**Nume: Nechita**

**Prenume: Viorel**

1. The file permission 764 means:  
a) Every one can read, group can execute only and the owner can read and write  
b) Every one can read and write, but owner alone can execute  
c) Every one can read, group including owner can write, owner alone can execute  
d) Every one can read and write and execute

2. The permission -rwxr–r– represented in octal expression will be  
a) 777  
b) 666  
c) 744  
d) 711

3. The permission -rwxr-sr– represented in octal expression will be  
a) 0777  
b) 2766  
c) 2744  
d) 2754

4. If the umask value is 0002. what will be the permissions of new directory  
a) 777  
b) 775  
c) 774  
d) 664

5. What is the command to set the execute permissions to all the files and subdirectories within the directory /home/user1/direct  
a) chmod –r +x /home/user1/direct  
b) chmod –R +x /home/user1/direct  
c) chmod –f –r +x /home/user1/direct  
d) chmod –F +x /home/user1/direct

6. Which special permission can't be assigned to a file?

a) SUID

b) SGID

c) sticky bit

d) None of the above. All special permissions can be assigned to a file.

7. Your Linux system's umask variable is currently set to a value of 077. A user named jcarr (who is a member of the users group) creates a file named mythoughts.odt. What can users who are members of the users group do with this file?

a) They can view the file, but they can't modify or save it.

b) They can open, modify, and save the file.

c) They can open, modify, and save the file. They can also execute the file if it is an executable.

d) They have no access to the file at all.

8. Sticky bit can be set using following permission  
a) 0777  
b) 2666  
c) 4744  
d) 1711

9. What is the difference between chgrp and chown ?

The chgrp command can change the group that the file is associated from one group to another

The chown command changes not only the owner but the group as well making it a more versatile command.

10. Name one configuration file where the umask can be set of the entire system.

/etc/profile

11. What does the $PATH variable stand for ?

It is an environmental variable that tells the shell which directories to search for executable files

12. With what command you can see the environment variables ?

env

13. Given the bellow output please explain each line ( and variable ) what it means and what it contains:

HOSTNAME=deheremcln333.emea.adsint.biz

Server name

TERM=xterm

Terminal

SHELL=/bin/bash

Shell that is used

PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/root/bin:/admtools/bin

Location where is accessed all commands

LANG=en\_US.UTF-8

Setting for type of language, country and encoding character

HISTFILE=/root/.bash\_history

# Location of all commands that are used on systems

HISTFILESIZE=500

HISTSIZE=500

Number of lines that are stored

HISTTIMEFORMAT='%h/%d - %H:%M:%S '

# Display date and time for each command

HOME=/root

Home location of user root

PS1='[$LOGNAME@`hostname`:$PWD]# '

\_=myscript.sh

14. How can environment variables be accessed within a shell script?

a) By using the set command

b) By using the export command

c) By referring to the variable name preceded by a dollar sign

d) By referring to the variable name within any echo command

15. What does the set command do ? ( related to environment variables )

**set** command declares a variable as a local one only for the current shell.

16. What is the difference between su and su - ?

su gives you root permissions but it does not change the PATH variable

su - changes the PATH and root's home becomes the current working directory where all commands of root cand be executed.

17. What is the difference between set and env ?

Command set can declare a variable

18. How do you quit vi without saving ?

a) :x!

b) :wq!

c) :f!

d) :q!

19. What does the command yy within vi do ?

Copies the current line

20. To see the number of lines in a file while you are in vi/vim you must type:

a) :showthelines

b) :x!

