PRINT Name: _____   **LAB Section:** ☐☐☐

One-Answer Multiple Choice   **150 Questions**   **Weight 10%**

☞ Read **all** the words of these instructions and **both** sides (back and front) of all pages.
☞ Manage your time. Answer questions you know, first. One Answer per question.
☞ **PRINT** your Name and Lab on this Question Sheet. You may write or draw on this sheet.
☞ Use your full, unabbreviated name on the mark-sense form. Do not abbreviate your name.
☞ Enter your NAME, Student Number, and Answers. Fill in the bubbles with pencil, no pen.
☞ The answer to the questions below about reading/doing all these test instructions is: **Jes**

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191. Answer **191** is ○○**C**○○
192. Answer **192** is **A**○○○○
193. Answer **193** is ○**B**○○○
194. Answer **194** is ○○○**D**○
195. Answer **195** is **A**○○○○
196. Answer **196** is **A**○○○○

Your **Test Version** is:

C   A   B   D   A   A

Fill in the bubbles for the above six letters as six answers **191** through **196** on the back side of the Scantron form, in the lower-right-most answer column.

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1. **Did you read all the words of the test instructions on page one?**
   a. **Sim** (Yes - Portuguese)
   b. **Tak** (Yes - Polish)
   c. **Jes** (Yes - Esperanto)
   d. **Taip** (Yes - Lithuanian)
   e. **Igen** (Yes - Hungarian)

2. **My three-digit Lab Section number is:**
   a. My lecture room number, i.e. **C346**, **T119**
   b. My lecture Section Number, i.e. **010**, **020**
   c. The Test Version code printed on the question sheet.
   d. My lab room number, e.g. **P210**, **P213**, **B119**
   e. The timetable Section Number of my weekly 2-hour lab period.

3. In which section of the manual do you find standard commands?
   a. 2   b. 3   c. 8   d. 4   e. 1

4. If my current directory is **/etc**, which of these pathnames is equivalent to the pathname **/etc/x/y**?
   a. **../etc/x/y**
   b. **/x/y**
   c. **../x/y**
   d. **./etc/x/y**
   e. **../etc/y**

5. What is the correct syntax to redirect both standard output and standard error into the same output file?
   a. **date 2>&1 >out**
   b. **date >out 2>&1**
   c. **date 1>out 2>1**
   d. **date 2>1 >out**
   e. **date 1>out 2>out**

6. What command can you use to delete an empty directory?
   a. **delete**
   b. **deldir**
   c. **mvdir**
   d. **rmdir**
   e. **erase**

7. Simplify this pathname:
   /../../var/./a/../../var/b/../../etc/./bar/../foo
   a. **/var/b/foo**
   b. **/var/a/foo**
   c. **/etc/bar/foo**
   d. **/etc/foo**
   e. **/var/foo**

8. The option to **ls** that shows which names are directories is:
   a. **-d**
   b. **-l**
   c. **-1**
   d. **-i**
   e. **-a**

9. How do I search for the string **foo** in the text display output from the **man** command?
   a. **find foo**
   b. **/foo**
   c. select "**Search**" in the menu
   d. **search foo**
   e. **@foo**

10. Which pathname almost always leads to the same file named: **/etc/passwd**?
    a. **/etc/./etc/../passwd**
    b. **./etc/passwd**
    c. **/etc/../etc/./passwd**
    d. **../etc/passwd**
    e. **/etc/passwd/.**

11. What Linux command copies an entire directory?
    a. **cp -r d1 d2**
    b. **less -s d1 d2**
    c. **mkdir -t d1 d2**
    d. **cat -v d1 d2**
    e. **cp d1 d2**

12. Simplify this pathname:
    /usr/./bin/../lib/../../etc/../usr/./lib/../bin/..
    a. **/usr/etc/usr/lib/bin**
    b. **/usr/lib/bin**
    c. **/usr**
    d. **/usr/lib**
    e. **/usr/bin/lib**

13. If **foo** is a sub-directory that contains only the file **bar**, what happens after this command: **mv ./foo/bar foo/../me**
    a. the command fails because the name **me** does not exist
    b. the command fails because the name **./foo/bar** does not exist
    c. there is a second copy of the file **bar** in the file named **me**
    d. the directory **foo** now contains only a file named **me**
    e. the directory **foo** is now empty

14. If your current CLS assignment base directory is **assignment03** what command line puts the date in a file in your HOME directory?
    a. **date >/HOME/date.txt**
    b. **date >../../../date.txt**
    c. **date >../../../home/date.txt**
    d. **date >/../../../home/date.txt**
    e. **date >../../date.txt**

15. If my current working directory is **/home**, and my HOME directory is **/home/me**, which command copies the password file into my HOME directory under the name **foo**?
    a. **cp ../etc/passwd ../me/foo**
    b. **cp ./me/../etc/passwd ../home/me/foo**
    c. **cp me/../../etc/passwd me/foo**
    d. **cp ../../etc/passwd /me/foo**
    e. **cp ../home/me/../etc/passwd ./me/./foo**

16. Which pathname almost always leads to the same file named: **/etc/passwd**
    a. **/etc/etc/../passwd**   b. **./etc/passwd**
    c. **/./etc/./passwd**   d. **/etc/../passwd**
    e. **/etc/passwd/.**

17. If **foo** is a sub-directory that contains only the file **bar**, what happens after this command: **mv foo/./bar foo/./.me**
    a. the directory **foo** is now empty
    b. the command fails because the name **me** does not exist
    c. the directory **foo** now contains only a file named **me**
    d. there is a second copy of the file **bar** in the file named **me**
    e. the command fails because the name **foo/./bar** does not exist

18. In the output of the command **ls -a**, the one-character name **.** signifies what?
    a. A name with an unprintable character.
    b. The current directory.
    c. The ROOT directory.
    d. A current file.
    e. The parent directory.

