Linux device driver:

Linux environment:

1. To increase the response time and throughput, the kernel minimizes the frequency of disk access by keeping a pool of internal data buffer called

a) Pooling

b) Spooling

c) Buffer cache

d) Swapping

View Answer

2. At start of process execution, STDOUT & STDERR

a) Point to current terminal device

b) Are closed

c) Point to special files on the system

d) None of the mentioned

View Answer

3. wtmp and utmp files contain:

a) Temporary system data

b) User login-logout log

c) The user's command execution log

d) The user's su and sudo attempts

4. Which is the core of the operating system?

a) Shell

b) Kernel

c) Commands

d) Script

View Answer

5. ILP32 stands for

a) 32 bit Integer, Long & Pointer

b) 32 bit Integrated Long & Pointer

c) 32 bit Intelligent Long & Pointer

d) 32 bit Long & Pointer

6. Single Unix Specification Version 2 provides enhanced support for

a) 16 bit Unix

b) 32 bit Unix

c) 64 bit Unix

d) 8 bit Unix

7. Under UNIX the key board is the default input device and the monitor is the default output device

a) True

b) False

8. Which among the following interacts directly with system hardware?

a) Shell

b) Commands

c) Kernel

d) Applications

9. Applications communicate with kernel by using:

a) System Calls

b) C Programs

c) Shell Script

d) Shell

10. Solaris is the name of a flavor of UNIX from
a) HP
b) IBM
c) Digital Equipment Corp
d) Sun Microsystems

11. Which of the following is "NOT" a UNIX variant ?
a) Solaris
b) AIX
c) IRIX
d) AS400

12. The system calls in UNIX is written using which language
a) C
b) C++
c) Assembly Language

13. Which of the following enables multi-tasking in UNIX?
a) Time Sharing
b) Multi programming
c) Multi user
d) Modularity
View Answer

14. Which of the following is considered as the super daemon in Unix?
a) sysinit
b) init
c) inetd
d) proc

15. Unix is which kind of Operating System?
a) Multi User
b) Multi Processes
c) Multi Tasking
d) All of the mentioned

16. SVR4 stands for?
a) Standard Version Release 4
b) System Version Release 4
c) Standard Five Release 4
d) System Five Release 4

17. Lp0 device file is used to access:
a) Floppy
b) Cdrom
c) Printer
d) Tape drive

18. Syntax of any Unix command is:
a) command [options] [arguments].
b) command options [arguments].
c) command [options] [arguments].
d) command options arguments

19. SVR4 was developed by
a) Sun Microsystems
b) AT&T
c) University of Berkeley
d) Sun and AT&T jointly

20. Which of these is not a Unix Flavor?
a) BSD
b) MAC
c) AIX
d) IRIX

21. Which of the following statement is FALSE ?
a) Unix supports multiple users
b) Linux is an open source operating system and the source code is shared
c) Shell takes care of inter process communication
d) Shell provides the feature of I/O Redirection

22. Which of the following UNIX flavor is from IBM?
a) BSD
b) Solaris
c) HP-UX
d) AIX

23. x86-32 uses which programming model?
a) IP16
b) IP32
c) ILP16
d) ILP32

24. What are the sizes of (Integer/Long/Pointer) in LP64 programming model?
a) 8/8/8
b) 4/4/8
c) 4/8/8
d) 4/8/4

25. Which among the following is used to write small programs to control Unix functionalities?
a) Shell Commands
b) Shell Script
c) Filters
d) C Language

26. What control character signals the end of the input file?
a) ctrl + a
b) ctrl + b
c) ctrl + c
d) ctrl + d

27. How do you get help about the command "cp"?
a) help cp
b) man cp
c) cd ?
d) none of the mentioned

Linux command:
1. The dmesg command

a) Shows user login logoff attempts
b) Shows the syslog file for info messages
c) kernel log messages
d) Shows the daemon log messages
View Answer

2. The command "mknod myfifo b 4 16"
a) Will create a block device if user is root
b) Will create a block device for all users
c) Will create a FIFO if user is not root
d) None of the mentioned

3. Which command is used to set terminal IO characteristic?
a) tty
b) ctty
c) ptty
d) stty

4. Which command is used to record a user login session in a file
a) macro
b) read
c) script
d) none of the mentioned

5. Which command is used to display the operating system name
a) os
b) unix
c) kernel
d) uname

6. Which command is used to display the unix version
a) uname -r
b) uname -n
c) uname -t
d) kernel

7. Which command is used to print a file
a) print
b) ptr
c) lpr
d) none of the mentioned

8. Using which command you find resource limits to the session?
a) rlimit
b) ulimit
c) setrlimit
d) getrlimit
View Answer

9. Which option of ls command used to view file inode number
a) –l
b) -o
c) –a
d) –i

10. Find / -name '*' will
a) **List all files and directories recursively starting from /**
b) List a file named * in /
c) List all files in / directory
d) List all files and directories in / directory

10. Which command is used to display the octal value of the text
a) octal
b) text_oct
c) oct
d) od

11. Which command is used to view compressed text file contents
a) cat
b) type
c) zcat
d) print

12. Which command changes a file's group owner
a) cgrp
b) chgrp
c) change
d) group
View Answer

13. Which command is used to extract intermediate result in a pipeline
a) tee
b) extract
c) exec
d) none of the mentioned
View Answer

14. Which command is used to extract a column from a text file
a) paste
b) get
c) cut
d) tar

15. Which command is used to display disk consumption of a specific directory
a) du
b) ds
c) dd
d) dds

16. Which command is used to perform backup in unix?
a) backup
b) cpio
c) zip
d) gzip
17. Which command creates an empty file if file does not exist?
a) cat
b) touch
c) ed
d) read

18. Which option of rm command is used to remove a directory with all its subdirectories

a) –b
b) –o
c) –p
d) –r

19. Which command is used to identify file type?
a) Type
b) File
c) Finfo
d) Info

20. Command used to determine the path of an executable file is
a) which
b) where
c) wexec
d) what

21. Command used to count number of character in a file is
a) grep
b) wc
c) count

22. Which of these commands could you use to show one page of output at a time?
a) less
b) sed
c) pause
d) grep

23. Which commands will give you information about how much disk space each file in the current directory uses?
a) ls -l
b) ls -la
c) du
d) ls -a

