

Question: 1

Which SysV init configuration file should be modified to disable the ctrl-alt-delete key combination?

- A. /etc/keys
- B. /proc/keys
- C. /etc/inittab
- D. /proc/inittab
- E. /etc/reboot

Answer: C

Question: 2

During a system boot cycle, what program is executed after the BIOS completes its tasks?

- A. The bootloader
- B. The inetd program
- C. The init program
- D. The kernel

Answer: A

Question: 3

Which run levels should never be declared as the default run level when using SysV init? (Choose TWO correct answers.)

- A. 0
- B. 1
- C. 3
- D. 5
- E. 6

Answer: A,E

Question: 4

Which of the following statements is correct when talking about /proc/?

- A. All changes to files in /proc/ are stored in /etc/proc.d/ and restored on reboot.
- B. All files within /proc/ are read-only and their contents cannot be changed.
- C. All changes to files in /proc/ are immediately recognized by the kernel.
- D. All files within /proc/ are only readable by the root user.

Answer: C

Question: 5

What of the following statements are true regarding /dev/ when using udev? (Choose TWO correct answers.)

- A. Entries for all possible devices get created on boot even if those devices are not connected.
- B. Additional rules for udev can be created by adding them to /etc/udev/rules.d/.
- C. When using udev, it is not possible to create block or character devices in /dev/ using mknod.
- D. The /dev/ directory is a filesystem of type tmpfs and is mounted by udev during system startup.
- E. The content of /dev/ is stored in /etc/udev/dev and is restored during system startup.

Answer: B,D

Question: 6

Which of the following information is stored within the BIOS? (Choose TWO correct answers.)

- A. Boot device order
- B. Linux kernel version
- C. Timezone
- D. Hardware configuration
- E. The system's hostname

Answer: A,D

Question: 7

Which of the following commands reboots the system when using SysV init? (Choose TWO correct answers.)

- A. shutdown -r now
- B. shutdown -r "rebooting"
- C. telinit 6
- D. telinit 0
- E. shutdown -k now "rebooting"

Answer: A,C

Question: 8

Which of the following are init systems used within Linux systems? (Choose THREE correct answers.)

- A. startd
- B. systemd
- C. Upstart
- D. Sysinit

E. SysV init

Answer: B,C,E

Question: 9

FILL IN THE BLANK

Which file in the /proc filesystem lists parameters passed from the bootloader to the kernel? (Specify the file name only without any path.)

Answer: cmdline,
/proc/cmdline

Question: 10

What information can the lspci command display about the system hardware? (Choose THREE correct answers.)

- A. Device IRQ settings
- B. PCI bus speed
- C. System battery type
- D. Device vendor identification
- E. Ethernet MAC address

Answer: A,B,D

Question: 11

Which of the following commands brings a system running SysV init into a state in which it is safe to perform maintenance tasks? (Choose TWO correct answers.)

- A. shutdown -R 1 now
- B. shutdown -single now
- C. init 1
- D. telinit 1
- E. runlevel 1

Answer: C,D

Question: 12

What is the first program that is usually started, at boot time, by the Linux kernel when using SysV init?

- A. /lib/init.so
- B. /sbin/init
- C. /etc/rc.d/rcinit
- D. /proc/sys/kernel/init
- E. /boot/init

Answer: B

Question: 13

CORRECT TEXT

Which command will display messages from the kernel that were output during the normal boot sequence?

Answer: dmesg,
/bin/dmesg

Question: 14

Which of the following commands will write a message to the terminals of all logged in users?

- A. bcast
- B. mesg
- C. print
- D. wall
- E. yell

Answer: D

Question: 15

Which of the following kernel parameters instructs the kernel to suppress most boot messages?

- A. silent
- B. verbose=0
- C. nomsg
- D. quiet

Answer: D

Question: 16

Which of the following options for the kernel's command line changes the systemd boot target to rescue.target instead of the default target?

- A. systemd.target=rescue.target
- B. systemd.runlevel=rescue.target
- C. systemd.service=rescue.target
- D. systemd.default=rescue.target
- E. systemd.unit=rescue.target

Answer: E

Question: 17

The message "Hard Disk Error" is displayed on the screen during Stage 1 of the GRUB boot process. What does this indicate?

- A. The kernel was unable to execute /bin/init
- B. The next Stage cannot be read from the hard disk because GRUB was unable to determine the size and geometry of the disk
- C. One or more of the filesystems on the hard disk has errors and a filesystem check should be run
- D. The BIOS was unable to read the necessary data from the Master Boot Record to begin the boot process

Answer: B

Question: 18

During a system boot cycle, what is the program that is run after the BIOS completes its tasks?

- A. The bootloader
- B. The inetd program
- C. The init program
- D. The kernel

Answer: A

Question: 19

You are having some trouble with a disk partition and you need to do maintenance on this partition but your users home directories are on it and several are logged in. Which command would disconnect the users and allow you to safely execute maintenance tasks?

- A. telinit 1
- B. shutdown -r now
- C. killall -9 inetd
- D. /bin/netstop --maint
- E. /etc/rc.d/init.d/network stop

Answer: A

Question: 20

CORRECT TEXT

You suspect that a new ethernet card might be conflicting with another device. Which file should you check within the /proc tree to learn which IRQs are being used by which kernel drivers?

Answer: interrupts,
/proc/interrupts

Question: 21

The system is having trouble and the engineer wants to bypass the usual /sbin/init start up and run /bin/sh. What is the usual way to pass this change to the kernel from your boot loader?

- A. Start in runlevel 1.
- B. Pass init=/bin/sh on the kernel parameter line.
- C. Pass /bin/sh on the kernel parameter line.
- D. Pass start=/bin/sh on the kernel parameter line.

Answer: B

Question: 22

CORRECT TEXT

The USB device filesystem can be found under /proc/ /usb/. (Please fill in the blank with the single word only)

Answer: bus

Question: 23

CORRECT TEXT

Which command displays the contents of the Kernel Ring Buffer on the command line? (Provide only the command name without any options or path information)

Answer: dmesg,
/bin/dmesg

Question: 24

After modifying GNU GRUB's configuration file, which command must be run for the changes to take effect?

- A. kill -HUP \$(pidof grub)
- B. grub-install
- C. grub
- D. No action is required

Answer: D

Question: 25

Which of the following commands is used to update the list of available packages when using dpkg based package management?

- A. apt-get update
- B. apt-get upgrade
- C. apt-cache update
- D. apt-get refresh
- E. apt-cache upgrade

Answer: A

Question: 26

Which of the following commands lists the dependencies of a given dpkg package?

- A. apt-cache depends-onpackage
- B. apt-cache dependencies package
- C. apt-cache depends package
- D. apt-cache requires package

Answer: C

Question: 27

Which of the following options is used in a GRUB Legacy configuration file to define the amount of time that the GRUB menu will be shown to the user?

- A. hidemenu
- B. splash
- C. timeout
- D. showmenu

Answer: C

Question: 28

What can the Logical Volume Manager (LVM) be used for? (Choose THREE correct answers.)

- A. To create RAID 9 arrays.
- B. To dynamically change the size of logical volumes.
- C. To encrypt logical volumes.
- D. To create snapshots.
- E. To dynamically create or delete logical volumes.

Answer: B,D,E

Question: 29

Which of the following commands updates the linker cache of shared libraries?

- A. mkcache
- B. soconfig
- C. mkldconfig
- D. lddconfig
- E. ldconfig

Answer: E

Question: 30

Which of the following commands lists all currently installed packages when using RPM package management?

- A. yum --query --all
- B. yum --list --installed
- C. rpm --query --all
- D. rpm --list --installed

Answer: C

Question: 31

Which of the following commands can be used to download the RPM package kernel without installing it?

- A. yum download --no-install kernel
- B. yumdownloader kernel
- C. rpm --download --package kernel
- D. rpmdownload kernel

Answer: B

Question: 32

When using rpm --verify to check files created during the installation of RPM packages, which of the following information is taken into consideration? (Choose THREE correct answers.)

- A. Timestamps
- B. MD5 checksums
- C. Inodes
- D. File Sizes
- E. GnuPG signatures

Answer: A,B,D

Question: 33

Which of the following is correct when talking about mount points?