19. What is the result of this exact command line: **ls /foo bar**
    a. all the files under directory **/foo** with the name **bar** will be displayed
    b. the names of the pathnames **/foo** and **bar** will be displayed
    c. the two text strings **/foo** and **bar** will be displayed
    d. the contents of the files **/foo** and **bar** will be displayed
    e. file **/foo** will be copied to **bar**

20. What can you do to get back (redo) the last command you typed?
    a. Type **[ALT]-[F2]**   b. Type **[CTRL]-[BACKSPACE]**
    c. Use the "**UpArrow**" key.   d. Type **[CTRL]-[ALT]-[UP]**
    e. Use the "**PageUp**" key.

21. Which command line does *not* show any lines from inside the file **bat**?
    a. **ls bat**   b. **sort bat**   c. **tail bat**
    d. **less bat**   e. **head bat**

22. If my current directory is **/etc**, which of these pathnames is equivalent to the file name **/etc/passwd**?
    a. **./passwd**   b. **../etc/passwd/.**
    c. **./etc/passwd**   d. **/passwd**
    e. **../passwd**

23. What does *quoting* mean on a shell command line?
    a. turning off the special meaning of shell meta-characters
    b. using more than one pathname argument to a command, e.g. **rm a b c**
    c. setting the PS1 variable to be your shell prompt
    d. using a leading tilde ("**~**") on a pathname to mean your HOME directory
    e. typing a "control" character using the **[CTRL]** key

24. How many arguments does the shell pass to this **echo** command:
    ```
    echo one two three >four five
    ```
    a. **4**   b. **6**   c. **2**   d. **3**   e. **5**

25. How do you search for the word **nongraphic** in the man page for **ls**?
    a. type **man ls -nongraphic** at the shell
    b. type **man -k nongraphic** at the shell
    c. type **man ls** at the shell, then **^F** (CTRL-F), then **nongraphic**
    d. type **man ls** at the shell, then **/nongraphic**
    e. type **man nongraphic | grep ls** at the shell

26. The shell expands a leading tilde (**~**) in a pathname (e.g. **~/foo**) to be:
    a. the ROOT directory   b. your HOME directory
    c. the directory **/root**   d. the parent directory
    e. the current directory

27. To make the **bash** shell complete commands or file names, you type the first part of the command or file name and then press this key:
    a. **[TAB]**   b. **[ALT]-[F1]**   c. **[ALT]**
    d. **[CTRL]-[D]**   e. **[CTRL]-[C]**

28. Simplify this pathname:
    ```
    /home/me/../you/../../etc/../home/me/../you/../me/..
    ```
    a. **/home/me**   b. **/home/me/you**
    c. **/home**   d. **/home/you/me**
    e. **/home/me/you/me**

29. What is the output of this successful command sequence?
    ```
    cd /home/dir ; mkdir one ; mkdir two ; pwd
    ```
    a. **/home/dir**   b. **/home/dir/one**
    c. **/home/dir/two**   d. **/two**
    e. **/home/dir/one/two**

30. The option to **ls** that shows hidden names is:
    a. **-1**   b. **-h**   c. **-i**   d. **-l**   e. **-a**

31. Which pathname almost always leads to the same file named: **/bin/ls**
    - *a.* **./bin/ls**
    - *b.* **/./bin/./ls**
    - *c.* **/bin/./bin/../ls**
    - *d.* **/./bin/./ls/.**
    - *e.* **/bin/../ls**

32. In which section of the manual do you find super-user and admin commands?
    - *a.* 3
    - *b.* 8
    - *c.* 2
    - *d.* 1
    - *e.* 4

33. How many arguments and options are there to the command: **wc −wc wc**
    - *a.* Two command line arguments, one of which contains two bundled options.
    - *b.* Two arguments, no options.
    - *c.* Two arguments, one of which is a single option and the other is a pathname.
    - *d.* Two command name arguments and two bundled options.
    - *e.* Two options, no arguments.

34. What Linux command shows the contents of a file?
    - *a.* **file**
    - *b.* **find**
    - *c.* **ls**
    - *d.* **wc**
    - *e.* **cat**

35. If I am in a directory named **/home/me** and **mt** is an empty sub-directory, what is true after this command line:
    touch new ; mv ./mt/../new ../me/old
    - *a.* the command fails because the path **./mt/../new** does not exist
    - *b.* the parent directory of **mt** now has a file named **old** in it
    - *c.* the command fails because the path **../me/old** does not exist
    - *d.* the directory **mt** now contains only a file named **old**
    - *e.* there is a second copy of the file named **new** in the file named **old**

36. What is an operating system?
    - *a.* An accounting package program.
    - *b.* A word-processing computer program.
    - *c.* A video display card.
    - *d.* A computer program that manages the hardware.
    - *e.* A web-browser program.