24. Which of the following command output contains userid?
a) ls
b) help
c) date
d) ls –l

25. Which command is used to display all the files including hidden files in your current and its subdirectories ?
a) ls –aR
b) ls –a
c) ls –R
d) ls –l

26. Which of the following commands can be used to copy files across systems?
a) ssh
b) telnet
c) rsh
d) ftp

27. pwd command displays
a) user password
b) password file content
c) present working directory

d) none of the mentioned

28. Which of the following commands can be used to change default permissions for files and directories at the time of creation
a) Chmod
b) Chown
c) Umask
d) Chgrp
View Answer

29. Which tar command option is used to list the files in a tape archive format?
a) cvf
b) tvf
c) xvf
d) ovf

30. Which of the following commands will allow the user to search contents of a file for a particular pattern
a) touch
b) grep
c) find
d) ls

31. Write the command to display the current date in the form dd/mm/yyyy.
a) date +%d/%m/%Y
b) date +"%d/%m/%Y"
c) date +/%d/%m/20%y
32. The command syntax to display the file 'sample.txt' one page at a time is
a) man sample.txt>more
b) cat sample.txt<more
c) cat sample.txt|more
d) none of the mentioned

33. Which one shows the name of the operating system?
a) uname -n
b) uname -r
c) uname -o
d) uname –m

34. How do you add (append) a file "file1" to the example.tar file
a) no you cannot add a file to example.tar
b) tar -cvf example.tar file1
c) tar -rvf file1 example.tar
d) tar -evf file1 example.tar

35. How to execute ls command inside a vi editor?
a) !ls
b) :ls
c) :!ls
d) we can't execute

36. Which command gives the first byte where the difference is in the file1 & file2?
a) diff
b) cmp
c) comm
d) ls -a

37. To open a file file1 with cursor at line number 4
a) vi +num file1
b) vi +set num file1
c) vi + "set num" file1
d) vi +/se nu file1

38. sed is a command typically used for
a) Perform complex calculations
b) Perform FIFO based non-blocking I/O
c) Modify/print selective contents of a file
d) None of the mentioned

39. What communication command provides communication to another user logged on by writing to the bottom of their terminal?
a) talk
b) write
c) chat
d) transmit

40. Which screen manipulation command sets the screen back to normal?
a) tput cup
b) tput smso
c) tput rmso
d) tput blink

41. Which command will you use to see the available routes?
a) show route
b) route status
c) netstat -r
d) none of the mentioned

Linux Questions & Answers – File Management:

1. Which of the following time stamps need not exist for a file on traditional unix file system
a) Access Time
b) Modification Time
c) Creation Time
d) Change Time
View Answer

2. Which command is used to set limits on file size
a) fsize
b) flimit
c) ulimit
d) usize

3. Which option of rmdir command will remove all directories a, b, c if path is a/b/c
a) –b
b) –o
c) –p
d) –t

4. Which represents the user home directory
a) /
b) .
c) ..

d) ~

5. If a file is removed in Unix using 'rm' then
a) The file can be recovered by a normal user
b) The file cannot be recovered by a user
c) The file can be fully recovered provided the sytem is not rebooted
d) The file will be moved to /lost+found directory and can be recovered only by administrator's intervention

6. Executing the 'cd ..' command when at the root level causes
a) Error message indicating the user can't access beyond the root level
b) Behavior is unix-flavor dependent
c) Results in changing to the 'home' directory
d) Nothing happens

7. How do you rename file "new" to file "old"?
a) mv new old
b) move new old
c) cp new old
d) rn new old

8. What command is used to copy files and directories?
a) copy
b) cp
c) rn
d) cpy

9. When mv f1 f2 is executed which file's inode is freed?
a) f1
b) f2
c) new inode will be used

10. Any file's attribute information is stored in which structure on the disk
a) Inode
b) Data blocks
c) File blocks
d) Directory file
View Answer

11. By default if any regular file is created, the number of link is displayed as 1 ?
a) True
b) False

12. How many links are created when we creat a directory file?
a) 1
b) 2
c) 3
d) 4

13. A user creates a link to a file file1 using the following command "ln file1 file2". Which of the following is not true?
a) file1 and file2 have the same inode numbers
b) The number of links for file1 is displayed as 1
c) The number of links for file1 is displayed as 2
d) The number of links for file2 is displayed as 2

14. There are two hard links to the "file1" say hl and h2 and a softlink sl. What happens if we deleted the "file1"?

a) We will still be able to access the file with hl and h2 but not with sl
b) We will not be able to access the file with hl and h2 but with sl
c) We will be able to access the file with any of hl, h2 and sl
d) We will not be able to access the file with any of hl, h2 and sl

15. If two files on same partition point to the same inode structure they are called
a) Soft links
b) Hard links
c) Alias
d) Special files

16. Deleting a soft-link
a) Deletes the destination file
b) Deletes both the softlink and the destination file
c) Deletes just the softlink
d) backup of the destination is automatically created

17. Creation of hardlinks that point across partitions
a) is allowed only to root user
b) can be done by all users
c) the effects are unspecified
d) is not allowed

18. Which command is used to change permissions of files and directories?
a) mv
b) chgrp
c) chmod
d) set

19. Where can I find the printer in the file structure?
a) /etc
b) /dev
c) /lib
d) /printer

20. Which of the following statement is true?
a) The cp command will preserve the meta data of the file
b) The sort command by default sorts in the numeric order
c) The mv command will preserve the meta data of the file
d) The command ps will display the filesystem usage

21. What UNIX command is used to update the modification time of a file?
a) time
b) modify
c) cat
d) touch

Linux Questions & Answers – File Types:

