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P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belgaum)
First Semester, Master of Computer Applications (MCA)
Make-up Examination; Feb - 2017
Introduction to UNIX

Time: 3 hrs   *Max. Marks: 100*

Note: Answer **FIVE** full questions, selecting **ONE** full question from each unit.

UNIT - I

1 a.	With a neat diagram, explain the architecture of UNIX.	8
b.	Explain the following commands with example :	
	i) bc ii) cp	12
	iii) lock iv) who.	
2 a.	Write the commands which perform the following functions in UNIX and explain them with at least one option :	
	i) To count the number of lines, words and characters present in a file	9
	ii) To delete files	
	iii) To record the session.	
b.	Explain the features of UNIX operating system.	8
c.	Explain the use of file command.	3

UNIT - II

3 a.	Explain the following command with example :	12
	i) umask ii) chown iii) chgrp iv) find.	
b.	Explain the difference between hard links and symbolic links.	8
4 a.	Explain the command used to change the file permissions and also explain the ways of changing file permissions.	4
b.	List the administrator privileges.	6
c.	Explain the following commands with example :	10
	i) cpio ii) tar iii) du iv) ls	

UNIT - III

5 a.	Write a shell script that accept a list of file names as its argument, count and report occurrence of each word that is present in the first argument file on other argument files.	8
b.	Explain the following commands with example :	6
	i) shift ii) expr iii) trap.	
c.	Explain the differences between while and until loop with example.	6

6 a. Explain the following special variables with example :

    i) $0   ii) $*   iii) $#   iv) $?   8

  b. Explain any four environment variables used in UNIX.   4

  c. Write a shell script which accept a file name as its argument and display the word which is having maximum number of characters.   8

UNIT - IV

7 a. Explain the following commands with example :

    i) head   ii) tail   iii) cut   iv) tr   12

  b. Explain the sort command with any four options.   8

8 a. What is regular expression? Explain the meaning of following meta characters with example :

    i) $\wedge$ ii) *   iii) $ 6

  b. Explain grep command and its options with example.   10

  c. Explain egrep and fgrep.   4

UNIT - V

9 a. Explain the following commands with example :

    i) nice   ii) at   iii) batch   iv) kill   10

  b. What is process? Explain the mechanism of process creation.   7

  c. Explain the use of cron command with example.   3

10a. Explain the Built-in functions and variables of awk.   10

  b. Explain the different sections of awk script.   6

  c. Consider a file *f1.txt* contains the following data about employees

Name	Salary	Age
Raju	50000	35
Ramu	10000	45
Mahesh	30000	50
Guru	35000	52

    4

Write an awk command to list the employees from *f1.txt* who are taking the salary of more than 20000.

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