inet address class of Java. Also explain, how to retrieve host name and host IP address, using inet address class of Java? (08 Marks)
 - b. Write a short notes on : (12 Marks)
 - i) Applet clients
 - ii) Datagram sockets in Java
 - iii) Sending and receiving objects in Java.

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