1. The soft link will increase the link counter of the file.(T/F)
a) True
b) False

2. When you use the ln command, which of the following occurs?
a) a file is created that points to an existing file
b) a file is created that is a copy of an existing file

c) a file is moved from one location to another
d) a file is renamed

3. srwxr-xrw- is a
a) internet socket file
b) unix domain socket file
c) symbolic link
d) shared file

4. Binary or executable files are:
a) Regular files
b) Device files
c) Special files
d) Directory files

5. The directory file contains:
a) File names & File Sizes
b) File names & Inode Numbers
c) File names & Address
d) File names & Permissions

6. Which directory contain device special files?
a) /etc
b) /etc/dev
c) /root/bin
d) /dev
7. Which of the following is not a valid file type on Linux
a) Socket
b) Softlink
c) Inode
d) FIFO

8. Which of the following is not correct statement regarding file types?
a) Hard links share same inode number
b) Soft links cannot be created across partitions
c) Socket files are Unix domain sockets
d) Character file is a special file

9. Which are the two types of device files?
a) Character & Block
b) Character & Socket
c) Block & FIFO
d) Input & output

10. Which is an example for character special file?
a) Hard disk
b) CD-ROM
c) Terminal
d) Memory

11. Which is an example for block special file?
a) Virtual Terminal
b) CD-ROM
c) Terminal
d) Serial modem

12. All device files are stored in which directory?
a) /etc
b) /bin
c) /dev
d) /usr

Linux Questions & Answers – File Permissions :

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. Effective user id can be set using following permission
a) 0777
b) 2666
c) 4744
d) 1711

4. Effective group id can be set using following permission
a) 0777
b) 2666
c) 4744
d) 1711

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

6. The permission -rwSr–r— represented in octal expression will be
a) 0777
b) 2666
c) 4744
d) 4644

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

8. If user tries to remove (rm) a readonly file (444 permission), what will happen?
a) The file is removed successfully (and silently)
b) The rm command prompts for a confirmation, the command is successful upon confirmation
c) The rm command prompts for a confirmation, however the operation fails because of insufficient permissions
d) The rm command fails because of insufficient permissions

9. A user does a chmod operation on a file. Which of the following is true?
a) The last accessed time of the file is updated
b) The last modification time of the file is updated
c) The last change time of the file is updated
d) None of the mentioned

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

11. 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

12. The permission -rwxr-xr-t represented in octal expression will be
a) 0777
b) 1755
c) 1754
d) 2754

13. With a umask value of 112, what is the default permission assigned to newly created regular file?
a) —x–x-wx
b) -rw-rw-r–
c) -r-xr-x-r–
d) -rw-rw-r–

14. Which command is used to assign read-write permission to the owner?
a) chmod a+r file
b) chmod o+r file
c) chmod u=rw file
d) chmod og-r file

15. Given the command
$ chmod o-w datafile
a) sets write permission to everyone for datafile
b) sets write permission to others for datafile
c) clears write permission to everyone for datafile
d) **clears write permission to others for datafile**

16. Which of these commands will set the permissions on file textfile to read and write for the owner, read for the group, and nothing for everyone else?
a) chmod 046 textfile
b) chmod 640 textfile
c) chmod 310 textfile
d) chmod rw r nil textfile

17. If you are a root user, how can you grand execute permission only for the owner of the file project1?
a) chmod +x project1
b) chmod u+x project1
c) chmod a+x project1
d) chmod U+X project1

18. A user executes the following command successfully:

$ chmod +x file1.txt   Which of the following is true of the output of this command?

a) The command results in adding execute permission to the user who ran this command

b) The command results in adding execute permission for the owner of the file

c) The command results in an error since the file is not an executable file

d) The command results in adding execute permission for all users (i.e., user,group & others)

19. What does chmod +t do?

a) wrong syntax

b) set effective userid for filename

c) set effective groupid for filename

d) set the sticky bit

20. Which of the following umask settings doesn't allow execute permission to be set by default on directory files

a) 222

b) 111

c) 000

d) 444

21. Which of the following umask settings allow execute permission to be set by default on regular files

a) 222

b) 111

c) 000

d) None of the mentioned

22. The command chmod 4777 a.out

a) will set the suid bit of a.out

b) will set the suid bit of a.out only if the command is issued by root

c) is not a valid command

d) will set the sticky bit of a.out

Linux Questions & Answers – Filesystem Overview:

1. Which command is used to check filesystem usage in a system?

a) mount

b) df

c) du

d) dd

2. Which among the following allows fast file system recovery?

a) Ext2

b) Journaling

c) Caching

d) Sysfs

3. Which filesystem can be used to change certain kernel parameters at runtime using sysctl command?

a) Ext3

b) Sysfs

c) Ext4

d) Procfs

4. Filesystem for CDROM is:

a) Ext2
b) Ext3
c) Isofs
d) Procfs

5. Which file system has journaling capability?
a) Ext2
b) Ext4
c) Isofs
d) Procfs

6. Which file contains the filesystems to be automatically mounted during boot?
a) /etc/mount
b) /etc/fstab
c) /etc/inittab
d) /etc/boot

7. _____ is a directory (which should exist), on which to mount the file system?
a) Root
b) Boot
c) Mount-point
d) Partition

8. Which command is used to mount file system read only.
a) mount –a
b) mount –v
c) mount –f
d) mount –r

Linux Questions & Answers – Startup & Shutdown:

1. Which of the following is not a valid run-level
a) S
b) 0
c) 8
d) 1

2. On Linux, initrd is a file
a) Containing root file-system required during bootup
b) Contains only scripts to be executed during bootup
c) Contains root-file system and drivers required to be preloaded during bootup
d) None of the mentioned

3. Which is loaded into memory when system is booted?
a) Kernel
b) Shell
c) Commands
d) Script

4. The process of starting up a computer is known as
a) Boot Loading
b) Boot Record
c) Boot Strapping
d) Booting

5. Bootstrapping is also known as

a) Quick boot
b) Cold boot
c) Hot boot
d) Fast boot

6. The shell used for Single user mode shell is:
a) bash
b) Csh
c) ksh
d) sh

7. Single user mode shell runs as
a) Admin user
b) Root user
c) Normal user
d) Log user

8. Which is the only partition mounted in Single user mode
a) boot
b) usr
c) root
d) tmp

9. Which daemon manages the physical memory by moving process from physical memory to swap space when more physical memory is needed.
a) Sched daemon
b) Swap daemon
c) Init daemon

