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 Ⓐ◯◯◯◯
192. Answer **192** is ◯Ⓑ◯◯◯
193. Answer **193** is ◯◯Ⓒ◯◯
194. Answer **194** is ◯◯Ⓒ◯◯
195. Answer **195** is Ⓐ◯◯◯◯
196. Answer **196** is ◯◯◯◯Ⓔ

Your **Test Version** is:

A   B   C   C   A   E

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. **Taip** *(Yes - Lithuanian)*   b. **Tak** *(Yes - Polish)*
   c. **Jes** *(Yes - Esperanto)*   d. **Igen** *(Yes - Hungarian)*
   e. **Sim** *(Yes - Portuguese)*

2. **My three-digit Lab Section number is:**
   a. The Test Version number printed on the question sheet.
   b. The timetable Section Number of my weekly 2-hour lab period.
   c. My lecture room number, i.e. **C346**
   d. My lab room number, e.g. **T303**, **A213**, **B332**
   e. My lecture Section Number, i.e. **010**

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

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

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

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

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

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

9. 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 ../home/./foo/../bin/ls foo/xx**
   b. **cp ../../bin/./ls /foo/xx**
   c. **cp ./foo/../bin/ls ../home/foo/xx**
   d. **cp ./../bin/ls ../foo/xx**
   e. **cp ./foo/../../bin/ls ./foo/./xx**

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

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

12. 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 directory **mt** is still empty
    b. the command fails because the path **./mt/../cat** does not exist
    c. the directory **mt** now contains two files
    d. the directory **mt** now has a file named **dog** in it
    e. the file named **cat** is now renamed to **dog**

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

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

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

16. 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 command fails because the path **mt/../bar** does not exist
    b. the command fails because the path **mt/../foo** does not exist
    c. there is a second copy of the file **foo** in the file named **bar**
    d. the directory **../me** now contains a file named **bar**
    e. the directory **mt** now contains only a file named **bar**

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

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

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

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

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

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

23. In a directory that contains only the file **foo**, what happens after this command:
    > **cp foo bar**
    a. the command fails because the name **bar** does not exist
    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 **bar** is not a directory
    e. there is a copy of the file named **foo** in the file named **bar**

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

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

26. What is the result of this exact command line: **cat /foo bar**
    a. the names of the pathnames **/foo** and **bar** will be displayed
    b. all the files under directory **/foo** with the name **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**

27. 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 current directory
    b. an error message: **mv: target 'c' is not a directory**
    c. the directories **a**, **b**, and **c** are moved to the directory **c**
    d. the directories **a** and **b** are appended to the directory **c**
    e. the directories **a** and **b** are moved into the directory **c**

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

29. 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/../../me** 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/./fil** does not exist
   d. the directory **mt** now contains only a file named **y**
   e. the directory **mt** is still empty

30. 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 command fails because the path **../me/cat** does not exist
   c. the command fails because the path **mt/../fil** does not exist
   d. the directory **mt/..** now has a file named **cat** in it
   e. the directory **mt** now contains only a file named **cat**

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

32. 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/./.**

33. 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 **../me/bar** does not exist
   b. the directory **mt** now contains only a file named **bar**
   c. the command fails because path **./mt/../foo** does not exist
   d. the directory **mt/..** now contains a file named **bar**
   e. there is a second copy of the file **foo** in the file named **bar**

34. 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 directory **foo** now contains only a file named **me**
   c. the command fails because the name **foo/./bar** does not exist
   d. there is a second copy of the file **bar** in the file named **me**
   e. the command fails because the name **me** does not exist

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

36. 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/y**
   d. **../lib/x/y**   *e.* **../x/y**

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

38. What is the result of this exact command line: **ls /foo bar**
   a. the names of the pathnames **/foo** and **bar** will be displayed
   b. all the files under directory **/foo** with the name **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**

39. If your current CLS directory is **Assignments** what pathname could you use to change to directory **CST8207-18W**
   a. **./.**   *b.* **CST8207-18W**
   c. **./CST8207-18W**   *d.* **..**
   e. **../CST8207-18W**

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

41. 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/a/b/c**   *c.* **/a/b/c**
   d. **../home/b/c**   *e.* **../a/b/c**

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

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

44. 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 command fails because the path **mt/../foo** does not exist
    b. the directory **mt** is still empty
    c. the directory **me** now contains a file named **bar**
    d. the directory **mt** now contains a file named **foo**
    e. the command fails because the path **../me/bar** does not exist

45. 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 [*]**

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

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

48. What is the result of this exact command line: **echo /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**

49. 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/.**

50. 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/../..**

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

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

53. 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**

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

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

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

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

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

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

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

61. 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.* **wc f1 f2 >bar**
    - *c.* **cp f1 f2 >bar**
    - *d.* **echo f1 f2 >bar**
    - *e.* **mv f1 f2 >bar**

62. 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 **mt** is still empty
    - *b.* the directory **mt** now contains a file named **foo**
    - *c.* the directory **mt** now contains a file named **bar**
    - *d.* the command fails because **mt/bar** is not a directory
    - *e.* the directory **bar** now contains a file named **foo**

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

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

65. 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 named **dog** in the file named **cat**
    - *c.* the command fails because the name **cat** does not exist
    - *d.* the directory **pig** is now empty
    - *e.* the command fails because the name **pig/./../cat** does not exist

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

67. 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, neither of which is an option.
    - *c.* Two arguments: A file name starting with a dash and a **/p** switch option argument.
    - *d.* Three arguments, one of which contains options and one is a pathname.
    - *e.* Two arguments, one of which is a single option name and the other is a pathname.

