COURSE TITLE	:	SYSTEM ADMINISTRATION LAB
COURSE CODE	:	4139
COURSE CATEGORY	:	B
PERIODS/WEEK	:	6
PERIODS/SEMESTER	:	90
CREDITS	:	3

Course General Outcomes:

Sl.	G.O	Student will be able
1	1	Install any Two Server Operating Systems
	2	Server Configuration
2	1	Design a Server Active Directory forest
3	1	Install and configure server hardware devices
4	1	Monitor server hardware
	2	Manage storage

Software Requirement: Linux Operating System, Any Other Server Software Like Windows server

PART – A LINUX COMMANDS

Write down the syntax and usage of the following exercise with all options. Check the commands with the system

1 (a) Logon to Linux and logoff.

   (b) Usage of directory management commands: l*s, cd,pwd, mkdir,rmdir*

   (c) Usage of File Management commands: cat, chmod,cp,mv,rm, *more, f*ile commands

2. Use the general purpose commnds: *wc, od, lp, cal , date, who , tty ,ln*

3. Using the simple filters: pr, head, tail, cut, paste, nl, sort

4. Advanced filters : Search for a pattern using *grep, egrep & fgrep*

5. To know the details of process status- *ps* command , Process management commands: &, nohup, kill, nice

6. Communication Commands: news, write, mail, wall, calendar

7. Device pattern using meta character to match each of the following situation:-

a. All two character filenames.

b. All filenames consisting of two lowercase letters.

c. All filenames ending with c.

d. All filenames beginning with a *c* and ending with a digit.

e. All filenames beginning with *p* and having at somewhere.

PART – B SHELL SCRIPTS

1. Write a shell-script that accepts a numerical value N. Then display the decrementing value of N till it reaches 0.

2. Write a shell-script that takes three command line arguments. The first argument is the name of the destination file and the other two arguments are names of files to be placed in the destination file.
3. Write a Shell script to print contents of file from given line number to next given number of lines
4. a)Shell script to say Good morning/Afternoon/Evening as you log in to system
   b)Write a shell-script that print out date information in this order: time, day of the week, day number, year – that is like this. 13:55:00 IST Sun 9 Jun 2015
5. Write a shell-script that tells you its name and PID
6. Develop a Basic math Calculator using case statement
7. Write a shell-script that takes a login name as a command line argument and reports to you when that person logs in. Have it sent a greeting to that person.
8. Write a shell-script that takes a command line argument and reports on whether it is a directory, a file or something else.

PART – C LINUX SERVER EXPERIMENTS

1. Installation of Linux using Graphical mode.
2. Installation of Linux using command prompt
3. Creating a user in Linux server and assigning rights
4. a) Configuring and Troubleshooting of /etc/inittab.
   b) Configuring and Troubleshooting of /etc/passwd
5. Configuring and Troubleshooting of /etc/grub.conf
6. Linux TCP/IP Network Configuration
7. Installation of additional software
8. File Data Backup using tar

PART – D SERVER EXPERIMENTS

1. Installation of s Server.
2. Installing Hardware, Devices and Drivers using Device manager and Driver Query
3. Configure Active Directory Services, create a user and assign permissions using Logon Script and Group permissions.
4. Automated installation of Server using answer files.
5. Installing required server components using Control panel.
6. Installation and configuration of DHCP server.
7. Configuring Disks and Volumes and Managing disks and volumes from the command prompt.
8. Installation and Configuration of Mail Server in server environment.
9. Establish RAID configuration on server.
10. Configure a router to connect two different networks and transfer files between them.