10411

MCA/ D-13

LINUX -AND SHELL PROGRAMNIING

Paper-MCA-5012

Time allowed: 3 hours]   [Maximum marks: 80

Note: Attempt five questions in all. Question No. 1 is compulsory. In addition, attempt exactly one question from each unit.

Compulosry Question

1. (a) Explain the Linux support for offline communication.   3
     (b) How PID numbers are useful when you run processes in background?   3
     (c) Differentiate between relative and absolute pathname.   3
     (d) How does Linux provide security to its users?   3
     (e) Explain the three modes of vi and how can you switch from one mode to another.   3
     (f) What is mount—p0int 7 How do you mount a hard disk partition?   3
     (g) Differentiate between dynamic and static libraries.   3
     (h) Explain the purpose of disk and mkfs.   3

Unit—I

2. (a) How do you 'grant and revoke permissions to Linux files and directories? Explain with suitable examples.   4

     (b) Explain following with the help of examples w.r.t. sed
        (i) deleting a line
        (ii) writing to files
        (iii) find and replace a pattern
        (iv) line addressing
        (v) context addressing.   10

3. (a) Explain the following filters in brief :

      (i) sort   (ii) cut

      (iii) tr   (iv) paste   8

     (b) Explain the commands that are used for arithmetic operations.   6

Unit—II

4. (a) What is an inode ? What happens to the inode when you move a tile within a file system?   5

     (b) What is file system? Discuss the various types of files systems.   5

     (c) How does- the kernel access a file? Explain.   4

5. (a) What is process in Linux ? Discuss the procedure to start and stop a process in detail.   7
     (b) What is meant by Signals in Linux? Discuss various type of Signal in Linux.   7

Unit—III

6. (a) List and explain the main privileges that are provided to the administrator in Linux. 7

   (b) Explain various operators provided by shell for string comparison, numeric comparison, file checking and logical operators. 7

7. (a) Discuss various control structures and loops in shell in Linux. 7

   (b) Write a script to check whether a given string is Palindrome or not. 7

Unit—IV

8. What do you understand by make file? How projects can be handled using make file? Design a make file with the help of dependency calculations using suitable examples. 14

9. (a) Write short notes on ldd tool and so name. 7
   (b) How is gdb useful in debugging? Explain. 7