**Evaluation: 57 Questions** **Name: _____**

**Important Instructions**

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

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**Multiple Choice - 57 Questions - 12 of 25%**

*(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 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57)*

1. A **`Makefile`** contains the following target: **`dog: foo bar`**
   which means:
   † **a**. item dog depends on items foo and bar
   b. items foo and bar depend on item dog
   c. items dog and foo depend on item bar
   d. item bar depends on items dog and foo
   e. the syntax "dog:" is not valid in a Makefile target

2. A shell script named **`dog`** is executed as follows:
   **`./dog "1 2" "a b c" z`**
   Inside the script is the line: **`echo "$2"`**
   What is the output on your screen from this line?
   † **a**. **`a b c`**
   b. **`2`**
   c. **`2"`**
   d. **`$2`**
   e. **`1 2`**

3. Given my directory **`dir`** and my file **`dir/foo`** owned by me, which permissions allow me to delete the file from the directory, but not change the content (data) in the file?
   † **a**. Permissions **`300`** on directory **`dir`** and **`500`** on file **`dir/foo`**.
   b. Permissions **`100`** on directory **`dir`** and **`200`** on file **`dir/foo`**.
   c. Permissions **`100`** on directory **`dir`** and **`100`** on file **`dir/foo`**.
   d. Permissions **`300`** on directory **`dir`** and **`300`** on file **`dir/foo`**.
   e. Permissions **`500`** on directory **`dir`** and **`400`** on file **`dir/foo`**.

4. Given my directory **`dir`** and my file **`dir/bar`** owned by me, which permissions allow me to access and change the content (data) in the file **`dir/bar`** but not delete the file?
   † **a**. Permissions **`100`** on directory **`dir`** and **`200`** on file **`dir/bar`**.
   b. Permissions **`500`** on directory **`dir`** and **`500`** on file **`dir/bar`**.
   c. Permissions **`600`** on directory **`dir`** and **`200`** on file **`dir/bar`**.
   d. Permissions **`300`** on directory **`dir`** and **`500`** on file **`dir/bar`**.
   e. Permissions **`700`** on directory **`dir`** and **`300`** on file **`dir/bar`**.





5. In response to the following command line: **`read one two three`**
   which user keyboard input line below will assign the text **`bb`** to the shell variable named **`two`**?
   † **a**. **`aa bb cc`**
   b. **`one=aa two=bb three=cc`**
   c. **`aa,bb,cc`**
   d. **`aa:bb:cc`**
   e. **`aa;bb;cc`**

6. If **`/bin/foo`** is a program that outputs **`mom`** and **`/usr/bin/foo`** is a program that outputs **`dad`** what is the output on your screen of this shell command sequence:
   **`PATH=/usr:/usr/bin:/etc:/bin ; foo`**
   † **a**. **`dad`**
   b. **`mom`**
   c. **`mom`** followed by **`dad`**
   d. **`dad`** followed by **`mom`**
   e. **`bash: foo: command not found`**

7. If **`/bin/foo`** is a program that outputs **`mom`** and **`/usr/bin/foo`** is a program that outputs **`dad`** what is the output on your screen of this shell command sequence:
   **`PATH=/bin/foo:/dev:/usr/bin/foo:/usr ; foo`**
   † **a**. **`bash: foo: command not found`**
   b. **`mom`**
   c. **`dad`**
   d. **`mom`** followed by **`dad`**
   e. **`dad`** followed by **`mom`**

8. If **`bat=55`** and **`cat=66`** then which of the following command lines outputs only the date (and nothing else)?
   † **a**. **`[ bat = bat ] && date`**
   b. **`[ bat -ne cat ] && date`**
   c. **`[bat != cat] && date`**
   d. **`[bat != cat] || date`**
   e. **`[bat -eq 66] || date`**

9. If **`cow=cow`** and **`pig=pig`** then which of the following command lines outputs only the date (and nothing else)?
   † **a**. **`test cow = cow && date`**
   b. **`test cow -ne pig && date`**
   c. **`[!cow = pig] && date`**
   d. **`[cow -ne pig] || date`**
   e. **`[cow!=cow] || date`**

