LPI _RealExamQuestions.Com_117-101_v2011-11-08_220q_By-chwena

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LPI 117-101

Version 2011-11-08

Question : 220

this dump is full of awesomeness,excellence and brilliant.all questions from
this dump came in the exam in the same format

Wish u a good luck.................

By-chwena

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Exam A

QUESTION 1
How many SCSI ids for peripherals can SCSI-1 support?

A. 5
B. 6
C. 7
D. 8

Correct Answer: C
Section: Part 1
Explanation

Explanation/Reference:
Up to 8 or 16 (Wide-SCSI) devices can be attached to a single bus, and the adapter itself counts as a device, which leaves 7 or 15 peripherals per bus.

For a complete list of SCSI Properties see http://en.wikipedia.org/wiki/SCSI

QUESTION 2
You need to install a fax server. Which type of fax/modem should you install to ensure Linux compatibility?

A. External Serial Fax/modem
B. External USB Fax/modem
C. Internal ISA Fax/modem
D. Internal PCI Fax/modem

Correct Answer: A
Section: Part 1
Explanation

Explanation/Reference:
Older kernels do not support USB, and internal modems need drivers which might not always be available. But a serial driver is active in all linux kernels, making a serial modem the most compatible.

QUESTION 3
You are running Linux 2.0.36 and you need to add a USB mouse to your system. Which of the following statements is true?

A. You need to rebuild the kernel.
B. You need to upgrade the kernel.
C. You need to load the USB modules for your existing modular kernel.
D. USB support is not available in Linux.

Correct Answer: B
Section: Part 1
Explanation

Explanation/Reference:
USB support started in Kernel 2.2 (for USB1.0; full support for USB2.0 since Kernel 2.4.; USB3.0 since 2.6.31

QUESTION 4
You have just upgraded your PC to a 60 gigabyte IDE drive. While partitioning the drive, you

notice that only 32 gigabytes are available.

Which of the following will most likely allow you to use the entire drive?

A. Create two smaller partitions of 30 gigabytes each.
B. Set the PC BIOS to use LBA mode.
C. Create a partition that resides entirely below the first 1024 cylinders.
D. Use GRUB or the latest version of LILO as a bootloader.
E. Upgrade the PC BIOS to the latest version available.

Correct Answer: E
Section: Part 1
Explanation

Explanation/Reference:
It might be possible that an older Kernel (< 2.3.21) is the cause of this problem, but since this is not an available option the most likely problem is an old BIOS.

QUESTION 5
The lspci command can display information about devices except the following:

A. Card bus speed (e.g. 66Mhz)
B. Card IRQ settings
C. Card vendor identification
D. Card AGP rate (e.g. 1x, 2x, 4x)
E. Card Ethernet MAC address

Correct Answer: E
Section: Part 1
Explanation

Explanation/Reference:
lspci is an utility for displaying information about all PCI buses in the system and all devices connected to them.
To display the MAC address of Ethernet use the ifconfig command.

Example:

lspci -v
04:09.0 Ethernet controller: Intel Corporation 82541PI Gigabit Ethernet Controller (rev 05)
    Subsystem: Intel Corporation Device 1376
    Flags: bus master, 66MHz, medium devsel, latency 32, IRQ 17
    Memory at fdce0000 (32-bit, non-prefetchable) [size=128K]
    Memory at fdcc0000 (32-bit, non-prefetchable) [size=128K]
    I/O ports at 9c00 [size=64]
    Expansion ROM at fdb00000 [disabled] [size=128K]
    Capabilities: [dc] Power Management version 2
    Capabilities: [e4] PCI-X non-bridge device
    Kernel driver in use: e1000
    Kernel modules: e1000

QUESTION 6
If Linux detects an ACPI BIOS on bootup, what does it automatically deactivate?

A. PnP

B. PCI

C. ATA

D. APM

Correct Answer: D
Section: Part 1
Explanation

Explanation/Reference:
APM is the older Version of ACPI, so it would not make sense to have both in one system.

QUESTION 7
What command would help you identify the I/O address range being used by the network card?

A. cat /proc/modules

B. cat /proc/devices

C. cat /proc/meminfo

D. cat /proc/dma

E. cat /proc/ioports

Correct Answer: E
Section: Part 1
Explanation

Explanation/Reference:
For example:
cat /proc/ioports
[...]
9000-9fff : PCI Bus 0000:04
  9c00-9c3f : 0000:04:09.0
    9c00-9c3f : e1000
[...]

/proc/modules contains the loaded kernel modules, /proc/devices the available devices, /proc/meminfo
information about memory usage,
/proc/dma contains the used dma channels.

QUESTION 8
You need to know where all the configuration files for the installed package named "postfix" are located.
Assuming it was installed with rpm, which command will list this information for you?

A. rpm -qc postfix

B. rpm -Vc postfix

C. rpm --config postfix

D. rpm -listconfig postfix

E. rpm -qa --config postfix

Correct Answer: A
Section: Part 1
Explanation

Explanation/Reference:
-qa --config is invalid
-listconfig is invalid
--config is invalid

-Vc verifies the installation of <package>

QUESTION 9
What tool can you use to print shared library dependencies?

A. ldconfig
B. ldd
C. libdep
D. libpath
E. ldev

Correct Answer: B
Section: Part 1
Explanation

Explanation/Reference:
ldd command prints the shared libraries required by each program or shared library specified on the command line.

Example:

ldd `which cat`
    linux-vdso.so.1 => (0x00007fff2b3ff000)
    libc.so.6 => /lib64/libc.so.6 (0x000000395ce00000)
    /lib64/ld-linux-x86-64.so.2 (0x000000395ca00000)

QUESTION 10
While installing from source code you don't see the configuration script.
What command can you run to compile the code?

A. make configure
B. install
C. install makefile
D. make

Correct Answer: D
Section: Part 1
Explanation

Explanation/Reference:
there is typically no "make configure" command, as opposed to a ./configure.sh script which creates the makefile.
if you already have a makefile use "make" or "make install" to build the binaries.

QUESTION 11
You have an updated RPM called screensaver-1.1.i386.rpm. You have version 1.0 installed.
Using RPM, how do you view the changelog of this file to see if you should install the update?

A. rpm -qp --changelog screensaver-1.1.i386.rpm
B. rpm --changelog screensaver-1.1.i386.rpm
C. rpm -qc screensaver-1.1.i386.rpm
D. rpm -showchangelog screensaver-1.1.i386.rpm

Correct Answer: A
Section: Part 1

Explanation

Explanation/Reference:
When you use rpm with a specific rpm-file, you need to specify the -p option, and the query-option to show the changelog is --changelog.
-qc would list the config files of an installed package (not an rpm-file)
--changelog on its own is an invalid option as is -showchangelog

QUESTION 12
You are about to install a new program on an RPM based Linux system.
Which of the following would be the best way to accomplish this?

A. Get the source code in a tarball and install from that source.
B. Get a source RPM and use rpm to install it.
C. Use rpm to install the program's binaries from an RPM package.
D. Use cpio to extract the binaries from a source RPM and use rpm to install those sources.

Correct Answer: C
Section: Part 1
Explanation

Explanation/Reference:
If a rpm-file is available the easiest way is to use "rpm" to install it, since the binaries are already available. If source-files are used a development environment (make, gcc, ...) must also be available.

QUESTION 13
You are installing Linux on a workstation for a new employee. Which partition should be largest?

A. /
B. /boot
C. /lib
D. /usr

Correct Answer: D
Section: Part 1
Explanation

Explanation/Reference:
Considering that employees will usually not have that many files stored in their local home directory of a workstation, but many applications installed, you should consider making /usr the largest of the partitions, since all applications will be installed there.

QUESTION 14
How can you update a package only if an earlier version is currently installed on the system?

A. rpm --update rpmname
B. rpm -U rpmname
C. rpm -F rpmname
D. rpm --force rpmname
E. rpm -u rpmname

Correct Answer: C
Section: Part 1
Explanation

Explanation/Reference:
rpm -F, --freshen <package>
updates <package>, but only if the package is currently installed.
rpm -U, --upgrade <package>
updates <package> regardless if the package is installed or not.
--force only works in combination with installing or upgrading. -u is an invalid option, as is --update

QUESTION 15
You are preparing a new set of shared libraries in /usr/local/applib and you have written and compiled some code that uses these libraries.
You have already performed ldconfig, however the system still cannot find the shared libraries.

What is most likely the cause of this?

A. You used the wrong compiler.
B. You did not update your PATH variable.
C. You compiled the code with wrong library.
D. You forgot to put the library path in ld.so.conf

Correct Answer: D
Section: Part 1
Explanation

Explanation/Reference:
ldconfig reads the file /etc/ld.so.conf and builds the shared library cache for the loader ld.so.
The PATH variable has no influence on the libraries (LD_LIBRARY_PATH does).

QUESTION 16
Where can lilo place boot code?

A. The boot ROM
B. The boot RAM
C. The /boot partition
D. The MBR on a hard drive

Correct Answer: D
Section: Part 1
Explanation

Explanation/Reference:
LILO does not use the /boot partition, GRUB1 and GRUB2 do.

QUESTION 17
Where does lilo store its boot information?

A. Boot ROM
B. Boot RAM
C. Master Boot Record
D. /boot partition

Correct Answer: C
Section: Part 1
Explanation

Explanation/Reference:

lilo uses /etc/lilo.conf to store its configuration and uses the 66 bytes of free space in the MBR to install itself there (or optionally in the / folder).
GRUB uses the /boot folder to store itself and the "compiled" configuration.

QUESTION 18
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

Correct Answer: C
Section: Part 1
Explanation

Explanation/Reference:
ld.so looks in LD_LIBRARY_PATH before looking anywhere else for libraries.

QUESTION 19
Which command will allow you to find a specific installed package?

A. rpm --list rpmname
B. rpm -qvl rpmname
C. rpm rpmname
D. rpm -qv rpmname
E. rpm -f rpmname

Correct Answer: D
Section: Part 1
Explanation

Explanation/Reference:
To query the package whether, package is installed or not:

rpm **-qv** <packagename>

example:

rpm -qv ncurses

It shows rpm fullname, version if installed otherwise it will display package is not installed.

Installed package options:
rpm **-qa** - lists all installed packages
rpm **-qf** <filename> - shows owning package for specific file
rpm **-qi** <packagename> - general information of package
rpm **-ql** <packagename> - shows all files owned by package
rpm **-qvl** <packagename> - would also show if a package is installed with the additional information what files where installed on the harddrive.

QUESTION 20
Which of the following is very important when installing from source code?

(Check TWO that apply)

A. Read all documentation included with the source code.
B. Reboot after installing all programs.
C. Manually check to see if all dependencies are met.
D. Use rpm or dpkg go verify the installation.
E. Do not install binaries as the root user.

Correct Answer: AC
Section: Part 2
Explanation

Explanation/Reference:
Normally you do not need to reboot when installing software, and you need to install binaries as root (until just installing software for one user only). When installing from source code you can not use rpm to verify the install.

QUESTION 21
You are building a server that will undergo many hardware and operating system upgrades. The server is the file server for all users on your 100 user network.

Which directory should have its own mountpoint and/or hard drive?

A. /boot
B. /sbin
C. /home
D. /etc

Correct Answer: C
Section: Part 2
Explanation

Explanation/Reference:
Since /boot, /sbin and /etc will change with each OS upgrade it's not as important to make them easily mountable. If you create /home on its own harddrive you can easily mount it on every system, and won't loose user data with every system change.

QUESTION 22
What file is read by the program ldconfig?

