Exam Linux-Praxis - 2
(From `http://www.linux-praxis.de`)

(1) What command sorts its input stream in alphabetic order
(just the command - no options)? Type the answer.

_____

(2) What would be the result of the following command?
```
cp *.* /tmp
```
Choose the best answer.

A. All files in the current directory would be copied to /tmp

B. All files in the current directory, which have exactly one
   point (.) inside, their names would be copied to /tmp

C. All files in the current directory, which have one or more
   points (.) anywhere inside their names would be copied to /tmp

D. All files in the current directory, which have one or more
   points (.) inside their names - but neither at the begining nor
   at the end of the name would be copied to /tmp

E. This is a DOS-command - it has no meaning under Linux

(3) What information is provided by the `jobs` command? Choose the best answer.

A. A list of all running processes started by you including PIDs

B. A list of all jobs started by the current shell including
   JobIDs

C. A list of all jobs started by any of your shells including
   JobIDs

D. A list of all jobs started by the current shell or one of its
   parent shells including JobIDs

E. A list of all jobs started by the current shell including PIDs

(4) How could you get a list of all running processes? Choose every correct answer.

```
A. ps
B. ps ax
C. getprocess
D. top
E. down
```

(5) What tool could you use to change the `nice` value of a running process?
Choose every correct answer.

```
A. ps
B. top
C. nice
D. renice
E. setpriority
```

(6) What statement concerning the following wildcard is correct?
```
[A-Z]*
```
Choose the best answer.

A. All files beginning with an uppercase letter followed by one
   letter
B. All files beginning with an non numeric letter
C. All files beginning with an uppercase letter
D. All files without numbers in their names
E. All files beginning with one of the letters A, Z or -

(7) What is the Partition System ID of a regular Linux Partition? (just the two digits) Type
the answer.

_____

(8) After an awful lot of work checking filesystem integrity in single user mode, you change
back again to multi user mode. What single command could you use to mount all
partitions at the right places? (Use the command and options) Type the answer.

_____

(9) You want to enable all of your users to use about 20 megabyte of diskspace in their
home directories and about 5 megabyte in /tmp.
What action concerning the partitioning is necessary?
Choose every correct answer.

A. /home and /tmp each have to be on a own partition

B. Use qfdisk instead of fdisk to create disk-quota partitions

C. One partition for /home is enough.
   You can symlink /tmp to /home/tmp later

D. Every partition with userquotas have to have the file
   quota.user in their root directory

E. Every partition with userquotas need the entry usrquota in the
   options-field in /etc/fstab

(10) The file foo has a permission mode of -rw-------, is owned by user bar and
belongs to group foobar. Which of the following commands would allow members of
the group foobar to read the file? Choose every correct answer.

A. chmod o+r foo
B. chmod g+r foo
C. chmod +r foo
D. chmod a+r foo
E. chmod 604 foo

(11) How could you read the current umask setting? Choose the best answer.

A. umask --show
B. echo $UMASK
C. echo $umask
D. umask

```
E. which umask
```

(12) How could you change the group membership of the file `foobar` to group `foo`?
Choose the best answer.

```
A. chown foo foobar
B. chgrp foo foobar
C. chgroup foo foobar
D. chgrp foobar foo
E. chperm --group foo --file foobar
```

(13) In the directory `/home/foo` exists a file named `bar` which is a symbolic link to `/etc/services`. If you would copy the link to `/tmp` using the command:
`cp -d /home/foo/bar /tmp`
what would happen? Choose the best answer.

```
A. The destination /tmp/bar is a symbolic link to /home/foo/bar
B. The destination /tmp/bar is a symbolic link to /etc/services
C. The destination /tmp/bar is a regular file with the same
   content as /etc/services
D. The cp command would ask you whether to create a link or a file
E. Nothing. The cp-command is not made for copying links.
```

(14) What would the following command search for?
`find / -perm +4000`
Choose the best answer.

```
A. All files which are "unchanged" since more than 4000 minutes.
B. All files which are permutated more than 4000 times.
C. All files which are permutated more than 4000 minutes ago.
D. All files with a permission of at least 4000
E. All files which are networking sockets with a permanent
   connection and which have transmitted more than 4000 Bytes
```

(15) What is the default configuration file for the Linux loader?
Enter the whole path and filename. Type the answer.

_____

(16) How could you ensure, that no user can login or work on the system while you manualy repair a filesystem? Choose the best answer.

```
A. Create /etc/nologin
B. Switch to runlevel 1
C. Change the user's login shell to /bin/false
D. Change the owner of the /dev/tty* files to root
E. Use "ifconfig eth0 down"
```

(17) What file is used to define most of the used enviroment variables
(like PATH or MANPATH) at login time for every user?
Enter the whole path and filename. Type the answer.

