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 - 2

Duration: 90 minute   **Max. Marks: 30**
                                                                      Date: 15/03/2017

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) What is pipe? Which token is used to denote pipe?

II) What is the significance of "*null*" file? Write an absolute path for "*null*" file.

III) What is the difference between "*cat*" and "*paste*" command while you used it for merge two files?

IV) What will be the output of following?
    $ a=10
    $ a=a+5
    $ echo $a

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

I) What is the output and interpretation of following commands?
   1. a="ls"
      eval echo $a

   2. p=50
      q=p
      echo $q
      eval ec0ho \$$q

II) List any four options of "*cut*" command with its purpose.

III) Is there any dependency between commands when you execute commands using sequenced command execution type? Give an example of sequenced command execution.

IV) How to define constant in shell script? What is the use of "unset" command?

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

A) **Do as directed.**
   Write a command line script that accept department name from command line and display the total salary of employees who are belongs to that department. Put appropriate command line validations.
   Assume that following is the file namely "Employee.txt" and the fields in file are as follow. Use colon ":" as field delimiter.
        Employee (emp_id : emp_name : designation : salary : department)

OR

A) **Do as directed.**

Write a command line script that accept enrollment number from command line and display the result grade sheet of student. Put appropriate command line validations. Assume that following is the file namely "Student.txt" and the fields in file are as follow. Use colon ":" as field delimiter.

Student (enroll_no : student_name : course : mark_1 : mark2 : mark_3 : mark_4 : mark_5)

B) Do as directed: Refer **"txt1"** and **"txt2"** for input and **"output"** to write an output.
1. Write a command to cut 3rd to 5th character of all lines of "txt1" and store result in "output" file.
2. Write a command to cut 2nd and 5th field from "txt1" file.
3. Write a command to display 4th to 8th lines from "txt1".
4. Write a command to merge content of "txt1" and "txt2" horizontally.
5. Write a command to numerically sort the content of file "txt1" based on 4th field. Assume that 4th field is numeric field.

OR

B) **Do as directed.**
1. Write a script that takes file name from command line and displays file permission in user readable form. Put appropriate command line validations. Take necessary assumption if any.
   Suppose file having read and write permission for user.
   Output: Readable Writable.
2. Write a default permission triplets for newly created files and directory when you set following user mask.
   1. 000
   2. 341
   3. 002
   4. 121
   5. 426

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

A) Write a detail note on redirection with example.

B) What is job? Write a key difference between background job and foreground job. Explain any three commands of job control with example.

C) List three quotes supported by shell. Explain each with appropriate examples.