10. At the end of kernel bootstrap, which process is started?
a) /etc/init
b) /etc/sched
c) /etc/swap
d) /etc/kernel

11. The process id of init process is:
a) -1
b) 0
c) 1
d) 2

12. Which file is read by init to get the default runlevel
a) /etc/profile
b) /etc/init
c) /etc/boot
d) /etc/inittab

Linux Questions & Answers – Process Management:

1. If a program executing in background attempts to read from STDIN
a) It is terminated
b) It's execution is suspended
c) STDIN is made available to it
d) None of the mentioned

2. Which command is used to bring the background process to forground?

a) bg
b) fg
c) background
d) forground

3. How to run a process in the background?
a) &
b) *
c) ?
d) |

4. Which command can be executed by a user who is already logged into the system, in order to change to the root user? (type the command without any parameters)
a) su
b) root
c) chroot
d) user

5. Process information in the current shell can be obtained by using
a) kill
b) bg
c) fg
d) ps

6. Which signal is sent by the command "kill -9 " ?
a) INT
b) TERM
c) KILL
d) STOP

7. Which of the following values for STAT column of ps command is not true:
a) status R means running
b) Status S means sleeping
c) Status E means exited
d) Status Z means zombie

8. When a child process exits before the parent process exits, which of the following is true:
a) the child process becomes defunct
b) the parent process becomes defunct
c) if the parent process does not handle SIGCHLD, the child process becomes a zombie
d) none of the mentioned

9. A user issues the following command sequence:

  $ a.out &
  $ bash
  $ a.out &
If the user kills the bash process, then which of the following is true?
a) the second a.out process is also terminated
b) the second a.out process becomes a defunct process
c) the first a.out process becomes a zombie process
d) init process becomes parent of second a.out process

10. The signal sent to a process when the Ctrl-C key is pressed is
a) KILL
b) TSTP

c) TERM
d) INT

11. we can change the priority of a running process using
a) nice
b) renice
c) priority cannot be changed for a running process
d) only superuser can change the priority

12. nohup is used to
a) automatically hang up the process after logout
b) continue the process after logout
c) create backgroung process
d) manually hang up the process after logout

Linux Questions & Answers – User Account Management:

1. User's Primary Group id is listed in which file, at the time of creation of the user (On a standard Unix system)
a) /etc/passwd
b) /etc/groups
c) /etc/login
d) /etc/profile

2. The encrypted password of a user is stored in
a) /etc/shadow
b) /etc/enpasswwd
c) /etc/.passwd
d) /etc/passwd

3. A user can change the default log-in shell using
a) chmod
b) chsh
c) rmsh
d) tchsh

4. Which of the following identifiers associated with a process decide its privilege level
a) uid
b) suid
c) euid
d) gid

5. The /etc/passwd file doesn't contain
a) userid
b) home directory for a user
c) login shell name
d) none of the mentioned

6. User id 0 is
a) An innvalid user id
b) The id of the root user
c) The id of a user when the user's account is deleted
d) None of the mentioned

7. The login shell is
a) The shell program that runs when the user logs in
b) The shell program that authenticates the user while logging in

c) Common shell for all the users that belong to the same group
d) None of the mentioned

8. Which of the following command can be used to change the user password?
a) user can't change the password
b) passwd
c) passd
d) pwd

9. What does the following command do ?
who | wc –l
a) List the number of users logged in
b) List the users
c) List the number of users in the system
d) Display the content of who command

10. By default, a Linux user falls under which group?
a) staff
b) others
c) same as userid (UPG)
d) system

11. Which of the following files need to be referred for user's secondary group?
a) /etc/passwd
b) /etc/shadow
c) /etc/group
d) /etc/profile

12. The ls –l output for /etc/passwd and /usr/bin/passwd is as follows:

-rw-rw-r-- 1 root root 2807 Apr 26 13:50 /etc/passwd
-r-s—x—x 1 root root 17008 May 25 02:30 /usr/bin/passwd

If a user, not belonging to the group 'root', runs the passwd executable in an attempt to modify his password, then which of the following is true?
a) password change fails since user does not have permission to update /etc/passwd file
b) password change is successful because the program runs as root
c) passwd change program runs in kernel mode where write access to the /etc/passwd file is possible
d) /etc/passwd is a special file and the system by default allows all users to update it
View Answer

Linux Questions & Answers – Shell Programming:

1. What will be output of following command:
$ echo "The process id is" $$$$
a) The process id is $$
b) The process id is $<pid>$<pid>
c) The process id is <pid><pid>
d) The process id is $$$$

2. What would be the current working directory at the end of the following command sequence?
$ pwd
 /home/user1/proj
 $ cd src
 $ cd generic
 $ cd .

$ pwd
a) /home/user1/proj
b) /home/user1/proj/src
c) /home/user1
d) /home/user1/proj/src/generic

3. How do you print the lines between 5 and 10, both inclusive
a) cat filename | head | tail -6
b) cat filename | head | tail -5
c) cat filename | tail +5 | head
d) cat filename | tail -5 | head -10

4. Create a new file "new.txt" that is a concatenation of "file1.txt" and "file2.txt"
a) cp file.txt file2.txt new.txt
b) cat file1.txt file2.txt > new.txt
c) mv file[12].txt new.txt
d) ls file1.txt file2.txt | new.txt

5. which of these is NOT a valid variable in bash
a) __ (double underscore)
b) _1var (underscore 1 var)
c) _var_ (underscore var underscore)
d) some-var (some hyphen var)

6. What is the output of the following code:
os=Unix
echo 1.$os 2."$os" 3.'$os' 4.$os
a) 1.Unix 2.Unix 3.Unix 4.Unix
b) 1.Unix 2.Unix 3.$os 4.Unix
c) 1.Unix 2.Unix 3.Unix 4.$os
d) 1.Unix 2.$os 3.$os 4.$os

