**Post Graduate Govt. College for Girls, Sector-42, Chandigarh**

**Teaching Plan for Post Graduate (First Semester)**

**Session (2020-2021)**

**Class: M.Sc (IT) Sem 1 Name of the Teacher: Dr. Anu Chawla**

**Subject: Linux System Administration and Programming Paper: MS - 66**

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| **S. No** | **Dates** | **Topics to be Covered** |
| Week 1 | 03/11/2020 – 07/11/2020 | Introduction to Linux: Functions of an operating system, Linux's History , different flavors of Linux |
| Week 2 | 09/11/2020 – 12/11/2020 | Minimum System Requirements for installing Linux: Using LILO; Linux's fdisk. |
| Week 3 | 16/11/2020 – 21/11/2020 | Using Linux: Starting and Stopping your Linux System, Linux Shutdown Commands, Login, Passwords; Linux Error Messages, Search Paths, |
| Week 4 | 23/11/2020 – 28/11/2020 | Input and Output Redirection, Man pages, Wildcards: \* and ?, Environment Variables, process Commands: ps, kill, su command;, |
| Week 5 | 01/12/2020 – 05/12/2020 | vi text-editor. GREP pattern searching command |
| Week 6 | 07/12/2020 – 12/12/2020 | Using the File System : Files Overview, Common types of files, file and directory management commands, Absolute and relative filenames; pwd, cd, rm, |
| Week 7 | 14/12/2020 – 18/12/2020 | cat, mkdir, mv, cp;, Important directories in the Linux file System: / , /home, /bin, /usr, /usr/bin, /usr/spool, /dev, /usr/bin, /sbin, /etc. |
| Week 8 | 21/12/2020 – 26/12/2020 | File and Directory Permissions: File and Directory ownership, User and ownership, Groups, Changing group ownership, File Permissions, UMASK Setting, Changing File Permission, Changing directory permissions; |
| Week 9 | 28/12/2020 – 02/01/2021 | Bourne Again Shell (BASH): Command-line Completion, Wildcards, Command History, Aliases, Pipelines, setting shell prompts, Job control, Customizing bash, bash variables. |
| Week 10 | 04/01/2021 – 09/01/2021 | Shell Programming: Creating and Running Shell Programs, Using variables, Positional Parameters and other built-in Shell Variables; importance of quotation marks, test Command, Conditional Statements: if Statement, case Statement; |
| Week 11 | 11/01/2021 – 16/01/2021 | Iteration Statements: for Statement, while Statement, until Statement, shift Command, select Statement, repeat Statement, Functions. |
| Week 12 | 18/01/2021 – 23/01/2021 | Linux for System Administrators: System Administration Basics, The root Account, Starting and Stopping the System; Mounting File Systems: Mounting a Device, Creating a New file System, Un-mounting file Systems, |
| Week 13 | 25/01/2021 – 30/01/2021 | Checking file Systems, Compressing files with gzip and compress: Using tar, Backups, Setting the Login Message, Setting of DNS, Ping, WWW, and e-mail. |
| Week 14 | 01/02/2021 – 06/02/2021 | PERL: Creating and Executing Perl Programs, Handling Data in Perl: Variables, Numbers, Strings, File Operators: Arrays, Perl Programming Constructs: Statement Blocks, If Statements, unless Statements, |
| Week 15 | 08/02/2021 – 13/02/2021 | for Statements, for each Statements, while Statements, until Statements, Functions: Passing Arguments to Functions, Using Return Values; Perl Operators. |
| Week 16 | 15/02/2021 – 20/02/2021 | System Calls: C as System Programming Language, I/O system calls – umask(); create(); open(); read(); write(); lseek(); dup(); link(); access(); chmod(); chown(); |
| Week 17 | 22/02/2021 – 27/02/2021 | Process management system calls; fork(); getpid(); getppid(); exit(); wait(); sleep() ; Signal system calls – kill(); signal(). |