

MCA/D-15
LINUX AND SHELL PROGRAMMING
PAPER-MCA-502

Time Allowed: 3 Hours

Maximum Marks: 80

Note: Attempt Five questions in all, selecting at least one question from each Unit.
Question No. 1 is compulsory. All questions carry equal marks.

Compulsory Question

1. (a) How do you redirect outputs and error messages to specified files?
(b) How do you insert and delete records vertically in a file?
(c) What is zombie process? How it can be deleted?
(d) How file system can be mounted in Linux?
(e) Discuss the purpose of fdisk and mkefs in brief.
(f) Explain various search and yanking commands in vi editor.
(g) Illustrate iterative statements available in bash shell.
(h) What is the purpose of gbd? Discuss.

UNIT-I

2. (a) Discuss the architecture of Linux Operating System and differentiate between Linux and Unix operating system.

(b) What do you understand by regular expressions? Discuss various regular expression characters used by grep and sed. Also explain some regular expressions which are used by egrep, but not by grep or sed along with IRE and TRE
3. (a) Explain the following using general formats and examples :
(i) find (ii) comm. (iii) expand (iv) mail (v) split.

(b) Discuss the use of chmod command in symbolic and octal notations.

UNIT-II

4. (a) Explain the features of Linux/Unix filename. What are various categories of file.

(b) Discuss various types of file systems, which are used in Unix/Linux. Also explain the procedure to create a new file system.
5. (a) What are Signals? Give a brief description of few important signals. How are they handled?

- (b) How the processes can be controlled using cron and time.

UNIT-III

6. (a) Who is a super in Linux/Unix? How super user can perform following activities?

Discuss with examples.

- (i) Booting the system
 - (ii) Shutting down the system
 - (iii) Adding a user
 - (iv) Deleting a user
 - (v) Checking of file system.
7. (a) How do you define and call shell functions? How does it differ from Shell Scripts?
- (b) Write a shell script to display the number of words and numbers of lines present in a given file.

UNIT-IV

8. List and explain the various things that make file can do automatically with the help of example.
9. Write short notes on the following :
- (i) Ldd
 - (ii) Optimization of 'C' under linux
 - (iii) Soname