A. /lib/ld.so
B. /etc/ld.so.conf
C. /etc/ld.so.cache
D. /etc/modules.conf

Correct Answer: B
Section: Part 2
Explanation

Explanation/Reference:
/lib/ld.so is the linux loader and using information collected by ldconfig (especially /etc/ld.so.cache)
/etc/ld.so.cache is one of the outputs of ldconfig.
/etc/modules.conf is an optional configuration file used by the modprobe command.

QUESTION 23
After a minor security incident you are instructed by your lead sys-admin to verify the RPM's installed on a running system.

Which command will create a complete report which you can analyze for changes which may be security related?

A. rpm -Va > report
B. rpm -Qavy > report
C. rpm -Vqt --nomd5 > report
D. rpm --checkfiles > report
E. rpm -Va --nofiles > report

Correct Answer: A
Section: Part 2
Explanation

Explanation/Reference:
-Qavy is an invalid option, as is --checkfiles.
--nomd5 is a deprecated option
--nofiles would disable checking of any files in the packages

Example
rpm -Va ncurses
S........   /usr/bin/captoinfo
S........   /usr/bin/clear
S........   /usr/bin/infocmp
S........   /usr/bin/infotocap
[...]
would indicate that the file size has changed since installing the files.

QUESTION 24
You installed a beta rpm package, but are experiencing some problems with it.

How can you remove this package?

A. rpm -qe rpmname
B. rpm -V --remove rpmname
C. rpm -r rpmname
D. rpm -d rpmname
E. rpm -ev rpmname

Correct Answer: E
Section: Part 2
Explanation

Explanation/Reference:
To uninstall the package, use
rpm **-e, --erase** <packagename>
(-v for verbose)

-r puts rpm in superuser mode (requires password)
-V verifys packages
-qe checks if the package is installed
-d is working in combination with -q only

QUESTION 25
You see following output while trying to install an updated package:

[root@example pub]# rpm -i gthumb-2.2.0.i386.rpm
package gthumb- 1.0.1.i386.rpm is already installed.

Which command will allow you to install the updated version?

A. rpm -i gthumb-2.2.0.i386.rpm
B. rpm -ivh gthumb-2.2.0.i386.rpm
C. rpm -U gthumb-2.2.0.i3S6.rpm
D. rpm -qu gthumb-2.2.0.i386.rpm
E. rpm -qiv gthumb-2.2.0.i386.rpm

Correct Answer: C
Section: Part 2
Explanation

Explanation/Reference:
-qu, -qiv would indicate rpm-queries,
-i was already not working
-h is just activating a progress bar
use -U or --upgrade to update a package

QUESTION 26
Which of the following would do the same as the command cat < file1.txt > file2.txt?

A. cat < file1.txt file2.txt
B. cat file1.txt >file2.txt
C. cat <file1.txt | file2.txt
D. cat file1.txt | file2.txt
E. cp file1.txt>file2.txt

Correct Answer: B
Section: Part 2
Explanation

Explanation/Reference:
A) would make cat use the redirected stdin and file2.txt as input
C) would pipe the output to file2.txt, which could not read it
D) see C
E) cp does not display file1.txt so it would make no sense to redirect stdout

QUESTION 27
In the vi editor, which of the following commands will delete the current line at the cursor and the 16 lines following it (17 lines total)?

A. 17d
B. 17dd
C. 17x
D. d17d
E. 16d

Correct Answer: B
Section: Part 2
Explanation

Explanation/Reference:
Alternative: Answer B or D ist correct!

17x just deletes 17 characters
17d or 16d is waiting for additional command input (besides 16dd would delete only 16 lines)

QUESTION 28
As root you have navigated to directory /B. You wish to move all of the files and directories from directory /A to directory /B.

Which of the following options would be the most appropriate command line to execute this task?

A. cp /a/* .
B. mv -f /A/* .
C. mv -Rf /a/* .
D. cp -f /a/* ..
E. cp -rf /A/* /b/

Correct Answer: B
Section: Part 2
Explanation

Explanation/Reference:
Files and folders are case-sensitive, so you can immediately dismiss all lines with "a" instead of "A", and since you need to move instead of copy, that leaves only B as the correct answer.

QUESTION 29
What key sequence will suspend the current process and return you to a shell prompt?

A. Ctrl-z
B. Ctrl-c
C. Ctrl-x
D. Ctrl-d

Correct Answer: A
Section: Part 2
Explanation

Explanation/Reference:
CTRL+Z sends SIGINT to the current process, sending it to the background,
CTRL+C would send SIGTERM, ending the process
CTRL+D is used to signal an EOF
CTRL+X has no meaning in a shell

QUESTION 30
Which TWO commands will find the path for the binary vim?

A. man vim
B. whereis vim
C. apropos vim
D. which vim

Correct Answer: BD
Section: Part 2
Explanation

Explanation/Reference:
man displays the manual pages of a command, and apropos shows related commands

Examples:
$ which vim
/usr/bin/vim
$ whereis vim
vim: /usr/bin/vim.basic /usr/bin/vim.tiny /usr/bin/vim /usr/bin/vim.gnome /etc/vim /usr/share/vim /usr/share/
man/man1/vim.1.gz

QUESTION 31
What command changes the priority of the process running with process id of 12345 to the highest priority?

A. /usr/bin/renice +20 12345
B. /usr/bin/renice -20 12345
C. /bin/setpriority +20 12345
D. /bin/setpriority -20 12345

Correct Answer: B
Section: Part 2
Explanation

Explanation/Reference:
To change the priority of running process use the renice command. Default priority is 0, highest priority is -20 and lowest priority is 19. The path of renice command is /usr/bin/renice.

QUESTION 32
You want to save vi changes to the file myfile with :w!, but vi complains it can not write to the file. Therefore, you want to check the write permissions on the file.

To do this without leaving vi, you type:

A. :!ls -l myfile
B. :\ls -l myfile
C. esc :ls -l myfile
D. :?ls -l myfile

Correct Answer: A
Section: Part 2
Explanation

Explanation/Reference:
Use "!command" to issue shell commands from the command prompt of vi

QUESTION 33
Which of the following GNU commands would be the most likely command you'd use to find the system load average?

A. top
B. nice

C. loadavg

D. cpustat

E. ps

Correct Answer: A
Section: Part 3
Explanation

Explanation/Reference:
The top program provides a dynamic real-time view of a running system. It can display system summary information as well as a list of tasks currently being managed by the Linux kernel. The types of system summary information shown and the types, order and size of information displayed for tasks are all user configurable and that configuration can be made persistent across restarts.

ps is used to display the running processes of the user, nice is used to set the priority of a command. cpustat and loadavg does not exist in debian or fedora.

QUESTION 34
Which of the following commands is equivalent to kill 1234?

A. kill -1 1234 or kill -s SIGHUP 1234

B. kill -2 1234 or kill -s SIGINT 1234

C. kill -3 1234 or kill -s SIGQUIT 1234

D. kill -9 1234 or kill -s SIGKILL 1234

E. kill -15 1234 or kill -s SIGTERM 1234

Correct Answer: E
Section: Part 3
Explanation

Explanation/Reference:
If no signal is specified kill uses SIGTERM (15) as its default signal to processes.

QUESTION 35
What command would execute cmd1 followed by cmd2, regardless of the exit status of cmd1?

A. cmd1 cmd2

B. cmd1 | cmd2

C. cmd1 ; cmd2

D. cmd1 && cmd2

E. cmd1 || cmd2

Correct Answer: C
Section: Part 3
Explanation

Explanation/Reference:
You can concatenate as many commands as you want by seperating them with a semi-colon.
A) cmd1 cmd2 would tell the shell that cmd2 is a parameter of cmd1
B) pipe the output of cmd1 to cmd2
D) && would check the exit code of cmd1 and only start cmd2 if cmd1 was successful
E) || would check the exit code of cmd1 and only run cmd2 if cmd1 was not successful

QUESTION 36

Which command will print to standard out only the lines that do not begin with # (pound symbol) in the file foobar?

A. /bin/grep ^# foobar
B. /bin/grep -v ^# foobar
C. /bin/grep #$ foobar
D. /bin/grep -v #$ foobar

Correct Answer: B
Section: Part 3
Explanation

Explanation/Reference:
A) would grep for all lines starting with #
C) would grep for all lines ending with #
D) would grep for all lines not ending with #

QUESTION 37
What command will remove duplicate lines from a sorted file?

A. filter
B. trim
C. uniq
D. wc

Correct Answer: C
Section: Part 3
Explanation

Explanation/Reference:
uniq - remove duplicate lines from a sorted file

wc - wordcount
trim - remove whitespaces
filter is not standard unix filter command

QUESTION 38
Which command line option would you use to restrict the GNU find command to searching a particular number of subdirectories?

A. --max-dirs
B. -dirmax
C. -maxdepth
D. -s
E. -n

Correct Answer: C
Section: Part 3
Explanation

Explanation/Reference:
from the man pages:
-maxdepth levels
    Descend at most <levels> (a non-negative integer) levels of directories below the command line arguments.

QUESTION 39
What is the disadvantage of using the command kill -9 ?

A. A core dump file will be created.
B. It affects the entire process group.
C. It makes excessive use of system resources.
D. The action can be blocked by buggy or malicious processes.
E. The affected process is unable to clean up before exiting.

Correct Answer: E
Section: Part 3
Explanation

Explanation/Reference:
From wikipedia: When sent to a program, SIGKILL (9) causes it to terminate immediately. In contrast to SIGTERM and SIGINT, this signal cannot be caught or ignored, and the receiving process cannot perform any clean-up upon receiving this signal.

QUESTION 40
To prevent a command run as root from sending both standard out (stdout) and standard error (stderr) to any terminal or other file or device.

Which of the following strings should be appended to the command?

A. >/dev/null
B. >/dev/null 1>&2
C. >/dev/null 2>&1
D. 1>&2 >/dev/null
E. 2>&1 >/dev/null

Correct Answer: C
Section: Part 3
Explanation

Explanation/Reference:
A) redirects only stdout
B) would send stdout to /dev/null, then redirect is to stderr, putting all output to stderr
D) would first redirect stdout to stderr, then redirect stdout to /dev/null, leaving stderr as it is
E) would first redirect stderr to stdout, then only stdout to /dev/null, leaving stderr on stdout

cmd &> /dev/null would have the same result as C

QUESTION 41
You want to search the file myfile for all occurances of string containing at least five characters, where character number 2 and 5 are 'a' and character number 3 is NOT 'b'.

Which command would you use?

A. grep a*^b*a myfile
B. grep .a[^b].a myfile
C. grep .[a].*.[a] myfile
D. grep .a*^b..a myfile

Correct Answer: B
Section: Part 3
Explanation

Explanation/Reference:
A) since ^ without brackets indicates beginning of line, this regex would search for lines where any count of 'a' come before the start of the line
C) would find every combination like xabax
D) has the same problem as A

QUESTION 42
What does the following command do?

cat '$TEST'

A. Displays a bash syntax error message.
B. Displays the contents of the file named $TEST if it exists.
C. Waits for the user to enter text and then echos the text back.
D. Displays the contents of the file named inside the back quotes.
E. Displays the contents of the named by the environment variable TEST.

Correct Answer: B
Section: Part 3
Explanation

Explanation/Reference:
single quotation marks instruct the bash not to do wildcard expansion or variable replacement, so cat will display the file called exactly $TEST
use double quotation marks to get variable replacement, but not wildcard replacement, and no quotations to get both.
Do not confuse with `cmd` which evaluates the command and replaces its output on the shell.

