

NDG Linux Essentials 2.0 Final Comprehensive Exam (Chapter 1-18) Answers

1 Embedded Systems means:

- Companies must share their changes
- You can view the software's source code
- Businesses cannot charge anything for the software, only the hardware
- **Systems designed to do a specific task on hardware optimized for only that purpose**
- Users must support the systems themselves

2 Linux originally only ran on:

- Xerox copy machines
- Specialized processor chips
- **Intel 386 PCs**
- Raspberry Pi computers
- Macintosh

3 Bundling utilities, management tools, and application software with a Linux kernel is called a:

- A trademark
- **A distribution of Linux**
- A type of hardware
- A text editor

4 A software release cycle describes:

- How often security fixes are implemented
- How often the software's memory is released back to the operating system
- **How often upgrades come out for software**
- How often the computer must be rebooted
- How often the computer must be upgraded to support new software

5 Apple's OS X is: (choose three)

- **A fully certified UNIX distribution**
- **Tightly integrated with Apple hardware**
- **Partially based on code from the FreeBSD project**
- Primarily used to manage network services
- Derived from Linux
- Able to natively run Windows binaries

6 Microsoft Windows: (choose three)

- **Is generally backwards compatible with previous versions**
- **Offers both desktop and server products**
- Has a Linux compatibility mode
- Has a short maintenance cycle
- **Has a scripting environment called PowerShell**
- Has a new desktop version every year.

**7 An interpreted programming language:
(choose two)**

- Requires a compilation step but no linking step
- **Is converted into machine specific instructions as the program runs**
- **Tends to offer more features than compiled languages**
- Requires a linking step but no compilation step
- Takes fewer resources to run than a compiled language

**8 The two main families of Linux shells are:
(choose two)**

- **Bourne Shell**
- Python Shell
- Korn shell
- Emacs
- **C Shell**

**9 In virtualization, what are the host and guest?
(choose two)**

- **The host is the machine that runs the virtual machines**
- The guest is the machine that runs the virtual machines
- The terms can be used interchangeably
- A host is a virtual machine
- **A guest is a virtual machine**

10 Cloud computing is:

- Requires fewer resources because systems are shared among many users
- Allows users in different geographical regions to work together in real time
- **All are correct**
- Is made possible by faster internet speeds
- Is useful for both business and home users

**11 Which of the following are properties of a strong password?
(choose three)**

- Based on easy to remember items like birthdays
- Long so that it can be reused on multiple sites
- **Includes symbols**
- **At least 10 characters long**
- **A mix of upper and lower case**

12 A license where you don't have access to the source code is called:

- Sourceless
- Impaired source
- Open source
- **Closed source**

13 A copyleft provision in a software license means:

- You must provide support for your modifications
- You may not link against third party closed source software
- **If you redistribute the software, you must distribute the source to any changes you**

- make
 - You must provide free copies of the software if you use it
 - You give up your copyright to the software
- 14 The Free Software Foundation believes that:
(choose two)**
- Software should be free to modify
 - People should write software with no expectation of making money
 - Software should not have copyright
 - Software should be free to share
 - No money should ever change hands
- 15 What does it mean when a work is placed in the public domain?**
- The work was done by a government agency
 - You may not use the work for commercial purposes
 - The author has died
 - The author has relinquished the copyright on the work
 - You must redistribute changes to the software
- 16 The semicolon (;) can be used to separate multiple commands to be executed in order.
True or False?**
- True
 - False
- 17 To be able to output messages to the screen, use the _____ command:**
- print
 - echo
 - display
 - type
- 18 The _____ command will print a list of the commands that you've previously executed.**
- list
 - eval
 - exec
 - history
- 19 HOME is an example of _____.**
- A path variable
 - A local variable
 - An environment variable
 - An alias
 - An internal command
- 20 The directory where additional documentation for software packages most likely can be found is:**
- /var/share/doc

- /var/lib/doc
- /usr/software/doc
- /usr/share/doc

21 To start searching a man page, the first key you press is:

- /
- f
- s
- !

**22 To get help on using the info command, execute:
(choose two)**

- man info
- info info
- help info
- info -q

23 The _____ command can be used to find any file, not just commands or man pages.

- whatis
- locate
- whereis
- apropos

24 Hidden files are files that begin with what character?

- A period (.)
- An asterisk (*)
- A plus (+)
- A dash (-)

25 The top-level directory on a Linux system is represented as:

- /
- /home
- /root
- C:

26 The ls command without options or arguments...

- ...prompts for a directory to list.
- ...lists the contents of the current directory.
- ...lists the contents of a user's home directory.
- ...generates an error as this command requires arguments.

27 The command ls -S will sort files:

- By size, smallest to largest
- By modification date, newest to oldest
- By number of symlinks, largest to smallest
- By size, largest to smallest

28 When using the cp command, you must provide both a source and a

destination.

True or False?

- True
- False

29 Which option can be used with the `rm` command to prompt before deleting?

- l
- A
- -P
- -i

30 Which command would list files that do not begin with a “T” or a “W”?

- `echo /etc/[!TW]*`
- `echo /etc/[*TW]!`
- `echo /etc/!TW`
- `echo /etc/*[TW!]`

31 In general, for which of the following would you want to use lossless compression?

- A JPEG image
- A log file
- An encrypted email
- A movie
- An mp3 audio file

**32 You type `gzip myfile.tar`. What happens?
(choose two)**

- An error; you forgot to specify the file with `-f`
- `myfile.tar` is unarchived into the current directory
- `myfile.tar` is removed
- An error; you forgot to pass the name of the output file
- `myfile.tar.gz` holds a compressed version of `myfile.tar`

33 Which command will show what is inside the compressed tarball with a name of `foo.tar.gz`?

- `tar -tf foo.tar.gz`
- `tar -tzf foo.tar.gz`
- `tar -xf foo.tar.gz`
- `tar -lf foo.tar.gz`
- `tar -tjf foo.tar.gz`

34 By default, the `zip` command replaces uncompressed files with compressed files.

True or False?

