

Solapur University, Solapur
Revised New Syllabus
Class –B.C.A. Part III
Semester V

Name Of the Paper:
Paper No : BCA-27

LINUX AND SHELL PROGRAMMING

Max. Marks: 100
External Assessment: 80
Internal Assessment: 20

Objectives : 1) To introduce Linux OS and Shell programming
2) To Check how to install Linux .
3) To study different editors

Contents of course

Unit No	Name of the topic	Details	Lecturers/ Periods
1	Introduction	Linux Operating Systems , History of Linux and Unix, Linux overview, shell : Bourne, Korn and C-shell, File Structure: Directories and files, Utilities: Editors, Filters, and Communications.	6
2	Installing Linux	Hardware and software requirements, Creating Linux partition, Creating install disks, Installing Open Linux System, Network Configuration, Final configuration, Installing LILO, Installing and Configuring X-Windows	8
3	Linux Startup and Setup	User Accounts, Accessing your Linux System Starting and Shutting down, Login/Logout, Linux Commands, Installing Software packages, Remote communications, Modern Setup, Internet Connections with Modems: pppd & ezppp, Xfmail, X-Windows and network configuration.	12
4	Shell operations	The command Line, Standard I/O and Redirection, Pipes, Shell Variables, Shell Scripts, User defined commands, Jobs: Background, Kills and Interruptions, Delayed Execution.	8

5	Linux File	Linux Files, File Types, File	
	Structure	Classifications: the file & od commands. The file structure, Home Directories, Path Names, System Directories. Listing, Displaying and Printing files, Ls, cat, more and lpr commands. Managing directories: mkdir, ls, cd and pwd. Nested directories, File and Directory Operations: find cp, mv, rm, ln.	10
6	File Management Operations	Displaying File Information; ls -l, File Directory permissions : Chmod, Setting Permissions: Permission Symbols, chown and chgrp, Mounting and Formatting Floppy Disks, Mounting CD-ROMs, Mounting Hard Drives Partitions Linux and MS-DOS. The fstab file: Lisa and fstool, NFS' and /etc/exports, NIS, Archive Files and Devices: tar, Xtar, File Compression: gzip, Installing Software from Compressed Archives: .tar.gz, Downloading, Compressed Archives, Compiling Software, The mtools Utilities: msdos, Dos and Windows Emulators, DOSemu, Wine and Willow.	8
7	vi editor	Create a file. Enter the text. Edit Text, Moving around. Save the file. customizing ex/vi, .exrc file & Exinit, options to vi, splitting a file using split command. (Study all important commands & key combinations)	8

Reference Books :

- 1) **Operating Systems by William Stallings(PHI)**
- 2) **Operating System by Achyut Godbole (TMH)**
- 3) **Linux the complete refrence by Richard Mathews(TMh)**
- 4) **Red Hat Linux :The Complete Reference by Peterson (TMH)**
- 5) **Unix Systems V 4 Concepts & Applications by Sumitabha Das**
- 6) **Using Linux by Bill Ball**

Distribution of Marks for University Exams

1. (a) 20 % Marks : Objective questions
- 40 % Marks : Short notes/Short answer type questions/
Short Mathematical type questions
- 40 % Marks : Descriptive type questions/Long mathematical type
questions

Out of 20 % marks for objective questions, 10 % marks should be assigned to multiple choice questions and remaining 10 % be assigned to fill in the blanks /answer in one sentence

etc. However ,each faculty may decide nature and types of questions to be set subject to distribution of above percentage of marks.

- c) One descriptive type question will be compulsory

Paper setter should mention approximate words limit for short note /short answer type questions except Diagrammatical and Numerical questions.