PRINT Name: _____   **LAB Section:** ▢▢▢

One-Answer Multiple Choice   45 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 last question about reading/doing all these test instructions is: **Tak**

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

Your **Test Version** is:

B   D   C   B   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. Which displays all the non-hidden names in the current directory that contain the word **ian** (and no other names)?

    a. **echo ?ian?**   *b.* **echo [ian]**
    c. **echo *ian***   *d.* **echo *[ian]***
    e. **echo [i][a][n]**

2. If **mt** is an empty sub-directory, what is true after this:
    touch foo ; mkdir dir ; mv foo dir/mt

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

3. The option to **ls** that shows hidden names is:

    a. **−h**   *b.* **−l**   *c.* **−a**   *d.* **−1**   *e.* **−i**

4. What is the output of this in an empty directory:
    pwd >.pwd ; ls >.ls ; echo .?*

    a. **.pwd   .ls**
    b. an error message from **echo** saying **.?*** does not exist
    c. **..   .pwd   .ls**
    d. **.?***
    e. **.   ..   .pwd   .ls**

5. In an empty directory, how many words are in file **c** after this:
    touch a >x ; echo y >x ; mv b a >b ; ls >c

    a. **0**   *b.* **1**   *c.* **2**   *d.* **3**   *e.* **4**

6. If **mt** is an empty sub-directory, what is true after this:
    touch foo ; mkdir bar ; mv mt/../foo mt/./bar

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

7. How do I search for the text string **string** in the paginated output from the **man** command on my screen?

    a. **find string**   *b.* **/string**   *c.* **help string**
    d. **\string**   *e.* **grep string**

8. If file **nine** contains 9 lines, each of which is the one-digit line number of the line in the file (**1** through **9**), what is the output on your screen of this:
    cat nine nine | head −n 11 | tail −n 1

    a. **8**   *b.* **3**   *c.* **2**   *d.* **9**   *e.* **1**

9. What is the output on your screen after these two command lines:
    echo hi >a ; cp a c ; echo go >>c
    head a >c ; head a >a ; cat a c

    a. **hi** followed by **hi**   *b.* **hi**
    c. **go**   *d.* **hi** followed by **go**
    e. no output

10. How many lines are in file **x** after this:
    ```
    date >x ; date >>x ; date >x ; date >>x
    ```
    a. **1**   *b.* **0**   *c.* **3**   *d.* **2**   *e.* **4**

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

12. In an empty directory, how many words are in file **c** after this:
    ```
    touch a a a a ; ls >b >c
    ```
    a. **3**   *b.* **4**   *c.* **1**   *d.* **2**   *e.* **0**

13. In an empty directory, what is the output on your screen of this:
    ```
    echo xx >foo >bar ; cat foo
    ```
    a. **cat: foo: No such file or directory**
    b. **xx**
    c. no output
    d. **xx >bar**
    e. **xx >foo >bar**

14. If **mt** is an empty sub-directory, what is true after this:
    ```
    touch mt/foo ; mkdir foo ; mv mt/foo mt/../foo/me
    ```
    a. the directory **mt** now contains only a file named **me**
    b. the command fails because the name **mt/../foo/me** does not exist
    c. the **mkdir** fails because **foo** already exists
    d. there is a second copy of the file **foo** in the file named **me**
    e. the directory **mt** is now empty

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

16. What command shows all the lines in file **file** that contain the text **mom**?
    a. **fgrep 'file' mom**
    b. **cat file | find 'mom'**
    c. **fgrep 'mom' >file**
    d. **fgrep 'mom' file**
    e. **cat file > fgrep 'mom'**

17. Which of these will make file **z** contain all of the content of file **x** followed by all of the content of file **y**?
    a. **cp x y >z**   *b.* **cp x >z ; cp y >>z**
    c. **cp x y >>z**   *d.* **cp x z ; cat y >>z**
    e. **cat x >z ; cp y >>z**

18. In an empty directory, what is the output on your screen after this:
    ```
    date >.a ; touch .b ; ls *
    ```
    a. *****
    b. **.   ..   .a   .b**
    c. no output
    d. **.a   .b**
    e. an error message from **ls** saying ***** does not exist

19. If my current directory is **/tmp**, which command copies the password file into the existing directory **/tmp/dir** under the name **bar**?
    a. **cp dir/../../etc/passwd dir/../../tmp/dir/bar**
    b. **cp ../../etc/./passwd /dir/tmp/bar**
    c. **cp .././etc/passwd ./bar**
    d. **cp ../dir/.././etc/passwd ././bar**
    e. **cp ./etc/passwd dir/bar**

20. Which displays all the non-hidden names in the current directory that contain the case-insensitive word **ian** (and no other names)?
    a. **echo *[ian,IAN,Ian,iAn,iaN,IAn,IaN,iAN]***
    b. **echo *[IiAaNn]***
    c. **echo *[ian|IAN|Ian|iAn|iaN|IAn|IaN|iAN]***
    d. **echo *[Ii][Aa][Nn]***
    e. **echo *IiAaNn***

21. If I am in directory **/tmp** and **mt** is an empty sub-directory, what is true after this: **touch mt/foo ; mkdir mt/me ; cp mt/foo mt/../me**

