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12SCN13

**First Semester M.Tech. Degree Examination, Dec.2013/Jan.2014**

**Network Programming**

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions.**

- 1 a. With reference to networks, define a process. What are the important functions of a server process in a client server model? (10 Marks)  
b. Explain the concept of layering. Why is layering essential in a network? Justify. With a neat diagram, explain simplified 4 layer model of networking. (10 Marks)
- 2 a. Using the concept of socket programming, write a program in C language for a TCP client and a TCP server. (10 Marks)  
b. Discuss in detail about the socket addressing scheme for internet and the XNS domain. (10 Marks)
- 3 a. With a suitable diagram, explain the steps to be performed by inet\_d. Also explain the concept of internet super server. (10 Marks)  
b. Explain two elementary and two advanced socket system calls associated with connection oriented server. (10 Marks)
- 4 a. Discuss the sorcerer's apprentice syndrome in brief. Also explain the corrective measures that need to be undertaken to address the issue. (10 Marks)  
b. Explain in detail the TFTP protocol message formats. (10 Marks)
- 5 a. In TFTP protocol, explain all the steps involved in pseudo connection between the client and the server. (10 Marks)  
b. Explain remd functions with an example and prototype. (10 Marks)
- 6 a. What are pseudo terminals? Write a program for a pseudo terminal routine provided by 4.3 BSD Unix. (10 Marks)  
b. Explain the terminal modes in detail. (10 Marks)
- 7 a. Explain the concept of rlogin. With a neat diagram, explain the process of remote login on multiple windows. (10 Marks)  
b. Explain the concept of reserved port for internet and XNS domain with the necessary prototype. (10 Marks)
- 8 Write short notes on following:  
a. Inet Address class  
b. Datagram Packet and Datagram Socket class  
c. Socket and Server Socket class  
d. Out of Band Data. (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.