7. What is the return value ($?) of this code:
os = Unix
[$osName = UnixName] && exit 2
[${os}Name = UnixName] && exit 3
a) 0
b) 1
c) 2
d) 3

8. What is the output of the following program?

x = 3; y = 5; z = 10;
if [($x -eq 3) -a ($y -eq 5 -o $z -eq 10)]
then
   echo $x
else
   echo $y
fi
a) 1
b) 3
c) 5
d) Error

9. What is the output of the following program?

```
[ -n $HOME ]
echo $?
[ -z $HOME ]
echo $?
```
a) 0
  1

b) 1
  0

c) 0
  0

d) 1
  1

11. The expression expr -9 % 2 evaluates to:

a) 0

b) 1

c) -1

d) 2

12. The statement z = 'expr 5 / 2' would store which of the following values in z?

a) 0

b) 1

c) 2

d) 2.5

13. To feed standard output of one command to standard input of another in a single shell session

a) IO redirection can be used

b) Named pipes can be used

c) The pipe operator provided by the shell can be used

d) It can not be done

14. Which of the following commands allows definition and assignment of environment variables under bash

a) env

b) export

c) environ

d) setenviron

15. While executing a command, the shell

a) Executes it in the same process (as shell)

b) Creates a child shell to execute it

c) Loads a special program to take care of the execution

d) None of the mentioned

16. If a file with execute permissions set, but with unknown file format is executed

a) The file is passed to /bin/sh

b) The system returns an error

c) The current shell will try to execute it

d) None of the mentioned

17. Which of the following is true?

a) Shell is a process and can be started by superuser only

b) Shell is a built-in Kernel functionality

c) Shell is a wrapper for all the commands and utilities

d) None of the mentioned

18. Which is true with regards to the shell prompt

a) It can be accidentally erased with backspace

b) The prompt cannot be modified

c) The prompt can be customized (modified)

d) None of the mentioned

19. What is a shell in UNIX?

a) a program through which users can issue commands to UNIX

b) a window management system

c) the login screen

d) the thing that rides on the back of a turtle in UNIX

20. Which of the following represents an absolute path?

a) ../home/file.txt

b) bin/cat

c) cs2204/

d) /usr/bin/cat

21. The user bhojas logged in and performed the following sequence of command. What will be the output of the last command?

$ cd project/module1

$ pwd

a) /home/bhojas/project/module1

b) /home/project/module1

c) /usr/bhojas/project/module1

d) project/module1

22. BASH shell stands for?

a) Bourne-again Shell

b) Basic Access Shell

c) Basic to Advanced Shell

d) Big & Advanced Shell

23. Which of the following files will not be displayed by the command cat re* ?

a) reminder

b) receipt

c) Receipt

d) recipe-cake

24. The redirection 2> abc implies

a) Write file 2 to file abc

b) Write standard output to abc

c) Write standard error to abc

d) None of the mentioned

25. cmd 2>&1 > abc will

a) Write file2 to file1

b) Write standard output and standard error to abc

c) Write standard error to abc

d) Write standard output to abc & standard error to monitor

26. cmd > abc 2>&1 will

a) Write file2 to file1

b) Write standard output and standard error to abc

c) Write standard error to abc

d) Write standard output to abc & standard error to monitor

27. Which of these is the correct method for appending "foo" in /tmp/bar file?

a) echo foo > /tmp/bar
b) echo foo >> /tmp/bar
c) echo foo | /tmp/var
d) /tmp/bar < echo foo

28. Syntax to suppress the display of command error to monitor?
a) command > &2
b) command 2> &1
c) command 2> &2
d) command 2> /dev/null

29. The following commands gives the output like this
    #cat file1 file2
    #cat: file1: No such file or directory
    hello
    If we execute the command "cat file1 file2 1>2 2>&1" the output would be
a) cat: file1: No such file or directory hello
b) No output is displayed
c) Cat: 1>2: No such file or directory
d) hello

30. cat < file1 >> file2 | file3
a) file1 content will be appended to file2 and finally stored in file3
b) file1 content will be appended to file2 and file3 will be ignored
c) file2 and file3 will have same content
d) syntax error

31. Executing cat /etc/password > /dev/sda as superuser will
a) Write data into a regular file called /dev/sda
b) Write data to the physical device sda
c) Create a temporary file /dev/sda and write data to it
d) None of the mentioned

32. From where would the read statement read if the following statements were executed?
    exec < file1
    exec < file2
    exec < file3
    read line
a) It would read all the files
b) It would not read any files
c) It would read all the files in reverse order
d) It would read only file3

33. The $ variables in a shell script context designates
a) The runtime of the script
b) Number of command line arguments
c) PID of the shell running the script
d) The exit status of the shell script

34. Which variable is used to display number of arguments specified in command line
a) $0
b) $#
c) $*
d) $?

35. Which variable contains last background job process id

a) $*
b) $?
c) $$
d) $!

36. Which command can be used to test various file attributes
a) if
b) file
c) test
d) type

37. * Specifies
a) one or more character
b) zero or more charecter
c) nothing
d) none of the mentioned

38. ? Specifies
a) one or more character
b) zero or more charecter
c) one character
d) none of the mentioned

39. Which of the following file set in the current directory are identified by the regular expression a?b*
a) afcc, aabb
b) aabb, axbc
c) abbb, abxy
d) abcd, axbb

40. What command would send the output of cmd1 to the input of cmd2?
a) cmd1 | cmd2
b) cmd1 || cmd2
c) cmd1 && cmd2
d) cmd1 ; cmd2

41. What is the output of the following command for bash shell:
echo linux $0
a) linux echo
b) linux linux
c) linux bash
d) linux

