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14SCN/LNI41

# Fourth Semester M.Tech. Degree Examination, June /July 2016
## Client Server Programming

Time: 3 hrs. Max. Marks:100

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





1 a. Explain the issues that must be handled by the server code. **(08 Marks)**
b. Differentiate between stateful servers and stateless servers. Explain the scenario where file server maintain state information for its clients. **(08 Marks)**
c. Discuss the situation where servers will also act as client. **(04 Marks)**

2 a. Explain software interface and interface functionalities. **(06 Marks)**
b. Discuss the two broad approaches that designers must choose while specifying a protocol interface. **(06 Marks)**
c. Explain in detail : the basic I/O functions which are available in UNIX can be extended to accommodate TCP/IP. **(08 Marks)**

3 a. What are the different ways a client can identify location of a server? **(08 Marks)**
b. Illustrate with example code how the client software look-up a domain name and well known port by name. **(08 Marks)**
c. Give algorithm for TCP–client. **(04 Marks)**

4 a. Explain in detail : iterative connection oriented server algorithm. **(12 Marks)**
b. Explain : concurrent Vs iterative servers. **(04 Marks)**
c. Explain : connection-oriented Vs connectionless access. **(04 Marks)**

5 a. Write a program to implement iterative UDP server for TIME service. **(10 Marks)**
b. Write a program to implement concurrent TCP server for ECHO service. **(10 Marks)**

6 Write a note on :
a. Standard Vs non–standard client software. **(08 Marks)**
b. Server deadlock. **(06 Marks)**
c. Process structure of connection oriented concurrent server. **(06 Marks)**

7 a. Write a code for a TCP client that access the DAY – TIME service. **(12 Marks)**
b. Explain the process structure of iterative connection oriented-server. **(08 Marks)**

8 Explain the following :
a. Four general server categories. **(08 Marks)**
b. System data structures for sockets. **(06 Marks)**
c. Concurrent connectionless server algorithm. **(06 Marks)**

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