c) :set number

d) :nr

21. To jump at the end of the file in vi/vim the command is:

a) gg

b) shift + end

c) end

d) shift + g

22. How do you jump to the begging of the file ?

Shift 1 + g

23. Please explain the difference between :a, :i, :o in vi ? ( what each command does )

:a – appends information

:i – inserts information

:o – go to the beginning of the next line

24. Name other 2 text editors beside vi/vim.

Emacs and mcedit

25. What does “sed” do ?

Stream Editor used for text replacement

26. What does this line do:

#Sed ‘s/cat/dog/g’ file

27. The output of /etc/passwd is:

hpux:x:2001:2001:temporary HP-Unix user:/home/hpux:/bin/bash

xwm110:x:2002:2002::/home/xwm110:/bin/bash

testing02:x:2003:2003::/home/testing02:/bin/bash

ciolo:x:2004:2004::/home/ciolo:/bin/bash

rawm110:x:2005:2005::/home/rawm110:/bin/bash

what does this command show: ***cut -d : -f1 /etc/passwd | tail -1***

1. hpux:x:2001:2001:temporary HP-Unix user:/home/hpux:/bin/bash
2. xwm110:x:2002:2002::/home/xwm110:/bin/bash
3. testing02:x:2003:2003::/home/testing02:/bin/bash
4. ciolo:x:2004:2004::/home/ciolo:/bin/bash
5. rawm110:x:2005:2005::/home/rawm110:/bin/bash
6. all of the above
7. none of the above

28. What does the following command do: echo "This is for testing" | tr [:space:] '\t'

a) Nothing, simple output of the echo command

b) Inserts a space at the end

c) Converts spaces into tabs

d) Converts spaces into new lines

29. What does this command do: echo "my username is 432234" | tr -d [:digit:]

30. The definition of the AWK command is:

a) acknowledges changes made on the server

b) sends an acknowledgement signal to the kernel that the changes to file structure is complete

c) scans the file line by line, break each line into columns, based on some column separator and assign a variable to each column.

d) all of the above

31. You have the following output:

www-data 4560 0.0 0.5 46500 11000 ? S< Mar20 0:00 /usr/sbin/apache2 -k start

www-data 4561 0.0 0.2 27248 5368 ? S< Mar20 0:00 /usr/sbin/apache2 -k start

www-data 4563 0.0 0.5 45972 10452 ? S< Mar20 0:00 /usr/sbin/apache2 -k start

root 7123 0.0 0.4 27080 8608 ? S<s Feb27 0:31 /usr/sbin/apache2 -k start

root 16836 0.0 0.0 3120 708 pts/0 R<+ 20:41 0:00 grep -e /sbin/apache

www-data 29181 0.0 0.5 46240 10520 ? S< Mar26 0:00 /usr/sbin/apache2 -k start

www-data 32506 0.0 0.5 46268 10816 ? S< Mar21 0:01 /usr/sbin/apache2 -k start

www-data 32507 0.0 0.5 46252 10864 ? S< Mar21 0:00 /usr/sbin/apache2 -k start

www-data 32508 0.0 0.5 46504 11096 ? S< Mar21 0:02 /usr/sbin/apache2 -k start

www-data 32516 0.0 0.5 46224 10320 ? S< Mar21 0:00 /usr/sbin/apache2 -k start

www-data 32517 0.0 0.3 46000 7288 ? S< Mar21 0:00 /usr/sbin/apache2 -k start

www-data 32519 0.0 0.2 27504 5496 ? S< Mar21 0:00 /usr/sbin/apache2 -k start

the command: ps aux | grep -e "/sbin/apache" | awk '{print $2}' | tail -1

What is the output:

1. www-data
2. 32519
3. 46000
4. Mar21

32. What is the command to determine when a user needs to change the password?

a) chage -E

b) chage -l

c) chage -m

d) chage –W

33. Which command changes ionel's home directory from its default location to /usr/local directory?

a) usermod -d /usr/local ionel

b) usermod -g /usr/local ionel

c) usermod -l /usr/local ionel

d) usermod -a /usr/local ionel

34. Which command do you use to create a new password for user "ionel"?

a) passwd ionel

b) password ionel

c) pswd ionel

d) passwd -x ionel

35. In which file or directory are user's folders created by default?

a) /etc/passwd

b) /etc/group

c) /home

d) /etc/skel

36. You have created new shell scripts and placed these scripts in the /usr/local/bin directory. You want to now add this directory to the system path. Which command do you use to do this?