QUESTION 43
You want the command foo to take its input from the file foobar and send its output to the program bar.

Which of the following command lines will do this?

A. foo < foobar | bar
B. foo < foobar > bar
C. foo | foobar > bar
D. foo | bar < foobar
E. foo > bar < foobar

Correct Answer: A
Section: Part 3
Explanation

Explanation/Reference:
B) would redirect output into a file called bar (overwriting an existing bar)
C) would pipe output of foo to foobar
D) would call foo then bar with the input of foobar
E) would redirect stdin to file foobar and stdout into file bar (overwriting an existing bar)

QUESTION 44
Which of the following commands would display the lines containing capital letters form the file "turkey.txt"?

A. cat turkey.txt|wc -l
B. grep -n [A-Z] turkey.txt
C. cat turkey.txt|wc -w [A-Z]
D. grep -v [A-Z] < turkey.txt
E. for [A-Z] in turkey.txt | count

Correct Answer: B
Section: Part 3
Explanation

Explanation/Reference:
A) would display the linecount of all lines in turkey.txt
C) would display an error
D) would display all lines not containing capital letters
E) would display an error

QUESTION 45
Which of these commands allows you to use shared libraries that are in /usr/local/lib?

A. export LD_PRELOAD=/usr/local/lib
B. export LD_LIBRARY_PATH=/usr/local/lib
C. ldconfig /usr/local/lib
D. ldd /usr/local/lib

Correct Answer: B
Section: Part 9
Explanation

Explanation/Reference:
ld.so searches for shared libraries in LD_LIBRARY_PATH before looking in the standard directories.
alternatively you can specify the directory in the /etc/ld.so.conf and running ldconfig.

QUESTION 46
Which file is used by ld.so to find libraries quickly without actually having to search the directories in its
library path?

A. /etc/ld.so.cache
B. /etc/ld.so.conf
C. /etc/ld.so
D. /var/ld/cache
E. /var/.cache

Correct Answer: A
Section: Part 9
Explanation

Explanation/Reference:
B) is used by ldconfig to create /etc/ld.so.cache
C) is the program itself
D) does not exist (on fedora or ubuntu)
E) does not exist

QUESTION 47

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

Correct Answer: D
Section: Part 9
Explanation

Explanation/Reference:
to work with specific rpm-files you need the parameter -p, -ql lists all files for a package.
alternatively you could specify the --test parameter when installing

QUESTION 48
Which system administration command you can use to update ld.so.cache after the installation of new shared libraries?

A. ldconfig
B. ldd
C. libpath
D. newlibs

Correct Answer: A
Section: Part 9
Explanation

Explanation/Reference:
ldconfig builds the library cache from the standard library directories and the ld.so.conf file

QUESTION 49
How do you get a list of files that have been installed from a dpkg package?

A. dpkg -l pkgname
B. dpkg -C pkgname
C. dpkg -s pkgname
D. dpkg -S pkgname
E. dpkg -L pkgname

Correct Answer: E
Section: Part 9
Explanation

Explanation/Reference:
-l prints the list of all packages matching pkgname
-C checks for broken packages
-s displays status information for a package
-S searches for a package matching pkgname

QUESTION 50
User Joseph has successfully extracted and compiled a program from source code. Installing the binaries produces errors.

What is the most likely reason?

A. The source code was compiled for a different CPU
B. The permissions set in the /usr/bin directory are wrong
C. The binaries require root privileges to be installed
D. The wrong prefix was used during configuration of the source code

Correct Answer: C
Section: Part 9
Explanation

Explanation/Reference:
Normally only the root user has write-privileges on /usr/bin, install binaries only as root.

QUESTION 51
What RPM command would show you detailed information for a package called openssh-3.6.i386.rpm?

A. rpm --showinformation openssh-3.6.i386.rpm
B. rpm --showdetails --package openssh-3.6.i386.rpm
C. rpm --query --info --package openssh-3.6.i386.rpm
D. rpm --verify openssh-3.6.i386.rpm

Correct Answer: C
Section: Part 9
Explanation

Explanation/Reference:
--verify only checks changes on the installed files
--showinformation is not a rpm option, as is --showdetails.

rpm -qpi <rpmfile> would display the same results.

QUESTION 52
In GRUB's configuration file you find the line

root (hd1,4)

What is corresponding device name on a Linux system?

A. /dev/hda4
B. /dev/hda5
C. /dev/hdb4
D. /dev/hdb5

Correct Answer: D
Section: Part 9
Explanation

Explanation/Reference:
Grub starts counting harddrives and partitions at zero, thus (hd1,4) is the 5th partition on the second harddrive /dev/sdb5 or /dev/hdb5

QUESTION 53
Which 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

Correct Answer: C
Section: Part 9
Explanation

Explanation/Reference:
In Linux, this keystroke combination is recognized by the keyboard device driver in the kernel. In the absence of more specific instructions, which will usually only be during system initialization, the kernel directly initiates a soft reboot in response. More commonly, the kernel will send a signal to the init process, which will perform an administrator-configured task, such as running a script, or displaying an "end current session" box in KDE.
However, Linux systems can be configured to ignore the keystroke combination. The setting is usually in the inittab(5) configuration file under the keyword "ca".

In newer Linux systems (using upstart) /etc/inittab is replaced by /etc/event.d/

QUESTION 54
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

Correct Answer: A
Section: Part 9
Explanation

Explanation/Reference:
telinit 1 orders the init process to switch to runlevel 1, stopping all services not configured for runlevel 1, including network and multiuser support.

QUESTION 55
In compliance with the FHS, in which of the following places are man pages typically found?

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

Correct Answer: A
Section: Part 9
Explanation

Explanation/Reference:
FHS is the Filesystem Hierarchy Standard (see http://www.pathname.com/fhs/pub/fhs-2.3.html)
This document defines that manual pages are stored in /usr/share/man

QUESTION 56
What is the PID for the Init that is the parent of all the process?

A. 0
B. 1
C. changes on reboot
D. same as current runlevel
E. -1

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
init is the first process the kernel starts, so init always has root priviliges and PID 1

QUESTION 57
From any mode in vi, how do you save a the current file and exit vi?

(give 2 options)

A. ESC :wq!
B. ESC :q!
C. ESC ZZ
D. ESC :Q

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
there is no ":" before ZZ!

QUESTION 58
Which command would run "make" in the background?

A. make && bg
B. make ; bg
C. make &
D. nohup make

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
append & to any command to run it in the background (alternatively use CTRL+Z and bg)

QUESTION 59
Consider the following commands

A) $ nice -n 1 /usr/bin/somecommand
B) $ nice -n 5 /usr/bin/somecommand
C) $ nice -n 10 /usr/bin/somecommand

Which instance of somecommand is run with the highest priority?

A. A
B. B
C. C
D. none, only superuser can change the priority

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:
The lower the nice-value the higher the priority, so A is the correct value.
Only the superuser may set negative values, but since A, B and C are using positive values this is irrelevant
for this Question.

QUESTION 60
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

Correct Answer: A
Section: Part 9
Explanation

Explanation/Reference:
telinit 1 orders the init process to switch to runlevel 1, stopping all services not configured for runlevel 1,
including network and multiuser support.

QUESTION 61
The lspci command can display information about devices except the following:

A. Card bus speed (e.g. 66Mhz)
B. Card IRQ settings
C. Card vendor identification
D. Card AGP rate (e.g. 1x, 2x, 4x)
E. Card Ethernet MAC address

Correct Answer: E
Section: Part 1
Explanation

Explanation/Reference:
lspci is an utility for displaying information about all PCI buses in the system and all devices connected to them.
To display the MAC address of Ethernet use the ifconfig command.

Example:

lspci -v
04:09.0 Ethernet controller: Intel Corporation 82541PI Gigabit Ethernet Controller (rev 05)
   Subsystem: Intel Corporation Device 1376
   Flags: bus master, 66MHz, medium devsel, latency 32, IRQ 17
   Memory at fdce0000 (32-bit, non-prefetchable) [size=128K]
   Memory at fdcc0000 (32-bit, non-prefetchable) [size=128K]
   I/O ports at 9c00 [size=64]
   Expansion ROM at fdb00000 [disabled] [size=128K]
   Capabilities: [dc] Power Management version 2
   Capabilities: [e4] PCI-X non-bridge device
   Kernel driver in use: e1000
   Kernel modules: e1000

QUESTION 62
While installing from source code you don't see the configuration script.
What command can you run to compile the code?

A. make configure
B. install
C. install makefile
D. make

Correct Answer: D
Section: Part 1
Explanation

Explanation/Reference:
there is typically no "make configure" command, as opposed to a ./configure.sh script which creates the makefile.
if you already have a makefile use "make" or "make install" to build the binaries.

QUESTION 63
You are preparing a new set of shared libraries in /usr/local/applib and you have written and compiled some code that uses these libraries.
You have already performed ldconfig, however the system still cannot find the shared libraries.

What is most likely the cause of this?

A. You used the wrong compiler.
B. You did not update your PATH variable.
C. You compiled the code with wrong library.
D. You forgot to put the library path in ld.so.conf

Correct Answer: D
Section: Part 1
Explanation

Explanation/Reference:
ldconfig reads the file /etc/ld.so.conf and builds the shared library cache for the loader ld.so.

The PATH variable has no influence on the libraries (LD_LIBRARY_PATH does).

QUESTION 64
How do you get a list of files that have been installed from a dpkg package?

A. dpkg -I pkgname
B. dpkg -C pkgname
C. dpkg -s pkgname
D. dpkg -S pkgname
E. dpkg -L pkgname

Correct Answer: E
Section: Part 9
Explanation

Explanation/Reference:
-I prints the list of all packages matching pkgname
-C checks for broken packages
-s displays status information for a package
-S searches for a package matching pkgname

QUESTION 65
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

Correct Answer: A
Section: Part 9
Explanation

Explanation/Reference:
telinit 1 orders the init process to switch to runlevel 1, stopping all services not configured for runlevel 1, including network and multiuser support.

QUESTION 66
From any mode in vi, how do you save a the current file and exit vi?

(give 2 options)

A. ESC :wq!
B. ESC :q!
C. ESC ZZ
D. ESC :Q

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
there is no ":" before ZZ!

Exam B

QUESTION 1
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

Correct Answer: C
Section: Part 3
Explanation

Explanation/Reference:
A) 2>&1
B) does not make sense
D) 2>&1
E) use | (pipe) to redirect stdout to stdin

QUESTION 2
Identify the proper device for the third partition, on the second hard disk, on the first IDE controller on a PC system.

A. /dev/hdb3
B. /dev/hd1b3
C. /dev/hdc1b3
D. /dev/hdc1d2p3

Correct Answer: A
Section: Part 3
Explanation

Explanation/Reference:
For IDE drives:
primary master /dev/hda
primary slave /dev/hdb
secondary master /dev/hdc
secondary slave /dev/hdd
So the 3rd partition on the second harddrive is /dev/hdb3 (or /dev/sdb3 for SCSI drives)

QUESTION 3
What umask will set the file permissions on a newly created file to -rw-r--r-- (644)?

A. 0002
B. 0022
C. 0224
D. 0246

Correct Answer: B
Section: Part 3
Explanation

Explanation/Reference:

The trick is to know that umask on a file excludes execute-priviliges per default, so to remove the write-privilige on a file use 022.

QUESTION 4
Which command will create an ext3 filesystem on /dev/hda2?

