

(Time 2½ 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.
 5) Assume suitable data if required or not given.

Q. 1 Attempt All(Each of 5Marks)**(15)****(a) Multiple Choice Questions**

- 1) _____ represents user's home directory.
 (a) / (b) \
 (c) ~ (d) |
- 2) _____ is not Linux distribution
 (a) Centos (b) Fedora
 (c) Ubuntu (d) MS Windows
- 3) How do you rename file "new" to file "old"?
 a) mv new old b) move new old c) cp new old d) rn new old
- 4) Full form of SSH is _____
 (a) Secure Shell (b) System Shell
 (c) Source Shell (d) Superuser Shell
- 5) Consider a command "echo "My name is khan" | gawk '{ \$4="university"; print \$4 }" will print
 (a) My name is khan (b) Khan
 (c) university (d) My name is univesity

(b) Fill in the blanks (copy, cp, \dev ,\bin, head , who, chmod)**(5)**

- 1) _____ command is used to copy files and directories?
- 2) _____ directory contain device special files
- 3) To display information of users _____ command is used.
- 4) _____ command is used to print first few lines of a file.
- 5) _____ is used to change file permissions.

(c) Short Answers**(5)**

- 1) State the rules for writing file name in Linux.
- 2) What is the need of cat command in Linux?
- 3) Define the term full duplex with respect to communication.
- 4) What do you mean by shell?
- 5) Give the name (path) of file containing user's password related information.

Q. 2 Attempt the following (Any THREE)(Each of 5Marks) (15)

- (a) Explain the relationship between kernel and shell with a neat diagram.
- (b) What are the different points which make GUI more user friendly compare to command line interface?
- (c) Justify the importance of Linux as OS on web services and mobiles.
- (d) Discuss 'init' process along with its run levels.
- (e) Explain the following options for shutdown process.
 - -a
 - -r
 - -h
 - Time
 - Message
- (f) Write use of following directories in Linux:
 - i) /etc
 - ii) /root
 - iii) /bin
 - iv) /sbin
 - v) /lib

Q. 3 Attempt the following (Any THREE) (Each of 5Marks) (15)

- (a) Write a note on following:
 - Launcher
 - Dash
 - Workspaces
- (b) State the purpose of following commands:
 - nslookup
 - dig
 - arp
 - factor
 - info
- (c) What do you mean by environmental variable? Explain following environmental variables in one line.
 - PATH
 - SHELL
 - HOME
 - PS2
- (d) Explain the use of following commands:
 - cal
 - date
 - wc
 - echo
 - whoami

- (e) Explain in brief hard link and soft link with suitable example.
- (f) Discuss following Linux Documentation commands: -
- man
 - info

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

- (a) Write a short note on FTP.
- (b) Discuss test command for file comparison.
- (c) State the purpose of following Regular Expressions:
^, \$, *, (), , ?
- (d) Write a shell script to accept 2 numbers from user and one operator. Based on the operator entered perform addition, subtraction, multiplication and division.
- (e) Write any five privileges of administrator.
- (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:

- Add two columns.
- Find the average.
- Multiply two columns.

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

- (a) State the use of ps command with any 4 options.
- (b) Explain following file compression utilities:
- bzip2
 - gzip
- (c) Describe following terms
- HTTP
 - TCP/IP
- (d) List option of ls -l command and describe each column in short.
- (e) Discuss IP address.
