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Fourth Semester B.E. Degree Examination, Dec.2017/Jan.2018
UNIX and 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. With a neat diagram, explain the architecture of UNIX operating system. (08 Marks)
- b. List and explain different features of UNIX operating system. (08 Marks)
- c. Explain briefly absolute pathname and relative pathname. (04 Marks)
- 2 a. Assuming that a file current permissions are rw_r xr_ specify the chmod expression required to change them to
 i) rwxrwxrwx ii) r__ r _ _ _ iii) _ _ _ r _ r _ _ iv) _ _ _ _ _ _ _ _
 using both relative and absolute assigning permissions. (08 Marks)
- b. Explain briefly the file attributes listed using ls -l command. (06 Marks)
- c. With a neat diagram, explain different modes of Vi editor. (06 Marks)
- 3 a. Explain the mechanism of process creation in UNIX and also explain the process of shell creation. (08 Marks)
- b. Explain the three standard files with respect to UNIX operating system. (06 Marks)
- c. Explain Job control with suitable example. (06 Marks)
- 4 a. Differentiate between Hard link and Symbolic link. (04 Marks)
- b. Discuss find command with all its options. (10 Marks)
- c. Explain in detail the following command with options and example:(i) tr, (ii) cut. (06 Marks)

PART – B

- 5 a. Explain grep command with any four option with suitable example. (06 Marks)
- b. What is sed command? With example explain the difference between line addressing and context addressing in sed. (08 Marks)
- c. Explain with example BRE and ERE. (06 Marks)
- 6 a. List and explain any six special parameters used by shell. (06 Marks)
- b. What is shell programming? Write a shell script to test and display the file attributes which is accepted as command line argument. (08 Marks)
- c. Explain looping construct (for and while) in shell with example. (06 Marks)
- 7 a. List and explain built-in variables used in awk. (06 Marks)
- b. Write an awk sequence to find DA, HRA and gross pay of an employee, where DA is 55% of basic, HRA is 25% of basic and gross pay is sum of basic, DA and HRA. Also find the average gross pay. (08 Marks)
- c. Explain the looping construct for in awk with example. (06 Marks)
- 8 a. Explain the following string handling function in perl with example:
 i) length ii) index iii) substr (06 Marks)
- b. Write a perl program that accepts decimal number as argument and convert it to binary. (07 Marks)
- c. Using command line arguments, write a perl script to check whether a given year is leap year or not. (07 Marks)

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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.