

PRINT Name: \_\_\_\_\_ LAB Section:

Test Version: \_\_\_\_ One-Answer Multiple Choice 45 Questions – 15 of 15%

- ☞ 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.
- ☞ Put 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.
- ☞ Put the three-digit **Test Version** above into both **NO. OF QUESTIONS** and **NO. OF STUDENTS**
- ☞ Fill in the bubbles with pencil only, no pen. Enter your NAME, Test Version, and answers.
- ☞ The answer to the last question about reading/doing all these test instructions is: **Tak**

1. [40/156] What is the output on your screen of this command line:  
`mkdir a ; touch b a/b a/bb ; find a -name b*`  
 a. a/b a/bb                      b. no output                      c. a/b  
 d. b a/b a/bb                      e. b bb
2. [52/156] In an empty directory, how many words are in file **foo** after this:  
`touch a d ; echo a b c >b ; mv b c ; ls >foo`  
 a. 2                      b. 4                      c. 0                      d. 1                      e. 3
3. [56/155] In an empty directory, how many words are in file **d** after this:  
`touch a b c ; ls >d`  
 a. 4                      b. 1                      c. 2                      d. 0                      e. 3
4. [70/155] If I am in directory **/tmp** and **dir** is an empty sub-directory, what is true after this command line:  
`mkdir bar ; touch foo ; mv foo bar/dir`  
 a. the command fails because **bar/dir** is not a directory  
 b. the directory **bar** now contains a file named **foo**  
 c. the directory **dir** now contains a directory named **bar**  
 d. the directory **dir** is still empty  
 e. the directory **dir** now contains a file named **foo**
5. [73/156] How do I search for the string **text** in the paginated output from the **man** command on my screen?  
 a. `help text`                      b. `grep text`                      c. `@text`  
 d. `/text`                      e. `find text`

6. [75/156] 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. `../passwd`                      d. `../etc/passwd/.`  
 e. `passwd`
7. [79/156] File **a** contains 2 lines, and file **b** contains 3 lines, then how many lines are in file **c** after this command line:  
`ln a d ; ln d e ; ln e c ; sort a b >c`  
 a. 0                      b. 3                      c. 4                      d. 5                      e. 2
8. [80/156] In an empty directory, how many words output on your screen after this: `echo It's redirected >a isn't it? >b ; ls`  
 a. 0                      b. 4                      c. 3                      d. 2                      e. 1
9. [81/154] Which command line below shows only lines 5-10 of file **foo**?  
 a. `head -n 10 foo | tail -n 5`  
 b. `head -n 10 foo | tail -n 6`  
 c. `head -n 6 foo | tail -n 10`  
 d. `tail -n 15 foo | head -n 5`  
 e. `tail -n 10 foo | head -n 6`
10. [85/156] File **a** contains 2 lines. File **b** contains 3 lines. How many lines are output on your screen by this command line: `cat b | echo a`  
 a. 3 followed by 2                      b. 2                      c. 1  
 d. 3                      e. 3 followed by 1
11. [88/156] Which pathname always leads to the same file named: **/etc/passwd**  
 a. `/etc/./passwd`                      b. `./etc/passwd`  
 c. `./etc/./passwd/.`                      d. `././etc/passwd`  
 e. `/etc/./etc/./passwd`
12. [88/156] In **/var/lib** using `ls -l` shows a symbolic link **foo -> /bin/cat** then dereference the absolute path of **foo** with no symbolic links:  
 a. `/var/lib/bin/cat`                      b. `/bin/cat`  
 c. `/var/lib/foo/bin/cat`                      d. `/foo/bin/cat`  
 e. `/var/lib/bin/cat/foo`

13. [89/156] Create a symbolic link under `/etc` named `foo` that has target `bar`:
- `ln -s /etc/foo '/etc/bar'`
  - `ln -s 'bar' '/etc/foo'`
  - `ln -s foo/bar /etc`
  - `ln -s '/etc/bar' /etc/foo`
  - `ln -s /etc/foo 'bar'`
14. [92/155] Dereference the following symlink `d` into its equivalent absolute path: `ln -s ../../a/../c /tmp/a/b/d`
- `/tmp/c`
  - `/tmp/a/b/d`
  - `/tmp/b/d`
  - `/tmp/b/c`
  - `/tmp/a/c`
15. [92/154] File `a` occupies one disk block. How many disk blocks are in use after this sequence of commands:
- ```
cp a b ; ln b c ; cp c d ; ln a e ; cp a d ; rm a
```
- 2
  - 5
  - 3
  - 1
  - 4
16. [93/155] File `a` contains 2 lines. File `b` contains 3 lines. How many lines are in file `c` after this command line:
- ```
cat b b >c ; head b >>a ; sort c b >c a
```
- 8
  - 10
  - 7
  - 12
  - 0
17. [95/156] What is the output of this in an empty directory:
- ```
date >.a ; touch .abc ; echo .?*
```
- `.. .a .abc`
  - `.?*`
  - `.a .abc`
  - an error message from `echo` saying `.?* does not exist`
  - `.abc`
18. [97/156] In an empty directory, what is in file `out` after this command line:
- ```
cat foo | wc -l >out
```
- 1
  - nothing (empty file)
  - `out`
  - `foo`
  - 0
19. [102/156] What is the link count of directory `x` after this set of successful commands? `mkdir x ; mkdir x/a x/b x/a/b x/b/c x/b/d`
- 6
  - 5
  - 4
  - 2
  - 3

