(Please write your Exam Roll no:) **Exam roll no……..**

END TERM EXAMINATION

FIFTH SEMESTER[MCA] DECEMBER 2012

Paper code:MCA310	**Subject: Linux Programming**

TIME :3 Hours **Maximum Marks:60**

Note: Attempt five questions including Q.no.1 which is compulsory.
Select one question from each unit

Q 1. Answer the following :- **(2x6=12)**

(a) Mention the sequence of steps in Linux bootup procedure.
(b) Explain the role of disk mounting in Linux systems. How can windows XP files be accessed in Linux systems.
(c) Using sockets functions, mention the startup sequence in TCP/IP client server application.
(d) Explain the role of startup files or init files in Linux Shells (TCSH or Bash).
(e) Write the command to display "Hello User" and current time in the shell initialization files.
(f) Explain the role of messages and queues in IPC. Give their respective attributes.

Q 2.

(a) Discuss the features of the Ext3 file system. Explain how an Ext3 file be reverted to an Ext2 file**.**
(b) Differentiate between the shareable and unshareable files in Linux file system. **(2)**
(c) Give the architecture of linux operating system. Explain how it is different from windows XP**.(3)**

OR

(a) Explain the tasks maintained and controller by root in in a linux system. **(3)**
(b) Explain the role of security in linux system.Mention various layers of security. **(4)**
(c) Explain the sequence of steps followed in linux installation process. **(5)**

Q 3.

(a) Explain the file and directory management functions used in linux systems. **(5)**
(b) Explain the following signal actions:- **(5)**
   i. Termination
   ii. Ignored
   iii. Core dump.
(c) Mention any four process management functions used in linux systems**.** **(2)**

OR

(a) Mention the role of signal() and raise () functions used in linux system. **(3)**
(b) Compare FIFO and pipes used in IPC. Give their respective applications**.** **(5)**
(c) Mention any four library system calls used in linux systems**.** **(4)**

Q 4.

(a) Explain the features of shell programming .how is shell programming different from C and C++ programming language? **(4)**
(b) Write a shell script to count the number of words enclosed between $ and # symbols**.** **(4)**
(c) Compare shell variables and environment variables .give their applications. **(4)**

OR

(a) Explain various types of editors used in linux systems. Mention their distinguish features. **(4)**
(b) Write sed command script to replace the word "the" by "new-the" in a file Report.txt. **(4)**
(c) Give an example to illustrate the working of awk filter. Use loop and conditional statements in the example. **(4)**

Q 5.

(a) Compare the socket programming of TCP/IP and UDP applications. **(5)**
(b) Explain the following features in UDP sockets**:** **(5)**
i. Lost datagrams.
ii. Verifying received response.
(c) Explain the lack of flow control in UDP sockets**.** **(2)**

OR

(a) Give the structure of socket address. **(2)**
(b) Explain the working of fork and join in TCP/IP sockets. **(5)**
(c) Write a program to illustrate the working of TCP client and TCP server applications. **(5)**