- A. Every existing directory can be used as a mount point.
- B. Only empty directories can be used as a mount point.
- C. Directories need to have the SetUID flag set to be used as a mount point.
- D. Files within a directory are deleted when the directory is used as a mount point.

Answer: A

Question: 34

Which function key is used to start Safe Mode in Windows NT?

- A. F10
- B. F8
- C. F6
- D. Windows NT does not support Safe Mode

Answer: D

Question: 35

Which of the following environment variables overrides or extends the list of directories holding shared libraries?

- A. LD_LOAD_PATH
- B. LD_LIB_PATH
- C. LD_LIBRARY_PATH
- D. LD_SHARE_PATH
- E. LD_RUN_PATH

Answer: C

Question: 36

CORRECT TEXT

Which world-writable directory should be placed on a separate partition in order to prevent users from being able to fill up the / filesystem? (Specify the full path to the directory.)

Answer: /tmp,
tmp,/var/tmp,
/tmp/, /var/tmp/

Question: 37

Which RPM command will output the name of the package which supplied the file /etc/exports?

- A. rpm -F /etc/exports
- B. rpm -qf /etc/exports
- C. rpm -KI /etc/exports
- D. rpm -qp /etc/exports
- E. rpm -qi /etc/exports

Answer: B

Question: 38

CORRECT TEXT

In which directory must definition files be placed to add additional repositories to yum?

Answer:

/etc/yum.repos.d,
/etc/yum.repos.d/
yum.repos.d,
yum.repos.d/

Question: 39

CORRECT TEXT

What is the name of the main configuration file for GNU GRUB? (Specify the file name only without any path.)

Answer: menu.lst,
grub.conf, grub.cfg

Question: 40

When removing a package, which of the following dpkg options will completely remove the files including configuration files?

- A. --clean
- B. --delete
- C. --purge
- D. --remove

Answer: C

Question: 41

Which file should be edited to select the network locations from which Debian installation package files are loaded?

- A. /etc/dpkg/dpkg.cfg
- B. /etc/apt/apt.conf
- C. /etc/apt/apt.conf.d
- D. /etc/apt/sources.list
- E. /etc/dpkg/dselect.cfg

Answer: D

Question: 42

CORRECT TEXT

Which option to the yum command will update the entire system? (Specify ONLY the option name without any additional parameters.)

Answer: update,
upgrade

Question: 43

CORRECT TEXT

Which command will disable swapping on a device? (Specify ONLY the command without any path or parameters.)

Answer: swapoff,
/sbin/swapoff

Question: 44

CORRECT TEXT

Which Debian package management tool asks the configuration questions for a specific already installed package just as if the package were being installed for the first time? (Specify ONLY the command without any path or parameters.)

Answer: dpkg-
reconfigure

Question: 45

Which of the following commands overwrites the bootloader located on /dev/sda without overwriting the partition table or any data following it?

- A. dd if=/dev/zero of=/dev/sda bs=512
- B. dd if=/dev/zero of=/dev/sda bs=512 count=1
- C. dd if=/dev/zero of=/dev/sda bs=440 count=1
- D. dd if=/dev/zero of=/dev/sda bs=440

Answer: C

Question: 46

Which of the following commands can be used to perform a full text search on all available packages on a Debian system?

- A. apt
- B. apt-cache
- C. apt-get
- D. apt-search
- E. dpkg

Answer: B

Question: 47

To what environment variable will you assign or append a value if you need to tell the dynamic linker to look in a build directory for some of a program's shared libraries?

- A. LD_LOAD_PATH
- B. LD_LIB_PATH
- C. LD_LIBRARY_PATH
- D. LD_SHARE_PATH
- E. LD_RUN_PATH

Answer: C

Question: 48

CORRECT TEXT

To prevent users from being able to fill up the / partition, the separate partition if possible because it is world writeable.

directory should be on a

Answer: /tmp, tmp

Question: 49

CORRECT TEXT

An administrator has issued the following command:

```
grub-install --root-directory=/custom-grub /dev/sda
```

In which directory will new configuration files be found? (Provide the full directory path only without the filename)

Answer: /custom-grub/boot/grub/, /custom-grub/boot/grub

Question: 50

CORRECT TEXT

The dpkg- command will ask configuration questions for a specified package, just as if the package were being installed for the first time.

Answer: reconfigure

Question: 51

Which of the following apt-get commands will install the newest versions of all currently installed packages without removing any packages or installing new packages that are not already installed?

- A. auto-update
- B. upgrade
- C. dist-upgrade
- D. install
- E. update

Answer: B

Question: 52

What is the difference between the --remove and the --purge action with the dpkg command?

- A. --remove removes the program, --purge also removes the config files
- B. --remove only removes the program, --purge only removes the config files
- C. --remove removes a package, --purge also removes all packages dependent on it
- D. --remove removes only the package file itself, --purge removes all files related to the package

Answer: A

Question: 53

You want to preview where the package file, apache.xml.i386.rpm, will install its files before installing it. What command do you issue?

- A. rpm -qp apache.xml.i386.rpm
- B. rpm -qv apache.xml.i386.rpm
- C. rpm -ql apache.xml.i386.rpm
- D. rpm -qpl apache.xml.i386.rpm

Answer: D

Question: 54

CORRECT TEXT

Typically, which top level system directory is used for files and data that change regularly while the system is running and are to be kept between reboots? (Specify only the top level directory)

Answer: /var, /var/
var, var/

Question: 55

Which of the following commands can be used to create a USB storage media from a disk image?

- A. gdisk
- B. dd
- C. cc
- D. fdisk
- E. mount

Answer: B

Question: 56

In Bash, inserting 1>&2 after a command redirects

- A. standard error to standard input.
- B. standard input to standard error.
- C. standard output to standard error.
- D. standard error to standard output.
- E. standard output to standard input.

Answer: C

Question: 57

What command will generate a list of user names from /etc/passwd along with their login shell?

- A. column -s : 1,7 /etc/passwd
- B. chop -c 1,7 /etc/passwd
- C. colrm 1,7 /etc/passwd
- D. cut -d: -f1,7 /etc/passwd

Answer: D

Question: 58

In a nested directory structure, which find command line option would be used to restrict the command to searching down a particular number of subdirectories?

- A. -dirmax
- B. -maxdepth
- C. -maxlevels
- D. -n
- E. -s

Answer: B

Question: 59

Which of the following statements is correct regarding the command `foo 1> bar`?

- A. The stdout from the command `foo` is appended to the file `bar`.
- B. The stdout from the command `foo` overwrites the file `bar`.
- C. The command `foo` receives its stdin from the file `bar`.
- D. The command `foo` receives its stdin from the stdout of the command `bar`.
- E. The stderr from the command `foo` is saved to the file `bar`.

Answer: B

Question: 60

Which of the following commands kills the process with the PID 123 but allows the process to "clean up" before exiting?

- A. `kill -PIPE 123`
- B. `kill -KILL 123`
- C. `kill -STOP 123`
- D. `kill -TERM 123`

Answer: D

Question: 61

CORRECT TEXT

Which signal is missing from the following command that is commonly used to instruct a daemon to reinitialize itself,

including reading configuration files?

killall -s daemon

Answer: HUP,
SIGHUP, 1

Question: 62

What is the maximum niceness value that a regular user can assign to a process with the nice command when executing a new process?

- A. 9
- B. 19
- C. 49
- D. 99

Answer: B

Question: 63

Immediately after deleting 3 lines of text in vi and moving the cursor to a different line, which single character command will insert the deleted content below the current line?

- A. i (lowercase)
- B. P (uppercase)
- C. p (lowercase)
- D. U (uppercase)
- E. u (lowercase)

Answer: C

Question: 64

A user accidentally created the subdirectory \dir in his home directory. Which of the following commands will remove that directory?

- A. rmdir '~/\dir'
- B. rmdir "~/\dir"
- C. rmdir ~/'dir'
- D. rmdir ~/\dir
- E. rmdir ~/\dir

Answer: E

Question: 65

In compliance with the FHS, in which of the directories are man pages found?

- A. /usr/share/man
- B. /opt/man
- C. /usr/doc/
- D. /var/pkg/man
- E. /var/man

Answer: A

Question: 66

Which of the following commands will send output from the program myapp to both standard output (stdout) and the file file1.log?