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

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

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

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

72. 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 **../me/old** does not exist
    - *b.* there is a second copy of the file named **new** in the file named **old**
    - *c.* the directory **mt** now contains only a file named **old**
    - *d.* the command fails because the path **./mt/../new** does not exist
    - *e.* the parent directory of **mt** now has a file named **old** in it

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

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

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

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

77. 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 >../../date.txt**
    d. **date >../../../home/date.txt**
    e. **date >/../../../home/date.txt**

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

79. 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 ../../etc/passwd /me/foo**
    d. **cp ../home/me/../etc/passwd ./me/./foo**
    e. **cp me/../../etc/passwd me/foo**

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

81. 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. your password will not echo on your screen as you type
    d. log in using your Blackboard userid
    e. use your ACSIS password as your password

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

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

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

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

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

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

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

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

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

91. 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**

92. 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/../..**

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

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

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

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

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

98. If **ian** is a sub-directory that contains only the file **foo**, what happens after this command: **mv ./ian/./foo ./ian/../bar**
    a. the directory **ian** 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 name **./ian/./foo** does not exist
    d. the directory **ian** is now empty
    e. the command fails because the name **./ian/../bar** does not exist

99. 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. the command fails because the name **me** does not exist
    c. there is only the file named **me** in the directory now
    d. the command fails because **bar** is not a directory
    e. an empty file named **me** is created

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

101. 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. there is a second copy of the file **foo** in the file named **bar**
    b. the directory **mt** now contains only a file named **bar**
    c. the command fails because the path **../me/bar** does not exist
    d. the parent directory of **mt** now contains a file named **bar**
    e. the command fails because the path **./mt/../foo** does not exist

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

103. 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/etc/../passwd**
    e. **./etc/passwd**

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

105. 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. **/usr/bin/../bash**

106. 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. **[CTRL]-[C]**   *b.* **[ALT]-[F1]**   *c.* **[TAB]**
    d. **[CTRL]-[D]**   *e.* **[ALT]**

107. 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** is still empty
    b. there is a second copy of the file **foo** in the file named **y**
    c. the directory **mt** now contains only a 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

108. 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/../../bin/bash**
    e. **/bin/../bash**

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

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

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

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

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

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

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

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

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

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

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

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

121. 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/.**

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

123. 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 **[CTRL]-[C]** key.
    b. Type the first part of the command or file name and press the **[ALT]** key.
    c. Type the first part of the command or file name and press the **[TAB]** key.
    d. Type the first part of the command or file name and press the **[ALT]-[F1]** key.
    e. Type the first part of the command or file name and press the **[CTRL]-[D]** key.

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

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

126. 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. **./passwd**
    e. **../etc/passwd/.**

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

128. 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 ./me/../etc/passwd ../home/me/foo**
    d. **cp ../etc/passwd ../me/foo**
    e. **cp ../home/me/../etc/passwd ./me/./foo**

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 **mt** is still empty
    b. the directory **mt** now contains a file named **foo**
    c. the command fails because **bar/mt** is not a directory
    d. the directory **mt** now contains a directory named **bar**
    e. the directory **bar** now contains a file named **foo**

130. 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. **../../..**

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

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

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

134. 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 ./me/../etc/passwd ../home/me/foo**
    b. **cp ../etc/passwd ./me/foo**
    c. **cp ../etc/passwd ../me/foo**
    d. **cp ../../etc/passwd /me/foo**
    e. **cp ../home/me/../etc/passwd ./me/./foo**

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

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

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

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

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

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

141. 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 ../home/me/foo**
    - *b.* **cp ../etc/passwd ./me/foo**
    - *c.* **cp ../../etc/passwd /me/foo**
    - *d.* **cp ../home/me/../etc/passwd ./me/./foo**
    - *e.* **cp ../etc/passwd ../me/foo**

142. 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 command fails because the path **../me/old** does not exist
    - *c.* there is a second copy of the file **new** in the file named **old**
    - *d.* the directory **mt** now contains only a file named **old**
    - *e.* the parent directory of **mt** now has a file named **old** in it

143. If your current CLS assignment base directory is **assignment03** what pathname could you use to change to directory **CST8207−18W**
    - *a.* **../..**
    - *b.* **../CST8207−18W**
    - *c.* **CST8207−18W**
    - *d.* **../../CST8207−18W**
    - *e.* **./.**

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

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

146. What Linux command changes your login password?
    - *a.* **chpass**
    - *b.* **pwd**
    - *c.* **passwd**
    - *d.* **newpass**
    - *e.* **password**

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

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

149. 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**

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