37. Which pathname almost always leads to the same file named: **/etc/shadow**
    - *a.* **/etc/shadow/./.**
    - *b.* **/etc/shadow/../..**
    - *c.* **././etc/shadow**
    - *d.* **/./../etc/./shadow**
    - *e.* **/etc/../../shadow**

38. If **ian** is a sub-directory that contains only the file **foo**, what happens after this command: **mv ./ian/./foo ./ian/../bar**
    - *a.* the command fails because the name **./ian/./foo** does not exist
    - *b.* the command fails because the name **./ian/../bar** does not exist
    - *c.* the directory **ian** now contains only a file named **bar**
    - *d.* there is a second copy of the file **foo** in the file named **bar**
    - *e.* the directory **ian** is now empty

39. The option to **ls** that shows inode (index) numbers is:
    - *a.* **−l**
    - *b.* **−1**
    - *c.* **−i**
    - *d.* **−a**
    - *e.* **−R**

40. If my current working directory is **/var**, which command copies the password file into directory **/var/ian** under the name **bar**?
    - *a.* **cp ../../etc/./passwd /ian/bar**
    - *b.* **cp ./../etc/passwd ../ian/bar**
    - *c.* **cp ./ian/../../etc/passwd ian/bar**
    - *d.* **cp ./././ian/../etc/passwd ../var/ian/bar**
    - *e.* **cp ../var/./ian/../etc/passwd ./ian/./bar**

41. Which of these pathnames is *not* an absolute pathname (after all shell expansions)?
    - *a.* **foo**
    - *b.* **~/foo**
    - *c.* **$HOME/foo**
    - *d.* **/foo**
    - *e.* **/../foo**

42. If my current directory is **/home**, and my HOME directory is **/home/me**, which command copies the password file into my HOME directory under the name **foo**?
    - *a.* **cp ../etc/passwd ./me/foo**
    - *b.* **cp ../etc/passwd ../me/foo**
    - *c.* **cp ../home/me/../etc/passwd ./me/./foo**
    - *d.* **cp ./me/../etc/passwd ../home/me/foo**
    - *e.* **cp ../../etc/passwd /me/foo**

43. What Linux command name renames a single file or directory?
    - *a.* **mv**
    - *b.* **rm**
    - *c.* **move**
    - *d.* **chname**
    - *e.* **rena**

44. Given the pathname **a/b/c**, the *basename* of this pathname is:
    - *a.* **b**
    - *b.* **a**
    - *c.* **b/c**
    - *d.* **a/b**
    - *e.* **c**

45. The output of the **tree** command is:
    - *a.* an indented, recursive list of directories and their contents
    - *b.* the tree of users logged in to the system
    - *c.* a recursive list of users logged in to the system
    - *d.* the tree of files under your HOME directory
    - *e.* the tree of files under the ROOT directory

46. If I am in directory **/home/me** and **mt** is an empty sub-directory, what is true after this command line: **touch ./foo ; mv ./mt/../foo ../me/bar**
    - *a.* the command fails because path **./mt/../foo** does not exist
    - *b.* the command fails because path **../me/bar** does not exist
    - *c.* there is a second copy of the file **foo** in the file named **bar**
    - *d.* the directory **mt** now contains only a file named **bar**
    - *e.* the directory **mt/..** now contains a file named **bar**

47. Simplify this pathname:
    /home/me/../you/../../etc/../home/me/../you/../me/../foo
    - *a.* **/home/foo**
    - *b.* **/home/me/you/foo**
    - *c.* **/home/you/foo**
    - *d.* **/home/you/me/foo**
    - *e.* **/home/me/foo**

48. If **foo** is an empty sub-directory, what happens after this command line:
    date >foo/single ; mv foo/single double
    a. the command fails because **single** is not a directory
    b. the command fails because the name **double** does not exist
    c. the directory **foo** is now empty
    d. a new empty file named **double** is created
    e. there is a second copy of the file **single** in the file named **double**

49. Which of these commands always returns you to your account HOME directory?
    a. **cd /home/..**   b. **cd home**   c. **cd**
    d. **cd /home**   e. **cd ..**

50. Which of these characters is *not* a shell GLOB meta-character?
    a. **[**   b. **]**   c. *****   d. **?**   e. **#**

51. In a directory that contains only the file **foo**, what happens after this command:
    cp foo bar
    a. there is a copy of the file named **foo** in the file named **bar**
    b. the command fails because **bar** is not a directory
    c. an empty file named **bar** is created
    d. there is only the file named **bar** in the directory now
    e. the command fails because the name **bar** does not exist

52. If my current directory is **/usr/local/bin**, then executing **cd ../sbin/.** leads where?
    a. **/local/sbin**   b. **/usr/sbin**
    c. **/usr/local/sbin**   d. **/sbin**
    e. **/usr/bin**

53. If **/etc/shadow** is a file name, which pathname almost always leads to the same file?
    a. **././etc/shadow**   b. **/etc/shadow/./.**
    c. **/etc/../../shadow**   d. **/etc/shadow/../..**
    e. **/././etc/./shadow**

54. If I am in a directory named **/home/me** and **mt** is an empty sub-directory, what is true after this command line:
    touch ../me/cat ; cp ./mt/../cat ./mt/../dog
    a. the file named **cat** is now renamed to **dog**
    b. the directory **mt** is still empty
    c. the directory **mt** now has a file named **dog** in it
    d. the command fails because the path **./mt/../cat** does not exist
    e. the directory **mt** now contains two files

55. The output of the **find** command is:
    a. finds patterns in a file corresponding to lines
    b. a recursive list of users logged in to the system
    c. finds lines in a file matching a pattern
    d. a recursive list of pathnames
    e. account names matching a pattern