- A. `cat < myapp | cat > file1.log`
- B. `myapp 0>&1 | cat > file1.log`
- C. `myapp | cat > file1.log`
- D. `myapp | tee file1.log`
- E. `tee myapp file1.log`

Answer: D

Question: 67

What is the purpose of the Bash built-in export command?

- A. It allows disks to be mounted remotely.
- B. It runs a command as a process in a subshell.
- C. It makes the command history available to subshells.
- D. It sets up environment variables for applications.
- E. It shares NFS partitions for use by other systems on the network.

Answer: D

Question: 68

What is the output of the following command? `echo "Hello World" | tr -d aieou`

- A. Hello World
- B. eoo
- C. Hll Wrld
- D. eoo Hll Wrld

Answer: C

Question: 69

Which of the following characters can be combined with a separator string in order to read from the current input source until the separator string, which is on a separate line and without any trailing spaces, is reached?

- A. <<
- B. <|
- C. !<
- D. &<

Answer: A

Question: 70

Which of the following commands will NOT update the modify timestamp on the file /tmp/myfile.txt?

- A. file /tmp/myfile.txt
- B. echo "Hello" >/tmp/myfile.txt
- C. sed -ie "s/1/2/" /tmp/myfile.txt
- D. echo -n "Hello" >>/tmp/myfile.txt
- E. touch/tmp/myfile.txt

Answer: A

Question: 71

What is the default nice level when a process is started using the nice command?

- A. -10
- B. 10
- C. 20
- D. 0

Answer: B

Question: 72

What is the default action of the split command on an input file?

- A. It will break the file into new files of 1,024 byte pieces each.
- B. It will break the file into new files of 1,000 line pieces each.
- C. It will break the file into new files of 1,024 kilobyte pieces each.
- D. It will break the file into new files that are no more than 5% of the size of the original file.

Answer: B

Question: 73

What is the difference between the i and a commands of the vi editor?

- A. i (interactive) requires the user to explicitly switch between vi modes whereas a (automatic) switches modes automatically.
- B. i (insert) inserts text before the current cursor position whereas a (append) inserts text after the cursor.
- C. i (independent rows) starts every new line at the first character whereas a (aligned rows) keeps the indentation of the previous line.
- D. i (interrupt) temporarily suspends editing of a file to the background whereas a (abort) terminates editing.

Answer: B

Question: 74

CORRECT TEXT

Which command displays a list of all background tasks running in the current shell? (Specify ONLY the command without any path or parameters.)

Answer: jobs

Question: 75

Which of the following commands moves and resumes in the background the last stopped shell job?

- A. run
- B. bg
- C. fg
- D. back

Answer: B

Question: 76

What is the effect of the egrep command when the -v option is used?

- A. It enables color to highlight matching parts.
- B. It only outputs non-matching lines.
- C. It shows the command's version information.
- D. It changes the output order showing the last matching line first.

Answer: B

Question: 77

What does the ? symbol within regular expressions represent?

- A. Match the preceding qualifier one or more times.
- B. Match the preceding qualifier zero or more times.
- C. Match the preceding qualifier zero or one times.
- D. Match a literal ?character.

Answer: C

Question: 78

In the vi editor, how can commands such as moving the cursor or copying lines into the buffer be issued multiple times or applied to multiple rows?

- A. By using the command :repeat followed by the number and the command.
- B. By specifying the number right in front of a command such as 4l or 2yj.
- C. By selecting all affected lines using the shift and cursor keys before applying the command.
- D. By issuing a command such as :set repetition=4 which repeats every subsequent command 4 times.

Answer: B

Question: 79

Which of the following files, located in the user home directory, is used to store the Bash history?

- A. .bash_history
- B. .bash_histfile

- C. .history
- D. .bashrc_history
- E. .history_bash

Answer: A

Question: 80

CORRECT TEXT

Which Bash environment variable defines in which file the user history is stored when exiting a Bash process? (Specify ONLY the variable name.)

Answer: HISTFILE

Question: 81

Which of the following commands displays the contents of a gzip compressed tar archive?

- A. gzip archive.tgz | tar xvf -
- B. tar ztf archive.tgz
- C. gzip -d archive.tgz | tar tvf -
- D. tar cf archive.tgz

Answer: B

Question: 82

Which grep command will print only the lines that do not end with a / in the file foo?

- A. grep '/\$' foo
- B. grep '/#' foo
- C. grep -v '/\$' foo
- D. grep -v '/#' foo

Answer: C

Question: 83

Which of the following commands is used to change options and positional parameters for a running Bash?

- A. history
- B. set

- C. bashconf
- D. setsh
- E. envsetup

Answer: B

Question: 84

Which of the following commands replaces each occurrence of 'bob' in the file letter with 'Bob' and writes the result to the file newsletter?

- A. sed '/bob/Bob' letter > newsletter
- B. sed s/bob/Bob/ letter < newsletter
- C. sed's/bob/Bob' letter > newsletter
- D. sed 's/bob/Bob/g' letter > newsletter
- E. sed 's/bob, Bob/' letter > newsletter

Answer: D

Question: 85

From a Bash shell, which of the following commands directly executes the instruction from the file /usr/local/bin/runme.sh without starting a subshell? (Please select TWO answers.)

- A. source /usr/local/bin/runme.sh
- B. ./usr/local/bin/runme.sh
- C. /bin/bash /usr/local/bin/runme.sh
- D. /usr/local/bin/runme.sh
- E. run /usr/local/bin/runme.sh

Answer: A,B

Question: 86

Regarding the command:

```
nice -5 /usr/bin/prog
```

Which of the following statements is correct?

- A. /usr/bin/prog is executed with a nice level of -5.
- B. /usr/bin/prog is executed with a nice level of 5.
- C. /usr/bin/prog is executed with a priority of -5.
- D. /usr/bin/prog is executed with a priority of 5.

Answer: B

Question: 87

Which shell command is used to continue background execution of a suspended command?

- A. &
- B. bg
- C. cont
- D. exec
- E. :&

Answer: B

Question: 88

Which of the following shell redirections will write standard output and standard error output to a file named filename?

- A. 2>&1 >filename
- B. >filename 2>&1
- C. 1>&2>filename
- D. >>filename
- E. 1&2>filename

Answer: B

Question: 89

In the vi editor, which of the following commands will copy the current line into the vi buffer?

- A. c
- B. cc
- C. 1c
- D. yy
- E. 1y

Answer: D

Question: 90

Which of the following sequences in the vi editor saves the opened document and exits the editor? (Choose TWO correct answers.)

- A. `esc ZZ`
- B. `ctrl :W!`
- C. `esc ZZ`
- D. `esc :Wq!`
- E. `ctrl XX`

Answer: A,D

Question: 91

When starting a program with the `nice` command without any additional parameters, which nice level is set for the resulting process?

- A. -10
- B. 0
- C. 10
- D. 20

Answer: C

Question: 92

Which of the following commands will reduce all consecutive spaces down to a single space?

- A. `tr 's' ' ' < a.txt > b.txt`
- B. `tr -c ' ' < a.txt > b.txt`
- C. `tr -d ' ' < a.txt > b.txt`
- D. `tr -r ' '\n' < a.txt > b.txt`
- E. `tr -s ' ' < a.txt > b.txt`

Answer: E

Question: 93

Which character, added to the end of a command, runs that command in the background as a child process of the current shell?

- A. `!`
- B. `+`
- C. `&`
- D. `%`
- E. `#`

Answer: C

Question: 94

Which of the following commands will print the last 10 lines of a text file to the standard output?

- A. cat -n 10 filename
- B. dump -n 10 filename
- C. head -n 10 filename
- D. tail -n 10 filename

Answer: D

Question: 95

Which of the following commands prints a list of usernames (first column) and their primary group (fourth column) from the /etc/passwd file?

- A. fmt -f 1,4 /etc/passwd
- B. split -c 1,4 /etc/passwd
- C. cut -d : -f 1,4 /etc/passwd
- D. paste -f 1,4 /etc/passwd

Answer: C

Question: 96

Which of the following signals is sent to a process when the key combination CTRL+C is pressed on the keyboard?

- A. SIGTERM
- B. SIGINT
- C. SIGSTOP
- D. SIGKILL

Answer: B

Question: 97

What happens after issuing the command vi without any additional parameters?

- A. vi starts and loads the last file used and moves the cursor to the position where vi was when it last exited.
- B. vi starts and requires the user to explicitly either create a new or load an existing file.
- C. vi exits with an error message as it cannot be invoked without a file name to operate on.