10. If **`cow=cow`** and **`pig=pig`** then which of the following command lines outputs only the date (and nothing else)?
    † **a**. **`[ cow = pig ] || date`**
    b. **`[ cow -ne pig ] && date`**
    c. **`test !cow = pig && date`**
    d. **`[cow -eq pig] || date`**
    e. **`test cow=cow || date`**

11. If **dog** is an executable script containing the line: **umask 0002**
what is the output on your screen of the following sequence of commands:
**umask 0077 ; ./dog ; umask**
† **a**. **0077**
b. **0002**
c. **0079**
d. **0075**
e. no output on screen

12. If **foo** is a file containing the first column of the output of the **last** command, which command line shows the most frequent login?
† **a**. **sort <foo | uniq -c | sort -nr | head -1**
b. **cat sort foo | uniq -c | sort -nr | head -1**
c. **uniq -c foo | sort -nr | head -1**
d. **sort | uniq -c | sort -nr | head -1 foo**
e. **sort foo > uniq -c ; sort -nr uniq | head -1**

13. If **foo** is an executable script containing the line:
**PATH=/bin ; export PATH**
what is the output on your screen of the following sequence of commands:
**PATH=/etc ; ./foo ; echo "$PATH"**
† **a**. **/etc**
b. **/bin**
c. **foo**
d. **/etc:/bin**
e. **$PATH**

14. If **foo** is an executable script containing the line:
**PATH=/bin ; export PATH**
what is the output on your screen of the following sequence of commands:
**PATH=/etc ; source ./foo ; echo "$PATH"**
† **a**. **/bin**
b. **/etc**
c. **foo**
d. **/etc:/bin**
e. **$PATH**

15. If **a=1** and **b=1**, which command sequence correctly compares the two numbers as equal and prints the date?
† **a**. **if [ $a -eq $b ] ; then date ; fi**
b. **if test a -eq b ; then date ; fi**
c. **if [ a = b ] ; then date ; fi**
d. **if ( a == b ) ; then date ; fi**
e. **if [ $a=$b ] ; then date ; fi**





16. If **a=aaa** and **b=bbb** then what is the output on your screen of the following command sequence: **if $a = $b ; then echo $a ; fi**
† **a**. **bash: aaa: command not found**
b. **test: aaa: integer expression expected**
c. **test: $a: integer expression expected**
d. **aaa**
e. no output on screen

17. If **a=ant** and **b=bat** then what is the output on your screen of the following command sequence: **[ $a = ant -a $b = ant ] ; echo $?**
† **a**. **1**
b. **0**
c. the number 1 or 0 followed by another 1 or 0 on a new line
d. **test: $a: integer expression expected**
e. no output

18. If **a=ant** and **b=bat** then what is the output on your screen of the following command sequence: **[ $a = bat -o $b = bat ] ; echo $?**
† **a**. **0**
b. **1**
c. the number 1 or 0 followed by another 1 or 0 on a new line
d. **test: $a: integer expression expected**
e. no output

19. If a shell script named **foo** contains the line:
**if [ "$2" = '$3' ] ; then echo SAME ; fi**
then which of the following command lines will always produce **SAME** as output?
† **a**. **./foo 2 '$3' 1**
b. **./foo $1 '$2' $3**
c. **./foo '$1' "$3" $2**
d. **./foo $1 $2 $3**
e. **./foo $3 "$2" $1**

20. If the file **bat** contained the word **foo**, what would be the output on your screen of this two command sequence:
**PATH=/bin/cat:/bin/who:/bin/ls ; cat bat**
† **a**. **bash: cat: command not found**
b. **bat**
c. **foo**
d. **cat: bat: No such file or directory**
e. no output on screen

21. If the file **dog** contained the word **bar**, what would be the output on your screen of this two command sequence:
**PATH=/etc/passwd:/bin/ls:/bin/who ; /bin/cat dog**
† **a**. **bar**
b. **dog**
c. **/bin/cat: dog: No such file or directory**
d. **bash: /bin/cat: command not found**
e. no output on screen