A. /sbin/mke2fs -d /dev/hda2
B. /sbin/mke2fs -j /dev/hda2
C. /sbin/mke2fs -m 3 /dev/hda2
D. /sbin/mke2fs -c ext3 /dev/hda2

Correct Answer: B
Section: Part 3
Explanation

Explanation/Reference:
mke2fs - create an ext2/3/4 filesystem
-j Create the filesystem with an ext3 journal.

If the -j option is not specified, the default journal parameters will be used to create an appropriately sized journal (given the size of the filesystem) stored within the filesystem. Note that you must be using a kernel, which has ext3 support in order to actually make use of the journal.

Alternatively use "mkfs -t ext3" to create a ext3fs partition.

QUESTION 5
What is the proper option to put in /etc/fstab to enable group quotas for a particular parition?

A. groupquota
B. grpquota
C. groupquotas
D. grpquotas

Correct Answer: B
Section: Part 3
Explanation

Explanation/Reference:
Use grpquota for groups or usrquota for users in /etc/fstab

QUESTION 6
Which utility would you use to change how often a filesystem check was performed over an EXT2 filesystem (without losing any data stored on that filesystem)?

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

Correct Answer: C
Section: Part 3
Explanation

Explanation/Reference:

tune2fs is used to change parameters in the superblock
fsck is used to check the (unmounted) filesystem
mke2fs is used to format the partition

QUESTION 7
To allow a regular user account to mount and unmount a filesystem (for instance, a cdrom or floppy), which option will need to be added to the corresponding line in /etc/fstab?

A. nouidchk
B. alluser
C. user
D. auto

Correct Answer: C
Section: Part 3
Explanation

Explanation/Reference:
Answer C is correct. user options is used to allow an ordinary user to mount the file system. The name of the mounting user is written to mtab so that user can unmount the file system again.

QUESTION 8
You have run out of disk space on a partition.

Which of the following would be an easy way to move data to a new partition without reconfiguring the path to the data in existing applications?

A. Run ext2fs ACL.
B. Use a hard link.
C. Use a symbolic link.
D. Use the loopback device.
E. Create a block device offset.

Correct Answer: C
Section: Part 4
Explanation

Explanation/Reference:
A) ACL specifies extended user and group rights on files and directories
B) Hardlink does not work over partitions
D) mounting something as loopback (mount -o loop) would require an image of the existing data
E) ?

If you use a symbolic link pointing from the new partition to the old data you do not need to move the data, since for users it would look like the data is already there. On the other hand, there would still be little diskspace left on the old partition / directory.

QUESTION 9
What TWO permissions must a user have in order to run a shell script?

A. read
B. write
C. execute
D. browse on the directory
E. users cannot run shell scripts

Correct Answer: AC
Section: Part 4
Explanation

Explanation/Reference:
You do not need write privileges on shell scripts.
Directory browsing priviliges are not needed if you know exactly how to start the script, even without this permission you may change into the directory and start the shell script
Users can run any application as long as the specific permission is set (read and execute right for owner, group or others)

QUESTION 10
You are using quota on your system. How can you see disk quota details?

A. repquota
B. quota -l
C. quota
D. quotachech
E. quota --list

Correct Answer: A
Section: Part 4
Explanation

Explanation/Reference:
quota lists the quotas for a user or group, use repquota for a drive or partition

QUESTION 11
You are experimenting with a binary in /tmp/foo.d that expects its configuration file at /etc/foo.conf.
You don't want to save it there, but use a symbolic link to /tmp/foo.d/foo.conf instead.

Which command would accomplish that?

A. ln -s /tmp/foo.d/foo.conf /etc/foo.conf
B. ln /tmp/foo.d/foo.conf /etc/foo.conf
C. ln -s /etc/foo.conf /tmp/foo.d/foo.conf
D. ln /etc/foo.conf /tmp/foo.d/foo.conf

Correct Answer: A
Section: Part 4
Explanation

Explanation/Reference:
To create a symbolic link (symlink) you need to specify the -s option for the command ln.
The correct syntax for ln is
ln -s <original> <symlink>

QUESTION 12
Which of the following Linux filesysterns pre-allocates a fixed number of inodes at filesysterns make/creation time, and does NOT generate them as needed?

A. ext3
B. jfs
C. reiserfs

D. xfs

Correct Answer: A
Section: Part 4
Explanation

Explanation/Reference:
reiserfs does not even use inodes
jfs and xfs use dynamic inode allocation

QUESTION 13
You have just added a CD-ROM drive (/dev/hdd) to your system and have added it to your fstab.

Typically you can use which of the following commands to mount media in that drive to /mnt/cdrom?

A. mount /dev/cdrom /mnt/cdrom
B. mount /dev/cdrom
C. mount -t cdrom/dev/cdrom/mnt/cdrom
D. mount /mnt/cdrom
E. automount/mnt/hdd/mnt/cdrom

Correct Answer: D
Section: Part 4
Explanation

Explanation/Reference:
mount can work with either devicename or mountpoint if the device was added in /etc/fstab (and the mountpoint exists)
(and /dev/cdrom is not the correct devicename)

QUESTION 14
What does the command mount -a do?

A. It mounts the floppy disk for all users.
B. It shows all mounted file systems.
C. It opens /etc/fstab to edit.
D. It mounts all file systems listed in /etc/fstab.

Correct Answer: D
Section: Part 4
Explanation

Explanation/Reference:
From the man pages:
-a, --all Mount all filesystems (of the given types) mentioned in fstab.

QUESTION 15
What would the following line accomplish if run as root?

chown -R bert /home/bert/*

A. Nothing, this command is invalid.
B. It would revoke bert's ownership of all files in /home/bert to bert.
C. It would change user ownership of all files in /home/bert to bert.

D. It would set the group ownership of the directory /home/bert to bert

E. It would set ownership of all files and subdirectories in /home/bert to bert

Correct Answer: E
Section: Part 4
Explanation

Explanation/Reference:
From the man pages:
chown changes the user and/or group ownership of each given file. -R operate on files and directories recursively

QUESTION 16
Which one of the following programs will only find files that are in your PATH?

A. locate

B. slocate

C. which

D. find

Correct Answer: C
Section: Part 4
Explanation

Explanation/Reference:
From the man pages:
which returns the pathnames of the files (or links) which would be executed in the current environment, had its arguments been given as commands in a strictly POSIX-conformant shell. It does this by searching the PATH for executable files matching the names of the arguments. It does not follow symbolic links.

QUESTION 17
What does the Filesystem Hierarchy Standard enable?

(Select TWO answers)

A. Software to predict the location of installed files and directories

B. Software to predict the ownership and access rights of installed files and directories

C. Users to predict the location of installed files and directories.

D. Users to predict how the filesystem should be formatted according to need.

Correct Answer: AC
Section: Part 4
Explanation

Explanation/Reference:
From the FHS Homepage (http://www.pathname.com/fhs/pub/fhs-2.3.html)
This standard consists of a set of requirements and guidelines for **file and directory placement under UNIX-like operating systems**. The guidelines are intended to support interoperability of applications, system administration tools, development tools, and scripts as well as greater uniformity of documentation for these systems.

QUESTION 18
You want the default permissions for your files to be -rw-r----- .

HOW must you set umask?

A. 037
B. 640
C. 038
D. 027

Correct Answer: D
Section: Part 4
Explanation

Explanation/Reference:
A) removes the directory permission g-x making the g+r permission pointless
B) would result in --x-wxrwx, which is not what we want
C) is not a octal number used for umask

QUESTION 19
Which chown command will change the ownership to foo and the group to bar on a file named biglist?

A. chown foo/bar biglist
B. chown -u foo -g bar biglist
C. chown foo:bar biglist
D. chown --user foo --group bar biglist

Correct Answer: C
Section: Part 4
Explanation

Explanation/Reference:
From the manual pages:
SYNOPSIS
      chown [OPTION]... [OWNER][:[GROUP]] FILE...

There is no parameter for user and/or group, and the correct seperation character is the ":"

QUESTION 20
Which option must be listed in /etc/fstab to activate user quotas automatically?

A. quota
B. user
C. quotaon
D. usrquota

Correct Answer: D
Section: Part 4
Explanation

Explanation/Reference:
To activate user quotas in partitions, you have to mount a partition with the option usrquota.

Additionally "quotaon -auvg" must be run in the init script to turn on quotas.

QUESTION 21
Which of the following commands makes /bin/foo executable by everyone but only writable by its owner?

A. chmod 557 /bin/foo

B. chmod o +rwx,a+rx /bin/foo

C. chown 557 /bin/foo

D. chmod 755 /bin/foo

Correct Answer: D
Section: Part 4
Explanation

Explanation/Reference:
A) would set -wx-wxrwx permissions on /bin/foo
B) would set at least r-xr-xrwx on /bin/foo (depending on former permissions)
C) would set the UID of /bin/foo to 557 (even if no user exists with that id)

QUESTION 22
The command cat /proc/dma will show you what?

A. Whether DMA is enabled

B. Which DMA channels are in use

C. Which DMA mode is in use

D. General information about DMA on the machine

Correct Answer: B
Section: Part 4
Explanation

Explanation/Reference:
/proc/dma contains a list of the registered ISA direct memory access (DMA) channels in use. It shows whether DMA is enabled or not.

Example
cat /proc/dma
4: cascade

QUESTION 23
You are formatting a single hard disk for a Linux install. What is the maximum number of primary partitions you can create?

A. 0

B. 1

C. 2

D. 3

E. 4

F. 5

Correct Answer: E
Section: Part 4
Explanation

Explanation/Reference:
On MBR partitioned harddrives only 4 primary partition can be created. (Use extended and logical partitions to create more partitions).

QUESTION 24
You have two shell scripts, foo and bar.

You wish to have bar execute if foo returns an exit status of 0 Select the correct command:

A. foo; bar
B. foo || bar
C. foo && bar
D. foo % bar

Correct Answer: C
Section: Part 5
Explanation

Explanation/Reference:
A) executes foo and bar regardless of exit codes
B) executes bar only if foo fails
D) % is used in trimming text in the shell

QUESTION 25
In order to append the output of ls to a file called bazz, which of the following command lines would you use?

A. ls > bazz
B. ls >& bazz
C. ls &> bazz
D. ls >> bazz

Correct Answer: D
Section: Part 5
Explanation

Explanation/Reference:
A) cmd > file - redirect the standard output of cmd into file.
B) cmd >& file - redirect stdout to file
C) cmd &> file - redirect stdout and stderr to file

QUESTION 26
Which command is used to dump files in octal format?

A. od
B. octdump
C. dumpoct
D. cat -o

Correct Answer: A
Section: Part 5
Explanation

Explanation/Reference:
From the man pages:
Write an unambiguous representation, octal bytes by default, of FILE [or stdin, if no file is specified] to standard output.

QUESTION 27
You have created a really long letter and after you are done, you notice that you used the name "Bob" many times but your forgot to capitalize it in many instances.

Which command would replace "bob" with "Bob" in all instances and generate a new letter for printing?

A. sed '/bob/Bob' letter > newletter

B. sed s/bob/Bob/ letter < newletter

C. sed 's/bob/Bob' letter > newletter

D. sed 's/bob/Bob/g' letter > newletter

E. sed s/bob, Bob/' letter > newletter

Correct Answer: D
Section: Part 5
Explanation

Explanation/Reference:
A) missing replacement option "s", and would not replace all bob with Bob
B) would not write output to newletter (if it works at all)
C) not replacing all occurrences of bob
E) wrong syntax for replacement

QUESTION 28
You are logged in as user tux1, but now you want to switch to user tux2 using tux2's environment.

How would you do this?