- D. vi starts in command mode and opens a new empty file.
- E. vi starts and opens a new file which is filled with the content of the vi buffer if the buffer contains text.

Answer: D

Question: 98

Which of the following command sets the Bash variable named TEST with the content FOO?

- A. set TEST="FOO"
- B. TEST = "FOO"
- C. var TEST="FOO"
- D. TEST="FOO"

Answer: D

Question: 99

Which variable defines the directories in which a Bash shell searches for executable commands?

- A. BASHEXEC
- B. BASHRC
- C. PATH
- D. EXECPATH
- E. PATHRC

Answer: C

Question: 100

Which of the following commands determines the type of a file by using a definition database file which contains information about all common file types?

- A. magic
- B. type
- C. file
- D. pmagic
- E. hash

Answer: C

Question: 101

CORRECT TEXT

Which command is used in a Linux environment to create a new directory? (Specify ONLY the command without any path or parameters.)

Answer: mkdir,
/usr/bin/mkdir

Question: 102

Which of the following commands prints all files and directories within the /tmp directory or its subdirectories which are also owned by the user root? (Choose TWO correct answers.)

- A. find /tmp -uid root -print
- B. find -path /tmp -uid root
- C. find /tmp -user root -print
- D. find /tmp -user root
- E. find -path /tmp -user root -print

Answer: C,D

Question: 103

When running the command `sed -e "s/a/b/" /tmp/file >/tmp/file`

While /tmp/file contains data, why is /tmp/file empty afterwards?

- A. The file order is incorrect. The destination file must be mentioned before the command to ensure redirection.
- B. The command sed did not match anything in that file therefore the output is empty.
- C. When the shell establishes the redirection it overwrites the target file before the redirected command starts and opens it for reading.
- D. Redirection for shell commands do not work using the > character. It only works using the | character instead.

Answer: C

Question: 104

When given the following command line. `echo "foo bar" | tee bar | cat`

Which of the following output is created?

- A. cat
- B. foo bar
- C. tee bar
- D. bar
- E. foo

Answer: B

Question: 105

Which of the following commands can be used to determine how long the system has been running? (Choose TWO correct answers.)

- A. uptime
- B. up
- C. top
- D. uname -u
- E. time -up

Answer: A,C

Question: 106

Which of the following are valid stream redirection operators within Bash? (Choose THREE correct answers.)

- A. <
- B. <<<
- C. >
- D. >>>
- E. %>

Answer: A,B,C

Question: 107

Which of the following explanations are valid reasons to run a command in the background of your shell?

- A. The command does not need to execute immediately.
- B. The command has to run immediately but the user needs to log out.
- C. The system is being shut down and the command needs to restart execution immediately after the reboot.
- D. The command can run at a lower priority than normal commands run on the command line.

Answer: B

Question: 108

What does the + symbol mean in the following grep regular expression: `grep '^d[aei]\+d$' /usr/share/dict/words`

- A. Match the preceding character set ([aei]) one or more times.
- B. Match the preceding character set ([aei]) zero or more times.
- C. Match the preceding character set ([aei]) zero or one times.
- D. Match a literal + symbol.

Answer: A

Question: 109

While editing a file in vi, the file changes due to another process. Without exiting vi, how can the file be reopened for editing with the new content?

- A. :r
- B. :n
- C. :w
- D. :e

Answer: D

Question: 110

You are trying to make a hard link to an ordinary file but `ln` returns an error. Which of the following could cause this?

- A. The source file is hidden.
- B. The source file is read-only.
- C. The source file is a shell script.
- D. You do not own the source file.
- E. The source and the target are on different filesystems.

Answer: E

Question: 111

CORRECT TEXT

The `/etc/passwd` file lists currently mounted devices.

Answer: mtab

Question: 112

After successfully creating a hard link called bar to the ordinary file foo, foo is deleted from the filesystem. Which of the following describes the resulting situation?

- A. foo and bar would both be removed.
- B. foo would be removed while bar would remain accessible.
- C. foo would be removed. bar would still exist but would be unusable.
- D. Both foo and bar would remain accessible.
- E. The user is prompted whether bar should be removed, too.

Answer: B

Question: 113

After moving data to a new filesystem, how can the former path of the data be kept intact in order to avoid reconfiguration of existing applications? (Choose TWO correct answers.)

- A. By creating an ACL redirection from the old to the new path of the data.
- B. By creating a hard link from the old to the new path of the data.
- C. By creating a symbolic link from the old to the new path of the data.
- D. By running the command touch on the old path.
- E. By mounting the new filesystem on the original path of the data.

Answer: C,E

Question: 114

Which of the following commands changes the ownership of file.txt to the user dan and the group staff?

- A. chown dan/staff file.txt
- B. chown dan:staff file.txt
- C. chown -u dan -g staff file.txt
- D. chown dan -g staff file.txt

Answer: B

Question: 115

Which of the following commands makes /bin/foo executable by everyone but writable only by its owner?

- A. chmod u=rwx,go=rx /bin/foo

- B. `chmod o+rwx,a+rx /bin/foo`
- C. `chmod 577 /bin/foo`
- D. `chmod 775 /bin/foo`

Answer: A

Question: 116

Which of the following commands can be used to search for the executable file `foo` when it has been placed in a directory not included in `$PATH`?

- A. `apropos`
- B. `which`
- C. `find`
- D. `query`
- E. `whereis`

Answer: C

Question: 117

What does the command `mount -a` do?

- A. It ensures that all file systems listed with the option `noauto` in `/etc/fstab` are mounted.
- B. It shows all mounted file systems that have been automatically mounted.
- C. It opens an editor with root privileges and loads `/etc/fstab` for editing.
- D. It ensures that all file systems listed with the option `auto` in `/etc/fstab` are mounted.
- E. It ensures that all file systems listed in `/etc/fstab` are mounted regardless of their options.

Answer: D

Question: 118

Which of the following settings for `umask` ensures that new files have the default permissions `-rw-r---`?

- A. `0017`
- B. `0640`
- C. `0038`
- D. `0027`

Answer: D

Question: 119

Which of the following is the device file name for the second partition on the only SCSI drive?

- A. /dev/hda1
- B. /dev/sda2
- C. /dev/sd0a2
- D. /dev/sd1p2

Answer: B

Question: 120

In order to display all currently mounted filesystems, which of the following commands could be used? (Choose TWO correct answers.)

- A. cat /proc/self/mounts
- B. free
- C. mount
- D. ls mounts
- E. cat /proc/filesystems

Answer: A,C

Question: 121

Which of the following commands can be used to locate programs and their corresponding man pages and configuration files?

- A. dirname
- B. which
- C. basename
- D. query
- E. whereis

Answer: E

Question: 122

Which of the following commands changes the number of days before the ext3 filesystem on

/dev/sda1 has to run through a full filesystem check while booting?

- A. tune2fs -d 200 /dev/sda1
- B. tune2fs -c 200 /dev/sda1
- C. tune2fs -i 200 /dev/sda1
- D. tune2fs -n 200 /dev/sda1
- E. tune2fs --days 200 /dev/sda1

Answer: C

Question: 123

Which type of filesystem is created by mkfs when it is executed with the block device name only and without any additional parameters?

- A. ext2
- B. ext3
- C. ext4
- D. XFS
- E. VFAT

Answer: A

Question: 124

How many fields are in a syntactically correct line of /etc/fstab?

- A. 3
- B. 4
- C. 5
- D. 6
- E. 7

Answer: D

Question: 125

CORRECT TEXT

Which command is used to create and initialize the files used to store quota information? (Specify ONLY the command without any path or parameters.)

Answer: quotacheck

Question: 126

Which of the following file permissions belong to a symbolic link?

- A. -rwxrwxrwx
- B. +rwxrwxrwx
- C. lrwxrwxrwx
- D. srwxrwxrwx

Answer: C

Question: 127

Creating a hard link to an ordinary file returns an error. What could be the reason for this?

- A. The source file is hidden.
- B. The source file is read-only.
- C. The source file is a shell script.
- D. The source file is already a hard link.
- E. The source and the target are on different filesystems.

Answer: E

Question: 128

Which of the following commands creates an ext3 filesystem on /dev/sdb1? (Choose TWO correct answers.)

