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13MCA14

**First Semester MCA Degree Examination, Dec.2014/Jan.2015**  
**Introduction to UNIX**

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions.**

- 1 a. Explain the architecture of UNIX OS with a neat diagram. (10 Marks)  
 b. Explain the following commands:  
 i) who ii) tty iii) uname iv) script v) bc. (10 Marks)
- 2 a. Discuss the organizational structure of files in UNIX with a neat diagram. Give the meaning of dot (·) and dot dot (··) (10 Marks)  
 b. What does the following command do?  
 i) \$ mkdir ../report  
 ii) \$ rmdir pis/pis/progs/pis/data  
 iii) \$ cd (06 Marks)  
 c. Briefly explain the difference between internal commands and external commands in UNIX. (04 Marks)
- 3 a. What do you mean by positional parameter in shell? Explain any 4 built-in positional parameter with examples. (10 Marks)  
 b. What is shell programming? Write a shell script to create a menu which displays the list of files, current month name, current users, current working directory. (10 Marks)
- 4 a. What is file permission? What are the different ways of setting file permission? Explain. (10 Marks)  
 b. Explain the following commands: i) chown; ii) find; iii) umask; iv) chgrp; v) ln. (10 Marks)
- 5 a. Explain with example, basic regular expression and extended regular expression. (10 Marks)  
 b. What is sed command? Explain the different ways of addressing sed. (06 Marks)  
 c. What is interval regular expression? Explain. (04 Marks)
- 6 a. Explain the following commands: i) pr; ii) unique; iii) cut; iv) tail; v) sort. (10 Marks)  
 b. Write a shell script that accepts one or more filenames as argument and convert all of them to uppercase, provided they exist in current directory. (10 Marks)
- 7 a. Explain awk built-in variable and built-in functions with suitable example. (10 Marks)  
 b. Explain the associative array in awk, with an example. (04 Marks)  
 c. Explain the following commands: i) export; ii) eval; iii) exec. (06 Marks)
- 8 a. What is process? Explain the mechanism of creating the process. (08 Marks)  
 b. What is super user? Explain the different privileges of a super user. (08 Marks)  
 c. Explain the following environmental variables: i) PATH; ii) HOME. (04 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.