Q.P.Code:04473

(2 ½ Hours)   [Total Marks: 75]

N.B.   1) All questions are compulsory.
        2) Figures to the right indicate marks.
        3) Illustrations, in-depth answers and diagrams will be appreciated.
        4) Mixing of sub-questions is not allowed.

Q. 1   **Attempt All (Each of 5Marks)**   (15M)
(a)   **Multiple Choice Questions**
        1.   .... is a collection of application which is combined to make an OS.
              a. Service   b. Distribution   c. Linux   d. File system
        2.   Which option of ls command used to view file inode number?
              a. –l   b. -o   c. –a   d. –i
        3.   Run level ....implies Multiple User.
              a. 0   b. 1   c. 2   d. 3
        4.   To run date first and then ls -l, which of the following is correct?
              a. date $ ls -l   b. date ; ls -l   c. date - ls -l   d. date > ls -l
        5.   Which of the following is a text editor?
              a. GNOME   b. LILO   c. emacs   d. GRUB
(b)   **Fill in the blanks**
        1.   _____ is a program that puts the operating system into memory.
        2.   _____ is an interface between process and OS.
        3.   _____ controls the command prompt settings.
        4.   _____ wild-card is used to match any number of characters including
              none.
        5.   _____ TCP/IP protocol is used for remote connection service.
(c)   **Short Answers**
        1.   State the purpose of pwd command.
        2.   What do you mean by service in Linux OS?
        3.   Define the term Kernel.
        4.   Which command is used to change the password of root? Write the same
              with proper syntax.
        5.   Write the name of command which prints the information about system
              like kernel name, operating system etc. if suitable options are given.

Q. 2   **Attempt the following (Any THREE)(Each of 5Marks)**   (15M)
(a)   Explain the relationship between Kernel and Shell with a neat diagram.
(b)   Discuss the booting process in Linux OS.
(c)   Explain the options for shutdown process: -a, -r, –h, Time, message
(d)   What are the different points which make GUI more user friendly compare to
        command line interface?
(e)   Justify the importance of Linux as OS on web services and mobiles.

(f)   Why people are moving towards free and open source systems like Linux OS? Give reasons with proper justification.

(15M)

Q. 3   Attempt the following (Any THREE) (Each of 5Marks)

(a)   Write a note on following:-
   i.   Launcher
   ii.   Dash
   iii.   workspaces

(b)   State the purpose of following commands:-
   i.   nslookup
   ii.   dig
   iii.   arp
   iv.   factor
   v.   info

(c)   Explain in brief hard link and soft link with suitable example.

(d)   What do you mean by environmental variable? Explain following environmental variables in one line.
   i.   PATH
   ii.   PS1
   iii.   HOME
   iv.   PS2
   v.   TERM

(e)   State the purpose of following directories:-
   i.   /bin
   ii.   /var
   iii.   /tmp
   iv.   /boot
   v.   /mnt

(f)   Explain the use of following commands:-
   i.   cal
   ii.   date
   iii.   who
   iv.   echo
   v.   wc

Q. 4   Attempt the following (Any THREE) (Each of 5Marks)   **(15M)**

(a)   Write a note on IP address and Domain Name System.

(b)   State the purpose of following Regular Expressions: ^ , $, * , ( ) , ?

(c)   Write a shell script to print factorial of a entered number.

(d)   Write a note on telnet.

(e)   Write a shell script to accept 2 numbers from user and one operator. Perform addition, subtraction, multiplication and division based on operator.

(f)   Assume that there is a file called "number" with following data:-

1	2
4	5
6	6
8	9

Write the purpose of awk command and command perform following:
1) Add two columns.
2) Find the average.
3) Multiply two columns.

Q. 5   Attempt the following (Any THREE) (Each of 5Marks)   (15M)

(a)   Explain processes and ps command with its options and usage?

(b)   What are the general purpose utilities in Linux? Explain with syntax and example.

(c)   Define the following terms in one or two lines:-
- Protocol
- HTTP
- TCP/IP
- UDP
- FTP

(d)   List details of ls -l command and describe each column in short.

(e)   Provide the syntax of multi-decision making statement in shell script with suitable example.