- A. /sbin/mke2fs -j /dev/sdb1
- B. /sbin/mkfs -t ext3 /dev/sdb1
- C. /sbin/mkfs -c ext3 /dev/sdb1
- D. /sbin/mke3fs -j /dev/sdb1

Answer: A,B

Question: 129

Which of the following commands will change the quota for a specific user?

- A. edquota
- B. repquota
- C. quota -e
- D. quota

Answer: A

Question: 130

Which utility would be used to change how often a filesystem check is performed on an ext2 filesystem without losing any data stored on that filesystem?

- A. mod2fs
- B. fsck
- C. tune2fs
- D. mke2fs
- E. fixe2fs

Answer: C

Question: 131

Which of the following Linux filesystems preallocates a fixed number of inodes at the filesystem's make/creation time and does NOT generate them as needed? (Choose TWO correct answers.)

- A. ext3
- B. JFS
- C. ext2
- D. XFS
- E. procfs

Answer: A,C

Question: 132

What is the purpose of the Filesystem Hierarchy Standard?

- A. It is a security model used to ensure files are organized according to their permissions and accessibility.
- B. It provides unified tools to create, maintain and manage multiple filesystems in a common way.
- C. It defines a common internal structure of inodes for all compliant filesystems.
- D. It is a distribution neutral description of locations of files and directories.

Answer: D

Question: 133

CORRECT TEXT

Which umask value will result in the default access permissions of 600 (rw) for files and 700 (rwx --) for directories? (Specify only the numerical umask value.)

Answer: 0077, 077

Question: 134

Instead of supplying an explicit device in /etc/fstab for mounting, what other options may be used to identify the intended partition? (Choose TWO correct answers.)

- A. FIND
- B. ID
- C. LABEL
- D. NAME
- E. UUID

Answer: C,E

Question: 135

After running the command `umount /mnt`, the following error message is displayed: `umount: /mnt: device is busy`. What is a common reason for this message?

- A. The kernel has not finished flushing disk writes to the mounted device.
- B. A user has a file open in the /mnt directory.
- C. Another file system still contains a symlink to a file inside /mnt.
- D. The files in /mnt have been scanned and added to the locate database.
- E. The kernel thinks that a process is about to open a file in /mnt for reading.

Answer: B

Question: 136

What does the command `mount -a` do?

- A. It mounts all available filesystems onto the current directory.
- B. It shows all mounted filesystems.
- C. It mounts all user mountable filesystems for the current user.
- D. It mounts all filesystems listed in /etc/fstab which have the option `auto` set.
- E. It mounts all filesystems listed in /etc/fstab which have the option `noauto` set.

Answer: D

Question: 137

Which of the following commands set the sticky bit for the directory /tmp? (Choose TWO correct answers.)

- A. chmod +s /tmp
- B. chmod +t /tmp
- C. chmod 1775 /tmp
- D. chmod 4775 /tmp
- E. chmod 2775 /tmp

Answer: B,C

Question: 138

Which of the following commands can be used to display the inode number of a given file?

- A. inode
- B. ls
- C. ln
- D. cp

Answer: B

Question: 139

Which of the following commands shows the definition of a given shell command?

- A. where
- B. stat
- C. type
- D. case

Answer: C

Question: 140

What do the permissions -rwsr-xr-x mean for a binary file when it is executed as a command?

- A. The command is SetUID and it will be executed with the effective rights of the owner.

- B. The command will be executed with the effective rights of the group instead of the owner.
- C. The execute flag is not set for the owner. Therefore the SetUID flag is ignored.
- D. The command will be executed with the effective rights of the owner and group.

Answer: C

Question: 141

Which of the following pieces of information of an existing file is changed when a hard link pointing to that file is created?

- A. File size
- B. Modify timestamp
- C. Link count
- D. Inode number
- E. Permissions

Answer: C

NEW QUESTIONS

Question: 142

Which of the following commands are common Linux commands for file management? (Choose three correct answers.)

- A. copy
- B. mv
- C. move
- D. cp
- E. mkdir

Answer: B,D,E

Question: 143

Which of the following examples for Bash file globbing matches a file named root-can-do-this.txt when used in the directory holding that file? (Choose three correct answers.)

- A. root*can?do-this.{txt,odt}
- B. r[oOo]t-can-do*.txt
- C. {root,user,admin}-can-??-this.txt
- D. root*can*do??this.txt
- E. root***{can,may}-do-this.[tT][xX][tT]

Answer: A,B,C

Question: 144

CORRECT TEXT

What command changes the nice level of a running process? (Specify ONLY the command without any path or parameters)

Answer: renice

Question: 145

Which option to the tee command will cause the output to be concatenated on the end of the output file instead of overwriting the existing file contents?

- A. -a
- B. -C
- C. --no-clobber
- D. --continue

Answer: A

Question: 146

What is the purpose of the xargs command?

- A. It passes arguments to an X server.
- B. It reads standard input (STDIN) and builds up command lines to execute.
- C. It helps shellscripts take variable argument lists.
- D. It asks a question, graphically, and returns the answer to the shell.
- E. It allows users to specify long options for commands that normally only accept short options.

Answer: B

Question: 147

Which of the following commands can be used to create a new file that is 100kB in size?

- A. dd
- B. file
- C. mkfile
- D. touch

Answer: A

Question: 148

When using regular expressions, which of the following characters match the beginning of a line?

- A. ^
- B. ?
- C. *
- D. +
- E. \$

Answer: A

Question: 149

Which of the following statements is correct for a command line ending with a & character?

- A. The command's output is redirected to /dev/null.
- B. The result of the command defines if the next command will be run.
- C. The command is run in background of the current shell.
- D. The command is run as a direct child of the init process.

Answer: C

Question: 150

Which of the following commands will produce the following output?

USER	PID	%CPU	%MEM	VSZ	RSS	TTY	STAT	START	TIME	COMMAND
root	1255	4.4	0.9	6071K	34824	tty7	5s+	09:25	19:04	/usr/bin/X :0
root	2016	0.0	0.0	1792	560	tty1	53+	09:25	0:00	/sbin/getty -8
matt	5254	0.0	0.1	320	369K	cta/4	53	13:12	0:00	bash
matt	5219	0.0	0.0	3988	1624	Ct 3/4	5+	13:12	0:00	mar. bash
matt	5229	0.0	0.0	3584	932	pts/4	5+	13:12	0:00	pager -s
matt	5768	0.0	0.1	10504	3880	pts/2	5-	25:11	0:00	VI REAEME.txt

- A. jobs
- B. proclist
- C. netstat
- D. ps

Answer: D

Question: 151

Which of the following commands print the current working directory when using a Bash shell?

(Choose two.)

- A. echo "\${PWD}"
- B. echo "\${WD}"
- C. pwd
- D. printwd
- E. echo "\${pwd}"

Answer: C

Question: 152

Which signal is sent by the kill command by default?

- A. SIGHUP(1)
- B. SIGQUIT(3)
- C. SIGKILL(9)
- D. SIGTERM(15)

Answer: D

Question: 153

Which of the following command lines creates or, in case it already exists, overwrites a file called data with the output of ls?

- A. ls 3> data
- B. ls >& data
- C. ls > data
- D. ls >> data

Answer: C

Question: 154

Which of the following commands will print important system information such as the kernel version and machine hardware architecture?

- A. sysinfo
- B. uname
- C. lspci
- D. arch
- E. info

Answer: B

Question: 155

In Bash, inserting `2>&1` after a command redirects:

- A. standard error to standard input.
- B. standard input to standard error.
- C. standard output to standard error.
- D. standard error to standard output.
- E. standard output to standard input.

Answer: C

Question: 156

When piping the output of `find` to the `xargs` command, what option to `find` is useful if the filenames have spaces in them?

- A. `-rep-space`
- B. `-print0`
- C. `-nospace`
- D. `-ignore-space`

Answer: B

Question: 157

Pressing the `Ctrl-C` combination on the keyboard while a command is executing in the foreground sends which of the following signal codes?

- A. 1(SIGHUP)
- B. 2(SIGINT)
- C. 3(SIGQUIT)
- D. 9(SIGKILL)
- E. 15(SIGTERM)

Answer: B

Question: 158

Which of the following are modes of the `vi` editor? (Choose two.)

