Babu Madhav Institute of Information Technology,
Uka Tarsadia University

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

Subject: 060010403 – Linux and Shell Programming

Unit Test 1

Duration: 90 minute **Max. Marks: 30**

Date: 22/02/2016

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 are the three levels of security in UNIX/LINUX?

II) Write the full path for file where the user's passwords are stored? What is the default userid assigned by the system for Super User?

III) How can you ensure that previous command was successfully execute?

IV) What is the difference when you use '>' and '>>' in file redirection?

Q-1 (B) Answer the following in brief. (Any 3) **[2 * 3 = 6]**

I) List the four blocks of UNIX/LINUX file system. Brief any one.

II) What will be the output of following code? Why?

```
B="5"
echo '$B'
echo "$B"
```

III) State the two key differences between hard-link and soft-link using block diagram.

IV) Which permission is necessary to read the content of directory file? What directory file contains?

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

A) How to set default permission of files in UNIX/LINUX? Explain with setting default permission as follow:
i) For regular file set read and write permission for user, read and execute permission for group and only read permission for other.
ii) For directory set write and execute permission for user, execute permission for group and only read permission for other.
iii) For regular file set all permission for user and group, read permission for other.
iv) For directory set write and execute permission to user and group, execute permission to other.

OR

A) What are the methods to change the permission of file? Explain all methods in details to set following:
i) To set read permission for user and remove write permission from group and other.
ii) To set read, write and execute permission for user and set execute permission to group and remove write and execute permission from other.
iii) To set all read, write and execute permissions to all user, group and other.

B) Write a shell script that take a file name as input from command line and check that file is exists or not and if exists then check file is directory or regular file or symbolic link file. Also check file is readable, writable and executable or not. Put proper validation in argument processing.

OR

B) Write shell script that print total number of regular files and total number of directory files from current directory.

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

A) What is process? What are the three process states? Describe foreground and background processes. Discuss how to move between foreground and background job?

B) Describe each field in the output of 'ls –l' command with example.

C) Write a note on shell's command interpretation cycle with the help of example.