M.Sc. Information Technology 1st Semester

(1129)

LINUX SYSTEM ADMINISTRATION AND PROGRAMMING

Paper : MS-66

Time Allowed : Three Hours]   **[Maximum Marks : 80**

Note :— Attempt **FIVE** questions in all, including Question No. **9** which is compulsory and selecting **one** question each from Sections A to D.

SECTION—A

1. (a) Discuss various distributions of Linux Operating System.

8

(b) How will you install Linux Operating System from a network ?   4

(c) What are various commands in vi editor for deleting characters and lines from an open file ?   4

2. Explain the following in the context of Linux :

(a) Input and output redirection   4

(b) Foreground and background processes   4

(c) Grep command   4

(d) Top command and various fields shown by this command.

4

3. (a) Discuss various important directories in the Linux file system. 4

(b) Differentiate between absolute path names and relative file names. 4

(c) What is an inode ? What information is stored in it ? 4

(d) What is command history ? 4

4. (a) Explain the following bash variables :

(i) EUID

(ii) REPLY

(iii) UID

(iv) HOSTTYPE. 4

(b) What octal values are used by umask and what is their meaning ? 4

(c) How directory permissions are changed in Linux Operating System ? 4

(d) What will be the output of command rm–f test. 4

5. (a) What are positional parameters ? Explain with the help of a program. 5

(b) Write a shell script to reverse a string. 6

(c) What is the syntax of case statement ? 5

6. As a Linux System Administrator, how do you perform the following ?

(a) Starting and stopping the system 5

(b) Mounting and Un-mounting a file system 6

(c) Differentiate between DNS and WWW. 5

SECTION—D

7. (a) Discuss various logical operators available in Perl with the help of program. 8

(b) What is dynamic array ? Explain with the help of a program. 8

8. What is a system call ? Explain the working of following system calls :

(a) chmod( )

(b) chown( )

(c) getppid( )

(d) dup( ). 4+4+4+4

(Compulsory Question)

9. (a) How will you create secure password in Linux ?   2

    (b) What is a root directory ?   2

    (c) What is an IP address ?   2

    (d) What are the commands used to schedule a process ?
                                                             2

    (e) How will you perform backup and recovery of the
         files ?   2

    (f) What are differences between PID and PPID ?   2

    (g) How a child process can kill its parent ?   2

    (h) What will be the output of the following command ?
         pg-n file 1   2