2031
M.Sc. Information Technology
First Semester
MS-66: Linux Administration and Programming

Time allowed: 3 Hours   Max. Marks: 80

NOTE: *Attempt five questions in all, including Question No. IX (Unit-V) which is compulsory and selecting one question each from Unit I – IV.*

x-x-x

UNIT – I

I.   a) What are the minimum system requirements for installing Linux? Also write down the steps to install Linux.

   b) Explain the usage of shutdown command in Linux. Also explain the various options of this command to halt, reboot and broadcast messages.   (8,8)

II. a) What is a process in Linux? Also Differentiate between background and foreground processes. Explain various Process management commands. Also explain the role of 'kill' command for managing processes.

   b) Explain the commands and files used for managing passwords in Linux.
                                                                          (10,6)

UNIT – II

III. a) Describe Linux file commands used to copy, move and remove files. Also describe the use of wildcards in these commands.

   b) List important directories of Linux File system and their need.   (8, 8)

IV. a) What do you understand by File and Directory permissions? How are they changed?

   b) Explain the use of bash shell and its customization.   (8,8)

UNIT – III

V.   a) Explain the usage of "while" and 'for" looping statements with their syntax and examples.

   b) Write a shell script to accept a valid filename and directory name from the user & check for their existence, and display a suitable message. In case both exist, display the contents of the file.   (8,8)

P.T.O.

VI.   Explain the following in the context of Linux:

   a)   Compressing Files

   b)   Mounting File System

   c)   Set a login Message "Your time will be over after one hour"

   d)   Setting of DNS   (4x4)

UNIT – IV

VII.   a) What is PERL? How are Strings managed in PERL? Give examples.
       b) How arrays are used in PERL? Write PERL code to initialize and print the elements of ID array.   (8,8)

VIII.   a) What is a function in PERL? How arguments are passed to functions in PERL? Write a function in PERL to find the factorial of a number.

       b) Explain the usage of Process management system calls for System Programming.
                                                                          (8,8)

UNIT – V

IX.   Write short answers:-

   a)   How online help is available in Linux?

   b)   How user account is different from loot account?

   c)   How are strings replaced in vi editor?

   d)   Differentiate between shell and kernel.

   e)   If 'mkdir sample' command fails to execute, what could be the possible reason?

   f)   What will you do, if you forget the root password?

   g)   Describe the role of ping command.

   h)   How comments are given in PERL?   (8x2)

x-x-x