_____

(18) How could you describe the following command?
```
tail -f /var/log/messages
```
Choose the best answer.

A. It cuts the last 10 lines of the file /var/log/messages to
   STDOUT

B. It changes the access time for the file /var/log/ messages to
   now

C. It changes the modification time for the file /var/log/
   messages to now

D. It writes the contents of the file /var/log/messages in
   reversed order to STDOUT

E. It displays every new line of the file /var/log/messages while
   this file is growing

(19) You've defined an environment variable `FOO` with the content "`bar`" and now you start
a new shell typing "`bash`". Which of the following statements is true?
Choose the best answer.

A. If you type "echo $FOO" you see the word "bar" as a result.
B. If you type "echo $FOO" you see an error message on the screen.
C. If you type "echo $FOO" you see an empty line as result.
D. If you type "echo . $FOO" you see the word "bar" as a result.
E. If you type "echo .. $FOO" you see the word "bar" as a result.

(20) What would the following command result in?
```
echo $(date +%H:%M) > file
```
Choose the best answer.

A. The string "date +%H:%M" will be written into the file

B. The content of the variable named "date +%H:%M" will be written
   into the file

C. The content of the variable named after the current time
   (Hours:Minutes)will be written into the file

D. The current time (Hours:Minutes) will be written into the file

E. This isn't a valid command

(21) You want to transport a file named `foo` from one computer to another.
The only media available for transport are floppy disks. Unfortunately the size of the
file is about 10 Megabytes. Which of the following commands could you use to solve
the problem? Choose the best answer.

A. cat --split 1.4M foo
B. splitf 1440k foo
C. split -b 1440k foo
D. cut -b1440k foo
E. chunk --size=1440k -f foo

(22) You have to move the whole directory tree `/home/foo` to `/oldusers`.
What command would you use? Choose the best answer.

```
A. move /home/foo /oldusers
B. mv /home/foo /oldusers
C. mv -r /home/foo /oldusers
D. mv -R /home/foo /oldusers
E. cp --move /home/foo /oldusers
```

(23) What command offers you an ongoing look at processor activity in real time?
(including options if needed) Type the answer.

_____

(24) The user `bertha` has marked an important line of one of her textfiles with an asterix
(*). But now she forgot the name of the file. How could you find this file, assuming it is
located in berthas home directory? Choose the best answer.

```
A. grep * /home/bertha/*
B. grep \* /home/bertha/*
C. grep "/*" /home/bertha/*
D. grep --key=asterix /home/bertha/*
E. grep 0x2A /home/bertha/*
```

(25) How many extended partitions could you create on one physical harddisk?
Choose the best answer.

```
A. 1
B. 3
C. 4
D. 16
E. 64
```

(26) Which command shows you, how much space in Megabytes is available on all
mounted partitions? Choose the best answer.

```
A. df
B. du -m
C. df -m
D. free -M
E. fdisk
```

(27) How could you get the information, what kind of quota is activated for user `foo`?
Choose the best answer.

```
A. repquota foo
B. repquota --user foo
C. quota foo
D. quota --user foo
E. quotainfo foo
```

(28) What permissions need the files `/etc/passwd and /etc/shadow`?
Choose the best answer.

```
A. -rw-r--r--/-rw-r--r--
B. -rw-r--r--/-rw-------
C. -rw-rw-rw-/-rw-rw-r--
D. -rwsr--r--/-rw-------
E. -rwxr--r--/-rw------t
```

(29) What is the proper way to force the `init` process to read it's configuration file?
Choose the best answer.

```
A. Use init --reload-conf
B. Use kill -HUP 1
C. Reboot the computer
D. Use kill -HUP init
E. Use restart init
```

(30) If you type the command
`man passwd`
would you get the manpage for the file `/etc/passwd` or the program `/usr/bin/passwd` ? Choose the best answer.

```
A. You get both manpages, one after the other.
B. You get the manpage for /etc/passwd
C. You get the manpage for /usr/bin/passwd
D. It depends on the MANPATH variable.
E. It depends on the settings in /etc/man.conf
```

(31) What command is used to cut a big file into many smaller files
(just the command - no options)? Type the answer.

_____

(32) What command would you use to create a new group named `foo`?
Choose the best answer.

```
A. groupadd foo
B. addgroup foo
C. newgrp foo
D. create --group=foo
E. mkgrp foo
```

(33) Where could you configure the behavior of the `syslog` daemon?
Choose the best answer.

```
A. /var/log/syslog.conf
B. /var/log/syslogd.conf
C. /etc/syslog.conf
D. /etc/syslogd.conf
E. /var/lib/syslogd/configure
```

(34) How could you describe the following commandline?
```
foo || bar
```
Choose the best answer.