56. What is the result of this exact command line: **echo /foo bar**
    a. the names of the pathnames **/foo** and **bar** will be displayed
    b. file **/foo** will be copied to **bar**
    c. the two text strings **/foo** and **bar** will be displayed
    d. the contents of the files **/foo** and **bar** will be displayed
    e. all the files under directory **/foo** with the name **bar** will be displayed

57. If a shell GLOB pattern fails to match anything, what happens by default? The shell:
    a. removes the pattern and passes nothing
    b. gives an error message and does not execute
    c. gives a warning message but continues
    d. passes the pattern unchanged to the command
    e. returns the closest match to the pattern

58. If I am in directory **/home/me** and **mt** is an empty sub-directory, what is true after this command line:
    touch ./mt/foo ; mv mt/./foo mt/../../me/./y
    a. the directory **mt** now contains only a file named **y**
    b. the directory **mt** is still empty
    c. there is a second copy of the file **foo** in the file named **y**
    d. the command fails because the path **mt/./foo** does not exist
    e. the command fails because the path **mt/../../me** does not exist

59. If **foo** is a sub-directory that contains only the file **bar**, what happens after this command: **mv foo/bar foo/moo**
    a. the command fails because **bar** is not a directory
    b. the command fails because the name **moo** does not exist
    c. there is only the file named **moo** in the directory now
    d. there is a second copy of the file **bar** in the file named **moo**
    e. an empty file named **moo** is created

60. Which command below is the best way to find a line containing a question mark (**?**) in the file **/etc/passwd**?
    a. **search '?' /etc/passwd**
    b. **fgrep './?' /etc/passwd**
    c. **fgrep /etc/passwd '?'**
    d. **fgrep '?' /etc/passwd**
    e. **find '?' /etc/passwd**

61. Which command below is the best way to find a line containing an asterisk (*****) in the file named **foo**?
   - a. **fgrep foo [*]**
   - b. **fgrep * foo**
   - c. **fgrep ./* foo**
   - d. **fgrep '*' foo**
   - e. **fgrep foo "*"**

62. If **/bin/bash** is a file name, which pathname almost always leads to the same file?
   - a. **/bin/bash/.**
   - b. **/bin/bin/../bash**
   - c. **./bin/bash**
   - d. **/./bin/./bash**
   - e. **/bin/../bash**

63. The purpose of the **PS1** shell variable is:
   - a. to set the shell prompt
   - b. to find patterns inside a text file
   - c. to protect your HOME directory from access
   - d. to allow access to the ROOT directory
   - e. to list your suspended jobs

64. If I am in directory **/home/me** and **mt** is an empty sub-directory, what is true after this command line: **touch ./foo ; mv mt/../foo mt/../bar**
   - a. the directory **mt** now contains only a file named **bar**
   - b. there is a second copy of the file **foo** in the file named **bar**
   - c. the command fails because the path **mt/../foo** does not exist
   - d. the directory **../me** now contains a file named **bar**
   - e. the command fails because the path **mt/../bar** does not exist

65. What is the Unix user name for the Super-User account?
   - a. **administrator**
   - b. **master**
   - c. **root**
   - d. **alterego**
   - e. **superuser**

66. If **/bin/bash** is a file name, which pathname almost always leads to the same file?
   - a. **./../bin/bash**
   - b. **/bin/../bash**
   - c. **/usr/bin/../bash**
   - d. **/bin/bash/.**
   - e. **/bin/../bin/bash**

67. If **/bin/bash** is a file name, which pathname almost always leads to the same file?
   - a. **/../bin/./bash**
   - b. **/bin/bin/../bash**
   - c. **/bin/bash/.**
   - d. **./../bin/bash**
   - e. **/bin/../bash**

68. If my current directory is **/home**, which of these pathnames is equivalent to the pathname **/home/a/b/c**?
   - a. **/a/b/c**
   - b. **../home/b/c**
   - c. **../a/b/c**
   - d. **../home/a/b/c**
   - e. **./home/a/b/c**

69. If **/etc/passwd** is a file name, which pathname almost always leads to the same file?
   - a. **/etc/../passwd**
   - b. **./etc/passwd**
   - c. **/etc/passwd/.**
   - d. **/./etc/./passwd**
   - e. **/etc/etc/../passwd**

70. What Linux command name copies files?
   - a. **cp**
   - b. **copy**
   - c. **cat**
   - d. **file**
   - e. **move**

71. Which of these statements is true?
   - a. Unix commands must be entered in lower-case letters.
   - b. To delete a word from the shell command line, type [CTRL]-[D]
   - c. Unix commands can be entered in upper-case or lower-case letters; they are equivalent.
   - d. To erase an entire line of typing, type [CTRL]-[D].
   - e. To indicate End-of-File (no more input), type [CTRL]-[C].

