

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

1. If your terminal type is **xterm**, what is the output of this **bash** shell command line? `echo '$TERM'`
  - a. '\$TERM'
  - b. 'xterm'
  - c. **xterm**
  - d. no output
  - e. \$TERM
2. What is the output of this successful command sequence?
 

```
cd /home/dir ; mkdir one ; mkdir two ; pwd
```

  - a. /home/dir
  - b. /two
  - c. /home/dir/one
  - d. /home/dir/one/two
  - e. /home/dir/two
3. What is in the file **out** after this command sequence?
 

```
echo hi >x ; echo ho >>x ; cp x y >out
```

  - a. no such file (nonexistent)
  - b. **hi** followed by **ho**
  - c. **hi**
  - d. nothing - empty file - no data
  - e. **ho**
4. If **/bin/bash** is a file name, which of the following pathnames always leads to the same file?
  - a. **/bin/bash/.**
  - b. **/bin/bin/../bash**
  - c. **/bin/../bin/bash**
  - d. **./bin/bash**
  - e. **/bin/../bash**
5. If my current directory is **/etc**, which of these pathnames is equivalent to the file name **/etc/passwd**?
  - a. **/passwd**
  - b. **../passwd**
  - c. **./passwd**
  - d. **../etc/passwd/.**
  - e. **./etc/passwd**

6. What can you do to get back (redo) the last command you typed to the **bash** (Linux) shell?
  - a. Type [ALT]-[F2]
  - b. Type [CONTROL]-[ALT]-[DEL]
  - c. Type [CONTROL]-[BACKSPACE]
  - d. Use the "PageUp" key.
  - e. Use the "UpArrow" key.
7. What appears on your screen after this **bash** shell command line?
 

```
echo xx >z ; ls z > wc
```

  - a. 1 1 3
  - b. no output
  - c. 3
  - d. 1 1 2
  - e. 2
8. 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 [3][3][3]`
  - b. `echo [?][?][?]`
  - c. `echo ???`
  - d. `echo [1-3][1-3][1-3]`
  - e. `echo [0-9][0-9][0-9]`
9. In an empty directory, how many words are in file **cow** after this **bash** shell command line? `touch dog dog cat ; ls >cow`
  - a. no output (empty file)
  - b. 2
  - c. 3
  - d. 1
  - e. 4
10. What is in file **cow** after running this **bash** shell command line?
 

```
echo one two >cow three
```

  - a. no output (empty file)
  - b. `echo one two`
  - c. `one two cow three`
  - d. `one two`
  - e. `one two three`
11. What command can you use to remove a directory that isn't empty?
  - a. `rmdir -r dir`
  - b. `rm -r dir`
  - c. `del -r dir`
  - d. `mv -r dir`
  - e. `deldir -r dir`

