



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/Feb - 2016

Introduction to UNIX

Time: 3 hrs

Max. Marks: 100

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

UNIT - I

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|---|----|--|----|
| 1 | a. | With a neat diagram explain the architecture of UNIX operating system. | 10 |
| | b. | Explain <i>cal</i> , <i>date</i> , <i>echo</i> , and <i>bc</i> commands with examples. | 10 |
| 2 | a. | What is a file? Explain different categories of files. | 4 |
| | b. | Explain absolute pathnames and relative pathnames. | 6 |
| | c. | Explain <i>cp</i> , <i>rm</i> , <i>mv</i> commands with options. | 10 |

UNIT - II

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|---|----|---|----|
| 3 | a. | What is <i>ls</i> command? Explain in detail the <i>ls -l</i> option. | 8 |
| | b. | Explain <i>chmod</i> command both relative and absolute permissions. | 8 |
| | c. | What is hard link? How to create hard link? | 4 |
| 4 | a. | Explain 'find' command with at least 5 selection criteria. | 10 |
| | b. | Explain any five administrator privileges. | 5 |
| | c. | Explain <i>cpio</i> command with two options. | 5 |

UNIT - III

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|---|----|--|----|
| 5 | a. | With syntax, explain different forms of 'if' statement used in shell. | 6 |
| | b. | Explain the working of <i>for</i> loop with an example. | 6 |
| | c. | Write a shell script that accept the filename, starting and ending line numbers as an argument and display all the lines between the given line numbers. | 8 |
| 6 | a. | Explain <i>set</i> and <i>shift</i> commands with examples. | 6 |
| | b. | Briefly explain here document (<<). | 4 |
| | c. | Explain common environment variables. | 10 |

UNIT - IV

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|---|----|--|----|
| 7 | a. | Explain <i>sort</i> command with any five options. | 10 |
| | b. | Explain <i>grep</i> command with any five options. | 10 |
| 8 | a. | Explain <i>cut</i> and <i>paste</i> commands with examples. | 8 |
| | b. | What is <i>sed</i> ? Explain line addressing and context addressing. | 6 |
| | c. | Explain substitution in <i>sed</i> with example. | 6 |

UNIT - V

- 9 a. Explain *ps* command with options. 6
- b. Explain *at* and *batch* commands. 6
- c. Write an awk script to delete duplicate lines from a text file. The order of the original lines must remain unchanged. 8
- 10 a. Explain the mechanism of process creation. 6
- b. Explain built in variables used in awk. 6
- c. Write an awk script to compute gross salary of an employee according to rule given below :
If basic salary is < 10000 then HRA = 15% of basic and DA = 45% of basic. 8
If basic salary is ≥ 10000 then HRA = 20% of basic and DA = 50% of basic.

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