

CBCS Scheme

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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 :
- Find and replace all the occurrences of "Unix" with "UNIX" in the text file after confirming the user. [Vi editor command].
 - To delete all files with three character extension except ".out" from current directory.
 - List all the files in PWD which are having exactly five characters in their filename and any numbers characters in their extension.
 - Writing the first 50 lines to another file. [Vi editor command].
 - Inserting a text at the beginning of the line. [Vi editor command].
 - 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
- List of users
 - List of processes
 - List of files
 - Current date
 - Content of files
 - Display current login users.
- b. Explain the following with an example: i) head ii) tail iii) cut.

(10 Marks)

(06 Marks)

OR

- 8 a. What is shell script? Explain the following statements with syntax and example :
- if
 - case
 - while.
- b. Distinguish between hard links and soft links with suitable example.

(10 Marks)

(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 ii) 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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