22. What is the output on your screen of this two command sequence:
```
PATH=/bin/cat:/bin/sh:/bin/ls ; ls nosuchfile
```
† **a**. `bash: ls: command not found`
b. `bash: /bin/ls: command not found`
c. `ls: /bin/ls: command not found`
d. `ls: nosuchfile: No such file or directory`
e. `bash: /bin/sh: No such file or directory`

23. If variable **mt** might contain nothing (a null value - defined but empty), which command sequence correctly tests for this and prints the date?
† **a**. `if [ "$mt" = "" ] ; then date ; fi`
b. `if [ "$mt" -z ] ; then date ; fi`
c. `if [ $mt -eq "" ] ; then date ; fi`
d. `if [ ''$mt'' = '''' ] ; then date ; fi`
e. `if [ "$mt" = * ] ; then date ; fi`

24. In a directory containing one file named **dog**, what appears on your screen after this command line? `1>/dev/null ls *`
† **a**. no output on screen
b. `*`
c. `dog`
d. `ls: *: No such file or directory`
e. `bash: 1>/dev/null: command not found`

25. In a directory containing one file named **dog**, what appears on your screen after this command line? `2>/dev/null ls nosuchfile`
† **a**. no output on screen
b. `nosuchfile`
c. `dog`
d. `ls: nosuchfile: No such file or directory`
e. `bash: 2>/dev/null: command not found`

26. In an empty directory, how many names are in file **bar** after this command line:
```
ls . nosuchfile 1>bar
```
† **a**. `1`
b. `2`
c. `3`
d. `4`
e. empty file (no data)

27. In an empty directory, how many names are in file **foo** after this command line:
```
ls nosuchfile . .. 2>foo
```
† **a**. `1`
b. `2`
c. `3`
d. `4`
e. empty file (no data)





28. In an empty directory, what appears on your screen after this command line?
```
ls 1>/dev/null nosuchfile
```
† **a**. `ls: nosuchfile: No such file or directory`
b. no output
c. `nosuchfile`
d. `ls: /dev/null: No such file or directory`
e. `ls: 1>/dev/null nosuchfile: No such file or directory`

29. In an empty directory, what appears on your screen after this 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`

30. In an empty directory, what is the output on your screen of these commands:
```
touch uu .u uv .v uw ; a="*u *v" ; echo "$a"
```
† **a**. `*u *v`
b. `u* v*`
c. `uu uv`
d. `uu .u uv .v`
e. `$a`

31. In an empty directory, what is the length of the longest file name (including extension) after this sequence of commands?
```
date >four ; cp four five5 ; mv five5 hi ; bzip2 hi
```
† **a**. 6
b. 5
c. 4
d. 3
e. 7

32. In an empty directory, what is the length of the longest file name created by the following two-command sequence: `a="1234 123 12 1" ; touch '$a'`
† **a**. 2 characters
b. 3 characters
c. 4 characters
d. 1 character
e. 13 characters

33. Select the correct **bash** shell order of command line processing:
† **a**. quotes, redirection, variables, GLOBs
b. quotes, variables, redirection, GLOBs
c. quotes, variables, GLOBs, redirection
d. quotes, GLOBs, variables, redirection
e. redirection, quotes, GLOBs, variables

34. The correct **g++** compiler suffix for a C++ source file is:
† **a**. **.cpp**
b. **.cplus**
c. **.g++**
d. **.gpp**
e. **.C++**

35. The correct option to enable warning messages from the **g++** compiler is:
† **a**. **-Wall**
b. **-wall**
c. **-warn**
d. **+Warn**
e. **-w**

36. 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 1>foo 2>foo**
d. **ls -l 2&1>foo**
e. **ls -l 1&2>foo**

37. What is the output on your screen if a user signals an end-of-file from the keyboard during this command sequence? **read input || echo "$?"**
† **a**. **1**
b. no output on screen
c. **$?**
d. **0**
e. an error message

