

## MCA 21 Linux System Administration

### SET : 1

#### Section-A

(Very Short Answer Questions)

1.
  - (i) What do you mean by Open Source technology?
  - (ii) Give the UNIX File System hierarchy.
  - (iii) In how many ways can you find out what your home directory is?
  - (iv) The command **rmdir bar** fails with the message that the directory is not empty. On running **ls bar**, no files are displayed. Why did the **rmdir** command fail?
  - (v) How will you obtain a complete listing of all files and directories in the whole system?
  - (vi) Explain the difference between the commands **cd ~charlie** and **cd ~/charlie**. Is it possible for both commands to work?
  - (vii) Write a command to find the name of your machine.
  - (viii) How will you add **/\*** at the beginning of a line and **\*/** at the end?
  - (ix) In the current line how do you take your cursor to the 40<sup>th</sup> character?
  - (x) How do you move to line number 100 and then write the remaining lines (including that line) to a separate file.

#### Section-B

(Short Answer Questions)

2. Draw the architecture of UNIX system and describe role of each layer.
3. Explain with the help of examples, the map and ab commands.
4. What are advantages of file expression? Discuss file operators with suitable examples.
5. Explain about file security in UNIX.
6. How do you delete only the first occurrence of a pattern?
7. Explain **LILO and GRUB** loaders.
8. Explain the advance editing techniques in vim.
9. Using sed, how do you perform a case sensitive search.

#### Section-C

(Long Answer Questions)

10. Explain the various permissions used for files and directories in Linux. How the read, write and execute permission attached with a file are different from that attached to a directory? – Explain
11. What are the different modes of operation of vi editor? What is importance of .exrc file in the behavior of vi editor? Explain. Also set the following default environment for the vi editor. Allow long lines to wrap around, display the line numbers, show the current mode, cause terminal beep when Escape key is pressed while in command mode, turn automatic indentation ON. Name the file in which to store the parameter values.
12. Write a shell script that, given a filename as the argument, deletes all even lines (lines 2,4,6...n) in the files.
13. Mention different type of loop statement in awk shell script.

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## MCA 21 Linux System Administration

### SET : 2

#### Section-A

(Very Short Answer Questions)

1.
  - (i) How do you combine five lines into a single line?
  - (ii) How will you replace **has** with **have** in the current line in vi editor?
  - (iii) Write vi command to replace the word put with get in the first 10 lines of the current file.
  - (iv) What will happen on execution of CTRL + g in vi commands?
  - (v) Differentiate between **rmdir** and **rm -r** Linux commands.
  - (vi) Write single command using pipes for Sort a file and remove the duplicate lines.
  - (vii) A file contains 1026 bytes. How many bytes of disk space will it occupy on a system where the size of disk block is 1034 bytes?
  - (viii) Unix is written in which language?
  - (ix) Which mode is used to enter commands that operate on text or cursor motion?
  - (x) What information are presented when **uname -r** command is entered.

#### Section-B

(Short Answer Questions)

2. What is the significance of the n and N commands?
3. Explain the three **ex-mode** commands that let you customize vi as you want.
4. Explain the difference between compression and archiving. Write the syntax of commands through which archiving and compression can be achieved.
5. What is an Operating System? Explain its functions.
6. Differentiate between Multiprogramming and Multitasking Operating Systems.
7. Explain the difference in following vi commands:
  - a) i and I
  - b) a and A
  - c) o and O
8. Explain do you mean by X windows System with suitable diagram.
9. Define the meaning of shell and also explain the purpose of shell.

#### Section-C

(Long Answer Questions)

10. Explain which vi command you would use to perform the following cursor movement operations:
  - 3 words to the right, 4 words to the left, top of the screen, bottom of the screen, beginning of the current line, end of the current line, end of the line, got o 23<sup>rd</sup> line in the file, moving one space left, moving up one line.
11. What are the ways a shell script can be executed when execute permissions are not granted to the file containing the script?-Explain.
12. What is meant by startup files of shell? List the startup files for Bourne again shell. Also list the order of execution of these files for an interactive login shell.
13. Write a shell script that gives the memory details of the system and how does shell executes external commands.

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