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First Semester MCA Degree Examination, Dec. 2013/Jan. 2014
Introduction to UNIX

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1
 - a. Discuss the architecture of UNIX operating system with the help of a neat diagram. (10 Marks)
 - b. Explain any four characteristics of UNIX operating system. (04 Marks)
 - c. Explain the following commands, with examples. (06 Marks)
 - i) who
 - ii) cat
 - iii) script.

- 2
 - a. Explain the parent – child relationships between the various files in the organization of files in UNIX. Also give the meanings of dot (.) and double dot (..) (12 Marks)
 - b. Explain the following commands, with suitable examples : (08 Marks)
 - i) bc
 - ii) wc
 - iii) mkdir
 - iv) rmdir.

- 3
 - a. How are the shell variables defined, given values, and evaluated? Discuss. (05 Marks)
 - b. Illustrate the usage of command line arguments with the help of an example. Also discuss the positional parameters. (10 Marks)
 - c. Write a shell script which accepts valid login names as arguments and prints their corresponding home directories. If no arguments are specified print an appropriate error message. (05 Marks)

- 4
 - a. What is `ls` command? Explain in detail, the `ls -l` option. (08 Marks)
 - b. Explain the `chmod` command, in detail. (08 Marks)
 - c. Differentiate between hard link and soft link. (04 Marks)

- 5
 - a. Explain the following commands, with example : (08 Marks)
 - i) cut
 - ii) sort
 - iii) tr
 - iv) uniq.
 - b. Explain line addressing using `sed` command. (06 Marks)
 - c. Differentiate between `egrep` and `fgrep` commands. (06 Marks)

- 6
 - a. Explain the built-in variables and built-in functions of an `awk` script. (10 Marks)
 - b. Write an `awk` script to delete duplicated lines from a text file. The order of the original files must remain unchanged. (10 Marks)
 - c. Write the usage of the following, with example : (10 Marks)
 - i) eval
 - ii) expr.

- 7
 - a. What is a process? Explain the mechanism of process creation in UNIX. (06 Marks)
 - b. Explain the following commands : (06 Marks)
 - i) cron
 - ii) batch
 - iii) nice.
 - c. Explain the start up and shutdown procedure in UNIX. (08 Marks)

- 8
 - a. Briefly discuss the privileges of system administrator. (05 Marks)
 - b. List any three names of Linux distribution. (03 Marks)
 - c. Explain how to insert and replace text in emacs editor. (04 Marks)
 - d. Explain the following : internal and external commands and system variables. (08 Marks)

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