- A. edit mode
- B. insert mode
- C. change mode
- D. review mode
- E. command mode

Answer: B,E

Question: 159

Which of the following shell commands makes the already defined variable TEST visible to new child processes? (Choose two.)

- A. visible TEST
- B. declare +x TEST
- C. declare -x TEST
- D. export TEST
- E. export -v TEST

Answer: D

Question: 160

CORRECT TEXT

Which command is used to start another command with a given nice level? (Specify ONLY the command without any path or parameters.)

Answer: nice

Question: 161

CORRECT TEXT

In the vi editor, what vi command will copy (but not paste) from the current line at the cursor and the following 16 lines (17 lines total)? Specify the correct vi command without spaces.

Answer: 17yy

Question: 162

Which of the following commands changes all occurrences of the word "bob" in file data to "Bob" and prints the result to standard output?

- A. sed'/bob/Bob' data
- B. sed's/bob/Bob/g' data
- C. sed's/bob/Bob/' data
- D. sed'/bob/Bob/' data

E. sed's/bob, Bob/' data

Answer: B

Question: 163

Which of the following is a limitation of the cut command?

- A. The cut command can only select output by field position.
- B. The cut command cannot reorder fields.
- C. The cut command only works on ASCII text.
- D. The cut command cannot use different input and output delimiters.

Answer: B

Question: 164

Which of the following commands will change all CR-LF pairs in an imported text file, userlist.txt, to Linux standard LF characters and store it as newlist.txt?

- A. tr '\r\n' " < userlist.txt > newlist.txt
- B. tr -c '\n\r' " < newlist.txt > userlist.txt
- C. tr -d V < userlist.txt > newlist.txt
- D. tr '\r' An' userlist.txt newlist.txt
- E. tr -s 'AM' 'AJ' userlist.txt newlist.txt

Answer: C

Question: 165

When in Normal mode in vi, which character can be used to begin a reverse search of the text?

- A. ?
- B. /
- C. F
- D. r

Answer: A

Question: 166

In compliance with the FHS, in which of the following directories are documentation files found?

- A. /usr/share/documentation
- B. /usr/local/share/documentation
- C. /var/share/doc
- D. /usr/share/doc
- E. /etc/share/doc

Answer: C

Question: 167

Which of the following commands converts spaces in a file to tab characters and prints the result to standard output?

- A. iconv
- B. expand
- C. unexpand
- D. tab

Answer: C

Question: 168

What does the command `grub-install /dev/sda` do?

- A. GRUB creates partitions on the device/`dev/sda` to be used with Linux.
- B. GRUB sets the default BIOS boot device to `/dev/sda`.
- C. GRUB installs all required files and configures the boot loader on device/`dev/sda`.
- D. GRUB recompiles the Linux Kernel and installs it on the Master Boot Record of device/`dev/sda`.

Answer: C

Question: 169

Which of the following statements describes a difference between GNU GRUB Legacy and GRUB 2?

- A. GRUB 2 no longer requires a configuration file.
- B. Partition numbers start at 0 in GRUB Legacy and 1 in GRUB 2.
- C. `grub-mkconfig` only works with GRUB Legacy if the `--version 1` option is used.
- D. The configuration files `menu.lst` (and `grub.conf`) have been replaced with `grub.config`.

Answer: B

Question: 170

Which of the following commands updates the already installed RPM package `rpmname`?

- A. `rpm --update rpmname`
- B. `rpm -U rpmname`
- C. `rpm -q rpmname`
- D. `rpm --force rpmname`

E. rpm -u rpmname

Answer: B

Question: 171

Which of the following partition types is used for Linux swap spaces when partitioning hard disk drives?

- A. 82
- B. 83
- C. 8e
- D. fd
- E. 7

Answer: B

Question: 172

Which of the following commands prints a list of available package updates when using RPM-based package management?

- A. dpkg list
- B. yum list
- C. dpkg check-update
- D. yum check-update
- E. yum list-update

Answer: D

Question: 173

When planning a partition scheme, which of the following directories could be considered for separate partitions? (Choose three.)

- A. /etc
- B. /home
- C. /var
- D. /lib
- E. /opt

Answer: B

Question: 174

How can the list of files that would be installed by the RPM package file apache.xml.rpm be previewed?

A. rpm -qp apache.xml.rpm B. rpm -qv apache.xml.rpm C. rpm -ql apache.xml.rpm D. rpm -qpl apache.xml.rpm

Answer: D

Question: 175

Which command will uninstall a package but leave its configuration files in case the package is re-installed?

A. dpkg -s pkgname B. dpkg -L pkgname C. dpkg -P pkgname D. dpkg -r pkgname

Answer: D

Question: 176

Which command is used to query information about the available packages on a Debian system?

- A. apt-cache
- B. apt-get
- C. apt-search
- D. dpkg
- E. dpkg-search

Answer: A

Question: 177

CORRECT TEXT

Which command shows all shared libraries required by a binary executable or another shared library?
(Specify ONLY the command without any path or parameters.)

Answer: ldd

Question: 178

Which of the following apt-get commands will install the newest versions of all currently installed packages?

- A. auto-update
- B. full-upgrade
- C. dist-upgrade
- D. install
- E. update

Answer: C

Question: 179

CORRECT TEXT

Which file from the /proc file system contains a list of all currently mounted devices? (Specify ONLY the command without any path or parameters.)

Answer: mounts

Question: 180

Which of the following commands will display the inode usage of each mounted filesystem?

- A. du -i
- B. df -i
- C. lsfs -i
- D. printfs -i

Answer: B

Question: 181

CORRECT TEXT

Following the Filesystem Hierarchy Standard (FHS), where should binaries that have been compiled by the system administrator be placed in order to be made available to all users on the system?

Answer:
/usr/local/bin/

Question: 182

Which of the following commands is used to change metadata and options for ext3 filesystems?

- A. mod3fs
- B. tune3fs
- C. mod2fs
- D. tune2fs
- E. dump2fs

Answer: D

Question: 183

Which of the following are filesystems which can be used on Linux root partitions? (Choose two.)

- A. NTFS
- B. ext3
- C. XFS
- D. VFAT
- E. swap

Answer: B,E

Question: 184

How is a symbolic link called bar.conf pointing to foo.conf created?

- A. ln -s foo.conf bar.conf
- B. ln foo.conf bar.conf
- C. ln -s bar.conf foo.conf
- D. ln bar.conf foo.conf

Answer: A

Question: 185

Which of the following is true for hard linked files? (Choose three.)

- A. The output of stat will report hard instead of regular file.
- B. The hard linked files have the same permissions and owner.

- C. The hard linked files share the same inode.
- D. The hard linked files are indicated by a -> when listed with ls -l.
- E. The hard linked files must be on the same filesystem.

Answer: B,C,E

Question: 186

Which of the following commands will mount an already inserted CD-ROM in /dev/sr0 onto an existing directory /mnt/cdrom when issued with root privileges?

- A. mount /dev/cdrom /mnt/cdrom
- B. mount /dev/sr0 /mnt/cdrom
- C. mount -t cdrom /dev/sr0 /mnt/cdrom
- D. mount -l cdrom /dev/sr0 /mnt/cdrom
- E. mount -f /dev/sr0/mnt/cdrom

Answer: C

Question: 187

Which chown command will change the ownership to dave and the group to staff on a file named data.txt?

- A. chown dave/staff data.txt
- B. chown -u dave -g staff data.txt
- C. chown --user dave --group staff data.txt
- D. chown dave:staff data.txt

Answer: D

Question: 188

CORRECT TEXT

Which command creates a swap space on a block device or a file? (Specify ONLY the command without any path or parameters.)

Answer: mkswap

Question: 189

Which of the following commands is used to modify quota settings? (Choose two.)

- A. editquota
- B. setquota

- C. edquota
- D. quotaedit
- E. quotaset

Answer: C

Question: 190

CORRECT TEXT

Which program updates the database that is used by the locate command?

Answer: updatedb

Question: 191

Which of the following commands enables the setuid (suid) permission on the executable /bin/foo?

- A. chmod 1755 /bin/foo
- B. chmod 4755 /bin/foo
- C. chmod u-s /bin/foo
- D. chmod 755+s /bin/foo

Answer: B

Question: 192

Which of the following options must be passed to a filesystem's entry in /etc/fstab in order to mount the file system without root privileges?