41. Which variable will display the list of the positional parameters?
a) $#
b) $*
c) $?
d) $$

42. Which option of grep displays the line number as well?
a) -v
b) -l
c) -n
d) -E

43. How can you search for blank line in a file?
a) $ grep " " file

b) $ grep "^$" file

c) $ grep [" "] file

d) $ grep [^$] file

44. Assuming the files fileA, fileB, fileAB, fileBC and fileABC, exist in a directory, which files match with the pattern file[ABC]?

a) fileA, fileB and fileABC

b) fileABC

c) fileA and fileB

d) fileAB, fileBC and fileABC

45. What will be printed for the command below?

$ grep –c "^echo" abc

a) The count of lines that do not contain the pattern echo in file abc

b) The count of lines which begin with the pattern echo in file abc

c) The count of lines that ends with the pattern echo in file abc

d) None of the mentioned

46. Which one is used to select only one copy of the repeated lines?

a) uniq -u

b) uniq -d

c) uniq -c

d) uniq –l

47. Indicate the right option to search for BOB, Bob, BOb or BoB?

a) grep –i Bob files

b) grep 'B[oO][bB]' files

c) grep '[BOB]' files

d) grep -v 'Bob' files

48. Indicate the right option to search for anything not a letter or number

a) grep '^[a-zA-Z0-9]'

b) grep '[^a-zA-Z0-9]'

c) grep '[a-zA-Z0-9]'

d) None of the mentioned

49. How do you remove duplicate lines from the file foo using uniq?

a) sort foo | uniq –u

b) sort -u foo | uniq -d

c) sort foo | uniq –c

d) sort foo | uniq –l

50. One of the entry of /etc/passwd file is shown below:

user1:x:1111:2222:Sanfoundry:/home/user1:/bin/bash

Which among the following will print userid and home dir in the following pattern "user1:/home/user1"

a) awk `{print $1 ":" $6}` /etc/passwd

b) awk `{print $1 ":" $7}` /etc/passwd

c) awk `{print $2 ":" $6}` /etc/passwd

d) awk `{print $2 ":" $7}` /etc/passwd

51. who | cut –d " " -f1

what is the ouput if the who command displays like this

user1 tty 0 1234

a) user1

b) user1 tty 0 1234

c) tty

d) tty 0 1234

52. What is the command that can print lines of first file matching with second file?
a) printline
b) cmp
c) com
d) comm

53. Which character to use to escape meaning of special characters in search operations?
a) []
b) ^
c) .
d) backslash (\)

54. Which built-in command performs integer arithmetic in bash shell?
a) let
b) get
c) set
d) none of the mentioned

55. Which expression use the value of the enclosed arithmetic expression?
a) $(())
b) $()
c) ${}
d) $[].

56. If a and b are 2 variables then the meaning of a<<=b is
a) b = a << b
b) a = a << b
c) b = b << a
d) a = a << b

57. Which one of the following is bitwise 'exclusive or' operator?
a) ^=
b) |=
c) !=
d) none of the mentioned

58. Which one of the following is not a valid operator in bash shell?
a) ||
b) ~
c) =<<
d) -=

59. What is the output of this program?

```
#!/bin/bash
a=2
b=4
let c=a**b
echo $c
exit 0
```
a) 8
b) 16
c) 32
d) none of the mentioned

60. What is the output of this program?
```
#!/bin/bash
a=10; b=20
c=$((++a))
let a=c+a
echo $a
exit 0
```
a) 21

b) 22

c) program will generate an error message

d) none of the mentioned

61. What is the output of this program?
```
#!/bin/bash
a=10
b=$(( $a<0?10:$a<100 ))
echo $b
exit 0
```
a) 10

b) 20

c) 1

d) 0

Explanation: Firstly the '$a<0' condition has been checked. Because it is false hence the right hand side condition of the colon (:) has been checked and this is true so program output is 1.

Output:

root@ubuntu:/home/sanfoundry# ./test.sh

1

root@ubuntu:/home/sanfoundry#

62. What is the output of this program?
```
#!/bin/bash
a=10
b=$(( $a<0&&$a<100 ))
echo $b
exit 0
```
a) 10

b) 0

c) 1

d) none of the mentioned

Explanation: The condition '$a<0' is false so logical and operator provides the output 0.

Output:

root@ubuntu:/home/sanfoundry# ./test.sh

0

root@ubuntu:/home/sanfoundry#

63. What is the output of this program?
```
#!/bin/bash
a=1; b=2; c=3
d=$(( ++a**b*c++ + a ))
echo $d
exit 0
```
a) 14

b) 12

c) program will generate an error message

d) none of the mentioned

Explanation: The operators in decreasing order of precedence are ++, **, *, +.

Output:

root@ubuntu:/home/sanfoundry# ./test.sh

14

root@ubuntu:/home/sanfoundry#

64. Which command runs the shell built-in command 'command' with the given argument?

a) builtin

b) caller

c) there is no command present for this purpose

d) none of the mentioned

65. Which option of the command 'cd' use the actual filesystem path for cd.. and the value of pwd?

a) -l

b) -L

c) -p

d) -P

67. Which command generates possible completions for string according to the and write it to standard output?

a) compgen

b) complete

c) continue

d) none of the mentioned

68. Which command executes 'command' in place of the current process instead of creating a new process?

a) exec

b) command

c) trap

d) none of the mentioned

Linux Questions & Answers – vi Editor:

1. Which one of the following statement is not true?

a) vim editor is the improved version of vi editor

b) vi editor commands are not case sensitive

c) vi editor has two modes of operation: command mode and insert mode

d) vi stands for visual editor

2. Which command is used to close the vi editor?

a) q

b) wq

c) both q and wq

d) none of the mentioned

Explanation: The command 'q' just closes the file and 'wq' saves and closes the file.

3. In vi editor, the key combination CTRL+f

a) moves screen down one page

b) moves screen up one page

c) moves screen up one line

d) moves screen down one line

4. Which vi editor command copies the current line of the file?

a) yy

b) yw

c) yc
d) none of the mentioned

5. Which command is used to delete the character before the cursor location in vi editor?
a) X
b) x
c) D
d) d
Explanation: The command 'x' is used to delete the character under the cursor locarion.

