UNIX

MODULE-1

1]- UNIX Architecture (Kernel & Shell Relationship)

2]- Salient features of UNIX

3]- Basic UNIX commands → Echo / printf.
→ ls
→ who
→ passwd
→ date
→ cal.

4]- Internal and External commands.

5]- mkdir & rmdir., pwd, cd, man

6]- Basic File categories and File Types

7]- Absolute and relative pathnames.

8]- parent-child relationship.

9]- File related commands - cat, mv, rm, cp, wc & od.

MODULE - 2

1]- File attributes - LS command.

2]- Changing file permissions - absolute & relative permissions.

3]- Wild cards

4]- Standard files in UNIX

5]- grep command.

6]- if and while control statements

7]- Escaping and quoting

8]- Shell program to create simple calculator.

MODULE - 3

1] - General unix file APIs.

2] - File and Record Locking.

3] - Device and FIFO File APIS.

4] - Symbolic link File APIs.

5] - Memory layout of C program.

6] - fork, vfork & exit, wait, waitpid, wait3, wait4 Functions.

7] - Race condition & polling.

8] - Process Termination.

9] - Process creation.

10] - setjmp & longjmp, getrlimit & setrlimit.

11] - UNIX Kernel support for processes.

MODULE - 4

1] - Changing User IDs and Group IDs, Process accounting & times.

2] - IPC Methods
- Pipes.
- popen and pclose functions
- FIFOs.
- Message queues
- Semaphores
- System V IPC.

3] - Shared memory → Client - server interaction.

MODULE - 5

1]. Signals - UNIX support for signals.

2]. Signal Mask - WAP

3]. SIGchild signal.

4]. sigsetjmp and siglong jump.

5]. kill() API and alarm() API.

6]. POSIX.1b Timers.

7]. Daemon processes → characteristics
→ Coding rules
→ Error Logging
→ Client - server model.