Evaluation: 42 Questions **Name: _____**

Important Instructions

1. Read all instructions and both sides of all pages.
2. Manage your time when answering questions on this test. Answer the questions you know, first.

(Office use only: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42)

1. What is the output of this shell command line in an empty directory?
```
echo *
```
† **a**. **`*`**
b. an error message from **`echo`** saying **`*`** does not exist
c. no output
d. **`.  ..`**
e. **`.`**

2. Which command line below does not show any lines from inside the file **`out`**?
† **a**. **`wc out`**
b. **`head -99 out`**
c. **`tail out`**
d. **`sort -n out`**
e. **`more out`**

3. What can you do to get back (redo) the last command you typed to the **`bash`** (Linux) shell?
† **a**. Use the "UpArrow" key.
b. Use the "PageUp" key.
c. Type [ALT]-[F2]
d. Type [CONTROL]-[ALT]-[DEL]
e. Type [CONTROL]-[BACKSPACE]

4. What command shows all the lines in file **`out`** that contain the string **`foo`**?
† **a**. **`grep <out foo`**
b. **`grep out foo`**
c. **`cat out > grep foo`**
d. **`grep out foo | cat`**
e. **`grep foo >out`**

5. Which command sequence outputs inode/filename pairs for names in the current directory, sorted by inode number?
† **a**. **`ls -ai | sort -n`**
b. **`sort -n | ls -ai`**
c. **`ls -i * > sort -n`**
d. **`ls -node * > sort -n`**
e. **`ls ./* | sort -node`**

6. What is in the file **`bar`** after this command sequence:
```
echo hi >x ; echo ho >x ; mv x y >bar
```
† **a**. nothing - empty file - no data
b. **`hi`** followed by **`ho`**
c. **`hi`**
d. **`ho`**
e. no such file (nonexistent)

7. How many lines are in the file **`bar`** after this command sequence:
```
echo hi >x ; echo ho >>x ; cat x x >bar
```
† **a**. **`4`**
b. **`6`**
c. **`2`**
d. **`1`**
e. nothing - empty file - no data

8. Which command line lists all possible utilities available for compiling programs?
† **a**. **`apropos compile`**
b. **`man compile`**
c. **`grep compile /etc/*`**
d. **`grep /etc/* compile`**
e. **`man * | grep compile`**

9. Which of the command lines below can generate a non-empty file?
† **a**. **`ls -ls file >file`**
b. **`tr a b <file >file`**
c. **`awk '{print $1}' file >file`**
d. **`touch file >file`**
e. **`uniq file >file`**

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

11. Which command below sorts *only* this five-character file name containing a special character (and no others): **`xx?xx`**
† **a**. **`sort "xx?xx"`**
b. **`sort xx?xx`**
c. **`sort xx/?xx`**
d. **`sort ''xx?xx''`**
e. **`sort ""xx?xx""`**

12. Which command below removes *only* this five-character file name containing a special character (and no others): **yy?yy**

† **a**. **rm yy\?yy**
b. **rm yy/?yy**
c. **rm yy\\?yy**
d. **rm yy//?yy**
e. **rm yy?yy**

13. If you type the command **xload**
which of the following key sequences will interrupt it and take you immediately back to the command prompt?

† **a**. **[CTRL-C]**
b. **[CTRL-D]**
c. **[CTRL-L]**
d. **[CTRL-U]**
e. **[CTRL-R]**

14. If you type the command **tr a b**
which of the following key sequences will send an EOF and take you immediately back to the command prompt?

† **a**. **[CTRL-D]**
b. **[CTRL-C]**
c. **[CTRL-L]**
d. **[CTRL-U]**
e. **[CTRL-R]**

15. If I am in my home directory named **/home/ian** and **mt** is an empty sub-directory, what is true after this command line:

```
who >../ian/cat ; cp ./mt/../cat ./mt/../dog
```

† **a**. the directory **mt** is still empty
b. the directory **mt** now has a file named **dog** in it
c. the directory **mt** now contains two files
d. there is a second copy of the file named **who** in the file **dog**
e. the command fails because the path **./mt/../cat** does not exist

16. How many command arguments does the shell pass to this **echo** command:

```
echo 'It's a bird! It's a plane!'
```

† **a**. Four arguments.
b. Five arguments.
c. One argument.
d. Two arguments.
e. Three arguments.