a) HOME=/usr/local/bin

b) PATH=$PATH:/usr/local/bin

c) SHELL=$SHELL:/usr/local/bin

d) ENV=$ENV:/usr/local/bin

37. Which configuration file contains the default values of environment variables for the Bourne Again shell (bash)?

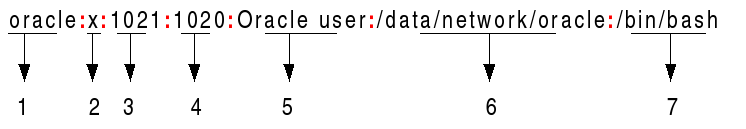
a) ~/.bash\_logout

b) ~/.bash\_profile

c) /etc/bashrc

d) /etc/profile

38. Please explain each field : /etc/passwd

****

1 user

2 password

3 User id

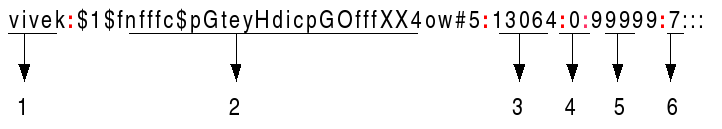
4 group id

5 user

6 home directory

7 shell

39. Please explain each filed : /etc/shadow

****

1 user

2 pasword

3

4

5

6

40. Please explain the following line ( what it does, each option explained ): useradd –u 5000 –g 7000 -s /bin/bash -m -d /home/alex -c "System Admin" alex

Assigne user with specific User ID , group ID, bash shell, home directory, and comment “alex’

41. What is the difference between at and cron ?

At –run command one time

Cron – runs command for for a period of time

42. Please explain the fields that are present in a crontab:

\*     \*   \*  \*   \*  command to be executed

1 is minutes, 2 is hour, 3 is days, 4 month

43. With what command do you edit a crontab ?

a) crontab -l

b) crontab -f

c) crontab -e

d) crontab -a

44. Please write down the crontab job that will run the following script every 5 minutes: /root/myscript.sh

5/5     \*   \*  \*   \*  command to be executed

45. What does this cron entry do:

00 11,16 \* \* \* /home/john/bin/incremental-backup

At 11:00 and 16:00 every day a incremental backup is run

46. What is anacron ?

a) anti-cron system management to predict the world time

b) a service that checks at every system reboot for any cron and at scheduled jobs that were missed from running while the system was down

c) a service that checks at every system reboot for a cron or an at job that was executed with success

d) all of the above

47. What is the difference between rpm and yum ?

With rpm cannot install update that have dependencies and yum installs the update with all dependencies

48. To uninstall a program using rpm the options are:

a) rpm –ivh [program]

b) rpm –e [program]

c) rpm –Uvh [program]

d) rpm –Avh [program]

49. What is a repository ?

Storage where all packages can be found for the systems

50. How do you build a yum repository ? ( please specify the exact steps, correct paths, the name for the repo file will be my\_repo )

51. How do you update the with yum a kernel package ?

Yum kernel

52. What is logrotate and what is the main configuration file ?

53. What is the main configuration file for syslog ?

54. I want to arhive all of the files from my home directory:

/home/

/home/lost+found/

/home/ionel/

/home/ionel/.bash\_logout

/home/ionel/.bash\_profile

/home/ionel/.mozilla/

/home/ionel/.mozilla/plugins/

/home/ionel/.mozilla/extensions/

/home/ionel/.bashrc

/home/ionel/hello.sh

/home/ionel/.bash\_history

Please write the command for archiving them with tar. The tar balls name will be myarhive.tar

Tar –zcvf /home/\* myarhive.tar

55. What are the process states ?

a) running, sleeping, stopped, zombie and super

b) running, waiting, sleeping, stopped and zombie

c) running, stopped, zombie, delayed and sleeping

d) running, stopped, super, delayed and sleeping