38. What is the output on your screen of the following command sequence:
```
a=1 ; b=2 ; [ ! $a -ge $b ] ; echo $?
```
† **a**. **0**
b. **1**
c. the number 1 or 0 followed by another 1 or 0 on a new line
d. **test: $a: integer expression expected**
e. no output

39. What is the output on your screen of the following command sequence:
```
f=1 ; touch f ; [ ! -z $f ] ; echo $?
```
† **a**. **0**
b. **1**
c. the number 1 or 0 followed by another 1 or 0 on a new line
d. **test: $f: integer expression expected**
e. no output





40. What is the output on your screen of this sequence of three shell commands:
```
umask 162 ; touch newfile ; ls -l newfile
```
† **a**. **-rw----r-- 1 foo foo 0 Apr 1 1:12 newfile**
b. **---xrw--w- 1 foo foo 0 Apr 1 1:12 newfile**
c. **----rw--w- 1 foo foo 0 Apr 1 1:12 newfile**
d. **-rw---xr-x 1 foo foo 0 Apr 1 1:12 newfile**
e. **-rw---x-w- 1 foo foo 0 Apr 1 1:12 newfile**

41. What is the output on your screen of this sequence of three shell commands:
```
umask 457 ; mkdir dir ; ls -ld dir
```
† **a**. **d-wx-w---- 2 foo foo 64 Mar 9 1:12 dir**
b. **d-w--w---- 2 foo foo 64 Mar 9 1:12 dir**
c. **d-wx-w-rwx 2 foo foo 64 Mar 9 1:12 dir**
d. **dr--r-xrwx 2 foo foo 64 Mar 9 1:12 dir**
e. **dr-xr-xrwx 2 foo foo 64 Mar 9 1:12 dir**

42. What minimal permissions must you have on a directory to be able to execute successfully the command **ls .** from *inside* the directory?
† **a**. **r-x**
b. **--x**
c. **r--**
d. **-wx**
e. **rw-**

43. Which command counts the number of Unix permission groups you are in?
† **a**. **groups | wc**
b. **umask | wc**
c. **id | wc**
d. **echo /etc/groups | wc**
e. **wc /etc/groups**

44. Which command line below allows programs in the current directory to execute without preceding the names with **./**?
† **a**. **PATH=/usr/bin:.:/bin**
b. **PATH=/usr/bin/.:$HOME**
c. **PATH=./$HOME:/usr/bin**
d. **$PATH=/usr/bin:./bin**
e. **$PATH=.:$HOME:/usr/bin**

45. Which command line copies all the files from directory **a** to directory **b**?
† **a**. **cd a ; tar czf /tmp/i . ; cd ../b ; tar xzf /tmp/i**
b. **cd a ; tar czf /tmp/i . ; cd ../b ; tar xvf /tmp/i**
c. **cd a ; tar xf /tmp/i . ; cd ../b ; tar czvf /tmp/i**
d. **cd a ; tar -r /tmp/i . ; cd ../b ; tar -rvx /tmp/i**
e. **cd a ; tar -rc /tmp/i . ; cd ../b ; tar -rx /tmp/i**

46. Which command line locates scripts in the **/bin** directory?
† **a**. `file /bin/* | grep script`
b. `file /bin | grep script`
c. `cat /bin/* | file | grep script`
d. `cat /bin | file | grep script`
e. `ls /bin/* | file | grep script`

47. Which command line shows the file in **/bin** with the largest checksum?
† **a**. `sum /bin/* | sort -nr | head -1`
b. `sum /bin | sort -nr | head -1`
c. `cat /bin/* | sum | sort -nr | head -1`
d. `cat /bin | sum | sort -nr | head -1`
e. `ls /bin/* | sum | sort -nr | head -1`

48. Which command line tells you the recursive count of all pathnames under the current directory and all subdirectories?
† **a**. `find | wc`
b. `ls | wc`
c. `wc *`
d. `wc .`
e. `wc "$PATH"`

