



Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India
(Autonomous Institute Affiliated to University of Mumbai)

Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned			
		L	T	P	L	T	P	Total
CEL35	Linux Lab	--	--	2	--	--	1	1
		Examination Scheme						
		ISE		ESE		Total		
				Practical	Oral			
40		10		10	60			

Pre-requisite Course Codes	-	
At the end of successful completion the course, students will be able to		
Course Outcomes	CO1	Demonstrate the knowledge of Linux File structure and installation process.
	CO2	Select and apply appropriate Linux command and utility to get desired output/results.
	CO3	Apply administrative skill for system and user management.
	CO4	Manipulate and manage file system, disk and software.
	CO5	Use Text processing Utility.
	CO6	Write Shell script and Shell Function.

Exp. No.	Experiment Details	Ref.	Marks
1.	Linux Installation and File System <u>content:</u> - Introduction to OS (Unix, Linux, rpm, debian) - Installation of Linux(Ubuntu installation) - Linux File Structure	1, 5, 6	5
2.	Managing Software (Binaries and Source) <u>content:</u> - User root user account - Using Administrative Commands and Files - Using Different run-level - Managing software using apt-get - Getting a package using wget - Zip, Tar, Gunzip, Bzip	1, 5, 6	5
3.	Linux Commands <u>content:</u> - File Management Commands (ls, metacharacter, cat, wc, cp, mv,	1, 4, 5, 6	5



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	rm,) - Directories Command (cd, pwd, mkdir, rmdir, rm, mv) - Pipes and filter command(grep, sort, more) - Process Management Commands(ps, top, kill) - Linux Editors(vim, nano, gedit)		
4.	User Administration <u>content:</u> - Add and manage User - Add and manage Group - Setting Permission with ACL - Adding Directories for user to collaborate - File Permission Managing Commands (chmod, chown, chgrp)	1, 4, 6	5
5.	Shell Scripting <u>content:</u> - Shell scripting(Bourne and C Shell, Shebang Construct, Basic Shell and Extended Shell) - Using Variables, Special Variables, Arrays in Shell Script - Using Basic Operators in Shell Script - Using Decision making Statements, Loops and Loop Control in Shell Script	1, 3	5
6.	Shell Function and Cron <u>content:</u> - Shell Functions - Using Substitution, Quoting mechanism, IO redirection in Shell Script - Cron and Shell Script	1, 3	5
7.	Text Processing and Manipulation <u>content:</u> - SED - AWK - GAWK	2	5
8.	Managing Disk and File System <u>content:</u> - Partitioning Disk - Mounting File system - Checking, creating and managing LVM(Logical Volume Manager)	1, 5	5
Total Marks			40

References:



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- [1] Christopher Negus, “*Linux Bible*”, Wiley Publication, 8th Edition.
- [2] Dale Dougherty and Arnold Robbins, “sed & awk”, O'Reilly Media, 2nd Edition.
- [3] Cameron Newham, “Learning the bash Shell”, O'Reilly Media, 3rd Edition.
- [4] Richard Petersen, “Linux: The Complete Reference”, McGrawHill , 6th Edition.
- [5] Richard Blum, “Linux for Dummies”, Wiley Publication, 9th Edition.
- [6] Christine Bresnahan and Richard Blum, “Linux Essentials”, Wiley/Sybex , 2nd Edition.