17. How many arguments does the shell pass to this **echo** command:

```
echo " 1 2 " three ' 4 ' five"6"
```

† **a**. Four arguments.
b. Three arguments.
c. Five arguments.
d. One argument.
e. Nine arguments.

18. Which of the following is true, given this long directory listing from **ls**:

```
drwxr-x--x 456 ian user 123 May 30 12:35 dir
```

† **a**. The number 123 is the size in bytes of this directory.
b. The number 123 is the count of links (names) this directory has.
c. The number 456 is the inode number of this directory.
d. The number 456 is the octal permissions of this directory.
e. The number 456 is the size of this directory.

19. Which of these command sequences will make file **foo** contain all of the content of file **a** followed by all of the content of file **b**?

† **a**. **cat a >foo ; cat b >>foo**
b. **cp a >foo ; cp b >>foo**
c. **cp a b >foo**
d. **mv a b >foo**
e. **echo a b >foo**

20. If my current directory is **/bin**, which of these pathnames is equivalent to the file name **/bin/ls**?

† **a**. **../../bin/ls**
b. **../bin/ls/.**
c. **./bin/ls**
d. **ls/.**
e. **/root/bin/ls**

21. What is the output of this successful command sequence?

```
cd /tmp ; mkdir foo ; mkdir bar ; pwd
```

† **a**. **/tmp**
b. **/tmp/foo**
c. **/tmp/bar**
d. **/tmp/foo/bar**
e. **/bar**

22. Which of the following pathnames always leads to the same file named: **/etc/passwd**?

† **a**. **/etc/../etc/passwd**
b. **/etc/./etc/../passwd**
c. **/etc/passwd/.**
d. **./etc/passwd**
e. **../etc/passwd**

23. How many arguments and options are there to the command:
ls -ls /cat
† **a**. Two command line arguments, one of which contains two bundled options.
b. Two arguments, one of which is a single option and the other is a pathname.
c. A three-letter file name and a **/cat** switch option argument.
d. Two arguments, no options.
e. Two options, no arguments.

24. How can you ask the **bash** (Linux) shell to complete commands or file names for you?
† **a**. You can type the first part of the command or file name and press the **TAB** key.
b. You can type the first part of the command or file name and press the **ALT** key.
c. Push key **F1** and the system will present a menu of commands.
d. Type **[CONTROL]-[D]** and the shell will present a menu of commands.
e. Type **[CONTROL]-[C]** and the shell will present a menu of commands.

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

26. When doing an **ls -a**, the output pathname that is a double dot (**..**) signifies what?
† **a**. The parent directory.
b. A file or directory with double links.
c. A hidden file.
d. The current directory.
e. The root directory.

27. What command can you use to remove a directory that isn't empty?
† **a**. **rm -r dir**
b. **del -r dir**
c. **rmdir -r dir**
d. **deldir -r dir**
e. **mv -r dir**

28. Which command sequence below outputs only lines 10-15 of the 16-line file named **hex**?
† **a**. **head -15 hex | tail -6**
b. **tail -16 hex | head -10**
c. **head -16 hex | tail -5 hex**
d. **head -10 hex | tail -15 hex**
e. **tail -10 hex | head -16 hex**

29. If file **nine** contains nine lines, each of which is the one-digit line number of the line in the file (**1** through **9**), what is the output of this command:
sort nine nine nine | tail -3 | head -1
† **a**. **9**
b. **8**
c. **7**
d. **7 7 7**
e. **1 1 1**

30. Which of the following shell command lines displays all the names in the current directory that are exactly three digits long (and no others)?
† **a**. **echo [0-9][0-9][0-9]**
b. **echo [1-3][1-3][1-3]**
c. **echo [3][3][3]**
d. **echo [?][?][?]**
e. **echo ???**