A. The command foo redirect its output to the command bar.

B. The command foo writes its output into the file bar.

C. The command bar is only processed if the command foo leaves
   without error.

D. The command bar is only processed if the command foo leaves
   with an error.

E. This isn't a valid commandline

(35) The _____ command starts processes with less priority. Choose the best answer.

A. less
B. more
C. nice
D. prior
E. startproc

(36) What command is used to create a new filesystem on `/dev/hda2` ?
   Choose the best answer.

A. format /dev/hda2
B. mkform /dev/hda2
C. mkfilesystem /dev/hda2
D. mkfs /dev/hda2
E. fdisk /dev/hda2

(37) What statement about the `du` command is true? Choose the best answer.

A. Dump User - backups all files owned by the named user.

B. Dos Utility - provides different features to handle DOS-
   filesystems.

C. Dir User - shows the directorys owned by the named user.

D. Disk Usage - shows the amount of diskspace used by the named
   directories.

E. DOS to Unix - changes the named DOS cr/lf textfile architecture
   into the cr Unix architecture

(38) You want to force a user to create files with a permission mode of `600`.
   How would you set the `umask`? Choose the best answer.

A. umask 600
B. umask 700
C. umask 077
D. umask 177
E. umask 770

(39) How could you get the information about the group membership of user `foo`?
Choose the best answer.

```
A. getusergrp foo
B. group foo
C. groups foo
D. which groups foo
E. cat /etc/passwd | grep foo
```

(40) What would be the result of the following command?
`ln /bin /bin2`
Choose the best answer.

```
A. A hardlink /bin2 would be created, referencing the directory /
   bin

B. A symbolic link /bin2 would be created, referencing the
   directory /bin

C. A directory /bin2 would be created, which contains hardlinks to
   every file in /bin

D. A directory /bin2 would be created, which contains symbolic
   links to every file and subdirectory in /bin

E. Nothing, but an error message
```

(41) Which directory contains the essential commands needed on bootup?
Choose the best answer.

```
A. /usr/bin
B. /bin
C. /etc
D. /boot
E. /lib
```

(42) You can give options to the kernel. Choose every correct answer.

```
A. using the append command in /etc/lilo.conf

B. using the options command in /etc/lilo.conf

C. appending the options to the kernel name while using the
   bootmanager

D. using the chopt command while running the system

E. writing the desired options to /proc/kernel
```

(43) How could you get informations about all manpages which content the word `foo` in
their short description? Choose the best answer.

```
A. apropos foo
B. whatis foo
C. man foo
D. list foo
E. which foo
```

(44) User `foo` has left our company and you want to remove his account and all his files in his home directory. Which of the following commands would do this?
Choose the best answer.

```
A. rm -rf /home/foo
B. userdel -r foo
C. killuser foo
D. deluser -r foo
E. kill -HOME foo
```

(45) You want to set an environment variable named `foo`, so that every user can use this variable after login. What would be a good place to define this variable?
Choose the best answer.

```
A. /etc/newvar
B. /etc/define
C. /etc/profile
D. ~/.profile
E. /etc/profile.rc
```

(46) The file `/etc/syslog.conf` contains the following line:
    `*.crit    -/var/log/warn`
What is the result of this setting?
Choose the best answer.

```
A. All messages of all facilities with priority "crit" are written
   into the file /var/log/warn

B. All messages of all facilities with priority "crit" or any
   higher priority are written into the file /var/log/warn

C. The syslog daemon reads its rules for all facilities with
   priority "crit" out of the file /var/log/warn

D. The syslog daemon reads its rules for all facilities with
   priority "crit" or any higher priority out of the file /
   var/log/ warn

E. The file /var/log/warn contains a list of all errors which are
   defined as critical
```

(47) How can you describe the function of the following commands?
    `foo < bar || foobar`
Choose the best answer.

```
A. The command foobar gets its input from the command bar

B. The command foo redirects its output to foobar

C. The command bar writes its output into the file foo

D. The command foo gets its input from the file bar and if its
   exitcode is not 0, the command foobar will be executed

E. The file foo is written by the command "bar | foobar"
```

(48) How could you describe the following command line?
```
foo > bar 2>&1
```
Choose the best answer.

A. The command foo redirects its output to the command bar and bar
   redirects its input back to foo.

B. The command bar is only processed if the command foo returns a
   status of 1 or 2.

C. The command foo writes its STDOUT and STDERR into the file bar.

D. The command foo writes its output into the file bar and into
   the file 2.

E. This isn't a valid commandline.

(49) How could you watch the contents of a logfile, even if the logfile is growing while you're
watching? Choose the best answer.

