CBCS Scheme

USN | | | | | | | | | | |

15CS35

Third Semester B.E. Degree Examination, June/July 2017
Unix and Shell Programming

Time: 3 hrs. Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

1 a. With a neat diagram, explain the architecture of Unix operating system. **(08 Marks)**

b. With the help of a diagram, explain the parent – child relationship in Unix File System. **(04 Marks)**

c. Explain the following commands with the syntax and example :
i) tty ii) printf iii) date iv) Uname **(04 Marks)**

OR

2 a. Explain the salient features of Unix operating system. **(08 Marks)**

b. Differentiate between external and internal commands in Unix with suitable example. **(04 Marks)**

c. Explain the following commands with syntax and example :
i) stty ii) echo iii) cal iv) passwd **(04 Marks)**

Module-2

3 a. Illustrate with a diagram typical Unix file system and explain different types of files supported in Unix. **(08 Marks)**

b. Name the command used for creating, deleting and changing the directory. Explain with the syntax and example. **(08 Marks)**

OR

4 a. Which command is used for listing file attributes? Explain the significance of each field in the output. **(08 Marks)**

b. Files current permissions are rw - - w – r - - write chmod expressions required to change them for the following.
i) r - - r - - - - x ii) rwxrwx - - x iii) r - xr - xr - x iv) rwxrwxr - -.
Using both relative and Absolute methods of assigning permissions. **(08 Marks)**

Module-3

5 a. Explain the three modes of Vi and explain how can you switch from one mode to another. **(04 Marks)**

b. Explain what these wild – card pattern match :
i) [A – Z] ????* ii) *[!0 – 9]* iii) * · [!S] [!h] **(06 Marks)**

c. With suitable examples, explain the grep command and its various options. **(06 Marks)**

OR

6 a. Briefly explain the extended Regular expression with an example. **(06 Marks)**

b. Explain the three sources of standard input and standard output. **(04 Marks)**

c. Write the Unix commands for the following :
   i) Find and replace all the occurrences of "Unix" with "UNIX" in the text file after confirming the user. [Vi editor command].
   ii) To delete all files with three character extension except "·out" from current directory.
   iii) List all the files in PWD which are having exactly five characters in their filename and any numbers characters in their extension.
   iv) Writing the first 50 lines to another file. [Vi editor command].
   v) Inserting a text at the beginning of the line. [Vi editor command].
   vi) Searching for a pattern in backward direction. **(06 Marks)**

Module-4

7 a. What is shell programming? Write a shell program to create a menu and execute a given options based on users choice. Options include
   i) List of users ii) List of processes iii) List of files
   iv) Current date v) Content of files vi) Display current login users. **(10 Marks)**

   b. Explain the following with an example: i) head ii) tail iii) cut. **(06 Marks)**

OR

8 a. What is shell script? Explain the following statements with syntax and example :
   i) if ii) case iii) while. **(10 Marks)**

   b. Distinguish between hard links and soft links with suitable example. **(06 Marks)**

Module-5

9 a. Write a Perl script to determine whether the given year is a leap year or not. **(08 Marks)**

   b. Explain the mechanisms of process creation. **(06 Marks)**

   c. What is an associative array? **(02 Marks)**

OR

10 a. Explain the following in PERL with example. i) Split iii) Join. **(08 Marks)**

   b. Explain variables and operators in PERL. **(06 Marks)**

   c. Briefly explain the subroutines in PERL. **(02 Marks)**

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