Code No: R6-33-MCA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MCA-III Semester Regular Examinations, February 2010

UNIXNETWORK PROGRAMMING

Time: 3hours **Max.Marks:60**

Answer any Five questions

All questions carry equal marks

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1.a) What are the characteristics of UNIX file system? Explain briefly.

b) Explain the following utilities.

i) rm ii) unlink iii) rlogin iv) cpio

v) awh vi) unif

2.a) What are the shell responsibilities? Write a shell script to find Fibonacci series upto a given number.

b) Give the use of shell metacharacters and explain.

3.a) Explain the meaning of the following term

i) inode ii) link iii) unlink iv) symlink

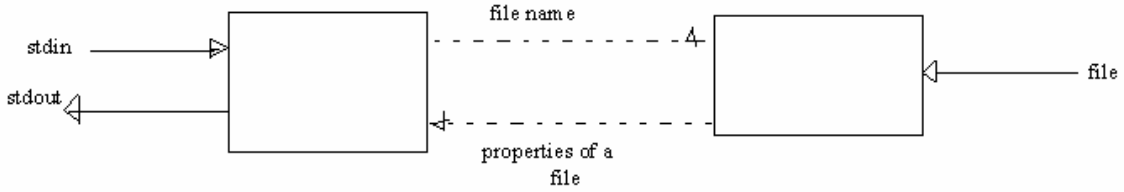
b) What would be the maximum size of a file permitted in a UNIX operating stem if the inose has 9 direct blocks + 1 single indirect block +1 double indirect block address. Each address entry occupies 4 bytes. Data block size is 4 kilobytes.

4.a) Describe the use of back ground process in UNIX with an example of you own.

b) Write the differences between:

i) Alarm( ) and sleep( ) ii) Fork( ) and enec ( )

5. Consider the following client server example.



As indicated in the figure above, the server should return the properties of the given file like size, typ,e owner and file permission. Write a C program in the pipes to implement the above

6.a) Explain in detail different UNIX API's for messages.

b) Write the server program in client server example using a simple message queue.

7.a) List out the data structures maintained by kernel for semaphores. Explain briefly.

b) Write short notes on shared memory.

8.a) Distinguish between iterative server and concurrent server.

b) Write a C program to implement a connection oriented concurrent time of day server, which when contacted by the client returns current time and date of the day.