72. The basic purpose of a shell is:
   - a. to find and run commands
   - b. to expand pathnames
   - c. to format hard drives
   - d. to program system administration backup procedures
   - e. to search for strings inside text files

73. If **pig** is a sub-directory that contains only the file **dog**, what happens after this command: **mv pig/dog pig/./.cat**
   - a. the directory **pig** now contains only a file named **cat**
   - b. there is a second copy of the file **dog** in the file named **cat**
   - c. the directory **pig** is now empty
   - d. the command fails because the name **cat** does not exist
   - e. the command fails because the name **pig/./.cat** does not exist

74. Which command line displays the contents of the Unix **passwd** file one page at a time?
   - a. **/etc/passwd cat less**
   - b. **less /etc/passwd**
   - c. **/etc/passwd | less**
   - d. **cat less | /etc/passwd**
   - e. **cat /etc/passwd less**

75. If my current working directory is **/home**, and my HOME directory is **/home/foo**, which command copies file **/bin/ls** into my HOME directory under the name **xx**?
   - a. **cp ../../bin/./ls /foo/xx**
   - b. **cp ../home/./foo/../bin/ls foo/xx**
   - c. **cp ././foo/../bin/ls ../home/foo/xx**
   - d. **cp ./foo/../../bin/ls ./foo/./xx**
   - e. **cp ./../bin/ls ../foo/xx**

76. If **pig** is a sub-directory that contains only the file **dog**, what happens after this command: **mv pig/dog pig/./../cat**
    a. the directory **pig** now contains only a file named **cat**
    b. the command fails because the name **pig/./../cat** does not exist
    c. there is a second copy of the file named **dog** in the file named **cat**
    d. the directory **pig** is now empty
    e. the command fails because the name **cat** does not exist

77. If I am in a directory named **/home/me** and **mt** is an empty sub-directory, what is true after this command line:
    touch ./fil ; mv mt/../fil ../me/cat
    a. there is a second copy of the file **fil** in the file named **cat**
    b. the directory **mt** now contains only a file named **cat**
    c. the command fails because the path **mt/../fil** does not exist
    d. the command fails because the path **../me/cat** does not exist
    e. the directory **mt/..** now has a file named **cat** in it

78. If my current directory is **/lib**, which of these pathnames is equivalent to the file name **/lib/foo**?
    a. **./lib/foo**   b. **/foo**   c. **./foo**
    d. **../foo**   e. **../lib/foo/.**

79. In the output of **ls −a**, the two-character name **..** signifies what?
    a. The parent directory.
    b. The current directory.
    c. It begins every name that is hidden.
    d. A file or directory with double links.
    e. The ROOT directory.

80. Simplify this pathname:
    /usr/./bin/../lib/../../etc/../usr/./lib/../bin/./bar
    a. **/usr/bin/bar**   b. **/usr/lib/bin/bar**
    c. **/usr/bin/lib/bar**   d. **/usr/lib/bar**
    e. **/usr/etc/lib/bin/bar**

81. If my current directory is **/usr/local/bin**, then executing **cd ../../sbin/.** leads where?
    a. **/usr/bin**   b. **/sbin**
    c. **/usr/sbin**   d. **/local/sbin**
    e. **/usr/local/sbin**

82. In an empty directory, what happens after this command line:
    mkdir a b c ; mv a b c
    a. the directories **a**, **b**, and **c** are moved to the directory **c**
    b. the directories **a** and **b** are appended to the directory **c**
    c. the directories **a** and **b** are moved into the directory **c**
    d. an error message: **mv: target 'c' is not a directory**
    e. the directories **a**, **b**, and **c** are moved to the current directory

83. In a manual page **SYNOPSIS** section, ellipsis (three dots) (**...**) mean:
    a. something that is repeated   b. no special meaning
    c. a hidden directory   d. the parent directory
    e. something that is optional

84. Simplify this pathname:
    /../../var/./a/../../var/b/../../etc/./bar/..
    a. **/etc**   b. **/etc/bar**
    c. **/bar**   d. **/var/b/etc**
    e. **/var/b/etc/bar**

85. The Linux command name **apropos** is a synonym for:
    a. **touch**   b. **pwd**   c. **man −k**
    d. **grep −v**   e. **cp −p**

86. If **foo** is a sub-directory that contains only the file **bar**, what happens after this command: **cp foo/bar ./foo/../me**
    a. there is a second copy of the file **bar** in directory **foo**
    b. the directory **foo** now contains only a file named **me**
    c. the command fails because the name **foo/bar** does not exist
    d. the directory **foo** is now empty
    e. there is a second copy of the file **bar** in the file named **me**

87. If your current CLS directory is **Assignments** what pathname could you use to change to directory **CST8207−19W**
    a. **../CST8207−19W**   b. **./.**
    c. **CST8207−19W**   d. **..**
    e. **./CST8207−19W**

88. If I am in directory **/home/me** and **mt** is an empty sub-directory, what is true after this command line: **touch foo ; mv ./mt/../foo ../me/bar**
    a. the directory **mt** now contains only a file named **bar**
    b. the parent directory of **mt** now contains a file named **bar**
    c. there is a second copy of the file **foo** in the file named **bar**
    d. the command fails because the path **./mt/../foo** does not exist
    e. the command fails because the path **../me/bar** does not exist

89. In the output of the command **ls −a**, a dot (period) that *begins* a name signifies what?
    a. A name that is hidden.
    b. A name with an unprintable character.
    c. The parent directory.
    d. The current directory.
    e. A current file.