12. Which command below removes *only* this four-character file name containing a special character (and no others): **xyz?**
- rm xyz\?**
  - rm xyz\?**
  - rm xyz//?**
  - rm -r xyz?**
  - rm xyz/?**
13. When doing an **ls -a**, the output pathname that is a double dot (..) signifies what?
- The current directory.
  - The root directory.
  - A hidden file.
  - A file or directory with double links.
  - The parent directory.
14. 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 | tail -4 | head -1
```
- 6 6**
  - 4 4**
  - 6**
  - 1 1**
  - 8**
15. Which of the following is true, given this long directory listing from **ls**:
- ```
drwxr-x--x 123 ian user 456 May 30 12:35 dir
```
- The number 456 is the size of this directory.
  - The number 123 is the octal permissions of this directory.
  - The number 123 is the inode number of this directory.
  - The number 456 is the count of links (names) this directory has.
  - The number 123 is the size of this directory.
16. Which command below removes *only* this four-character file name containing a special character (and no others): **?abc**
- rm ''?abc''**
  - rm /?abc**
  - rm ""?abc""**
  - rm -r ?abc**
  - rm "?abc"**

17. If directory **foo** contains only these four three-character file names: **.x1**, **.x2**, **.z3**, **.z.**, then what is the output of the following **bash** shell command line: **echo foo/???**
- no output
  - foo/.x1 foo/.x2 foo/.z3 foo/.z.**
  - foo/.x1 foo/.x2 foo/.z3**
  - foo/???**
  - foo/.z.**
18. How many arguments does the shell pass to this **echo** command:
- ```
echo " 1 2 "three ' 4 ' five"6"
```
- Three arguments.
  - Four arguments.
  - One argument.
  - Nine arguments.
  - Five arguments.
19. In an empty directory, what appears on your screen after this **bash** command line? **ls out 2>/dev/null**
- /dev/null not found**
  - out**
  - out not found**
  - out 2 not found**
  - no output
20. Which command line lists all possible utilities available for sorting files?
- man sort**
  - grep /etc/passwd sort**
  - grep sort /etc/passwd**
  - man -k sort**
  - man | grep sort**
21. How many arguments and options are there to the command:
- ```
wc -wc /sort
```
- Two arguments, no options.
  - Two options, no arguments.
  - Two arguments, one of which is a single option and the other is a pathname.
  - Two command line arguments, one of which contains two bundled options.
  - A three-letter file name and a **/sort** switch option argument.
22. In the output of the command **ls -a**, a dot that begins a name signifies what?
- The current directory.
  - A current file.
  - A name with an unprintable character.
  - A name that is hidden.
  - The parent directory.

23. What command shows all the lines in file **foo** that contain the string **bar**?
- grep cat foo bar**
  - grep foo bar**
  - grep bar >foo**
  - cat foo > grep bar**
  - grep bar foo**
24. Which of these command sequences will make file **out** contain all of the content of file **in1** followed by all of the content of file **in2**?
- cat in1 in2 >out**
  - cp in1 in2 >out**
  - mv in1 in2 >out**
  - cp in1 >out in2 >out**
  - echo in1 in2 >out**
25. How many command arguments does the shell pass to this **echo** command:  
**echo 'It's a bird! No! It's a plane!'**
- One argument.
  - Three arguments.
  - Two arguments.
  - Four arguments.
  - Five arguments.
26. What is the correct syntax to redirect both standard output and standard error into the same output file?
- command 2>&1 >out**
  - command >out 2>1**
  - command 2>1 >out**
  - command >out 2>&1**
  - command >out 2>out**
27. If you type the command **sort verybigfile >out** which of the following key sequences will interrupt it and take you immediately back to the command prompt?
- [CTRL-R]**
  - [CTRL-C]**
  - [CTRL-L]**
  - [CTRL-D]**
  - [CTRL-U]**
28. What text is output by this **bash** shell command sequence:  
**echo dog >out ; echo cat | sort out**
- dog** followed by **cat**
  - out**
  - cat** followed by **dog**
  - dog**
  - cat**

29. If file **a** contains twenty lines, and file **b** contains thirty lines, then how many lines are in file **out** after this sequence of **bash** shell commands:  
**cat a b >c ; head c >c ; sort a b c >out**
- 60**
  - no lines (empty file)
  - 100**
  - 50**
  - 30**
30. Which of the command lines below can generate a non-empty file?
- head -5 file >file**
  - tail -3 file >file**
  - wc -wc file >file**
  - sort -r file >file**
  - cat file file file >file**
31. In an empty directory, what is in file **out** after this **bash** command line?  
**ls nosuchfile | wc -l >out**
- 10**
  - no output (empty file)
  - 0**
  - 1**
  - 11**
32. If file **twenty** contains twenty lines, and file **thirty** contains thirty lines, then how many lines are output by this command:  
**tail thirty | cat twenty**
- 20**
  - 21**
  - 30**
  - 50**
  - no lines (no output)
33. Which command line below does not show any lines from inside the file **dog**?
- less dog**
  - ls dog**
  - sort -r dog**
  - head -3 dog**
  - tail -8 dog**

34. How can you ask the **bash** (Linux) shell to complete commands or file names for you?
- Type [**CONTROL**]-[**C**] and the shell will present a menu of commands.
  - Type [**CONTROL**]-[**D**] and the shell will present a menu of commands.
  - Push key **F1** and the system will present a menu of commands.
  - You can type the first part of the command or file name and press the **ALT** key.
  - You can type the first part of the command or file name and press the **TAB** key.
35. Which command below is the best way to find a line containing a question mark (?) in the file `/etc/passwd`?
- `grep ? >/etc/passwd`
  - `grep ./? /etc/passwd`
  - `grep '?' /etc/passwd`
  - `grep /etc/passwd ./?`
  - `grep ? /etc/passwd`
36. If you type the command `head` which of the following key sequences will send an EOF and take you immediately back to the command prompt?
- [**CTRL-D**]
  - [**CTRL-L**]
  - [**CTRL-C**]
  - [**CTRL-U**]
  - [**CTRL-R**]
37. Which command sequence outputs inode/filename pairs for names in the current directory, sorted by inode number?
- `sort ls -ia`
  - `ls -node * > sort -n`
  - `ls -i * > sort`
  - `ls -ia | sort -n`
  - `ls /* | sort -node`
38. In an empty directory, how many arguments are passed to the `cat` command in this **bash** command line?
- ```
date >a1 ; touch a2 ba ca ; cat a*
```
- 2
  - 3
  - none
  - 1
  - 4

39. If I am in my home directory named `/home/alleni` and `empty` is an empty sub-directory, what is true after this command line:
- ```
date >./cat ; mv empty/./cat ../alleni/dog
```
- the command fails because the path `empty/./cat` does not exist
  - the directory `empty` now contains only a file named `dog`
  - the directory `empty/..` now has a file named `dog` in it
  - there is a second copy of the file `cat` in the file named `dog`
  - the command fails because the path `../alleni/dog` does not exist
40. Which command sequence below outputs only lines 11-15 of the 99-line file named `cat`?
- `head -10 cat | tail -15 cat`
  - `head -15 cat | tail -5`
  - `head -15 cat | tail -5 cat`
  - `tail -15 cat | head -10`
  - `tail -10 cat | head -15 cat`
41. How many lines are in the file `out` after this command sequence:
- ```
echo hi >x ; echo ho >>x ; cat x x x >out
```
- 2
  - 1
  - nothing - empty file - no data
  - 6
  - 3
42. What is the output of this shell command line in an empty directory?
- ```
ls *
```
- \*
  - . ..
  - no output
  - an error message from `ls` saying `*` does not exist
  - .

**Answer Key - DAT 2330 – Ian Allen – Fall 2003 - DAT 2330 Test #1 -  
Unix - 15%**

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

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