A. su tux2

B. su -e tux2

C. su - tux2

D. su -m tux2

E. su -f tux2

Correct Answer: C
Section: Part 5
Explanation

Explanation/Reference:
from the man pages:
 -, -l, --login   Provide an environment similar to what the user would expect had the user logged in directly.

There are no -e or -f options and -m would not switch the environment (except PATH)

QUESTION 29
You wish to kill a process with a PID of 123. Select the command which will allow the process to "clean up" before exiting.

A. kill -1 123

B. kill -9 123

C. kill -15 123

D. kill -17 123

Correct Answer: C
Section: Part 5
Explanation

Explanation/Reference:
To tell a process to quit "at the earliest convinience" use the signal SIGTERM (15). If the process captures signals it can then either ignore it or "clean up" and terminate itself

QUESTION 30
You have read/write permission on an ordinary file foo. You have just run *ln foo bar*.

What would happen if you ran rm foo?

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. You would be asked whether bar should be removed.

Correct Answer: B
Section: Part 5
Explanation

Explanation/Reference:
ln (without option -s) creates a hardlink of a file; creating a hardlink creates a new directory entry, but no new inode is created. Instead the new file gets the same inode as the old file, and the linkcounter is incremented. Deleting any File with a linkcount greater than 1 just removes the directory entry, the datablocks and the inode are freed only when the last link (linkcount equals 1) is deleted.

QUESTION 31
You need to create a simple hierarchy of directories: images/photos/summer/ottawa/

None of the directories on that path exists. What command will create all of the needed directories in one step?

A. mkdir -r images/photos/summer/ottawa/
B. mkdir -R images/photos/summer/ottawa/
C. mkdir -p images/photos/summer/ottawa/
D. mkdir -P images/photos/summer/ottawa/
E. mkdir -m images/photos/summer/ottawa/

Correct Answer: C
Section: Part 5
Explanation

Explanation/Reference:
From the man pages:
mkdir - make directories
-p, --parents   make parent directories as needed

QUESTION 32
While using the vi editor, you wish to move ahead one page. You should press the control key and:

A. A
B. D
C. F
D. U

Correct Answer: C
Section: Part 5
Explanation

Explanation/Reference:
To move screen in vi Editor,

F - go forward one full screen
B - go back one full screen
D - go down half screen
U - go up half screen

QUESTION 33
You enter the command date +%M. Wat does the output show you?

A. the current year
B. the current month
C. the current hour
D. the current minute
E. the current second

Correct Answer: D
Section: Part 5
Explanation

Explanation/Reference:
From the man pages:
date - print or set the system date and time
    date [OPTION]... [+FORMAT]
    date [-u|--utc|--universal] [MMDDhhmm[[CC]YY][.ss]]
[...]
%A locale's full weekday name, variable length (Sunday..Saturday)
%b locale's abbreviated month name (Jan..Dec)
%B locale's full month name, variable length (January..December)
%c locale's date and time (Sat Nov 04 12:02:33 EST 1989)
%C century (year divided by 100 and truncated to an integer) [00-99]
%d day of month (01..31)
%H hour (00..23)
%m month (01..12)
%M minute (00..59)
%Y year (1970...)

QUESTION 34
When you are looking for brief information about a program in your PATH with its associated man pages, you would use ...

A. which
B. whereis
C. locate
D. where

Correct Answer: B
Section: Part 5
Explanation

Explanation/Reference:
From the man pages:
whereis - locate the binary, source, and manual page files for a command

QUESTION 35
Which command will print out the attributes of the file foobar?

A. ls --attr foobar
B. lsattr foobar
C. printattr foobar
D. fileattr foobar

Correct Answer: B
Section: Part 5
Explanation

Explanation/Reference:
From the man pages:
lsattr - list file attributes on a Linux extfs

For a list of possible attributes see man page for **chattr(1)**.

QUESTION 36
Which of the following commands will list the quota for the user foobar?

A. repquota foobar
B. quota foobar
C. lsquota foobar
D. printquota foobar

Correct Answer: B
Section: Part 5
Explanation

Explanation/Reference:
From the man pages:
quota displays users' disk usage and limits. By default only the user quotas are printed.
repquota prints a summary of the disk usage and quotas for the specified file systems.

lsquota and printquota commands do not exist.

QUESTION 37
You have an USB storage device that you cannot get working. You have enabled all appropriate USB options in the latest 2.2 kernel but still cannot get your device working.

What is most likely the source of the problem?

A. You have not configured your usb.usermap properly
B. You are using the wrong kernel for this type of device
C. The USB device is not USB 2.0 compliant
D. There is a USB resource conflict

Correct Answer: B
Section: Part 5
Explanation

Explanation/Reference:
Only USB1.0 is supported for Kernel 2.2, upgrade to at least 2.4 to use USB2.0

QUESTION 38
What is a reasonable command to uninstall a Debian package from your system?

A. dpkg -Ra pkgname
B. dpkg -R pkgname
C. dpkg -r pkgname
D. dpkg -ra pkgname

Correct Answer: C
Section: Part 5
Explanation

Explanation/Reference:
-R is the recursive option and would not remove any packages.
If you specifiy the option -ra, you would instruct dpkg to remove pending packages, instead of the specified package.

QUESTION 39
You want to install a new software package, but it is only available in RPM format and you are running Debian Linux.

Which of the following would help you to install it on your system?

A. alien
B. apt-conf
C. dselect
D. cpio

Correct Answer: A
Section: Part 5
Explanation

Explanation/Reference:
From the man pages:
alien is a program that converts between Red Hat rpm, Debian deb, Stampede slp, Slackware tgz, and Solaris pkg file formats. If you want to use a package from another linux distribution than the one you have installed on your system, you can use alien to convert it to your preferred package format and install it.

dselect is the debian commandline administration frontend for packaging.
/etc/apt/apt-conf is the central configuration-file for aptitude.
cpio is an archiver, similar to tar.

QUESTION 40
What command will uninstall a package but leave its configuration files in case a package is re-installed?

A. none, no command will do this
B. dpkg -s pkgname
C. dpkg -L pkgname
D. dpkg -P pkgname
E. dpkg -r pkgname

Correct Answer: E
Section: Part 6
Explanation

Explanation/Reference:
Option -r, --remove removes everything except configuration files.
Use option -R, --purge to remove packages completely.

-L lists all files for an installed package
-s displays the status of a package

QUESTION 41
You have not run apt-get on a system for some time, but it has been run on the system before.

What apt-get command would you run to download the latest list of packages, but not the packages themselves?

A. apt-get build-dep
B. apt-get mirror-select
C. apt-get update
D. apt-get upgrade
E. apt-get dist-upgrade

Correct Answer: C
Section: Part 6
Explanation

Explanation/Reference:
Unlike rpm, use option update to load new package lists and upgrade to load new versions of installed packages.

QUESTION 42
What is the purpose of the bash built-in export command?

A. To allow disks to be mounted remotely.
B. To run a command as a process in a sub-shell.
C. To make the command history available to sub-shells.
D. To setup environment variables for applications.
E. To share NFS partitions for use by other systems on the network.

Correct Answer: D
Section: Part 9
Explanation

Explanation/Reference:
Without **export**, a variable will only be visible in the process that defined it. Exported variables are also visible in all child processes that are created after the export.

QUESTION 43
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

Correct Answer: B
Section: Part 9
Explanation

Explanation/Reference:
GRUB Stage 1 is before the Kernel is loaded, but after the BIOS started the bootloader.

QUESTION 44
Which of the following commands can be used to instruct the init process to switch runlevels?

(Choose TWO correct answers)

A. telinit
B. initctl
C. init
D. reinit
E. runlevel

Correct Answer: AC
Section: Part 10
Explanation

Explanation/Reference:
From the man pages:
telinit - change system runlevel
init is not normally executed by a user process, and expects to have a process id of 1. If this is not the case, it will actually execute telinit(8) and pass all arguments to that.

runlevel - output previous and current runlevel
initctl - init daemon control tool
reinit command does not exist (on ubuntu or fedora)

QUESTION 45
The system is having trouble and the engineer wants to bypass the usual /sbin/init startup 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

Correct Answer: B
Section: Part 10
Explanation

Explanation/Reference:
If you use lilo or GRUB you can easily edit the kernel parameter line; any process specified by init=<command> will be executed with root privileges.

QUESTION 46
Which command will show you 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

Correct Answer: B
Section: Part 10
Explanation

Explanation/Reference:
A) gzip <filename> would inplace compress <filename>; using pipe would not make sense
C) gzip -d <filename> would inplace uncompress <filename>.gz; pipe also would not make sense here
D) tar cf <filename> would create an archive, not list the contents.

QUESTION 47
What can the tee command be used for?

A. Print the contents of a file in reverse order

B. Use the output of one command as arguments to another

C. Add line numbers to the output of a command

D. Pipe the output of one command into the input of another

E. Send a command's output to stdout and to a file at the same time

Correct Answer: E
Section: Part 10
Explanation

Explanation/Reference:
From the man pages:
tee - read from standard input and write to standard output and files

QUESTION 48
Which key do you press to switch to normal mode in vi?

A. Alt

B. Esc

C. Ctrl

D. Shift

Correct Answer: B
Section: Part 10
Explanation

Explanation/Reference:

QUESTION 49
Which directory contains additional information about installed packages?

A. /usr/share/documentation

B. /usr/local/share/documentation

C. /usr/local/doc

D. /usr/share/doc

E. /usr/packages/doc

Correct Answer: D
Section: Part 10
Explanation

Explanation/Reference:

QUESTION 50
Which of the following commands will replace every instance of the word list with LIST from the file myfile.txt
and print the results on the screen?

A. sed --in-place -e "s/list/LIST/" myfile.txt
B. sed -e "s/list/LIST/" myfile.txt
C. sed --in-place -e "/list/LIST/" myfile.txt
D. sed -e "/list/LIST/" myfile.txt

Correct Answer: B
Section: Part 10
Explanation

Explanation/Reference:
Technically even B) is not the correct answer, but it is the least wrong answer.
sed -e "s/list/LIST/g" myfile.txt would replace EVERY occurrance of list in myfile.txt

The other 3 answers either modify the source file, or are just plain wrong.

QUESTION 51
Which TWO runlevels should never be declared as the default runlevel?

A. 0
B. 3
C. 5
D. 6

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:
From the man pages:
Runlevels 0, 1 and 6 are reserved. Runlevel 0 is used to halt the system and 6 to reboot the system.
Runlevel 1 is used to bring the system back down into single-user mode.

QUESTION 52
When you format the filesystem with the command mkfs -t ext3 -T largefile /dev/hdb1 how much data is
represented by a single inode?

A. 4 KB
B. 1 MB
C. 2 MB
D. 4 MB

Correct Answer: B
Section: Part 5
Explanation

Explanation/Reference:
From the man pages:
-T usage-type[,...]   Specify how the filesystem is going to be used, so that mke2fs can choose optimal filesystem parameters for that use. The usage types that are supported are defined in the configuration file /etc/mke2fs.conf(5)

Some usage types are:
news: one inode per 4kb block
largefile: one inode per megabyte
largefile4: one inode per 4 megabytes

QUESTION 53
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

Correct Answer: A
Section: Part 9
Explanation

Explanation/Reference:
telinit 1 orders the init process to switch to runlevel 1, stopping all services not configured for runlevel 1, including network and multiuser support.

Exam C

QUESTION 1
Which Debian package system command will list all partially installed packages and suggest how to get them correctly installed?