49. Which command sequence below always outputs just the date only if the first argument is either a file or a directory?
† **a**. `if [ -f "$1" -o -d "$1" ]; then date ; fi`
b. `if [ "-f $1" || "-d $1" ]; then date ; fi`
c. `if [ "$1" -eq -f -o "$1" -eq -d ]; then date ; fi`
d. `if [ -f -o -d "$1" ]; then date ; fi`
e. `if [ -f || -d "$1" ]; then date ; fi`

50. Which command sequence correctly searches for **foo** and then prints the date if it is found inside the file **bar**?
† **a**. `if grep <bar foo ; then date ; fi`
b. `if [ grep foo bar ] ; then date ; fi`
c. `if test foo bar ; then date ; fi`
d. `if [ grep foo <bar ] ; then date ; fi`
e. `if test -r foo bar ; then date ; fi`

51. Which command tells you the full absolute pathname of the **lynx** command?
† **a**. `whereis lynx`
b. `absolute lynx`
c. `whereis | grep lynx`
d. `echo "$PATH" | grep lynx`
e. `absolute "$PATH" | grep lynx`





52. Which line below passes three *separate* arguments to the **cat** command when placed inside a shell script named **foo** invoked by the command line:
`./foo one two three`
† **a**. `cat "$@"`
b. `cat "$*"`
c. `cat "$#"`
d. `cat "$1 $2 $3"`
e. `cat "$? $? $?"`

53. Which line below puts the count of the number of lines in the password file into the variable **foo**?
† **a**. `foo=$( wc -l </etc/passwd )`
b. `foo=$( wc -lines /etc/passwd )`
c. `foo=$( wc /etc/passwd | awk "echo $1" )`
d. `foo=$( wc -l /etc/passwd | awk "print $1" )`
e. `foo=$( awk -F: /etc/passwd | wc -l )`

54. Which of these commands makes a file owned by me, also executable by me (without changing any other permissions)?
† **a**. `chmod u+x myfile`
b. `chmod x+u myfile`
c. `chmod x=u myfile`
d. `umask 100 myfile`
e. `chmod 100 myfile`

55. What is the meaning of this SysV init script pathname: **/etc/rc3.d/S04httpd**
† **a**. start the web server in run level 3, sort order 4
b. start the web server in run level 4, sort order 3
c. stop the web server in run level 3, sort order 4
d. start the web server in run level 04; stop it in run level 3
e. start the web server in run level 3; stop it in run level 04

56. Which of these lines fetches an entire raw index web page using the **http** protocol?
† **a**. `GET /index.html HTTP/1.0`
b. `HEAD /index.html HTTP/1.0`
c. `HEAD HTTP/1.0 index.html`
d. `GET HTTP/1.0 index.html`
e. `HEAD HTTP/1.0 /index.html`

57. Which line will show you the default run level for your system?
† **a**. `grep initdefault /etc/inittab`
b. `grep default /etc/rc?.d`
c. `grep init /etc/rc?.d/*`
d. `grep default /etc/init.d`
e. `grep init /etc/init.d/*`

# Answer Key - NET 2003 – Ian Allen – Winter 2005 - NET 2003 Unix Test #2 - 25%

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 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57

```
 1. a                          45. a
 2. a                          46. a
 3. a                          47. a
 4. a                          48. a
  5. a                        49. a
  6. a                        50. a
  7. a                        51. a
  8. a                        52. a
 9. a                          53. a
10. a                          54. a
11. a                          55. a
12. a                          56. a
  13. a                       57. a
  14. a
  15. a                      Count of a:  57  100%
  16. a
17. a                        With 5 choices: 57
18. a                          1 2 3 4 5 6 7 8 9 10 11 12
19. a                          13 14 15 16 17 18 19 20 21
20. a                          22 23 24 25 26 27 28 29 30
  21. a                        31 32 33 34 35 36 37 38 39
  22. a                        40 41 42 43 44 45 46 47 48
  23. a                        49 50 51 52 53 54 55 56 57
  24. a
25. a                        Macro .cmd split no indent: 0
26. a                        Macro .cmd split with indent: 23
27. a                        Macro .ans splits: 0
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
41. a
42. a
43. a
44. a
```