90. If my current directory is **/etc**, which of these pathnames is equivalent to the file name **/etc/passwd**?
    - a. **passwd/.**
    - b. **/root/etc/passwd**
    - c. **./../../etc/./passwd**
    - d. **../etc/passwd/.**
    - e. **./etc/passwd**

91. To leave a shell and let the terminal window close, type:
    - a. **[CTRL-C]**
    - b. **bye**
    - c. **exit**
    - d. **quit**
    - e. **q**

92. In an empty directory, what happens after this command line:
    touch a b c ; mv a b c
    - a. an error message: **mv: target 'c' is not a directory**
    - b. the files **a**, **b**, and **c** are moved to the directory **c**
    - c. the files **a** and **b** are appended to the file **c**
    - d. the files **a**, **b**, and **c** are moved to the current directory
    - e. the files **a** and **b** are moved into the directory **c**

93. If a shell token with a GLOB pattern contains two slashes, how many slashes can be in each matched pathname?
    - a. one, two, or more
    - b. exactly two
    - c. two or more
    - d. zero, one, or two
    - e. one or two

94. If **/etc/passwd** is a file name, which pathname almost always leads to the same file?
    - a. **/etc/../../passwd**
    - b. **/etc/passwd/../..**
    - c. **./etc/passwd**
    - d. **/etc/passwd/.**
    - e. **/../etc/./passwd**

95. Which command line below does *not* show any lines from inside the file **out**?
    - a. **head out**
    - b. **wc out**
    - c. **tail out**
    - d. **more out**
    - e. **sort out**

96. If my current directory is **/home**, and my HOME directory is **/home/me**, which command copies the password file into my HOME directory under the name **foo**?
    - a. **cp me/../../etc/passwd me/foo**
    - b. **cp ../etc/passwd ../me/foo**
    - c. **cp ../home/me/../etc/passwd ./me/./foo**
    - d. **cp ./me/../etc/passwd ../home/me/foo**
    - e. **cp ../../etc/passwd /me/foo**

97. If **/bin/bash** is a file name, which pathname almost always leads to the same file?
    - a. **./bin/bash**
    - b. **/bin/bash/.**
    - c. **/bin/../bash**
    - d. **/../../bin/bash**
    - e. **/bin/bash/..**

98. What command displays the sizes of files in the current directory?
    - a. **ps -l**
    - b. **ls -l**
    - c. **ps -s**
    - d. **cat -s**
    - e. **ls -p**

99. Which command line lists all possible utilities available for compiling programs?
    - a. **man compile**
    - b. **find compile**
    - c. **man -k compile**
    - d. **grep 'compile' /etc/**
    - e. **locate compile**

100. Which of these command line will make **bar** contain all of the content of **f1** followed by all of the content of **f2**?
    - a. **cat f1 f2 >bar**
    - b. **cp f1 f2 >bar**
    - c. **echo f1 f2 >bar**
    - d. **wc f1 f2 >bar**
    - e. **mv f1 f2 >bar**

101. What is the result of this exact command line: **cat /foo bar**
    - a. the two text strings **/foo** and **bar** will be displayed
    - b. all the files under directory **/foo** with the name **bar** will be displayed
    - c. file **/foo** will be copied to **bar**
    - d. the contents of the files **/foo** and **bar** will be displayed
    - e. the names of the pathnames **/foo** and **bar** will be displayed

102. In a directory that contains only the file **foo**, what happens after this command:
    mv foo bar
    - a. there is a copy of the file named **foo** in the file named **bar**
    - b. there is only the file named **bar** in the directory now
    - c. an empty file named **bar** is created
    - d. the command fails because the name **bar** does not exist
    - e. the command fails because **bar** is not a directory

103. If I am in a directory named **/home/me** and **mt** is an empty sub-directory, what is true after this command line:
    touch new ; mv ./mt/../new ../me/old
    - a. there is a second copy of the file **new** in the file named **old**
    - b. the command fails because the path **../me/old** does not exist
    - c. the parent directory of **mt** now has a file named **old** in it
    - d. the command fails because the path **./mt/../new** does not exist
    - e. the directory **mt** now contains only a file named **old**

104. What is the *current directory*?
    - a. The directory named **/current**
    - b. The directory named **..** (dot dot)
    - c. The directory that your shell (or any Unix process) is in now
    - d. The directory into which you are placed when you first log in
    - e. This is where "root" goes when "root" logs in to the system

105. Which Linux command name searches inside files for lines containing a pattern?
    - a. **pattern**
    - b. **fgrep**
    - c. **search**
    - d. **file**
    - e. **find**

106. If my current directory is **/bin**, which of these pathnames is equivalent to the file name **/bin/ls**?
    a. **../../bin/ls**   *b.* **ls/.**   *c.* **../bin/ls/.**
    d. **./bin/ls**   *e.* **/root/bin/ls**

107. The command that creates a directory and all parent directories is:
    a. **rmdir −r a/b/c**   *b.* **mkdir −p a/b/c**
    c. **mkdir −r a/b/c**   *d.* **rm −r a/b/c**
    e. **touch a/b/c**

108. What do you do to erase an entire line of typing in the shell?
    a. type **[CTRL−U]**
    b. select the line with the mouse and use the **DEL** key
    c. type **[CTRL−D]**
    d. type **[CTRL−W]**
    e. type **[CTRL−C]**

109. The shell meta-character used to separate multiple separate commands on the same line of typing is:
    a. **;**   *b.* **@**   *c.* **,**   *d.* **+**   *e.* **:**

110. Give the minimum number of directories in this pathname: **/a/b/c/d**
    a. **5**   *b.* **1**   *c.* **4**   *d.* **3**   *e.* **2**

111. What is the absolute pathname of the Unix/Linux password (account) file?
    a. **/lib/passwd**   *b.* **/usr/passwd**   *c.* **/etc/passwd**
    d. **/bin/passwd**   *e.* **/var/passwd**

112. If **foo** is a sub-directory that contains only the file **pig**, what happens after this command: **mv foo/pig foo/dog**
    a. the command fails because the name **dog** does not exist
    b. there is a second copy of the file **pig** in the file named **dog**
    c. the command fails because the name **foo/dog** does not exist
    d. the directory **foo** now contains only a file named **dog**
    e. the directory **foo** is now empty