A. dpkg -C
B. apt-get -u
C. dpkg -Dh
D. dpkg -l
E. apt-get -y

Correct Answer: A
Section: Part 6
Explanation

Explanation/Reference:
From the man pages:
dpkg -C, --audit list all partially installed packages and will make suggestions how to install them correctly.

-Dh is the option for displaying help for the debugging options
-I, --info shows status information about a specific package
apt-get-y, --yes, --assume-yes will answer every interactive question with Yes, allowing unattended installation and upgrades.
apt-get -u, --show-upgraded shows all packages that were or will be upgraded.

QUESTION 2
What single command (no options or arguments) can be used to fully extract a file called abc.tar.bz2?

A. gzip
B. gunzip
C. tar
D. bz2unzip

Correct Answer: C
Section: Part 6
Explanation

Explanation/Reference:
gzip and gunzip work with *.gz files, and there is no bz2unzip command, leaving only tar as he right answer.

QUESTION 3
A Makefile typically contains which targets?

A. CFLAGS, CPPFLAGS, LIBS, LDFLAGS
B. clean, install, uninstall
C. PATHS, DESTDIR, LIBS, LDFLAGS
D. prefix, exec_prefix, bindir, mandir

Correct Answer: B
Section: Part 6
Explanation

Explanation/Reference:
While makefiles can contain every one of the above targets, commonly clean, install, and uninstall are used

in makefiles.

QUESTION 4
Which RPM command will output the name of the package which installed the file /etc/exports?

A. rpm -F /etc/exports
B. rpm -qf /etc/exports
C. rpm -Kl /etc/exports
D. rpm -qp /etc/exports
E. rpm -ql /etc/exports

Correct Answer: B
Section: Part 6
Explanation

Explanation/Reference:
Use the -q, --query option in combination with -f to get the package that contains a specified file.
dpkg -S /etc/exports would do the same on debian systems.

QUESTION 5
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

Correct Answer: D
Section: Part 6
Explanation

Explanation/Reference:

QUESTION 6
Which command will list all the files installed from the RPM package file named vorbis-tools-1.1.i386.rpm?

A. rpm -qf vorbis-tools-1.1.i386.rpm
B. rpm- F vorbis-tools-1.1.i386.rpm
C. rpm -pf vorbis-tools-1.1.i386.rpm
D. rpm -ql vorbis-tools-1.1.i386.rpm
E. rpm -qlp vorbis-tools-1.1.i386.rpm

Correct Answer: E
Section: Part 6
Explanation

Explanation/Reference:
You have to use the -p option if you want information about a rpm-file.

QUESTION 7
Which of the following programs is typically used to query installed debian packages?

(Please select TWO that apply)

A. dpkg
B. apt-cache
C. apt-conf
D. dselect

Correct Answer: AD
Section: Part 6
Explanation

Explanation/Reference:
dselect is the console frontend for the apt family, and dpkg the commandline tool for package administration.
apt-cache is used to manipulate the apt cache, and apt-conf is not a command.

QUESTION 8
An installed package is broken. In order to go back to the previous version of the same package which RPM option should be used?

A. --replacefiles
B. --replacepkgs
C. --oldpackage
D. --nodeps

Correct Answer: C
Section: Part 6
Explanation

Explanation/Reference:
From the man pages:
--oldpackage   Allow an upgrade to replace a newer package with an older one.

QUESTION 9
George is planning a partition scheme for a new Linux installation. Which THREE directories should he consider for separate partitions?

(Select THREE answers)

A. /etc
B. /home
C. /var
D. /lib
E. /tmp

Correct Answer: BCE
Section: Part 6
Explanation

Explanation/Reference:
B) and C) to allow for easy upgrade to larger harddrives
E) because everyone can write to /tmp and it is possible to use up (almost) all the free disk space. Putting /tmp on a seperate, smaller partition prevents that.
A) and D) should not be seperated from / according to FHS.

QUESTION 10
All items are required to enable USB support on a Linux system EXCEPT...

A. A kernel that has USB driver support
B. A USB 2.0 compatible device
C. A supported controller chip such as OHCI, UHCI, or EHCI
D. A kernel that supports hot-pluggable devices

Correct Answer: B
Section: Part 7
Explanation

Explanation/Reference:
You need a Kernel with USB and hot-pluggable device support (2.2 or later), you need a supported USB controller. A USB2.0 device is not a requirement (since USB1.0 is also supported)

QUESTION 11
According to the File System Hierarchy Standard, the lost+found directory is used for:

A. files with unknown owners
B. missing device files found by/proc
C. unknown binary files found by find
D. unlinked files found by fsck

Correct Answer: D
Section: Part 7
Explanation

Explanation/Reference:
See http://tldp.org/LDP/Linux-Filesystem-Hierarchy/html/lostfound.html

QUESTION 12
The sticky bit is usually set on

A. /var/log
B. /tmp
C. /home
D. log files

Correct Answer: B
Section: Part 7
Explanation

Explanation/Reference:
When the sticky bit is set, only the item's owner, the directory's owner, or the superuser can rename or delete files. This prevents users from deleting other users files. That is especially important in /tmp because everyone may write in /tmp.

QUESTION 13
How can you turn off the group quota in /pub?

A. quotaoff /pub
B. quotaoff -gv /pub
C. quotadown /pub

D. rm /pub/quota.group

Correct Answer: B
Section: Part 7
Explanation

Explanation/Reference:
quotaoff without -g would turn off the quota completly (users and groups)

QUESTION 14
What command line redirection characters instruct the shell to read from the current input source until a specific word, on a separate line and without leading and trailing characters, is reached?

A. <<
B. <l
C. !<
D. $<

Correct Answer: A
Section: Part 7
Explanation

Explanation/Reference:
Example:
$ echo <<foobar
Hello
foobar
Hello

QUESTION 15
Pressing the Ctrl-C combination on the keyboard while a command is executing in the foreground sends which of following signal codes?

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

Correct Answer: B
Section: Part 7
Explanation

Explanation/Reference:
CTRL+C sends the Interrupt Signal to the current process.

QUESTION 16
What is the output when the following shell command executes?

$ cat << foobar
Hello foobar
foobar

A. The contents of the file foobar
B. Hello

C. No output but a file named foobar is created

D. Hello foobar

E. Hello foobar
   foobar

Correct Answer: D
Section: Part 7
Explanation

Explanation/Reference:
see Exam C / Question 14

QUESTION 17
Which of the following commands will display the last 30 lines of /var/log/bigd.log as well as new content as it is appended to the file by another process?

A. cut -30 -v /var/log/bigd.log

B. head -30 -e /var/log/bigd.log

C. tail -f -n 30 /var/log/bigd.log

D. tac -30 /var/log/bigd.log

E. cat -r -n 30 /var/log/bigd.log

Correct Answer: C
Section: Part 7
Explanation

Explanation/Reference:
From the man pages:
tail - output the last part of files

QUESTION 18
You wish to kill a process with a PID of 123. Select the command which will allow the process to "clean up" before exiting.

A. kill -1 123

B. kill -9 123

C. kill -15 123

D. kill -17 123

Correct Answer: C
Section: Part 7
Explanation

Explanation/Reference:
SIGTERM (15) sends the signal to the process indicating the process should terminate at its earliest convenience.

QUESTION 19
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 '\r' < userlist.txt > newlist.txt

D. tr '\r' '\n' userlist.txt newlist.txt

E. tr -s '^M' '^J' userlist.txt newlist.txt

Correct Answer: C
Section: Part 7
Explanation

Explanation/Reference:
To change CR-LF ("\r\n", DOS newline) to LF ("\n", Linux newline) just delete the CR "\r" part from the file.
This is done by using tr with the -d (delete) option.

QUESTION 20
Which of the following commands will find the string foo in file1.txt, regardless of foo being in upper or
lowercase letters?

A. cat file1.txt | grep -i foo

B. cat file1.txt > grep -n foo

C. grep -i foo | file1.txt

D. grep -n file1.txt < foo

E. grep -n foo file1.txt

Correct Answer: A
Section: Part 7
Explanation

Explanation/Reference:
grep option -i tells grep to work case insensitive.

QUESTION 21
The command used to determine a file's type is ...

A. type

B. find

C. file

D. ls

Correct Answer: C
Section: Part 8
Explanation

Explanation/Reference:
From the man pages:
file — determine file type

QUESTION 22
Many people like the vi text editor but the default bash command line editor recognizes emacs keystrokes.

What command entered into a bash initialization file will have bash recognize vi keystrokes after login?

A. history -p vi

B. alias emacs=vi

C. HISTCMD=vi

D. set -o vi

E. unset emacs

Correct Answer: D
Section: Part 8
Explanation

Explanation/Reference:
You can switch the internal bash commandline editor by using the set -o command either directly in the command line or in the .bashrc file (or any other start script).

QUESTION 23
You ran out of space and added a eighth disk to your SCSI-I system. When you try to start, the system no longer boots.

What is most likely the cause of this problem?

A. SCSI-I supports only 8 devices including the adaptor
B. SCSI-I supports only 6 disks per adaptor
C. There is a SCSI-ID conflict that causes that problem
D. You forgot to set the SCSI-ID #8 for the new disk

Correct Answer: A
Section: Part 8
Explanation

Explanation/Reference:
SCSI-I supports only 7 diskdrives per adaptor, if you need more devices switch to Wide-SCSI (15 drives) or install an additional SCSI adaptor.

QUESTION 24
Keyboards and mice are members of which class of USB devices?

A. Communication Device Class
B. Human Interface Device Class
C. Mass Storage Device Class
D. Data Interface Device Class

Correct Answer: B
Section: Part 8
Explanation

Explanation/Reference:
Kernel 2.2 only supported HID-class USB1.0 devices.

QUESTION 25
The command echo $! will produce what output?

A. the process id of last background command
B. the exit status of the last command
C. the exit status of the last background command
D. the process id of the current shell
E. the name of the command being executed

Correct Answer: A
Section: Part 8

Explanation

Explanation/Reference:
$? is the exit code of the last command
$$ the process id of the current shell or script
$_ the name of the last argument of the last command (or the command itself if no argument was given)
$0 the name of the script/command being executed

QUESTION 26
Given the following output:

myapp
[1]+ Stopped myapp
#

Which of the following commands will resume executing the stopped process while allowing the user to continue to type commands at the command prompt?

A. bg myapp
B. continue myapp
C. exec myapp
D. fg myapp
E. myapp &

Correct Answer: A
Section: Part 8
Explanation

Explanation/Reference:
bg [jobspec]   Place jobspec into the background, as if it had been started with `&'. If jobspec is not supplied, the current job is used.
fg [jobspec]   Bring jobspec into the foreground and make it the current job. If jobspec is not supplied, the current job is used.
Use jobs to list all current background processes

QUESTION 27
What command will print a list of usernames (first column) and their corresponding user id (uid, third column) from /etc/passwd?

A. cut -d: -f1,3 /etc/passwd
B. chop -c 1,3 /etc/passwd
C. tac 1-3 /etc/passwd
D. fmt -u /etc/passwd

Correct Answer: A
Section: Part 8
Explanation

Explanation/Reference:
From the man pages:
cut - remove sections from each line of files

/etc/passwd entries are seperated by ":", so use option "-d:" and use -f to only get specific columns.

QUESTION 28

In order to append the output of ls to a file called bazz, which of the following command lines would you use?

A. ls > bazz
B. ls > & bazz
C. ls &> bazz
D. ls >> bazz

Correct Answer: D
Section: Part 8
Explanation

Explanation/Reference:
Use >> to append text to files (file will be created if it does not exist)

>, >& and &> redirect file descriptors (like stdout and stderr)

QUESTION 29
Which shell built-in command can be used to create a shortcut or pseudonym for a longer command?
Assume a modern bourne-like shell, such as bash.

