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06CS36

Third Semester B.E. Degree Examination, June 2012
UNIX and Shell Programming

Time: 3 hrs.

Max. Marks: 100

Note: Answer FIVE full questions, selecting atleast TWO questions each from Part – A and Part - B.

PART - A

- 1 a. Discuss the salient features of UNIX operating system. (06 Marks)
b. Explain the different file types available in UNIX operating system. (06 Marks)
c. What are internal and external commands in UNIX? Explain three of them each with examples. (08 Marks)
- 2 a. Interpret the significance of the seven fields of the `ls - l` output. (06 Marks)
b. What are file and directory permissions? Explain how directory permissions are used in conjunction with file permissions to determine the overall permission. (06 Marks)
c. Explain the three modes of the Vi Editor. (06 Marks)
d. Write a command line to concatenate two files `foo1` and `foo2` with some text input from the terminal inserted between the contents of these two files. The output has to be stored in a file called `foo2`. (02 Marks)
- 3 a. Mention some of the wildcards that could be used with the shell and explain the special meaning associated with them in the shell environment. How do you turn off the meaning of a meta character? (06 Marks)
b. Explain the process in UNIX and the mechanism of process creation. (06 Marks)
c. Explain the following environment variables :
i) `CDPATH` ii) `TERM` iii) `PSI` iv) `IFS`. (08 Marks)
- 4 a. It is required to count the number of regular file, that exist under the current directory. Write a UNIX command line that does this and very briefly discuss the purpose of using different components that exist in the command line. (06 Marks)
b. Explain the following commands with examples : i) `umask` ii) `touch`. (06 Marks)
c. Discuss the various options available for `sort` command with examples. (08 Marks)

PART - B

- 5 a. Explain `grep` command with all options using examples. (10 Marks)
b. Discuss line addressing and context addressing used in `sed` command. Illustrate with examples. (10 Marks)
- 6 a. What is shell programming? Explain with examples, how expressions are evaluated in shell programming. (08 Marks)
b. Discuss the significance of shell parameters `$*`, `$#`, `$?` and `$O`. (06 Marks)
c. Write a shell script that accepts a string from the terminal and echo a suitable message if it does not have at least 10 characters using i) `case` iv) `expr`. (06 Marks)
- 7 a. What is `awk`? Discuss any three built – in functions available in `awk`. (10 Marks)
b. Discuss the various built – in variables used by `awk`. (10 Marks)
- 8 a. Discuss how lists and arrays are used in PERL with examples. (10 Marks)
b. Mention the different file test operators available in PERL. Discuss how these operators are used for file testing. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.