- A. auto
- B. norestrict
- C. noauto
- D. user

Answer: D

Question: 193

Which permissions and ownership should the file /etc/passwd have?

- A. -rW---- 1 rootroot531 Jun 5 22:45 /etc/passwd
- B. -rw-r--r-- 1 rootroot531 Jun 5 22:45 /etc/passwd
- C. -rw-r--r-- 1 11531 Jun 5 22:45 /etc/passwd
- D. -rW---- 1 11531 Jun 5 22:45 /etc/passwd

Answer: B

Question: 194

Which of the following commands will load a kernel module along with any required dependency modules?

- A. depmod
- B. insmod
- C. modprobe
- D. module_install
- E. loadmod

Answer: C

Question: 195

Which of the following commands instructs SysVinit to reload its configuration file?

- A. reinit
- B. initreload
- C. telinit 7
- D. telinit q
- E. init reinit

Answer: D

Question: 196

Which of the following describes the correct order in which the components of the system boot process are started?

- A. BIOS, kernel, bootloader, init system
- B. BIOS, bootloader, kernel, init system
- C. Bootloader, BIOS, kernel, init system
- D. BIOS, bootloader, init system, kernel
- E. Bootloader, BIOS, init system, kernel

Answer: B

Question: 197

Where does the BIOS search for a bootloader?

- A. On all connected storage media regardless of the boot device order.
- B. On all connected storage media in the defined boot device order.
- C. Only on hard disk drives in the defined boot device order.
- D. Only on the last added storage media.
- E. The BIOS is not responsible to search for a valid bootloader.

Answer: B

Question: 198

CORRECT TEXT

Which command reads and displays the current contents of the Kernel Ring Buffer on the command line? (Specify ONLY the command without any path or parameters.)

Answer: dmesg

Question: 199

CORRECT TEXT

Which file in /proc describes the IRQs that are used by various kernel drivers? (Specify the file name only without any path.)

Answer: interrupts

Question: 200

CORRECT TEXT

Which SysV init configuration file is commonly used to set the default run level? (Specify the full name of the file, including path.)

Answer: inittab

Question: 201

What is the process ID number of the init process on a SysV init based system?

- A. -1
- B. 0

- C. 1
- D. It is different with each reboot.
- E. It is set to the current run level.

Answer: C

Question: 202

CORRECT TEXT

The system configuration file named _____ is commonly used to set the default runlevel. (Please provide the file name with full path information)

Answer: /etc/inittab

Question: 203

Which umask value ensures that new directories can be read, written and listed by their owning user, read and listed by their owning group and are not accessible at all for everyone else?

- A. 0750
- B. 0027
- C. 0036
- D. 7640
- E. 0029

Answer: B

Question: 204

Which is the default percentage of reserved space for the root user on new ext4 filesystems?

- A. 10%
- B. 3%
- C. 15%
- D. 0%
- E. 5%

Answer: E

Question: 205

Which of the following is true when a file system, which is neither listed in /etc/fstab nor known to

system, is mounted manually?

- A. systemd ignores any manual mounts which are not done using the `systemctl mount` command
- B. The command `systemctl mountsync` can be used to create a mount unit based on the existing mount
- C. systemd automatically generates a mount unit and monitors the mount point without changing it
- D. Unless a systemd mount unit is created, systemd unmounts the file system after a short period of time
- E. `systemctl unmount` must be used to remove the mount because system opens a file descriptor on the mount point

Answer: B

Question: 206

What does the command `mount --bind` do?

- A. It makes the contents of one directory available in another directory
- B. It mounts all available filesystems to the current directory
- C. It mounts all user mountable filesystems to the user's home directory
- D. It mounts all file systems listed in `/etc/fstab` which have the option `userbind` set
- E. It permanently mounts a regular file to a directory

Answer: A

Question: 207

Consider the following output from the command `ls -li`:

```
525385 -rw-rw-r- 2 1000 1000 0 Feb 12 19:44 a.txt
$26255 lrwxrwxrwx 1 1000 1000 5 Feb 12 19:44 b.txt -> a.txt
```

How would a new file named `c.txt` be created with the same inode number as `a.txt` (Inode 525385)?

- A. `ln -h a.txt c.txt`
- B. `ln c.txt a.txt`
- C. `ln a.txt c.txt`
- D. `ln -f c.txt a.txt`
- E. `ln -i 525385 c.txt`

Answer: C

Question: 208

Consider the following directory:

```
drwxrwxr-x 2 root sales 4096 Jan 1 15:21 sales
```

Which command ensures new files created within the directory sales are owned by the group sales? (Choose two.)

- A. `chmod g+s sales`
- B. `setpol -R newgroup=sales sales`
- C. `chgrp -p sales sales`
- D. `chown --persistent *.sales sales`
- E. `chmod 2775 sales`

Answer: A,E

Question: 209

CORRECT TEXT

Which command displays the current disk space usage for all mounted file systems? (Specify ONLY the command without any path or parameters.)

Answer: df

Question: 210

When considering the use of hard links, what are valid reasons not to use hard links?

- A. Hard links are not available on all Linux systems because traditional filesystems, such as ext4, do not support them
- B. Each hard link has individual ownership, permissions and ACLs which can lead to unintended disclosure of file content
- C. Hard links are specific to one filesystem and cannot point to files on another filesystem
- D. If users other than root should be able to create hard links, suIn has to be installed and configured
- E. When a hard linked file is changed, a copy of the file is created and consumes additional space

Answer: C

Question: 211

Which daemon handles power management events on a Linux system?

- A. `acpid`
- B. `batteryd`
- C. `pwrmgntd`
- D. `psd`
- E. `inetd`

Answer: A

Question: 212

Which of the following statements are true about the boot sequence of a PC using a BIOS? (Choose two.)

- A. Some parts of the boot process can be configured from the BIOS
- B. Linux does not require the assistance of the BIOS to boot a computer
- C. The BIOS boot process starts only if secondary storage, such as the hard disk, is functional
- D. The BIOS initiates the boot process after turning the computer on
- E. The BIOS is started by loading hardware drivers from secondary storage, such as the hard disk

Answer: A,D

Question: 213

What is true regarding UEFI firmware? (Choose two.)

- A. It can read and interpret partition tables
- B. It can use and read certain file systems
- C. It stores its entire configuration on the /boot/ partition
- D. It is stored in a special area within the GPT metadata
- E. It is loaded from a fixed boot disk position

Answer: B,D

Question: 214

A faulty kernel module is causing issues with a network interface card. Which of the following actions ensures that this module is not loaded automatically when the system boots?

- A. Using `lsmod --remove --autoclean` without specifying the name of a specific module
- B. Using `modinfo -k` followed by the name of the offending module
- C. Using `modprobe -r` followed by the name of the offending module
- D. Adding a blacklist line including the name of the offending module to the file `/etc/modprobe.d/blacklist.conf`
- E. Deleting the kernel module's directory from the file system and recompiling the kernel, including its modules

Answer: D

Question: 215

When is the content of the kernel ring buffer reset? (Choose two.)

- A. When the ring buffer is explicitly reset using the command `dmesg --clear`
- B. When the ring buffer is read using `dmesg` without any additional parameters
- C. When a configurable amount of time, 15 minutes by default, has passed
- D. When the kernel loads a previously unloaded kernel module
- E. When the system is shut down or rebooted

Answer: A,E

Question: 216

What is the first program the Linux kernel starts at boot time when using System V init?

- A. `/lib/init.so`
- B. `/proc/sys/kernel/init`
- C. `/etc/rc.d/rcinit`
- D. `/sbin/init`
- E. `/boot/init`

Answer: D

Question: 217

A Debian package creates several files during its installation. Which of the following commands searches for packages owning the file `/etc/debian_version`?

- A. `apt-get search /etc/debian_version`
- B. `apt -r /etc/debian_version`
- C. `find /etc/debian_version -dpkg`
- D. `dpkg -S /etc/debian_version`
- E. `apt-file /etc/debian_version`

Answer: C

Question: 218

What is contained on the EFI System Partition?

- A. The Linux root file system
- B. The first stage boot loader
- C. The default swap space file
- D. The Linux default shell binaries
- E. The user home directories

Answer: B

Question: 219

Which of the following directories on a 64 bit Linux system typically contain shared libraries? (Choose two.)