20. [103/155] What is the output of this in an empty directory:
- ```
echo >.abc 123 ; echo .*
```
- `.*`
  - an error message from `echo` saying `.?*` does not exist
  - `.abc`
  - `. .. .abc`
  - 123
21. [105/156] If `/bin/foo` is a program that outputs `one` and `/usr/bin/foo` is a program that outputs `two` what would be the output on your screen of this two command sequence:
- ```
PATH=/etc:/usr:/bin:/usr/bin ; foo
```
- `one` followed by `two`
  - `one`
  - `bash: foo: command not found`
  - `two`
  - `two` followed by `one`
22. [106/156] File `a` contains 2 lines, and file `b` contains 3 lines, then how many lines are in file `c` after this command line:
- ```
sort a b >c ; cat a >>b ; sort c b >c a
```
- 12
  - 7
  - 8
  - 5
  - 0
23. [106/155] If `/bin/foo` is a program that outputs `one` and `/usr/bin/foo` is a program that outputs `two` what would be the output on your screen of this two command sequence:
- ```
PATH=/home:/bin/foo:/usr ; foo
```
- `two` followed by `one`
  - `one` followed by `two`
  - `bash: foo: command not found`
  - `two`
  - `one`
24. [106/155] What is in file `c` after this command line:
- ```
echo xx >a ; ln a b ; echo yy >b ; ln a c ; rm a b
```
- `xx` followed by `yy`
  - nothing (empty file)
  - no such file (nonexistent)
  - `xx`
  - `YY`

25. [110/156] File **a** occupies one disk block. How many disk blocks are in use after this sequence of commands:

```
cp a b ; ln b c ; cp c d ; cp a c ; rm a b
```

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

26. [110/156] In `/var/lib` using `ls -l` shows a symbolic link **bar** -> `../abc/foo` then dereference the absolute path of **bar** with no symbolic links:

- a. `/var/lib/abc/foo`  
 b. `/var/lib/abc/foo/bar`  
 c. `/var/abc/foo`  
 d. `/var/bar/../abc/foo`  
 e. `/var/lib/bar/../abc/foo`

27. [111/155] What is the link count of directory **x** after this set of successful commands?

```
mkdir x ; cd x ; touch a ; ln a b ; mkdir c d e
```

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

28. [113/156] What is true about this output from `ls -il foo bar`?

```
15 -rwxrwxrwx 2 bin bin 3 Jul 31 12:33 foo
15 -r--r--r-- 2 bin bin 3 Jul 31 12:33 bar
```

- a. **foo** and **bar** are names for different files  
 b. **foo** and **bar** are two of three names for the same file  
 c. **foo** and **bar** are names for the same file  
 d. this output is not possible  
 e. **foo** and **bar** each have three names (six names total)

29. [114/156] Given this long listing:

```
drwxr-xr-x 448 me me 296 Dec 4 9:12 dir
```

How many subdirectories lie immediately under **dir**?

- a. 296  
 b. 446  
 c. there is not enough information shown to answer the question  
 d. 294  
 e. 448

30. [114/155] If a shell GLOB pattern fails to match anything, the shell:

- a. removes the pattern and passes nothing  
 b. gives a warning message but continues  
 c. passes the pattern unchanged to the command  
 d. returns the closest match to the pattern  
 e. gives an error message and does not execute

31. [118/156] How many arguments are passed to the command by the shell:

```
echo " 1 '2 3' 4 " 55 66 ' 7 "8 '999 >out
```

- a. 6            b. 3            c. 2            d. 4            e. 5

32. [120/156] What is true about this output from `ls -il foo bar`

```
15 -rwxrwxrwx 2 bin bin 3 Jul 31 12:33 foo
23 -rwxrwxrwx 2 bin bin 3 Jul 31 12:33 bar
```

- a. **foo** and **bar** are names for different files  
 b. this output is not possible  
 c. **foo** and **bar** are two of three names for the same file  
 d. **foo** and **bar** each have three names (six names total)  
 e. **foo** and **bar** are names for the same file

