

**JYOTI NIVAS COLLEGE AUTONOMOUS
SYLLABUS FOR 2018 BATCH AND THEREAFTER**

Programme: B.C.A

Semester: IV

UNIX PROGRAMMING

Course Code: 18BCAIVT4

No. of Hours: 60

COURSE OBJECTIVES:

- Use the standard Unix editor 'vi'
- The various types of commands such as basic commands, directory and file related, pipe and filter related commands are executed on the shell.
- Implement shell scripts using this editor involving decision control, looping and control flow statements.

LEARNING OUTCOMES:

- Student will be write awk programs to perform text processing
- Student will have clear understanding about the file management and permission commands.

UNIT - I

14 HRS

Introduction: History - Salient features of UNIX - UNIX system architecture.

UNIX File System: UNIX files system - Boot Block, Super Block, Inode Table, and Data Blocks – File and directory related Unix commands : ls, cat, mkdir, rmdir, cd, cp, mv, ln- File and Directory permissions – chmod command and usage.

Essential Unix commands: passwd, cal, bc, tty, stty, touch, file, wc, sort, cut, grep, dd, viewing files: head, tail, more, pg, Taking printouts: lp, lpstat, cancel, File Compression: compress, pack, uncompress, unpack, online Unix manual: man.

UNIT- II

16 HRS

I/O Redirection and Piping: I/O redirection – Piping Pipelining commands – Filters and various filter Commands.

Processes in UNIX: Process definition – States of Process – Listing of processes with PS - Process killing - Background process - Changing process priorities with nice.

UNIT - III

18 HRS

Shell Programming - Basics: Types of Shells - Shell variables - Shell parameters.

Shell Programming: Control Structures: If, while, until, for, continue.

System Administration: User and supervisory privileges and facilities, controlling processes, accessing the file system, security issues.

UNIT IV

05 HRS

UNIX System Communication: Introduction, Write, Read, Mesg, Wall commands, sending and handling mails.

UNIT V

07 HRS

Special tools and Utilities: SED, AWK, UNIX system calls and library functions Signals and interrupts.

REFERENCES:

1. Yashwant Kanethkar .Unix Shell programming. By BPB publications, 2005. 6th Edition.
2. Sumitabha Das. UNIX Concepts and Applications. Tata McGraw-Hill Education, 2006, 4th Edition.
3. Brian W. Kernighan ,Rob pike “The Unix programming environment”, Prentice Hall of India Private Ltd.2004. 2nd Edition.