- A. ~/.lib64/
- B. /usr/lib64/
- C. /var/lib64/
- D. /lib64/
- E. /opt/lib64/

Answer: A,D

Question: 220

Which of the following files exist in a standard GRUB 2 installation? (Choose two.)

- A. /boot/grub/stages/stage0
- B. /boot/grub/i386-pc/1vm.mod
- C. /boot/grub/fstab
- D. /boot/grub/grub.cfg
- E. /boot/grub/linux/vmlinuz

Answer: B,D

Question: 221

Which of the following commands installs all packages with a name ending with the string foo?

- A. zypper get "*foo"
- B. zypper update "foo?"
- C. zypper force "foo*"
- D. zypper install "*foo"
- E. zypper add ".*foo"

Answer: D

Question: 222

Which of the following properties of a Linux system should be changed when a virtual machine is cloned? (Choose two.)

- A. The partitioning scheme

- B. The file system
- C. The D-Bus Machine ID
- D. The permissions of /root/
- E. The SSH host keys

Answer: D,E

Question: 223

Which of the following commands installs GRUB 2 into the master boot record on the third hard disk?

- A. grub2 install /dev/sdc
- B. grub-mkrescue /dev/sdc
- C. grub-mbrinstall /dev/sdc
- D. grub-setup /dev/sdc
- E. grub-install /dev/sdc

Answer: E

Question: 224

Which of the following commands prints a list of usernames (first column) and their primary group (fourth column) from the /etc/passwd file?

- A. fmt -f 1,4 /etc/passwd
- B. cut -d : -f 1,4 /etc/passwd
- C. sort -t : -k 1,4 /etc/passwd
- D. paste -f 1,4 /etc/passwd
- E. split -c 1,4 /etc/passwd

Answer: B

Question: 225

Which of the following regular expressions represents a single upper-case letter?

- A. :UPPER:
- B. [A-Z]
- C. !a-z
- D. %C
- E. {AZ}

Answer: B

Question: 226

Given a log file loga.log with timestamps of the format DD/MM/YYYY:hh:mm:ss, which command filters out all log entries in the time period between 8:00 am and 8:59 am?

- A. `grep -E ':08:[09]+:[09]+' loga.log`
- B. `grep -E ':08:[00]+' loga.log`
- C. `grep -E loga.log ':08:[0-9]+:[0-9]+'`
- D. `grep loga.log ':08:[0-9]:[0-9]'`
- E. `grep -E ':08:[0-9]+:[0-9]+' loga.log`

Answer: E

Question: 227

What is true regarding the configuration of yum? (Choose two.)

- A. Changes to the repository configuration become active after running `yum confupdate`
- B. Changes to the yum configuration become active after restarting the `yum` service
- C. The configuration of package repositories can be divided into multiple files
- D. Repository configurations can include variables such as `$basearch` or `$releasever`
- E. In case `/etc/yum.repos.d/` contains files, `/etc/yum.conf` is ignored

Answer: D,E

Question: 228

Which of the following `apt-get` subcommands installs the newest versions of all currently installed packages?

- A. `auto-update`
- B. `dist-upgrade`
- C. `full-upgrade`
- D. `install`
- E. `update`

Answer: E

Question: 229

Which command uninstalls a package but keeps its configuration files in case the package is re-installed?

- A. `dpkg -s pkgname`
- B. `dpkg -L pkgname`
- C. `dpkg -P pkgname`
- D. `dpkg -v pkgname`
- E. `dpkg -r pkgname`

Answer: E

Question: 230

Which of the following commands lists the dependencies of the RPM package file `foo.rpm`?

- A. `rpm -qpR foo.rpm`
- B. `rpm -dep foo`
- C. `rpm -ld foo.rpm`
- D. `rpm -R foo.rpm`
- E. `rpm -pD foo`

Answer: A

Question: 231

Which of the following commands list all files and directories within the `/tmp/` directory and its subdirectories which are owned by the user `root`? (Choose two.)

- A. `find /tmp -user root -print`
- B. `find -path /tmp -uid root`
- C. `find /tmp -uid root -print`
- D. `find /tmp -user root`
- E. `find -path /tmp -user root -print`

Answer: A,E

Question: 232

Which of the following are valid stream redirection operators within Bash? (Choose two.)

- A. <
- B. #>
- C. %>
- D. >>>
- E. 2>&1

Answer: A,E

Question: 233

Which of the following vi commands deletes two lines, the current and the following line?

- A. d2
- B. 2d
- C. 2dd
- D. dd2
- E. de12

Answer: C

Question: 234

The command `dbmaint &` was used to run `dbmaint` in the background. However, `dbmaint` is terminated after logging out of the system. Which alternative `dbmaint` invocation lets `dbmaint` continue to run even when the user running the program logs out?

- A. `job -b dbmaint`
- B. `dbmaint &>/dev/pts/null`
- C. `nohup dbmaint &`
- D. `bg dbmaint`
- E. `wait dbmaint`

Answer: D

Question: 235

CORRECT TEXT

Which program runs a command in specific intervals and refreshes the display of the program's output? (Specify ONLY the command without any path or parameters.)

Answer: watch

Question: 236

Which of the following commands changes all CR-LF line breaks in the text file userlist.txt to Linux standard LF line breaks and stores the result in newlist.txt?

- A. `tr -d '\r' < userlist.txt > newlist.txt`
- B. `tr -c '\n\r' "" <newlist.txt> userlist.txt`
- C. `tr '\r\n' "" <userlist.txt> newlist.txt`
- D. `tr '\r' '\n' userlist.txt newlist.txt`
- E. `tr -s '/^M/^J/' userlist.txt newlist.txt`

Answer: A

Question: 237

Given the following input stream:

txt1.txt

atxt.txt

txtB.txt

Which of the following regular expressions turns this input stream into the following output stream? txt1.bak.txt

atxt.bak.txt

txtB.bak.txt

- A. `s/^txt/.bak/`
- B. `s/txt/bak.txt/`
- C. `s/txt$/bak.txt/`
- D. `s/^txt$/bak.txt/`
- E. `s/[.txt]/.bak$1/`

Answer: B

Question: 238

Which command must be entered before exiting vi to save the current file as filea.txt?

- A. `%s filea.txt`
- B. `%w filea.txt`
- C. `:save filea.txt`
- D. `:w filea.txt`
- E. `:s filea.txt`

Answer: D

Question: 239

Which of the following commands displays the output of the foo command on the screen and also writes it to a file called /tmp/foodata?

- A. `foo | less /tmp/foodata`
- B. `foo | cp /tmp/foodata`
- C. `foo > /tmp/foodata`
- D. `foo | tee /tmp/foodata`
- E. `foo > stdout >> /tmp/foodata`

Answer: D

Question: 240

What output will be displayed when the user fred executes the following command? `echo 'fred $USER'`

- A. `fred fred`
- B. `fred /home/fred/`
- C. `'fred $USER'`
- D. `fred $USER`
- E. `'fred fred'`

Answer: A

Question: 241

Which of the following commands displays the path to the executable file that would be executed when the command foo is invoked?

- A. `lsattr foo`
- B. `apropos foo`
- C. `locate foo`
- D. `whatis foo`
- E. `which foo`

Answer: A

Question: 242

When redirecting the output of find to the xargs command, what option to find is useful if the filenames contain spaces?

- A. -rep-space
- B. -printnul
- C. -nospace
- D. -ignore-space
- E. -print0

Answer: E

Question: 243

What is true regarding the command `ls > files` if files does not exist?

- A. The output of ls is printed to the terminal
- B. files is created and contains the output of ls
- C. An error message is shown and ls is not executed
- D. The command files is executed and receives the output of ls
- E. Any output of ls is discarded

Answer: B

Question: 244

Which of the following files, located in a user's home directory, contains the Bash history?

- A. .bashrc_history
- B. .bash_histfile
- C. .history
- D. .bash_history
- E. .history_bash

Answer: B

Question: 245

Which wildcards will match the following filenames? (Choose two.)

ttyS0
ttyS1
ttyS2

- A. ttyS[1-5]
- B. tty?[0-5]
- C. tty*2
- D. tty[A-Z][012]
- E. tty[Ss][02]

Answer: B,D

Question: 246

Which of the following commands redirects the output of ls to standard error?

- A. ls >-1
- B. ls <<ERR
- C. ls >&2
- D. ls >>2
- E. ls |error

Answer: C

