

**Babu Madhav Institute of Information Technology,
Uka Tarsadia University**

5 years Integrated M.Sc. (IT) (4th Semester)

Subject: 060010410 – CC12 – LINUX and Shell Programming

Unit Test - 1

Duration: 90 minute

Max. Marks: 30

Date: 07/01/2017

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks allocated to that question.
4. Draw diagrams/figures whenever necessary.

Q-1 (A) Do as directed.

[1 * 4 = 4]

- I) How do you get the value of 10th positional parameter?
- II) What will be the output of following code snippet? Assume that file LINUX.txt having 7 lines.

```
while read n
do
    echo '$n'
done < LINUX.txt
```

- III) Suppose you are executing a command and that command is having an error. How do you get that command is successfully executed or not?
- IV) Why shell is known as command interpreter? Write an absolute path for bash file.

Q-1 (B) Answer the following in brief. (Any 3)

[2 * 3 = 6]

- I) What information is contain by \$# variable? Write a shell script that display command line arguments one in each line.
- II) What is the output of following code segment? Why? Assume that you are passing three command line arguments.

```
for i in $*
do
    echo $i
done
echo "======"
for i in "$*"
do
    echo $i
done
```

- III) Write a difference between absolute path and relative path using example.
- IV) List any six file operators. Write a code snippet that check the directory file.

Q-2 Answer the following

[5 * 2 = 10]

A) Do as directed.

- 1) Write a shell script that take a file name as input from user and check that file is exists or not and if exists then check file is directory or regular file.

- 2) Write a script program that accept a number from command line and count number of odd and even digits within given number. Do appropriate command line validations.

Ex. If user input number 1245789 then the output Odd digits are four and even digits are three.

OR

A) Do as directed.

- 1) Write shell script that print total number of regular files and total number of directory files from current directory. (Do not use grep and wc command.)
- 2) Write a script which takes a number as input from command line and display it in word form as given below. Put appropriate command line validation.

Input: 56

Output: Five Six

Input: 3490

Output: Three Four Nine Zero

B) Do as directed.

- 1) Convert the following permission code to octal.
a) u=rwx,g=x,o=x **b)** u-rx,g+w,o-x **c)** =r **d)** a+rw **e)** u-x,g+w,o-r
- 2) Convert the following permission to rwx triplets.
a) 110 **b)** 505 **c)** 777 **d)** 15 **e)** 101

OR

B) Do as directed.

- 1) Write a command which display calendar of January month of 2025.
- 2) Write a command that display time in hour:minute:second format. Like 05:20:45.
- 3) Write a command which set full permissions at all the level while you create new directory.
- 4) Write a command to apply following permission on file LINUX.txt. Use octal code.
a) r-xrw-rwx **b)** rw-r-x--x
- 5) Write a single command to move in to the directory "Demo" which is located in "Desktop" directory. Your current directory is "home". "Desktop" directory is located in "home" directory.

Q-3 Answer the following in detail. (Any 2)

[5 * 2 = 10]

- A) What are three levels of security in UNIX? List types of files available in UNIX. Explain four blocks in file system implements in UNIX.
- B) User execute a command **ls -l a***. How shell interpret the command? Explain the steps in detail with given command example.
- C) Write an absolute path for the file which stores information about user including user name and password. How UNIX provide a security on password though it is available publically to all user? List and describe the columns of that file.