33. [123/156] If files occupy one disk block, how many disk blocks will the system free up if I remove these four file names:

```
111 -rw-r--r-- 2 me me 1 Jan 1 1:00 a
111 -rw-r--r-- 2 me me 1 Jan 1 1:00 b
222 -rw-r--r-- 3 me me 1 Jan 1 1:00 c
222 -rw-r--r-- 3 me me 1 Jan 1 1:00 d
```

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

34. [124/156] File **a** occupies one disk block. How many disk blocks are in use after this sequence of commands:

```
cp a b ; ln b c ; ln c d ; ln a e ; rm a b c
```

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

35. [124/156] How many files are touched?

```
touch " 1 '2 3' 4 "5 6 ' 7 "8 '
```

- a. 5            b. 2            c. 3            d. 6            e. 4

36. [124/156] If files occupy one disk block, how many disk blocks will the system free up if I remove these four file names:
- ```
111 -rw-r--r-- 1 me me 1 Jan 1 1:00 a
222 -rw-r--r-- 1 me me 1 Jan 1 1:00 b
444 -rw-r--r-- 2 me me 1 Jan 1 1:00 c
444 -rw-r--r-- 2 me me 1 Jan 1 1:00 d
```
- a. 1            b. 2            c. 3            d. 0            e. 4
37. [127/155] How do you execute the program **bar** in the current directory?
- a. `./bar`            b. `bar/`            c. `bar/.`  
d. `$HOME/bar`        e. `/bar`
38. [128/156] If files occupy one disk block, how many disk blocks will the system free up if I remove these four file names:
- ```
111 -rw-r--r-- 1 me me 1 Jan 1 1:00 a
222 -rw-r--r-- 3 me me 1 Jan 1 1:00 b
222 -rw-r--r-- 3 me me 1 Jan 1 1:00 c
222 -rw-r--r-- 3 me me 1 Jan 1 1:00 d
```
- a. 1            b. 4            c. 2            d. 3            e. 0
39. [129/156] If files occupy one disk block, how many disk blocks will the system free up if I remove these four file names:
- ```
111 -rw-r--r-- 3 me me 1 Jan 1 1:00 a
111 -rw-r--r-- 3 me me 1 Jan 1 1:00 b
222 -rw-r--r-- 3 me me 1 Jan 1 1:00 c
222 -rw-r--r-- 3 me me 1 Jan 1 1:00 d
```
- a. 1            b. 0            c. 4            d. 3            e. 2
40. [131/156] What is true about this output from `ls -il foo bar`
- ```
15 -rwxrwxrwx 2 bin bin 3 Jul 31 12:33 foo
15 -rwxrwxrwx 2 bin bin 3 Jul 31 12:33 bar
```
- a. **foo** and **bar** are two of three names for the same file  
b. this output is not possible  
c. **foo** and **bar** are names for the same file  
d. **foo** and **bar** each have three names (six names total)  
e. **foo** and **bar** are names for different files

41. [132/155] File **a** contains 2 lines. File **b** contains 3 lines. How many lines are output on your screen by this command line: `cat b | cat a`
- a. 5            b. 2            c. 2 followed by 3  
d. 3 followed by 2        e. 3
42. [135/156] File **a** occupies one disk block. How many disk blocks are in use after this sequence of commands:
- ```
ln a b ; ln b c ; cp c d ; ln c e ; rm a b c d
```
- a. 3            b. 4            c. 5            d. 2            e. 1
43. [135/155] If files occupy one disk block, how many disk blocks will the system free up if I remove these four file names:
- ```
111 -rw-r--r-- 1 me me 1 Jan 1 1:00 a
222 -rw-r--r-- 1 me me 1 Jan 1 1:00 b
333 -rw-r--r-- 1 me me 1 Jan 1 1:00 c
444 -rw-r--r-- 2 me me 1 Jan 1 1:00 d
```
- a. 1            b. 2            c. 0            d. 3            e. 4
44. [137/156] If files occupy one disk block, how many disk blocks will the system free up if I remove these four file names:
- ```
111 -rw-r--r-- 1 me me 1 Jan 1 1:00 a
222 -rw-r--r-- 2 me me 1 Jan 1 1:00 b
333 -rw-r--r-- 2 me me 1 Jan 1 1:00 c
444 -rw-r--r-- 1 me me 1 Jan 1 1:00 d
```
- a. 4            b. 1            c. 2            d. 3            e. 0
45. [152/156] **Did you read all the words of the test instructions on page one?**
- a. **Jes** (Yes - Esperanto)            b. **Igen** (Yes - Hungarian)  
c. **Tak** (Yes - Polish)            d. **Taip** (Yes - Lithuanian)  
e. **Sim** (Yes - Portuguese)