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

22. If file **a** contains 2 lines, and file **b** contains 3 lines, then how many lines are output on your screen by this: **cp a b | tail**

    a. **3**   *b.* **2**
    c. **2** followed by **3**   *d.* **3** followed by **2**
    e. no output on screen

23. If file **a** contains 2 lines, and file **b** contains 3 lines, then how many lines are output on your screen by this: **head a | head b**

    a. **3** followed by **2**   *b.* **2**
    c. **2** followed by **3**   *d.* **3**
    e. no output on screen

24. If file **nine** contains 9 lines, each of which is the one-digit line number of the line in the file (**1** through **9**), what is the output on your screen of this:
    sort nine nine | tail −n 6 | head −n 1

    a. **7**   *b.* **4**   *c.* **6**   *d.* **5**   *e.* **3**

25. Which pathname almost always leads to the same file named: **/dev/null**

    a. **/dev/null/.**   *b.* **./dev/null**
    c. **../dev/null**   *d.* **/dev/null/../null**
    e. **/dev/../dev/./null**

26. In a manual page **SYNOPSIS** section, ellipsis (three dots) (**...**) mean:

    a. something that is repeated   *b.* the parent directory
    c. something that is optional   *d.* a hidden directory
    e. no special meaning

27. Which *CTRL* key will send an **EOF** to a command reading your keyboard, and take you back to the command prompt?

    a. **^C**   *b.* **^D**   *c.* **^U**   *d.* **^R**   *e.* **^E**

28. In an empty directory, what is in file **c** after this:
    echo nosuchfile >c ; ls nosuchfile >c

    a. **ls: cannot access nosuchfile**
    b. **nosuchfile c**
    c. **nosuchfile**
    d. nothing (empty file)
    e. **c**

29. Given the pathname **/usr/local/lib**, the *basename* of this pathname is:

    a. **/**   *b.* **usr**   *c.* **/usr/local**
    d. **lib**   *e.* **local**

30. Which deletes a directory and everything inside it?

    a. **del −p dir**   *b.* **rd −a dir**
    c. **rmdir −r dir**   *d.* **rm −r dir**
    e. **rmdir −p dir**

31. The command that creates a directory and all parent directories is:

    a. **touch −p a/b/c**   *b.* **mkdir −r a/b/c**
    c. **pwd −r a/b/c**   *d.* **mkdir −p a/b/c**
    e. **cp −p a/b/c**

32. What is the output on your screen after this:
    mkdir d ; touch d/.a d/.b ; echo d/*

    a. **d/. d/.. d/.a d/.b**   *b.* **d/***
    c. no output   *d.* **d/a d/b**
    e. **d/.a d/.b**

33. What command will recursively find all pathnames named **lib** in **bar**?

    a. **find bar −name 'lib'**   *b.* **grep 'lib' bar**
    c. **grep −name 'lib' bar**   *d.* **find lib −name 'bar'**
    e. **grep bar −name 'lib'**

34. Give the minimum number of directories in this valid pathname:
    /usr/local/lib

    a. **4**   *b.* **3**   *c.* **2**   *d.* **1**   *e.* **5**

35. To "throw away" (hide) standard error output of a command, use:
    a. `cmd 2>/dev/null`   b. `cmd 2>/dev/sda1`
    c. `cmd 2>&1`   d. `cmd 1>/dev/sda1`
    e. `cmd 1>&2`

36. If file **a** contains 2 lines, and file **b** contains 3 lines, then how many lines are output on your screen by this: `head b | echo a`
    a. `1`   b. `2`   c. `3` followed by `1`
    d. `3`   e. `3` followed by `2`

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

38. If file **a** contains 2 lines, and file **b** contains 3 lines, then how many lines are in file **c** after this: `cat a a >c ; cat c >>a ; cat c b >c a`
    a. `8`   b. `11`   c. `10`   d. `9`   e. `7`

39. What is the output of this successful command sequence?
    `cd /var/tmp ; mkdir foo ; mkdir bar ; pwd`
    a. `/foo/bar`   b. `/bar`
    c. `/var/tmp/foo/bar`   d. `/var/tmp`
    e. `/tmp/foo/bar`

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

41. What is in file **out** after this: `echo 1 2 >out 3`
    a. `1 2 3`   b. `1 2`
    c. `1 2 >out 3`   d. nothing (empty file)
    e. `1 2 out 3`

42. What is the output of this in an empty directory:
    `touch x y z x1 xyx bxy yd .yx ye ; echo [xy]?`
    a. `x x1 y yd ye`
    b. `[xy]?`
    c. `x1 yd ye`
    d. `xyx`
    e. an error message from **echo** saying **[xy]?** does not exist

43. Which *CTRL* key will send an **Interrupt** to make a command end and take you back to the command prompt?
    a. `^U`   b. `^D`   c. `^R`   d. `^C`   e. `^E`

44. How many arguments and options are there to the command:
    `wc -wc ls cd`
    a. Two arguments and one option.
    b. Four arguments, one of which is a command name.
    c. Three arguments with no options.
    d. Three command names and one argument with two options.
    e. Three arguments, one of which contains two options.

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