CORE COURSE XI: 5B11CSC-B LINUX ADMINISTRATION

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
5	5B11CSC-B	4	4	3

COURSE OUTCOME

CO1: To learn basic Linux commands and understand the file system structure
CO2: To understand the Boot loaders and the configuration files
CO3: To learn different system services, maintenance and configuring these
CO4: To experience Shell Scripting

Unit I:

Linux OS: History, Features and benefits of Linux, basic concepts of multi user system , open source, free Software concepts, Types of users in Linux, Types of files. BASICS : login, password, creating an account, shell and commands, logout, changing password, files and directories, relative and absolute pathnames, directory tree, current working directory, referring home directory, creating new directories, copying files, moving files, deleting files and directories , wild cards, hidden files, cat command.

(20 Hrs)

Unit II:

Vi editor: different modes-command mode, insert mode, last line mode, vi Editing commands – moving within a file, deleting, editing,Copy and Paste Commands, Saving and Closing the file, redirecting input/output-filter, pipes. File permissions: user, group, ls command (long listing), changing file permission. Shell Scripting: Types of shell, Basic shell configuration for bourne and bash shell: /etc/profile, /etc/bashrc, ~/.bash_profile, ~/.bash_login, ~/.profile,~/.bashrc, ~/.bash_logout, ~/.bash_history. Bourne shell scripts, script execution, variables and parameters, Control structures - Shell if then else, Shell if then elif, Shell for loop, Shell while loop, Shell until loop, Shell case, Shell function.

(20 Hrs)

Unit III:

Linux Boot process: LILO - boot process, /edc/lilo.conf file, GRUB - /etc/grub.conf file runlevels, rc files, startup scripts. Mounting: mounting file systems, structure of /etc/fstab. Linux Administration: Major services in Linux system - init, /etc/inittab file,

login from terminal, syslog and its configuration file /etc/syslog.conf, periodic command execution: at and cron, crontab file, GUI, X windows. Starting and stopping different services – service command.

(16 Hrs)

Unit IV:

System Maintenance: tmpwatch command, logrotate utility. Backup and Restore: types of backup - full, differential, incremental, cp, tar commands. Linux Installation: Partitioning, MBR, SWAP, file system mount points, rpm utility - installation of packages.

(16 Hrs)

Books for Study:

1. Unix Shell Programming, Yeshwanthkanethkar
2. Essential System Administration, O'reilly& Associates.

Books for Reference:

1. Unix in a Nutshell, by Daniel Gilly, O'Reilly & Associates.
2. Linux Administration handbook, Nemeth, PHI.
3. Red Hat Linux Bible.
4. A user guide to the Unix system, Thomas, Yates Tata McGraw Hill

Marks including choice:

Unit	Marks
I	15
II	15
III	15
IV	15