31. If file **x** contains ten lines, and file **y** contains twenty lines, then how many lines are in file **cat** after this sequence of **bash** shell commands:
sort x y >z ; tail -5 y >y ; sort x y z >cat
† **a**. **40**
b. **45**
c. **50**
d. **60**
e. no lines (empty file)

32. If file **ten** contains ten lines, and file **twenty** contains twenty lines, then how many lines are output by this command: **cat twenty | sort ten**
† **a**. **10**
b. **20**
c. **30**
d. **60**
e. no lines (no output)

33. If directory **foo** contains only these three three-character file names: **.11**, **.12**, **...**, then what is the output of the following **bash** shell command line: **echo foo/???**

† **a**. **foo/???**
b. **foo/.11 foo/.12 foo/...**
c. **foo/.11 foo/.12**
d. **foo/...**
e. no output

34. If your PATH variable contains **/bin:/usr/bin**, what is the output of this **bash** shell command line? **echo '$PATH'**

† **a**. **$PATH**
b. **/bin:/usr/bin**
c. **'$PATH'**
d. **/bin**
e. **'/bin'**

35. What appears on your screen after this **bash** shell command line?

```
echo hi >ls ; cat ls > wc
```

† **a**. no output
b. **1 1 2**
c. **1 1 3**
d. **ls**
e. **hi**

36. In an empty directory, how many arguments are passed to the **rm** command in this **bash** command line?

```
date >a1 ; touch a2 ba ca >all ; rm a*
```

† **a**. **3**
b. **2**
c. **1**
d. **4**
e. none

37. What is the correct syntax to redirect both standard output and standard error into the same output file?

† **a**. **ls -l >foo 2>&1**
b. **ls -l 2>&1 >foo**
c. **ls -l >foo 2>$1**
d. **ls -l 2>$1 >foo**
e. **ls -l >foo 2>foo**

38. In an empty directory, what is in file **count** after this **bash** command line?

```
ls ??? | wc -w >count
```

† **a**. **0**
b. **1**
c. **1 1 1**
d. **1 1 2**
e. no output (empty file)

39. What text is output by this **bash** shell command sequence:

```
echo cow >foo ; echo dog | head -1 foo
```

† **a**. **cow**
b. **dog**
c. **foo**
d. **cow** followed by **dog**
e. **dog** followed by **cow**

40. In an empty directory, what appears on your screen after this **bash** command line? **ls 2>/dev/null nosuchfile**

† **a**. no output
b. **nosuchfile**
c. **ls: nosuchfile: No such file or directory**
d. **ls: /dev/null: No such file or directory**
e.

```
ls: 2 /dev/null nosuchfile: No such file or
directory
```

41. In an empty directory, how many words are in file **out** after this **bash** shell command line? **touch 1 2 3 2 1 ; ls >out**

† **a**. **4**
b. **5**
c. **6**
d. **3**
e. no output (empty file)

42. What is in file **out** after running this **bash** shell command line?

```
echo 2 3 >out 3 0
```

† **a**. **2 3 3 0**
b. **2 3**
c. **2 3 0**
d. **2 3 >out 3 0**
e. no output (empty file)

Answer Key - DAT 2330 – Ian Allen – Winter 2004 - DAT 2330 Test #1 - Unix - 15%

Office use only: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42

```
 1. a                          41. a
 2. a                          42. a
 3. a
 4. a                        Count of a:  42  100%
   5. a
   6. a                      With 5 choices: 42
   7. a                        1 2 3 4 5 6 7 8 9 10 11
   8. a                        12 13 14 15 16 17 18 19
 9. a                          20 21 22 23 24 25 26 27
10. a                          28 29 30 31 32 33 34 35
11. a                          36 37 38 39 40 41 42
12. a
  13. a                      Macro .cmd splits: 17
  14. a                      Macro .ans splits: 0
  15. a
  16. a
17. a
18. a
19. a
20. a
  21. a
  22. a
  23. a
  24. a
25. a
26. a
27. a
28. a
  29. a
  30. a
  31. a
  32. a
33. a
34. a
35. a
36. a
  37. a
  38. a
  39. a
  40. a
```