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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)

Semester End Examination; Jan - 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. Explain the features of UNIX operating systems. 10
- b. Explain the following commands in UNIX :
- i) stty ii) uname 10
- iii) lock iv) tput v) script.
- 2 a. Discuss the organizational structure of file in UNIX with a neat diagram. Briefly explain the absolute path names and relative path names. 10
- b. What does the following command do?
- i) \$ mkdir PESCE 6
- ii) \$ rmdir stop stop/that stop/this
- iii) \$ cd~ 4
- c. Briefly explain the files type in UNIX. 4

UNIT - II

- 3 a. What are the permissions that are associated with UNIX file on its creation? Explain how these permissions can be changed to required values? 10
- b. What is the command used for listing the file attributes? Explain the file attributes. 10
- 4 a. Explain the system administration privileges in UNIX and also explain how does a user acquire a super user privileges? 10
- b. Write the startup and shut down procedure of a UNIX operating system. 10

UNIT - III

- 5 a. With four different types of listing, explain the working of for looping statement. 10
- b. Explain redirection in UNIX with an example for each. 10
- 6 a. Write a shell script to copy one file to another file with the following requirement :
- i) The 2 file names are entered as argument 10
- ii) The source file must be present in the current directory
- iii) The destination file must not be in the current directory.
- b. What is here document? Explain with an example. 4
- c. How 'expr' can be used with strings? 6

UNIT - IV

- 7 a. Why grep command is used? Explain the families of grep command. Explain any three options of grep command with suitable examples. 10
- b. Explain the following commands :
- i) uniq ii) pr 10
- iii) tr iv) paste v) tail.
- 8 a. What is sed command? Explain any four options of sed command with suitable examples. 10
- b. Explain the special character + and ? with respect to ERE. 4
- c. Explain any six basic regular expressions with examples. 6

UNIT - V

- 9 a. Explain the process creation in UNIX. 6
- b. Explain the following commands : 4
- i) cron ii) nice.
- c. Differentiate between : 10
- i) at and batch ii) external and internal commands.
- 10 a. Give the general structure of an awk program. Explain with an example. 10
- b. Give awk command to do the following :
- i) Display all lines of a file where the 6th field is > 6000
- ii) Display all lines whose length is between 50 and 60 10
- iii) Display all lines where 3rd field is “director”
- iv) Display all lines whose 3rd field is “production” and 5th field is “clerk”
- v) Display all lines whose 8th field contains either “clerk” or “manager”.

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