6. Which one of the following statement is true?
a) autoindentation is not possible in vi editor
b) autoindentation can be set using the command ':set ai'
c) autoindentation can be set using the command ':set noai'
d) autoindentation is set by default in vi editor

7. Which command searches the string in file opened in vi editor?
a) / or ?
b) f or F
c) t or T
d) none of the mentioned
Explanation: The command '/' searches downward in the file and command '?' searches upward in the file.

8. In vi editor, which command reads the content of another file?
a) read
b) r
c) ex
d) none of the mentioned

9. Which command shows all the abbreviations in vi editor?
a) ab
b) abb
c) show
d) none of the mentioned

10. Which command sets the number for all lines?
a) :set li
b) :set ln
c) :set nu
d) :set nl

Linux Filesystem Hierarchy Questions & Answers

1. Operating system kernel must be located in
a) /
b) /boot
c) either in / or in /boot
d) none of the mentioned

2. Which one of the following is a mount point for a temporarily mounted filesystem?
a) /mnt directory
b) /media directory
c) /dev directory
d) none of the mentioned

3. What is /root?

a) root filesystem
b) home directory of the root user
c) the directory which contains all the directories of the filesystem
d) none of the mentioned

4. System binaries are stored in
a) /sbin directory
b) /usr/sbin directory
c) /usr/local/sbin directory
d) all of the mentioned

5. The /dev directory contains the
a) device drivers
b) device files
c) kernel modules of device drivers
d) none of the mentioned

6. The contents of root filesystem is responsible to
a) boot the system
b) recover the system
c) repair the system
d) all of the mentioned

7. Static files of the bootloader are installed in
a) /boot directory
b) /root directory
c) /bin directory
d) /sbin directory

8. Linux filesystem contains mainly
a) ordinary files
b) device files
c) directory files
d) all of the mentioned

9. In linux filesystem, the passwords of different users are stored in
a) /etc/passwd file
b) /bin/passwd file
c) /etc/shadow file
d) /bin/shadow file
Explanation: Passwords are visible in encrypted format in the file.
10. Superuser can change the _____ permissions of any file.
a) owner
b) group
c) other
d) all of the mentioned

11. When we install a new package in linux system, then
a) all the files of the packages are installed in a single directory
b) different files are installed at different locations of the file system
c) package works just after extraction, installation is not required
d) none of the mentioned

12. Host specific configuration files are installed in
a) /etc directory
b) /lib directory

c) /root directory
d) /bin directory

13. The directory /media is the
a) mount point for removable media
b) mount point for filesystem
c) mount point for removable media & filesystem
d) none of the mentioned

14. What is /bin/sh ?
a) bourne shell
b) hard or symbolic link to the real shell command
c) bash shell
d) both bash shell and bourne shell

15. The /boot directory stores the data that is used
a) before the kernel begins executing user mode programs
b) after the kernel begins executing user mode programs
c) before the bootloader is loaded in the RAM
d) none of the mentioned

16. Which one of the directory does not contain binary files?
a) /bin
b) /sbin
c) /etc
d) none of the mentioned

17. Kernel modules are present in
a) /lib directory
b) /root directory
c) /boot directory
18. The directory /opt is reserved for
a) installation of add-on application software packages
b) optional booting files
c) optional user specific files
d) none of the mentioned

19. The directory /srv contains
a) site-specific data which is served by the system
b) all the system files
c) all the service files provided by the specific user
d) none of the mentioned

20. Any file or directory present in the _____ directory may not be reserved between the invocation of the program.
a) /var
b) /tmp
c) /etc
d) all of the mentioned

Linux Proc Filesystem Questions & Answers

1. Which one of the following is not true about proc filesystem?
a) proc filesystem is a pseudo-filesystem
b) proc filesystem is used as an interface to kernel data structures
c) some files in proc filesystem allow kernel variables to be changed
d) none of the mentioned

2. Proc filesystem provides the information about
a) processes
b) processor
c) proxy server
d) none of the mentioned

3. The /proc directory contains
a) numerical sub-directory for each running process
b) sub-directories for installed buses
c) a text listing of filesystems which are supported by the kernel
d) all of the mentioned

4. The file /proc/[PID]/cgroups
a) describes control groups to which the process belongs
b) contains the information about all groups of the system
c) provides the information about the group which has generated the process
d) none of the mentioned
Explanation: [PID] represents the process ID of the process. Every system has various running processes, so /proc directory contains various numerical sub-directories and the number shows the PID of the process.
advertisement

5. The file /proc/[PID]/cmdline holds the complete command line for the process, unless the process is a
a) child process
b) zombie process
c) orphan process
d) none of the mentioned
Explanation: A zombie process is the process which has completed execution but still has an entry in the process table.

6. What is /proc/[PID]/cwd?
a) symbolic link to current directory of the process
b) regular file containing the information about the current status of the process
c) directory containing various sub-directories
d) none of the mentioned

7. Which one of the following file contains the environment for the process?
a) /proc/[PID]/environ
b) /proc/[PID]/env
c) /proc/[PID]/path
d) none of the mentioned

8. The entry for each file opened by the process is present in
a) /proc/[PID]/fd
b) /proc/[PID]/file
c) /proc/[PID]/maps
d) none of the mentioned

9. The file /proc/[PID]/limits displays the _____ for each of the process's resource limits.
a) hard limit
b) soft limit
c) units of measurement
d) all of the mentioned

10. The file /proc/[PID]/maps contains the
a) currently mapped memory regions
b) available memory regions

c) memory regions which are free to map

d) none of the mentioned

11. What is /proc/[PID]/root?

a) symbolic link that points to the process's root directory

b) regular file which holds all the PID of the system

c) root directory

d) does not exists in the proc filesystem

12. "ps" command uses the file _____ to provide the information.