A. `tail -f logfile`
B. `head -f logfile`
C. `less -f logfile`
D. `more -f logfile`
E. `watch logfile`

(50) What command is used to get the last lines of a text file
(just the command - no options)? Type the answer.

_____

(51) Which of the following commands could you use to copy all regular files in the current
directory to `/tmp`? Choose the best answer.

A. `copy *.* /tmp`
B. `copy * /tmp`
C. `cp *.* /tmp`
D. `cp * /tmp`
E. `cp --all /tmp`

(52) Which statements concerning the tool `renice` are true?
Choose every correct answer.

A. A normal user may only change the nice values of his own
   processes.

B. A normal user can decrease the nice value of his own processes.

C. Once a nice value is increased, a normal user may not decrease
   it, even if it is his own process.

D. root can change the nice values of all processes of one user
   with a single command.

E. renice allows a normal user to fasten his processes.

(53) What command would you use to show all partitions on all hard drives?
     Choose the best answer.

```
A. df
B. mtab
C. fstab
D. fdisk -l
E. du
```

(54) What ist the numeric value of the permission mode `drwxr-xr-T` Type the answer.

_____

(55) Which of the following statements concerning `locate` is true?
     Choose the best answer.

```
A. locate can find any file in the system which was created before
   the last call of updatedb

B. locate can find only program files inside the searchpath (PATH)

C. locate is used to locate manpages inside the MANPATH

D. locate can find any file in the system which was created after
   the last call of updatedb

E. locate is used to find the original file of a hard or symbolic
   link
```

(56) What command shows you, what groups you are belonging to?
     Choose the best answer.

```
A. whatgrp
B. whatgroup
C. group
D. groups
E. grps
```

Exam Linux-Praxis - 2
Answers

 1. sort
 2. C. All files in the current directory, which have one or more
       points (.) anywhere inside their names would be copied to
       /tmp

 3. B. A list of all jobs started by the current shell including
       JobIDs.
 4. B. ps ax
    D. top
 5. D. renice
 6. C. All files beginning with an uppercase letter
 7. 83 (You get it via command: fdisk /dev/hda   then type 'l' *<Enter>*)
 8. mount -a
 9. C. One partition for /home is enough.
       You can symlink /tmp to /home/tmp later
    D. Every partition with userquotas have to have the file
       quota.user in their root directory
    E. Every partition with userquotas need the entry usrquota in
       the options-field in /etc/fstab
10. B. chmod g+r foo
    D. chmod a+r foo
11. D. umask
12. B. chgrp foo foobar
13. B. The destination /tmp/bar is a symbolic link to /
       etc/services
14. D. All files with a permission of at least 4000
15. /etc/lilo.conf
16. B. Switch to runlevel 1
17. /etc/profile
18. E. It displays every new line of the file /var/log/messages
       while this file is growing
19. A. If you type "echo $FOO" you see the word "bar" as a result.
20. D. The current time (Hours:Minutes) will be written into the
       file
21. C. split -b 1440k foo
22. B. mv /home/foo /oldusers
23. top or procinfo -f
24. B. grep * /home/bertha/*
25. A. l
26. C. df -m
27. C. quota foo
28. B. -rw-r--r--/-rw-------
29. kill -HUP 1
30. C. You get the manpage for /usr/bin/passwd
31. split
32. A. groupadd foo
33. C. /etc/syslog.conf
34. D. The command bar is only processed if the command foo leaves
       with an error.
35. C. nice
36. D. mkfs /dev/hda2
37. D. Disk Usage - shows the amount of diskspace used by the
       named directories.

38. C. umask 077
39. C. groups foo

40. E. Nothing, but an error message (Can't hardlink to a directory!!)
41. B. /bin (/etc and /lib are necessary but there are no commands inside)
42. A. using the append command in /etc/lilo.conf
    C. appending the options to the kernel name while using the
       bootmanager

43. A. apropos foo
44. B. userdel -r foo
45. C. /etc/profile
46. B. All messages of all facilities with priority "crit" or any
       higher priority are written into the file /var/log/warn
47. D. The command foo gets its input from the file bar and if its
       exitcode is not 0, the command foobar will be executed.
48. C. The command foo writes its STDOUT and STDERR into the file
       bar.
49. A. tail -f logfile
50. tail
51. D. cp * /tmp
52. A. A normal user may only change the nice values of his own
       processes.
    C. Once a nice value is increased, a normal user may not
       decrease it, even if it is his own process.
    D. root can change the nice values of all processes of one
       user with a single command.

53. D. fdisk -l
54. 1754 (StickyBit + r-- = r-T , StickyBit + r-x = r-t)
55. A. locate can find any file in the system which was created
       before the last call of updatedb

56. D. groups