113. If you type the command **cat**, which *CTRL* key will send an **EOF** and take you back to the command prompt?
    a. **^E**   *b.* **^R**   *c.* **^C**   *d.* **^U**   *e.* **^D**

114. What command can you use to delete a directory that isn't empty?
    a. **del −r dir**   *b.* **deldir −r dir**
    c. **rmdir −r dir**   *d.* **deltree −r dir**
    e. **rm −r dir**

115. If your current CLS assignment base directory is **assignment03** what pathname could you use to change to directory **CST8207−19W**
    a. **../..**   *b.* **../../CST8207−19W**
    c. **CST8207−19W**   *d.* **./.**
    e. **../CST8207−19W**

116. What is the output of this successful command sequence?
    cd /home/foo ; mkdir bar ; touch bar/a ; pwd
    a. **/home/foo/bar/a**   *b.* **/home/foo/bar**
    c. **/bar/a**   *d.* **/bar**
    e. **/home/foo**

117. Which of these statements is true?
    a. To erase an entire line of typing, type **[ALT]−[DELETE]**.
    b. Command **apropos** is an exact synonym for command **man**.
    c. To interrupt a Unix process from the keyboard, type **[CTRL]−[D]**.
    d. The **file** command creates a new, empty file in the current directory
    e. To indicate End-of-File (no more input) to a program, type **[CTRL]−[D]**.

118. Which *CTRL* key will erase a full line of typing in a terminal window?
    a. **^R**   *b.* **^C**   *c.* **^I**   *d.* **^D**   *e.* **^U**

119. What does the **file** command do?
    a. Archives a file into a backup folder.
    b. Renames a directory (folder) to be a file.
    c. Displays a calendar file on your screen.
    d. Tells you what type of thing a pathname is.
    e. Displays a recursive list of file names.

120. How can you ask the **bash** (Linux) shell to complete commands or file names for you?
    a. Type the first part of the command or file name and press the **[TAB]** key.
    b. Type the first part of the command or file name and press the **[CTRL]−[D]** key.
    c. Type the first part of the command or file name and press the **[ALT]** key.
    d. Type the first part of the command or file name and press the **[CTRL]−[C]** key.
    e. Type the first part of the command or file name and press the **[ALT]−[F1]** key.

121. If I am in a directory named **/home/me** and **mt** is an empty sub-directory, what is true after this command line:
    touch ./mt/.fil ; mv mt/./fil mt/../../me/./y
    a. the command fails because the path **mt/./fil** does not exist
    b. there is a second copy of the file **fil** in the file named **y**
    c. the command fails because the path **mt/../../me** does not exist
    d. the directory **mt** is still empty
    e. the directory **mt** now contains only a file named **y**

122. In a manual page **SYNOPSIS** section, square brackets (**[]**) mean:
    a. a GLOB pattern matching a list   *b.* an arithmetic expression
    c. something that is repeated   *d.* no special meaning
    e. something that is optional

123. What would you type to find the string **tony** in the file **/etc/passwd**?
 a. **find /etc/passwd –name tony –print**
 b. **grep /etc/passwd tony**
 c. **find /etc/passwd –user tony –print**
 d. **grep tony /etc/passwd**
 e. **cat tony /etc/passwd**

124. If my current working directory is **/home**, and my HOME directory is **/home/me**, which command copies the password file into my HOME directory under the name **foo**?
 a. **cp ../etc/passwd ../me/foo**
 b. **cp ../../etc/passwd /me/foo**
 c. **cp ./me/../etc/passwd ../home/me/foo**
 d. **cp ../home/me/../etc/passwd ./me/./foo**
 e. **cp ../etc/passwd ./me/foo**

125. What Linux command name creates empty files?
 a. **cat**   b. **mkdir**   c. **mkfile**
 d. **man**   e. **touch**

126. If **foo** is a sub-directory that contains only the file **bar**, what happens after this command: **mv foo/me foo/bar**
 a. there is a second copy of the file **bar** in the file named **me**
 b. there is only the file named **me** in the directory now
 c. the command fails because the name **me** does not exist
 d. an empty file named **me** is created
 e. the command fails because **bar** is not a directory

127. To change your own account password, use this exact command line:
 a. **$ passwd**
 b. **$ passwd cst8207**
 c. **$ passwd options LOGIN**
 d. **$ passwd cst8207.idallen.ca**
 e. **$ passwd root**

128. How many arguments and options are there to the command: **ls –lid /p**
 a. Two command line arguments, one of which contains three bundled options.
 b. Two arguments: A file name starting with a dash and a **/p** switch option argument.
 c. Two arguments, one of which is a single option name and the other is a pathname.
 d. Two arguments, neither of which is an option.
 e. Three arguments, one of which contains options and one is a pathname.

