JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year I Semester Examinations, February/March -2016
LINUX PROGRAMMING
(Computer Science and Engineering)

Time: 3 Hours   Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks
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1.a)   Write briefly on POSIX threads.
  b)   Write briefly on Thread synchronization with semaphores.   [8+7]

2.a)   Describe any four built in variables in Shell and demonstrate their use by giving an example for each.
  b)   Write a shell script to display GUD MRNG, GUD AFTERNOON, GUD NIGHT based on system time whenever user logs on.   [7+8]

3.   Write a program to print all the filenames with inode numbers recursively in a directory whose name is given with command line argument using directory system calls.   [15]

4.a)   Write briefly about system calls used for message queue and semaphores.
  b)   Write a program to lock a memory region using semaphore.   [8+7]

5.   Write a code snippet to implement echo server and echo client on port number 1234 using connection-oriented system calls.   [15]

6.a)   Write a shell program to print a multiplication table of a number given from command line.
  b)   Write briefly on the ":" and "." commands in bash. Write briefly on if control structure in bash with examples. Write briefly on "&&" operator in bash.   [7+8]

7.   Write a client and server program using shared memory so that what is written by the client in shared memory is read and printed by the server.   [15]

8.a)   List the differences between named pipe and unnamed pipe.
  b)   Write a program to implement full duplex communication using unnamed pipe.   [7+8]

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