A. shortcut
B. ln
C. sudo
D. link
E. alias

Correct Answer: E
Section: Part 8
Explanation

Explanation/Reference:
In bash you can use alias to create shell internal commands.

Example:
$ alias
alias grep='grep --color=auto'
alias ll='ls -alF'
alias ls='ls --color=auto'

ln creates symlinks or hardlinks (can be used to create aliases, but does not work with options)
sudo starts a command with root privileges

QUESTION 30
Which of the following sed commands will replace all instances of the string foo with the string foobar changing the file file1.txt in place?

A. sed 's/foo/foobar/g' file1.txt
B. sed 's/foo/foobar/g' file1.txt > file1.txt
C. sed 's/foo/foobar/g' file1.txt | file1.txt
D. sed -i 's/foo/foobar/g' file1.txt
E. sed -i 's/foo/foobar/g' file1.txt > file1.txt

Correct Answer: D
Section: Part 8

Explanation

Explanation/Reference:
When using the option -i, --in-place sed creates no output, but changes the source file itself.
You can not use redirection (B) because file1.txt would be empty before starting sed.

QUESTION 31
When reading man pages, a lot of extra characters are shown on screen.

Which of the following commands can help to deal with this problem?

A. col
B. grep
C. more
D. pg
E. row

Correct Answer: A
Section: Part 8
Explanation

Explanation/Reference:
???

QUESTION 32
Which of the following commands will send output from the program myapp to both stdout and the file file1.
txt?

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

Correct Answer: D
Section: Part 8
Explanation

Explanation/Reference:
From the man pages:
tee - read from standard input and write to standard output and files

QUESTION 33
Which of the following commands is run last during boot on a system with quotas enabled?

A. fsck
B. mount
C. quotacheck
D. quotaon

Correct Answer: D
Section: Part 8
Explanation

Explanation/Reference:
???

QUESTION 34
Select the line that best represents what permissions the /etc/passwd file should have

A. -rw------- 1 root root 531 Apr 3 12:36 /etc/passwd
B. -rw-r--r-- 1 root root 531 Apr 3 12:36 /etc/passwd
C. -rw-r--r-- 1 1 1 531 Apr 3 12:36 /etc/passwd
D. all answers listed are not correct
E. all answers listed are correct

Correct Answer: B
Section: Part 8
Explanation

Explanation/Reference:
All Users should be able to read /etc/passwd to gain certain important information about users and groups.
C) indicates that someone deleted the root user from the system

QUESTION 35
What does the command mount a do?

A. It mounts the floppy disk for all users
B. It shows all mounted file systems
C. It opens /etc/fstab to edit
D. It mounts all file systems listed in /etc/fstab

Correct Answer: D
Section: Part 8
Explanation

Explanation/Reference:
From the man pages:
-a, --all   Mount all filesystems (of the given types) mentioned in fstab.

QUESTION 36
You are using quota on your system. How can you see disk quota details?

A. repquota
B. quota-l
C. quota
D. quotacheck
E. quota --list

Correct Answer: A
Section: Part 8
Explanation

Explanation/Reference:

QUESTION 37
Which of the following commands will print the inode usage on each mounted filesystem?

A. du -i

B. df -i

C. lsfs -i

D. printfs -i

Correct Answer: B
Section: Part 8
Explanation

Explanation/Reference:
du -i is an invalid option
lsfs and printfs do not exist

QUESTION 38
Which of the following commands will NOT execute the bash script /usr/local/bin/runme.sh?

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

Correct Answer: E
Section: Part 10
Explanation

Explanation/Reference:

QUESTION 39
What is the default process priority when a process is started using the nice command?

A. -10

B. 10

C. 20

D. 0

Correct Answer: B
Section: Part 10
Explanation

Explanation/Reference:
From the man pages:
nice - run a program with modified scheduling priority
-n, --adjustment=N   add integer N to the niceness (default 10)

QUESTION 40
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 -i "s/1/2/" /tmp/myfile.txt

D. echo -n "Hello" >/tmp/myfile.txt

E. touch /tmp/myfile.txt

Correct Answer: A
Section: Part 10
Explanation

Explanation/Reference:
file just displays the MIME-type of a file, without changing anything in the file.

QUESTION 41
Bob accidentally created the subdirectory \bobsdir in his home directory. He tried to remove the subdirectory with the command rmdir \bobsfile only to receive the error, "No such file or directory."

Which command will remove the directory?

A. rmdir 'bob/\bobsdir'

B. rmdir "bob/\bobsdir"

C. rmdir ~bob/ 'bobsdir'

D. rmdir bob/\bobsdir

E. rmdir ~bob/\\bobsdir

Correct Answer: E
Section: Part 10
Explanation

Explanation/Reference:
~bob specifies the home directory of Bob, \\ means one literal backslash.

QUESTION 42
While editing a file in vi, you realize that you are changing the wrong file.

What vi command sequence will allow you to quit without saving your changes?

A. :Q!

B. :q!

C. :w!

D. :wq!

Correct Answer: B
Section: Part 10
Explanation

Explanation/Reference:

QUESTION 43
Which command will allow an administrator to adjust the number of mounts after which an existing filesystem will be checked by e2fsck?

A. debugfs

B. dumpe2fs

C. mode2fs

D. tune2fs

E. mke2fs

Correct Answer: D
Section: Part 10
Explanation

Explanation/Reference:
From the man pages:
tune2fs - adjust tunable filesystem parameters on ext2/ext3/ext4 filesystems

QUESTION 44
Which of the following is true when hard-linked files are present?

A. The output of stat will report "hard" instead of "regular file"
B. The hard-linked files may not be empty
C. Both files will share the same inode
D. Issuing a long directory listing with ls -1 will indicate the link with "->"
E. The file permissions will be prefixed by an "h", eg. hrwxr-x-r-x

Correct Answer: C
Section: Part 11
Explanation

Explanation/Reference:

QUESTION 45
After modifying LILO's configuration file, what command should you run for the changes to take effect?

A. kill -HUP 'pidof lilo'
B. lilo-install
C. lilo
D. reboot

Correct Answer: C
Section: Part 11
Explanation

Explanation/Reference:
???if you edit grub.conf you need to run grub-update, if you edit the grub configuration files directly no action is required.

QUESTION 46
After modifying GRUB's configuration file, what command should you run for the changes to take effect?

A. kill HUP `pidof grub`
B. grubinstall
C. grub
D. no action is required

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
???if you edit grub.conf you need to run grub-update, if you edit the grub configuration files directly no action
is required.

QUESTION 47
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 isreadonly.
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.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:
Hardlinks share the same inode, that is only possible on the same partition.

QUESTION 48
What command should be invoked to give the user sally read and write, but not execute, access to the file
strategy.txt using Extended ACL entries?

A. setfacl -setperm sally:rw strategy.txt
B. setfacl -m user::sally+rw strategy.txt
C. setfacl -m user:sally:rw strategy.txt
D. setfacl -setperm user:sally+rw strategy.txt

Correct Answer: C
Section: Part 8
Explanation

Explanation/Reference:

Exam D

QUESTION 1
Which program finds only files that are in your PATH?

Correct Answer: which
Section: Part 9
Explanation

Explanation/Reference:
From the man pages:
which returns the pathnames of the files (or links) which would be executed in the current environment, had its arguments been given as commands in a strictly POSIX-conformant shell. It does this by searching the PATH for executable files matching the names of the arguments. It does not follow symbolic links.

QUESTION 2
To prevent users from being able to fill up the / partition, the _____ directory should be on a separate partition if possible because it is world writeable.

Correct Answer: /tmp
Section: Part 9
Explanation

Explanation/Reference:
If you do not restrict the space that /tmp can use (either by making it an extra partition or by quota use), users can fill up the partition /tmp is in (root-Directory per default) making it impossible to create new files on that partition.

QUESTION 3
Upon booting one of your Linux boxes, you notice a message scrolling by that does not look right, but it goes so fast, you do not have a chance to read it.

What command could you use to view that message after the boot process completes?

Correct Answer: dmesg
Section: Part 9
Explanation

Explanation/Reference:
From the man pages:
dmesg - print or control the kernel ring buffer

QUESTION 4
What file contains kernel level logging information such as output from a network driver module when it is loaded?

Correct Answer: /var/log/messages
Section: Part 9
Explanation

Explanation/Reference:
Kernel logging is different from distribution to distribution, but typically its /var/log/messages
Debian uses /var/log/syslog

QUESTION 5
In the vi editor, which of the following commands will delete the current line at the cursor and the 16 lines following it (17 lines total)?

Correct Answer: 17dd
Section: Part 9
Explanation

Explanation/Reference:
in vi you can prefix every command with the number of repetitions you need to do. in this example the command is "dd" (delete line) and since you want to delete 17 lines, you just prefix dd with 17.

QUESTION 6
Which option must be listed in /etc/fstab to activate user quotas automatically?

Correct Answer: usrquota
Section: Part 9
Explanation

Explanation/Reference:
mount uses usrquota and grpquota as mount parameters (column 4 in fstab) to enable quotas for a partition.

QUESTION 7
The USB device filesystem can be found under /proc/ _____ /usb/.

(Please fill in the blank with the single word only)

Correct Answer: bus
Section: Part 9
Explanation

Explanation/Reference:
At least in Debian this file does no longer exist. USB media is normally mounted in /media/usb.

QUESTION 8
Which user-level program, when manually executed by the root user, is used to change the runlevel of the system? (Provide only the command with no additional options or parameters)

Correct Answer: init
Section: Part 10
Explanation

Explanation/Reference:
when using init as a command, init itself just runs telinit to send the new runlevel to the init process (with the PID 1)

QUESTION 9
The priority of any process can range from -20 to _____ .

(Provide only the numerical value)

Correct Answer: 19
Section: Part 10
Explanation

Explanation/Reference:
there are 20 negative and 20 positive values for the priority (from -1 to -20 and 0 to 19)

QUESTION 10
To change the priority of a running process, you use the _____ command

(Specify command only with no options.)

Correct Answer: renice
Section: Part 10
Explanation

Explanation/Reference:
nice is used to start processes with a specific priority, and renice is used to change the priority (only root, or process owner are allowed to change priorities of processes)

QUESTION 11
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)?

Enter the correct vi command without spaces.

Correct Answer: 17yy
Section: Part 10
Explanation

Explanation/Reference:

QUESTION 12
An administrator has sent their current vi process with a PID of 1423 to the background on the command line.

Assuming no other processes are in the background, what single command with no options or parameters will bring the vi process to the foreground?

Correct Answer: fg
Section: Part 10
Explanation

Explanation/Reference:

QUESTION 13
You want to display all currently mounted file systems. Which command would you use?

(Please enter only the command without arguments or options)

Correct Answer: mount
Section: Part 10
Explanation

Explanation/Reference:

QUESTION 14
The/etc/ _____ file lists currently mounted devices.

Correct Answer: mtab
Section: Part 10
Explanation

Explanation/Reference:

QUESTION 15
_____ /dev/sda3 will create a swap area on the device/dev/sda3.

Correct Answer: mkswap
Section: Part 11
Explanation

Explanation/Reference:

QUESTION 16
What umask value will result in the default access permissions of 600 (rw-------) for files and 700 (rwx------) for directories?

(Provide only the numerical umask value)

Correct Answer: 077
Section: Part 11
Explanation

Explanation/Reference:

QUESTION 17
Which command will convert an RPM package file to a cpio archive?