129. If I am in directory **/home/me** and **mt** is an empty sub-directory, what is true after this command line: **touch foo ; mkdir bar ; mv foo bar/mt**
 a. the directory **bar** now contains a file named **foo**
 b. the directory **mt** now contains a file named **foo**
 c. the directory **mt** is still empty
 d. the directory **mt** now contains a directory named **bar**
 e. the command fails because **bar/mt** is not a directory

130. Which of these is the correct CLS name to use when on-campus (or via VPN)?
 a. **cst8207.alg.idallen.ca** b. **cst8207_alg.idallen.ca**
 c. **cst8207,idallen,ca**   d. **cst8207-alg.idallen.ca**
 e. **cst8207.idallen.ca**

131. Simplify this pathname:
 /home/me/../you/../../etc/../home/me/../you/../me/..//..
 a. **/home**   b. **/home/me**
 c. **/home/me/you/me** d. **/**
 e. **/home/you**

132. If my current directory is **/lib**, which of these pathnames is equivalent to the pathname **/lib/x/y**?
 a. **./lib/x/y** b. **/x/y** c. **../lib/x/y**
 d. **../lib/y** e. **../x/y**

133. If my current directory is **/etc**, which of these pathnames is equivalent to the file name **/etc/passwd**?
 a. **./etc/passwd** b. **passwd**
 c. **../passwd**   d. **../etc/passwd/.**
 e. **/passwd**

134. What would you see if you typed this command: **cat /foo**
 a. The contents of your subdirectory named **foo**
 b. The contents of the file **foo** located in the ROOT directory
 c. The contents of the file **foo** located in the parent directory
 d. The contents of the file **foo** located in your HOME directory
 e. The contents of your directory named **foo**

135. If **/bin/bash** is a file name, which pathname almost always leads to the same file?
 a. **./bin/bash** b. **/bin/bash/.**
 c. **/usr/bin/../bash** d. **/bin/../bash**
 e. **/bin/../../bin/bash**

136. What happens when you try to change to the parent directory of ROOT, e.g.
    `cd / ; cd ..`
    a. the shell asks you to retype this invalid directory
    b. the shell issues an error message and does not change
    c. the shell current directory is still ROOT; no change
    d. the shell issues a warning, but changes to the parent
    e. you go to the parent directory containing your `C:` drive

137. If I am in directory `/home/me` and `mt` is an empty sub-directory, what is true after this command line:
    `touch ./foo bar ; rm mt/../foo ../me/bar`
    a. the directory `me` now contains a file named `bar`
    b. the command fails because the path `../me/bar` does not exist
    c. the directory `mt` now contains a file named `foo`
    d. the command fails because the path `mt/../foo` does not exist
    e. the directory `mt` is still empty

138. If my current directory is `/home`, which of these pathnames is equivalent to the pathname `/home/a/b/c`?
    a. `./a/b/c`   b. `../home/b/c`   c. `/a/b/c`
    d. `./home/a/b/c`   e. `../a/b/c`

139. What is your HOME directory?
    a. The directory named `/home`
    b. The directory into which you are placed when you first log in
    c. The top directory of the Unix/Linux/BSD/OSX file system tree
    d. The directory that your shell is in now
    e. This is where "root" goes when "root" logs in to the system

140. If your current CLS assignment base directory is `assignment03` what pathname could you use to change to your HOME directory?
    a. `../..`   b. `/HOME`
    c. `/../../../home`   d. `../../../home`
    e. `../../..`

141. What Linux command changes your login password?
    a. `passwd`   b. `chpass`   c. `newpass`
    d. `password`   e. `pwd`

142. If `/etc/passwd` is a file name, which pathname almost always leads to the same file?
    a. `././etc/passwd`   b. `/etc/../../passwd`
    c. `/etc/passwd/./.`   d. `/./../etc/./passwd`
    e. `/etc/passwd/../..`

143. Which command line lists all possible utilities available for compiling programs?
    a. `man compile`   b. `locate compile`
    c. `grep compile /etc/`   d. `find compile`
    e. `apropos compile`

144. To prevent disconnections when using the Windows version of `PuTTY`, you should make this configuration change:
    a. set the seconds between keepalives to 55
    b. use your student number as your password
    c. use your ACSIS password as your password
    d. your password will not echo on your screen as you type
    e. log in using your Blackboard userid

145. Which Unix command line deletes a directory and everything inside it?
    a. `rm -all dir`   b. `rmdir -all dir`
    c. `rm -r dir`   d. `deltree -all dir`
    e. `rmdir -r dir`

146. If you type the command `sleep 60`, which *CTRL* key will **interrupt** it and take you back to the command prompt?
    a. `^U`   b. `^R`   c. `^C`   d. `^I`   e. `^D`

147. If I am in directory `/home/me` and `mt` is an empty sub-directory, what is true after this command line: `touch foo ; mkdir bar ; mv foo mt/bar`
    a. the directory `bar` now contains a file named `foo`
    b. the directory `mt` is still empty
    c. the command fails because `mt/bar` is not a directory
    d. the directory `mt` now contains a file named `bar`
    e. the directory `mt` now contains a file named `foo`

148. If `cow` is a sub-directory that contains only the file `dog`, what happens after this command: `mv cow/dog cow/././cat`
    a. the command fails because the name `cow/././cat` does not exist
    b. the command fails because the name `cat` does not exist
    c. the directory `cow` now contains only a file named `cat`
    d. the directory `cow` is now empty
    e. there is a second copy of the file `dog` in the file named `cat`

149. If my current directory is `/usr`, which of these pathnames is equivalent to the pathname `/usr/x/y/z`?
    a. `/x/y/z`   b. `../usr/y/z`   c. `../x/y/z`
    d. `x/./y/z`   e. `./usr/x/y/z`

150. **Did you read all the words of the test instructions on page one?**
    a. `Sim` *(Yes - Portuguese)*   b. `Igen` *(Yes - Hungarian)*
    c. `Taip` *(Yes - Lithuanian)*   d. `Jes` *(Yes - Esperanto)*
    e. `Tak` *(Yes - Polish)*