END TERM EXAMINATION

FIFTH SEMESTER [MCA]　DECEMBER- 2015

Paper Code: MCA-301	Subject: LINUX Programming
Time: 3 Hours	Maximum Marks: 60

Note: Attempt any five questions including Q.No1 which is compulsory. Select one question from each unit.

Q1

(a) What are Hard links and Symbolic links in LINUX file system?　　　(2x10=20)
(b) What is the differences between pipe and FIFO?
(c) Difference between System call and Standard library functions.
(d) Write the command for Obtaining list of files and subdirectories for the whole system
(e) Write a short note on awk command.
(f) Write a short note on Linux File permissions.
(g) Write a short note on Process Control Block.
(h) Write a short note on Find Command in Linux.
(i) What is big-endian and little-endian?
(j) Explain the use of $0, $*,$$ and $@ variables.

UNIT-I

Q2 (a) Explain the Linux booting process.　　　(4)
(b) Differentiate between Linux and Windows.　　　(3)
(c) Explain Ext2 file system. Differentiate between Ext2 and Ext3.　　　(3)

Q3 (a) What is a inode? Explain its structures in brief.　　　(3)
(b) Explain Linux architecture.　　　(4)
(c) Describe the various Run levels used by Linux and Unix.　　　(3)

UNIT-II

Q4 (a) What are Pipes? Write a program to create a pipe between a parent and its child and to send data down the pipe.　　　(5)
(b) Write a program to create a child process and print pid and ppid of parent and child processes, showing that the two processes are executing independently.　　　(5)

Q5 (a) What is FIFO? Write a program to exchange data between two processes using FIFO.(6)
(b) What is a Signal? How the signals are handled?　　　(4)

UNIT-III

Q6 (a) What is a process? How are you able to get complete information about all currently scheduled processes?　　　(4)
(b) How "grep" is different from "sed" script?　　　(3)
(c) Differentiate Unlink, rm and rmdir command.　　　(3)

Q7 (a) Write a shell script to check whether a number is prime or not.　　　(3)
(b) Write a script to cut the range of the particular columns and rows from a file.　　　(3)
(c) Write a script to copy files. Check the possible conditions for the existence fo source and destination file in the directory.　　　(4)

UNIT-IV

Q8 (a) What is a Socket? State and explain different Socket Types?　　　(4)
(b) What do you mean by Client-Server Architecture? Write steps to establishing a socket on the client side and server Side.　　　(6)

Q9 (a) Differentiate between fork() & exec() with example.　　　(4)
(b) Explain connect, bind, accept and listen system calls used in socket programming?(6)

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