a) /proc/[PID]/stat

b) /proc/[PID]/smaps

c) /proc/[PID]/oom_score_adj

d) /proc/[PID]/oom_score

13. Which one of the following is not correct?

a) proc filesystem does not contain any directory for thread in the process

b) in multithread process thread details will not be available if the main thread is already terminated

c) proc filesystem contain any directory

d) none of the mentioned

14. Proc filesystem does not contains

a) sub-directories for installed buses

b) device files

c) list of registered DMA

d) none of the mentioned

15. The file /proc/devices is the

a) text listing of major numbers

b) text listing of device groups

c) text listing of major numbers & device groups

d) none of the mentioned

16. The file /proc/cpuinfo is a collection of

a) cpu items

b) architecture independent items

c) both cpu items and architecture independent items

d) none of the mentioned

17. The proc filesystem records the number of interrupts

a) per CPU only

b) per IO device only

c) per CPU per IO device

d) none of the mentioned

18. Which file of the proc filesystem can be used instead of "syslog" system call to read kernel messages?

a) /proc/kmsg

b) /proc/moudle/kmsg

c) /proc/module/msg

d) /proc/msg

19. The file /proc/modules is a text list of

a) static modules

b) dynamic modules

c) modules that have been loaded by the system

d) none of the mentioned

20. /proc/partitions contains
a) major number of each partition
b) minor number of each partition
c) number of block and partition name
d) all of the mentioned

21. Which one of the following operating system does not supports proc filesystem?
a) IBM AIX
b) QNX
c) Solaries
d) None of the mentioned

22. Obtaining of the PID can be done by the utility
a) pgrep
b) pidof
c) ps
d) all of the mentioned

23. Which one of the following contains various bits of information about the state of power management?
a) /proc/acpi
b) /proc/apm
c) both /proc/acpi and /proc/apm
d) none of the mentioned

24. Which file contains the boot options passed to the kernel?
a) /proc/cmdline
b) /proc/root
c) /proc/boot
d) none of the mentioned

25. Which one of the following is a symlink to the root path as seen by the process?
a) /proc/[PID]/root
b) /proc/[PID]/path
c) both /proc/apm and /proc/[PID]/path
d) none of the mentioned

26. The directory /proc/[PID]/tasks contains
a) hard links to any task that have been started by this process
b) files that containing tasks that have been started by this process
c) sub-direcories of various tasks
d) none of the mentioned

27. The list of available frame buffers are stored in
a) /proc/[PID]/fb
b) /proc/fb
c) /proc/etc/fb
d) none of the mentioned

28. The buddy algorithm handles the
a) Memory fragmentation
b) DHCP server
c) Routing
d) None of the mentioned

29. The file /proc/swaps contains the

a) list of active swap partitions
b) sizes of the swap partitions
c) priorities of the swap partitions
d) all of the mentioned

30. /proc/tty contains the information about
a) current terminal
b) all terminals
c) both current & all terminals
d) none of the mentioned

31. The command "cd /proc/10/cwd" provides the
a) current working directory of process having PID 10
b) current status of the process having PID 10
c) current version of the filesystem
d) none of the mentioned

32. Which one of the following command will print the environement of process 1?
a) cat /proc/1/environ
b) cat /proc/bin/1/env
c) cat /proc/1/var/env
d) none of the mentioned

33. The file /proc/[PID]/mountinfo contains
a) major minor numbers of device files
b) root of the mount within the filesystem
c) mount point relative to the process's root
d) all of the mentioned
34. With the help of proc filesystem
a) kernel and kernel modules can send the information to processes
b) process information can be accessed
c) kernel modules can send the information to processes & process information can be accessed
d) none of the mentioned

35. Most files and directories within /proc are 0 bytes in size because
a) proc filesystem exists only as a reflection of the in-memory kernel data structure
b) these files contains very only one or two instructions
c) proc filesystem doesn't exists only as a reflection
d) none of the mentioned

36. Proc files are
a) read-only files
b) read-write files
c) both read-write and read-only files
d) none of the mentioned

37. Accessing the file /proc/meminfo gives the different result each time because
a) memory usages is always fluctuating
b) a new process id is assigned
c) logical address is different from the physical address
d) none of the mentioned

38. The files of /proc directory are
a) stored in secondary memory
b) generated by the kernel
c) stored in secondary memory & generated by the kernel

d) none of the mentioned

39. The directory /proc/net contains information about
a) Different network system compiled into the system
b) IP address of the system
c) MAC address of the system
d) None of the mentioned

40. The command "echo www.sanfoundry.com > /proc/sys/kernel/hostname" will
a) change the hostname
b) print "www.sanfoundry.com"
c) do nothing
d) none of the mentioned

42. Which file is used primarily for diagnosing memory fragmentation issues ?
a) /proc/buddyinfo
b) /proc/meminfo
c) /proc/apm
d) none of the mentioned

43. Which file shows the parameter passed to kernel at the time of starting?
a) /proc/apm
b) /proc/cmdline
c) both /proc/apm and /proc/cmdline
d) none of the mentioned

44. For the system having one processor, the processor identifying number in the file /proc/cpuinfo is
a) 0
b) 1
c) 2
d) 3

45. The file /proc/execdomains lists the
a) execution domains currently supported by the linux kernel
b) all domains of all processes
c) registered ISA DMA channel in use
d) none of the mentioned

46. The file /proc/kcore displays a size of
a) RAM
b) RAM plus 4 KB
c) RAM plus 8 KB
d) None of the mentioned

47. /bin/dmesg picks the messages from
a) /proc/kmesg
b) /sbin/klogd
c) both /proc/kmesg and /sbin/klogd
d) none of the mentioned

48. The file /proc/locks displays the file currently locked by the
a) kernel
b) user
c) superuser
d) none of the mentioned

49. The file /proc version shows the version of _____ used in the system.
a) kernel
b) gcc
c) both kernel and gcc
d) none of the mentioned

50. What is /proc/self ?
a) a directory
b) link to the currently running process
c) it allows a process to look itself without having to know its process ID
d) all of the mentioned

51. The /sbin/sysctl command is used to
a) view kernel settings in the /proc/sys/ directory
b) set kernel settings in the /proc/sys/ directory
c) automate kernel settings in the /proc/sys/ directory
d) all of the mentioned