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06CS36

Third Semester B.E. Degree Examination, Dec.08/Jan.09
UNIX & Shell Programming

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions, selecting at least TWO questions from each part.***

PART – A

1 a. Explain the salient features of UNIX operating system. **(07 Marks)**

b. Explain the concept of absolute pathname and relative pathname with suitable examples. **(04 Marks)**

c. What is parent –child relationship? With the help of neat diagram explain, UNIX file system tree. **(05 Marks)**

d. What is the output of the following command. **(04 Marks)**

(i) echo $PATH
(ii) man man
(iii) cmp f_1 f_2 [f_1 and f_2 are identical]
(iv) ls -i

2 a. What is file permission? What are the different ways of setting file permission? Explain **(08 Marks)**

b. Explain the following with respect to vi editor. **(06 Marks)**

(i) Search for a pattern printf, then repeat the search in both forward and backward direction
(ii) : $s | director | member | g
(iii) : .w tempfile
(iv) : . , $w tempfile
(v) recover
(vi) 20h

c. Explain the different modes of operation in a vi editor with a suitable diagram. **(06 Marks)**

3 a. Explain the concept of Escaping and quoting with suitable examples. **(06 Marks)**

b. Frame wild card pattern for the following: **(06 Marks)**

(i) Retrieve hidden files
(ii) Any number of characters followed by 4 characters.
(iii) Matches all filenames that do not begin with an alphabetic character.

c. What is a process? Explain how a process is created using the three primitives fork, exec and wait. **(08 Marks)**

4 a. Discuss standard input, standard output and standard errors files, in UNIX. **(06 Marks)**

b. Explain the following environment variables with examples. **(06 Marks)**

(i) SHELL
(ii) PS2
(iii) HOME

c. Explain the following commands with examples. **(08 Marks)**

(i) tr
(ii) tee
(iii) sort
(iv) pr

PART – B

5 a. Explain grep command with any five options with suitable examples. **(06 Marks)**

b. List and explain Extended Regular Expression (ERE) set used by grep, egrep and awk. **(06 Marks)**

c. Explain the following:

(i) sed '3q' abc

(ii) ls –l | grep '^d' > directories

(iii) sed –n '$p' abc

(iv) sed –n '3 , $!p' abc **(08 Marks)**

6 a. Explain special parameters used by the shell. **(06 Marks)**

b. Explain the expr command applicable to numeric and string functions. **(06 Marks)**

c. Explain here document with an example. Also mention its use. **(04 Marks)**

d. Explain trap in shell scripts with a suitable example. **(04 Marks)**

7 a. Explain awk built-in variables and built-in function with suitable examples. **(10 Marks)**

b. Explain if statement, for and while loop statement with respect to awk with suitable example. **(10 Marks)**

8 a. Explain the following in perl.

(i) split

(ii) join

(iii) $ - default variable **(06 Marks)**

b. Using command line arguments, write a perl program to find whether a given year is leap year. **(07 Marks)**

c. Write a perl program that accepts decimal number as arguments and convert it into binary number. **(07 Marks)**

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