



DJ-1902

B. C. A. (Sem. V) Examination
September / October – 2007
Unix & Shell Programming : Paper - 502

Time : Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दृष्टांतव निशानीवाणी विगतो उत्तरपदी पर अवश्य लपवी.
Fillup strictly the details of signs on your answer book.

Name of the Examination :
B. C. A. (Sem. 5)

Name of the Subject :
Unix & Shell Programming : 502

Subject Code No. : **1 9 0 2** Section No. (1, 2,.....) : **Nil**

Seat No. :

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Student's Signature

I Answer the following questions in brief :

14

- (1) What do you mean by block and character special devices?
- (2) What is the role of login program?
- (3) How can you know the location of a command file?
- (4) Is the option really optional? Justify your answer with an example.
- (5) Where is the password stored?
- (6) How will you record your login session in the file x1.
- (7) Where are the system administration's commands and configuration files stored?
- (8) List at least two commands that don't create process.
- (9) Which vi editor command moves cursor to the beginning of line?
- (10) Which ls option marks directories and executable files separately?
- (11) What is the difference between yank and delete in vi editor?
- (12) Define process. Which process do you think may have the maximum number of children?

DJ-1902]

1

[Contd...

- (13) Which processes cannot be killed using the kill command?
- (14) Explain the difference between utilities and applications.
- (15) What is the purpose of special files/dev/null?
- (16) When do wildcard characters lose their meaning?
- (17) How can you make out whether two files are copies or links?
- (18) You removed the write permission of a file from group and others, and yet someone (other than super user) could delete your file. How could that happen?

- 2 (a) Write an awk script to print the file *myfile.txt*. The output should be such that there should be only 25 characters in each line. If a line in the file exceeds 25 characters, the remaining characters should be printed in the next line.

OR

- (a) Write an awk script that calculates frequency of palindrome words in a text file.
- (b) Attempt any one :
 - (1) Develop a shell script that creates 100 files with the name bca001 up to bca100.
 - (2) The distance between two cities (in terms of kms) is input through the keyboard. Write a shell script to convert it in meters, feet, inches and cms.
- (c) Explain default directory structure created during the installation of Unix OS.

- 3 (a) Do as directed : (any ten)
- (1) Write a command to display file names of working directory having first and last character must be an alphabet.
 - (2) Write a command to list the users logged in more than once.
 - (3) Write a command to display all files having length greater than equal to 25 characters.
 - (4) Write a command to display system processes.
 - (5) What is the use of shift command in Unix?
 - (6) What do you mean by command substitution?

- (7) Define internal and external command in Unix.
- (8) When is it appropriate to schedule a process using at command?
- (9) What is the importance of regular expression?
- (10) What is the use of kill command?
- (11) What does \$\$\$*\$ pattern match?
- (12) How will you remove duplicate lines from a file? Assume that file is unsorted.
- (b) Explain shell meta-characters with example. 4
- 4 (a) Answer the following : (Any three) 12
- (1) Explain any one command used for backup and recovery. Discuss its various options.
- (2) Explain position parameters with an example.
- (3) Distinguish between a sequence of commands, a group of commands and a chain of commands.
- (4) Explain access permission for directory and file.
- (b) Explain set commands of ex mode of vi editor. 2
- 5 (a) Write an appropriate command for the following : 8
(any eight)
- (1) To replace all occurrence of word zenix with word Unix but only on those lines where the word "operating" found in file INFILE.
- (2) To display those lines between 25 and 50 having pattern 'unix' in it.
- (3) To replace multiple-spaces with a space.
- (4) To select files having read and write permission for all categories of users
- (5) To display those lines that contain two or more consecutive instances of any word.
- (6) To count number of characters in last line of file x1.

- (7) To display those lines of file emp.dat in which third field contains 'director' or 'chairman'.
- (8) Display from /etc/passwd a list of users and their shells for those using the korn shell or bash.
- (9) To locate lines that contain hardware, software or firmware.
- (10) To count all lines that end with digit.

(b) Answer the following: (any three)

- (1) Explain TRE features of sed with suitable example.
- (2) Explain arithmetic functions available with awk utility.
- (3) Locate lines where the occurrences of any three consecutive and identical characters (e.g. aaa, bbb, ...) using
 - (i) grep and
 - (ii) sed.
- (4) State the significance of the following built in variable of awk utility:
 - (i) FILENAME
 - (ii) NF