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Second Semester M.Tech. Degree Examination, June / July 2014
Client – Sever Programming

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1
 - a. What are the issues that must be handled by the server code? Explain. (05 Marks)
 - b. Differentiate between stateless and stateful servers. Explain the scenario where file server maintains / not maintain state information for its clients. (08 Marks)
 - c. Explain the effect of time slicing and making processes diverge with respect to concurrency. (07 Marks)
- 2
 - a. What are the basic I/O functions which are available in UNIX that can be extended to accommodate TCP/IP? Explain them in brief. (06 Marks)
 - b. Discuss the two broad approaches that designers must choose while specifying a protocol interface. (06 Marks)
 - c. Describe how a straight forward client and server use primary socket system calls to communicate with sockets. (08 Marks)
- 3
 - a. What are the methods client software can adopt to find a server's IP address and protocol port number? Explain. (08 Marks)
 - b. Illustrate with the example code how the client software look up a Domain name and well – known port by name. (08 Marks)
 - c. What is the need for partial close? Explain the system call for the same. (04 Marks)
- 4
 - a. How the client software chooses the local protocol port number and IP address? Explain. (07 Marks)
 - b. Write the code for a TCP client that accesses the DAYTIME service. (13 Marks)
- 5
 - a. What is the need for optimizing stateless server? List the advantages and disadvantages of optimizing a stateless server. (06 Marks)
 - b. Design a algorithm for a connection oriented server. (06 Marks)
 - c. Explain the four general server categories. (08 Marks)
- 6
 - a. Write a program to implement iterative UDP server for TIME service. (10 Marks)
 - b. Explain the steps that a concurrent server uses for a connection oriented protocol. (06 Marks)
 - c. How do you justify the statement “client software that uses UDP must implement reliability”? (04 Marks)
- 7
 - a. Write a program to implement concurrent TCP server for Echo service. (12 Marks)
 - b. Explain the process structure of a concurrent connection – oriented server and iterative connection – oriented server. (08 Marks)
- 8
 - a. Write a note on a generic address structure. (08 Marks)
 - b. Explain how client software communicates with the server using TCP, with example code. (07 Marks)
 - c. Discuss the situation where servers will also act as client. (05 Marks)

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.