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Third Semester B.E. Degree Examination, June/July 2013
UNIX and Shell Programming

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1 a. Discuss the history of the UNIX operating system. (05 Marks)
- b. With a neat sketch, explain kernel-shell relationship of the UNIX operating system. (05 Marks)
- c. Explain the following with example: i) Script; ii) echo; iii) who. (03 Marks)
- d. Define file. Explain 3 categories of files in UNIX system. (07 Marks)
- 2 a. Explain the seven attributes listed by *ls -l* of all files in the current directory with an example. (08 Marks)
- b. With an example explain changing of file ownership using i) *chown*; ii) *chgrp* commands. (06 Marks)
- c. Explain the three modes in which *vi* operates for sharing the workload. (06 Marks)
- 3 a. What are wild cards? Explain how they are used in file name generation. Also discuss the methods to turnoff their meaning. (06 Marks)
- b. What is a process? Discuss the mechanism of a process creation in UNIX. (04 Marks)
- c. Define job. How job control is done in UNIX. (05 Marks)
- d. What are shell variables? Mention at least four environment variables used in Bash shell and discuss them in brief. (05 Marks)
- 4 a. What are hard links and symbolic links explain with an example? Where are hard links used and what are their limitations? (10 Marks)
- b. Explain the following with examples: i) *Head*; ii) *tail*; iii) *cut*; iv) *paste*; v) *sort*. (10 Marks)

PART – B

- 5 a. Explain the *grep* command, with options *c*, *n*, *v*, *i* and *l* each with an example. (10 Marks)
- b. Explain the '*sed*' command. What are its addressing mechanisms? Explain with example. (10 Marks)
- 6 a. What is a shell program? How shell programs are executed? Write a shell program to display the current date in the *ddmmyy* format. (08 Marks)
- b. Discuss in brief the special parameters *\$**, *\$#*, *\$?*. (06 Marks)
- c. What is 'for' loop in a shell script? Explain the different ways of making the lists. (06 Marks)
- 7 a. What is *awk*? Briefly explain any four built-in variables used by *awk*. (10 Marks)
- b. How are arrays handled in *awk*? Discuss. (05 Marks)
- c. List the built-in functions in *awk*. Explain any two of them. (05 Marks)
- 8 a. Explain the string handling functions in Perl. (06 Marks)
- b. Explain with example the use of '*split*' and '*join*' commands. (08 Marks)
- c. Write a note on file handling in Perl. (06 Marks)

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