Hcell No-18
Block No-14
SS 10

FYCS
Linux
Q.P.Code:04471
17|0 4|18

(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. Which of the following OS is not based on Linux?
    a. Ubuntu   b. Redhat   c. BCD   d. None of the above
2. In Linux everything stored as a...................
    a. File   b. Directory
    c. Executable file   d. all of the above
3. Which represents the user home directory?
        a. /
        b. .
        c. ..
        d. ~
4. Which of the following is a text editor
        a. GNOME
        b. LILO
        c. emacs
        d. none of the above
5. The command "awk {print $1} san.txt" will
        a. print the first line of file san.txt
        b. print the first field of every line in san.txt
        c. generate syntax error
        d. None of the above

(b) Fill in the blanks
1. Man pages are called as _____.
2. GRUB is nothing but _____.
3. Purpose of who command is _____.
4. The sed is nothing but _____.
5. The purpose of head command is _____.

(c) Short Answers.
1. State the rules for writing a file name in Linux.
2. What do you mean by arch?
3. Define the term RPM and DEB.
4. What do you mean by shell?
5. Provide the syntax of mv command.

Q. 2 Attempt the following (Any THREE)(Each of 5Marks) (15M)
(a) Diagrammatically explain the relationship between User-Shell-Kernel in Linux architecture.
(b). Define the following terminology used in Linux :-
Desktop Environment, Package, Service, Terminal, root
(c). Differentiate between Linux Kernel and Distribution.
(d) Give the steps for boot process in Linux.

(e)   Define process. Explain ps command with its options and usage.
(f)   Discuss the importance of Linux in software ecosystem as Servers and Supercomputers.

Q. 3   Attempt the following (Any THREE) (Each of 5Marks)   (15M)
(a)   What is the purpose of the following network management commands: - ifconfig, ping, netstat, dig, nslookup.
(b)   Define environment variables. Explain its types.
(c)•   Explain the basic commands with examples:- cat, cp, mv, rm, pwd
(d)•   Discuss Linux Documentation commands: - man, GNU info, and help.
(e)   Diagrammatically explain File system architecture.
(f)   Write a note on emacs editor.

Q. 4   Attempt the following (Any THREE) (Each of 5Marks)   (15M)
(a)   Explain ssh in detail.
(b)   Define Network protocol. Explain in detail HTTP.
(c)•   What is the purpose of following commands? Give suitable example.
        ssh, telnet, ping, traceroute, hostname
(d)   Give and explain the syntax of if...else and if...elif...else command with example.
(e)•   What are the uses of root in Linux system? Explain.
(f)   Write a shell script to read a filename from the user, check whether it is an ordinary or directory file or any other type of file.

Q. 5   Attempt the following (Any THREE) (Each of 5Marks)   (15M)
(a)   Explain the meaning of shutdown command with following options:-
        -r, -h, -p, Time , message
(b)   Which are the columns of ls -l command? Explain.
(c)   Give and explain sed syntax. Also explain with examples the meaning of
        q, p, d, !, = action commands in sed.
(d)   Give the purpose of the following regular expression characters:-
        ^, $, *, ?, ( )
(e)   Explain the following compression commands:
        bzip2, bzcat, bunzip2, gzip, gunzip