- True
- False

- 35 Error messages generated by commands are sent where by default?
- STDIN
 - Log files
 - STDOUT
 - **STDERR**
- 36 Which of the following commands will display only lines that begin with test?
- `grep *test file.txt`
 - `grep &test file.txt`
 - `grep $test* file.txt`
 - **`grep ^test file.txt`**
- 37 Which of the following commands will display lines that contain either start or end?
- **`egrep 'startlend' file.txt`**
 - `egrep start end file.txt`
 - `egrep start&end file.txt`
 - `egrep (startlend) file.txt`
- 38 A file begins with `#!/bin/csh`. This means:
- This is a Perl script
 - The operator should not be using /bin/csh
 - C Shell compatibility mode is enabled
 - **Running the script will invoke /bin/csh to interpret the rest of the file**
 - Nothing, this is a comment
- 39 Most of nano's commands take the form of:
- Alt and another character
 - Escape followed by another character
 - The F1 through F12 function keys
 - Mouse clicks
 - **Control and another character**
- 40 The `if` command looks for what exit code to consider a condition to be true?
- 255
 - **0**
 - 2
 - 1
 - 10
- 41 The number of users logged in is in a variable called `USERS`. How would you test to see if 5 users are logged in?
- **`test $USERS -eq 5`**
 - `test $USERS,5`
 - `test -f USERS=5`

- test \$USERS = 5
- test \$USERS -a 5

**42 Which of the following are valid partitioning types?
(choose two)**

- PC
- **MBR**
- **GPT**
- BIOS

43 Software that allows hardware devices to communicate with the installed operating system is called?

- **Drivers**
- Instructions
- Packages
- Programs

**44 Which of the following commands will check hard disk GPT partitions?
(choose three)**

- sfdisk
- **sgdisk**
- **gdisk**
- **cgdisk**
- gfdisk

**45 The process (ps) command shows only processes running in the current shell by default.
True or False?**

- **True**
- False

46 The free command outputs statistics about:

- **Memory usage**
- Disk usage
- Software usage
- CPU usage

47 Which file contains the information passed to the kernel at boot time?

- /proc/kernel
- /proc/kopts
- /proc/kargs
- **/proc/cmdline**

48 To make changes permanent for kernel parameter files found under /proc/sys, the following file can have entries added to it:

- /etc/sysinfo.conf
- **/etc/sysctl.conf**
- /etc/procctl.conf

- /etc/procsys.conf
- 49 Which of the following commands will display the IP address on a Linux system?
- ifconfig
 - route
 - ipconfig
 - dig
- 50 The RSA key fingerprint allows the dig command to connect to remote systems.
True or False?
- True
 - False
- 51 When issuing the service network restart command, which of the following occurs?
- ...takes down all network interfaces, re-reads all related configuration files and then the networking for the system is restarted.
 - ...the networking for the system is stopped and then started back up.
 - ...brings up all network interfaces, re-reads all related configuration files and then the networking for the system is restarted.
- 52 Which of the following commands can be used to display socket statistics, and supports all major packet and socket types?
- route
 - ss
 - ifconfig
 - top
- 53 Which of the following commands will display the groups that the user bob belongs to?
- group bob
 - id bob
 - all bob
 - groups -a
- 54 Traditional UNIX systems allowed users to belong to how many groups?
- 65,000
 - 10,000
 - 1
 - 256
 - 16
- 55 A value of 0 in the “minimum” password aging field means the user cannot change their password.
True or False?
- True

- False
- 56 Sudo privileges allow users to execute commands as another user.
True or False?
- True
 - False
- 57 The first line of this command displays how long the system has been running since being rebooted.
- id
 - getent
 - who
 - w
 - su
- 58 Which option for the usermod command can be used to specify a user's group ID (either primary or secondary)?
(choose two)
- -g
 - -S
 - -s
 - -G
- 59 The groupmod command can be used to add users to a group.
True or False?
- True
 - False
- 60 Which of the following files contains user IDs?
- /etc/passwd
 - /etc/shadow
 - /etc/group
 - /etc/usr
- 61 Which of the following commands, run as root, will prevent the user bob from logging in?
- usermod -L bob
 - usermod -D bob
 - usermod -d bob
 - usermod -l bob
- 62 What directory contains a user's home directory?
- /rootfs
 - /user
 - /
 - /home
- 63 GIDs under 500 (or 1000) are usually reserved for what kind of groups?

- Are not used for groups, but for user accounts
- Administrators
- User private groups (UPG)
- **System use**

**64 A user cannot delete a file if they do not own it.
True or False?**

- True
- **False**

**65 The chown command permits changing group ownership done by root only.
True or False?**

- True
- **False**

66 Which of the following commands will list hidden files as well as their ownership?

- ls -a
- ls -z
- ls -l
- **ls -la**

67 Which of the following commands will set setuid for /usr/bin/program?

- chmod 1755 /usr/bin/program
- **chmod 4755 /usr/bin/program**
- chmod 2755 /usr/bin/program
- None of the above

68 Setting setgid on a directory...

- ...will allow scripts in the directory to be executed as the group owner of the directory.
- **...will set the group owner of all files created in the directory to the group owner of the directory.**
- ...is not allowed by the system.
- ...does nothing.

**69 Deleting a source file will break an associated hard link.
True or False?**

- True
- **False**

70 Which of the following commands would create a hard link, link to file?

- **ln file link**
- ln -s link file
- ln link file
- ln -s file link

