Name of the Faculty : **HARNEK SINGH**

Department : Computer Engineering

Semester : 3rd

Subject : Operating System

Lesson Plan Duration : 15 weeks

**Work load (Lecture / Practical) per week (in hours): Lectures-03, practical -03

Week	Theory		Practical	
	Lecture day	Topic (Including assignment / test)	Practical Day	Topic
1st	1st	Definition of Operating Systems	1st	Demonstration of all the controls provided in windows control panel
	2nd	Types of Operating Systems: Batch Systems, Multi-		
	3rd	Types of Operating Systems: Time Sharing Systems,		
2nd	4th	Operating System Services, User operating system	2nd	Exercise on Basics of windows
	5th	System Calls, Types of System Calls		
	6th	System Programs		
3rd	7th	Operating System Structure	3rd	Installation of Linux Operating System
	8th	Virtual Machine, Benefits of Virtual Machine		
	9th	Revision of the unit		
4th	10th	Process concept, Process State, Process Control Block,	4th	Usage of directory management commands of Linux: ls, cd, pwd, mkdir, rmdir
	11th	Scheduling Queues, Scheduler, Job Scheduler, Process		
	12th	Context Switch, Operations on Processes		
5th	13th	Interposes Communication	5th	Usage of File Management commands of Linux: cat, chmod,cp, mv, rm, pg, more, find
	14th	Shared Memory Systems, Message-Passing Systems		
	15th	CPU Scheduler, Scheduling Criteria, Process		
6th	16th	SchedulingAlgorithms,Pre-emptive and Pre-emptive	6th	Use the general purpose commands of Linux: wc, od, lp, cal , date, who, whoami
	17th	First come first serve (FCFS), Shortest Job first		
	18th	Revision of the Unit II		
7th	19th	Deadlock, Conditions for Dead lock Methods for handling deadlocks	7th	Using the simple filters: pr, head, tail, cut, paste, nl, sort
	20th	Dead Prevention, Deadlock Avoidance		
	21st	Deadlock detection ,Recovery from deadlock		
8th	22nd	Definition – Logical and Physical address Space	8th	Communication Commands: news, write, talk, mseg, mail, wall
	23rd	Swapping, Memory allocation partition		
	24th	Class Test of Topics Covered		
9th	25th	Internal and External fragmentation and Compaction	9th	Write a shell program that finds the factorial of a number
	26th	Paging – Principle of operation, Page allocation		
	27th	Hardware support for paging, Disadvantages of paging		
10th	28th	Protection and sharing	10th	Write a shell program that finds whether a given number is prime or not
	29th	Segmentation, Virtual Memory		
	30th	Class Test of Unit III		
11th	31st	Dedicated Devices, Shared Devices,	11th	Write a shell program to find the average of three numbers
	32nd	I/O Devices, Storage Devices,		
	33rd	Buffering, Spooling		
12th	34th	Types of File System; Simple file system	12th	Write a shell program that will

	35th	Basic file system, Logical file systemPhysical file system		convert all the text of the file from lowercase to uppercase
	36th	Various Methods of Allocating Disk Space		
13th	37th	History of Linux and Unix, Linux Overview	13th	Practice the general purpose commands of Linux
	38th	Structure of Linux, Linux releases, Open Linux,Linux		
	39th	Linux Commands and Filters: mkdir, cd,rmdir, pwd, ls, who, whoami,		
14th	40th	cp, mv, rm,pg,more, pr, tail, head, cut, paste, nl	14th	Practice Shell Programming
	41st	grep, wc, sort, kill, write, talk,mseg, wall, merge,mail, news		
	42nd	Revision of Linux Commands		
15th	43rd	Shell: concepts of command optionsinput, output,redirection,pipesredirecting		
	44th	and piping with standard errorsShell scripts	15th	Practice Vi editor Programs
	45th	vi editing commands and Revision of Shell Script and vi editor		