

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

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

060010410 – CC12-Linux and Shell Programming

Unit Test 1

Duration: 90 minute

Max. Marks: 30

Date: 12/01/2018

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) What “~” (tilde) symbol represents in directory paths? Assume that your current directory is “Desktop”; Write a command which change your current directory to root directory.
- II) Define command substitution with example.
- III) Which are three levels of security in LINUX?
- IV) What is the output of following code block?
While read line
do
 echo \$line
done < demo.txt

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

[2 * 3 = 6]

- I) Differentiate sequential and chained command execution with example.
- II) Write a code snippet to determine if a given file name is directory and exist.
- III) Brief the meaning of read only variable with example. Can we unset read only variable? Justify.
- IV) Assume that user executing a script and pass 1 2 3 4 5 values from command line; What will be the output of following code block?

```
for a in "$@"  
do  
    echo "$a"  
done
```

```
for a in "$*"  
do  
    echo "$a"  
done
```

Q-2 Answer the following**[5 * 2 = 10]**

A) Write “chmod” command for following set of permissions on file Linux.txt using symbolic code and octal code.

- | | | |
|--|--------------------------------|------------------------------|
| i) User: read, execute | Group: execute only | Other: read only |
| ii) User: read only | Group: execute only | Other: read only |
| iii) User: read, write, execute | Group: write, read | Other: read, write |
| iv) User: read, write | Group: read, write | Other: write, execute |
| v) User: write only | Group: read and execute | Other: remove all |

OR

A) What are the default permission will be set on newly created file and directory by applying following user mask. Write an **rwX** triplets for default permission on newly created files and directory.

- i) 000
- ii) 667
- iii) 777
- iv) 105
- v) 167

B) Write a shell script that takes a number from command line and count number of odd and even digits within given number. Put appropriate command line validation.

Ex. If user input number 1245789 then the output Odd digits are 4 and Even digits are 3.

OR

B) Write a shell script that takes a number from command line and extract middle digit from the given number. Put appropriate command line validation.

Ex. If user input 123 then the output is 2.

If user input 1234 then do not extract any digit and print appropriate message.

Q-3 Answer the following in detail. (Any 2)**[5 * 2 = 10]**

- A) Which permissions are necessary to read the content of directory? Explain output of “ls -l” command with example.
- B) List any four special parameters. Explain positional parameters with appropriate example.
- C) If user issue a command “ls -r ~/Desktop/Script” then what are the steps involve to execute the following command? List and explain the process to execute a command steps by step with the help of above example.