(Provide only the command with no options or parameters)

Correct Answer: rpm2cpio
Section: Part 11
Explanation

Explanation/Reference:

QUESTION 18
What option, when passed to the yum command, will update the entire system?

(Specify ONLY the option name with no additional parameters)

Correct Answer: update
Section: Part 11
Explanation

Explanation/Reference:
is like "apt upgrade"

QUESTION 19
Which command will disable paging and swapping on a device?

(Provide only the command with no additional options or parameters)

Correct Answer: swapoff
Section: Part 11
Explanation

Explanation/Reference:

QUESTION 20
The dpkg-_____ command will ask configuration questions for a specified package, just as if the package were being installed for the first time.

Correct Answer: reconfigure
Section: Part 11
Explanation

Explanation/Reference:

QUESTION 21
An administrator has issued the following command:

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

In which directory will the new menu.lst file be found?
(Provide the **full directory path** only **without** the filename)

Correct Answer: /custom-grub/boot/grub
Section: Part 11
Explanation

Explanation/Reference:
menu.lst is per default in /boot/grub, but --root-directory adds /custom-grub in front of the original path

QUESTION 22
What command will print the shared libraries for the file /usr/lib/libpng12.so?

(Provide the **full** command with library name but **without** any other options or parameters)

Correct Answer: ldd /usr/lib/libpng12.so
Section: Part 11
Explanation

Explanation/Reference:

QUESTION 23
Which command is used to enable disk quotas on a particular filesystem?

(Provide only the command, with no options or parameters)

Correct Answer: quotaon
Section: Part 11
Explanation

Explanation/Reference:

QUESTION 24
Which environment variable you have to setup to use shared libraries that are not in the standard search path?

Correct Answer: LD_LIBRARY_PATH
Section: Part 6
Explanation

Explanation/Reference:

QUESTION 25
You are formatting a single hard disk for a Linux install.

What is the maximum number of primary partitions you can create?

Correct Answer: 4 -or- four
Section: Part 6
Explanation

Explanation/Reference:

QUESTION 26
USB fax/modems that conform to this subclass of the Communication Device Class (CDC) vendor neutral standard are Linux compatible (answer is a 3 letter acronym)

Correct Answer: ACM -or- acm
Section: Part 6
Explanation

Explanation/Reference:

QUESTION 27
What command with all options and/or parameter will send the signal USR1 to any executing process of program apache2?

Correct Answer: killall -s SIGUSR1 apache2 -or- killall -10 apache2
Section: Part 7
Explanation

Explanation/Reference:
From the man pages:
killall - kill processes by name

QUESTION 28
Consider the following output:

$ myapp
[1]+ Stopped myapp

This output was the result of the user pressing the keyboard combination of the Ctrl key and what letter key?

Enter only the single (1) letter as your answer

Correct Answer: z
Section: Part 7
Explanation

Explanation/Reference:

QUESTION 29
What command can put suspended jobs into the background?

Correct Answer: bg
Section: Part 8
Explanation

Explanation/Reference:

QUESTION 30
Which command (without options) would you use to display how much space is available on all partitions?

Correct Answer: df
Section: Part 4
Explanation

Explanation/Reference:
From the man pages:
df - report file system disk space usage
du - estimate file space usage (space used on a partition)

QUESTION 31
You have written a custom tool on your local system. Following the File Hierarchy Standard (FHS), where should you install the binaries to be available to all users on your system?

Correct Answer: /usr/local/bin
Section: Part 4
Explanation

Explanation/Reference:

QUESTION 32
You are compiling some software from source. After running ./configure with the appropriate arguments and no errors, what is the next command to run?

Correct Answer: make
Section: Part 5
Explanation

Explanation/Reference:

QUESTION 33
Which utility can be used to convert a . rpm package to .deb package format?
(Enter command without any arguments)

Correct Answer: alien
Section: Part 5
Explanation

Explanation/Reference:

QUESTION 34
Which file the /proc filesystem lists parameters passed from the bootloader to the kernel?

Correct Answer: cmdline

Section: Part 6
Explanation

Explanation/Reference:
Example:
```
$ cat /proc/cmdline
BOOT_IMAGE=/vmlinuz-2.6.32-24-generic root=/dev/sda1 ro
```

QUESTION 35
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 drives?

Correct Answer: interrupts
Section: Part 1
Explanation

Explanation/Reference:
The Linux /proc Directory is a Virtual Filesystem provided by linux kernel. /proc contains files and directories that let system administrators and programmers access system information. The file /proc/interrupts file contains information on interrupts and IRQs.

Example:
```
$ cat /proc/interrupts
            CPU0        CPU1
   0:         25          14   IO-APIC-edge      timer
   1:       4710        1831   IO-APIC-edge      i8042
   4:          0           2   IO-APIC-edge
   6:          0           5   IO-APIC-edge      floppy
   7:          1           0   IO-APIC-edge      parport0
   8:          0           1   IO-APIC-edge      rtc0
   9:          0           0   IO-APIC-fasteoi   acpi
  12:       2493      219349   IO-APIC-edge      i8042
  14:          0           0   IO-APIC-edge      pata_amd
  15:        133       25008   IO-APIC-edge      pata_amd
  16:     136945        7434   IO-APIC-fasteoi   nvidia
  17:          0        1172   IO-APIC-fasteoi   eth0_rename
  20:          0           0   IO-APIC-fasteoi   ohci_hcd:usb2
  21:        701        2368   IO-APIC-fasteoi   ehci_hcd:usb1
  22:          4         412   IO-APIC-fasteoi   sata_nv, HDA Intel
  23:      90839       14138   IO-APIC-fasteoi   sata_nv, eth4
 NMI:          0           0   Non-maskable interrupts
 LOC:     236626       98439   Local timer interrupts
 SPU:          0           0   Spurious interrupts
 PMI:          0           0   Performance monitoring interrupts
 PND:          0           0   Performance pending work
 RES:    1205807     1212171   Rescheduling interrupts
 CAL:       1078        1174   Function call interrupts
 TLB:      87901       91058   TLB shootdowns
 TRM:          0           0   Thermal event interrupts
 THR:          0           0   Threshold APIC interrupts
 MCE:          0           0   Machine check exceptions
 MCP:          8           8   Machine check polls
 ERR:          1
 MIS:          0
```

QUESTION 36
You are building a server that will have many hardware and operating system upgrades. The server is the file server for all users on your 100 user network.

Which directory should have its own mountpoint and/or hard drive?

Correct Answer: /home
Section: Part 2
Explanation

Explanation/Reference:

QUESTION 37
The _____ partition is used for virtual memory.

Correct Answer: swap
Section: Part 2
Explanation

Explanation/Reference:

QUESTION 38
What command is used to display a file in octal format?

Correct Answer: od
Section: Part 2
Explanation

Explanation/Reference:

QUESTION 39
You wish to execute two commands, one after the other. However, you only want the second command to execute if the first is successful.

Which character(s) do you put between the commands on the command line to accomplish this?

Correct Answer: &&
Section: Part 2
Explanation

Explanation/Reference:
&& logical and (execute cmd2 ONLY if cmd1 was successful)
|| logical or (execute cmd2 only if cmd1 was NOT successful)

QUESTION 40
What program would you use to increase or decrease the priority of a command before it is executed?

Correct Answer: nice
Section: Part 2
Explanation

Explanation/Reference:
use renice for already running processes, and nice to start processes with a specific priority.

QUESTION 41
You wish to send the output of a command to standard output (stdout) and save it to a file. The command to use is _____.

Do not specify any arguments.

Correct Answer: tee
Section: Part 2
Explanation

Explanation/Reference:

QUESTION 42
What command returns the first few lines of a given file?

Correct Answer: head
Section: Part 2
Explanation

Explanation/Reference:

QUESTION 43
You have a text file with tab-separated values, but your application needs them space-separated. What command would you use from the Bash shell to achieve this?

Please fill in the command only, without any options.

Correct Answer: expand
Section: Part 3
Explanation

Explanation/Reference:
From the man pages:
expand - convert tabs to spaces

QUESTION 44
In which directory must definition files be placed to add additional repositories to yum?

Correct Answer: /etc/yum.repos.d
Section: Part 3
Explanation

Explanation/Reference:
YUM-Repositories are all files matching /etc/yum.repos.d/*.repo
apt repositories are stored in /etc/apt/sources.list or /etc/apt/sources.list.d/*.list

QUESTION 45
You've downloaded an image file of a boot floppy disk to your hard drive. What is the best utility to create a boot floppy from the disk image?

Specify a single command without any options or parameters.

Correct Answer: dd
Section: Part 9
Explanation

Explanation/Reference:
Example:
dd if=floppy-image.img of=/dev/fd0

QUESTION 46

You want a process to keep running after you have logged out. What command to use ?

Correct Answer: nohup
Section: (none)
Explanation

Explanation/Reference:
nohup - run a command immune to hangups, with output to a non-tty

QUESTION 47
What is the name of the grub config file? (Provide only the filename)

Correct Answer: menu.lst
Section: (none)
Explanation

Explanation/Reference:
Configuring grub v1
The configuration file is /boot/grub/menu.lst Under Debian, the grub configuration file is updated automatically, when you install a new kernel. This is done automatically by update-grub. You can edit the settings in /boot/grub/menu.lst.Make sure you read the update-grub(8) manpage from your distribution.

Configuring grub v2
The configuration file is /boot/grub/grub.cfg, but you shouldn't edit it directly. This file is generated by grub v2's update-grub(8), based on:
   1. The script snippets in /etc/grub.d/
   2. The configuration file /etc/default/grub
To configure grub "v2", you should edit /etc/default/grub, then run update-grub. Advanced configuration are achieved by modifying the snippets in /etc/grub.d/.

QUESTION 48
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

Correct Answer: A
Section: Part 9
Explanation

Explanation/Reference:
telinit 1 orders the init process to switch to runlevel 1, stopping all services not configured for runlevel 1, including network and multiuser support.

Exam E

QUESTION 1
Which command will print line numbers before each line in a file?

A. ln
B. nl
C. cat -n
D. numline

Correct Answer: B
Section: Part 5
Explanation

Explanation/Reference:
???

cat -n prints a line number in front of EVERY line of the file, where nl does not number the empty lines.
In my opinion both B and C would be correct

???

QUESTION 2
You want to examine the changelog for the installed package postfix. Which command will display the changelog?

A. rpm -Vc postfix
B. rpm -qpil postfix
C. rpm --changelog postfix
D. rpm -q --changelog postfix
E. rpm -qa --changelog postfix

Correct Answer: D
Section: Part 6
Explanation

Explanation/Reference:
???
D) and E) are both correct
???

QUESTION 3
You have finished updating and resolving dependencies for some source code.

What command should you run before recompiling the code into binary form?

A. make clean
B. make all
C. makedep
D. make install

Correct Answer: A
Section: Part 6
Explanation

Explanation/Reference:
When dependencies for source code change, it is best to be on the safe side and delete all previously compiled objects/binaries. make clean will do exactly that.
???
make all will also delete all targets, before starting the recompile, making this the right answer also.

QUESTION 4
In order to save and restore your sound card's configuration between sessions, the ALSA sound system uses what program?

A. setalsa
B. setsound
C. soundctl
D. alsactl
E. alsaset

Correct Answer: D
Section: Part 7
Explanation

Explanation/Reference:
??? not part of 117.101 ???

QUESTION 5
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

Correct Answer: A
Section: Part 9
Explanation

Explanation/Reference:
telinit 1 orders the init process to switch to runlevel 1, stopping all services not configured for runlevel 1, including network and multiuser support.