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1. During the linux boot process, what happens immediately after the phase called "Load kernel"?
Device detection and configuration
2. How do you copy an entire directory structure? E.g. from Project to Project.backup
cp -r dir target_dir
3. Which process below is a "spontaneous process"?
Kflushd, kupdate, kpiod, kswapd, init
4. What is the name of the current Linux boot loader?
Grub
5. How do you direct the shell to execute a command in the background?
Type an ampersand (&) just before the return that ends the command line.
6. How do you display who is logged on to the system?
You can use the "who" or "w" (w gives the actual IP they logged in from)
7. What file specifies what the init process has to do at each run level?
/etc/inittab
8. How do you find out information about your identity, including the names of the groups you are in?
You can look in /etc/passwd or "ID" is the command you use
9. How many run levels are there?
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10. How do you see the permission of files in your home directory?
"ls /home/ -l" or "ls -al"
11. Where is your encrypted password stored?
"etc/shadow"
12. What is the first service that is terminated given the run control scripts?
K15httpd
13. Which command gracefully shuts down the system?
"shutdown"
14. How would you continuously display memory usage every 5 seconds?
"watch -n 5 free"
15. How would you display running httpd processes?
"ps -C httpd"
16. What command can be used to see paging activity? (paging activity is the process of putting pieces of the program from the hard disk into memory)
"VMstat"
17. Which of the following is a disk interface?
SCSI, IDE, Fibre Channel, USB
18. How would you change the file permissions for the file named csmo099 to r-- --x --x?
"chmod 411 csmo099" (4 is read, 1 is execute)
19. What is the benefit of logical volume?
It lets you combine partitions and drives to present an aggregate volume as a regular block

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device.

(Volume management basically finds space you can use without overriding certain files.)

20. What file is responsible for mounting file systems at boot?

"/etc/fstab"

21. How would you show process hierarchy in tree format for all processes?

"pstree"

22. What command would you use to install a package called nmap?

"sudo apt-get install nmap"

23. What is the interactive command to add a user?

"adduser"

24. How would you become the superuser?

You can use "su"

25. In DNS what happens after a client calls getbyhostname()?

Resolver sends a lookup request to the "first name server" it knows

26. DNS Servers that do all the work (queries and response) are known as:

Recursive

27. Suppose you are in your home directory, /home/raf as in diagram above. What is the relative path for the file called "save" in the email subdirectory?

"cd ./email/save" or "cd email/save"

28. The arpa branch in the DNS namespace is used for?

Reverse look up. It takes the IP address and maps it to a domain name

29. What file contains the ip of your primary nameserver?

"/etc/resolv.conf"

30. What DNS record type is used to specify host to name resolution?

The A record. When it reads the file, it encounters A, and it knows the regular host name.

31. Superuser privileges are required for

- **Changing the root directory of a process with "chroot"**
- **Creating device files**
- **setting the system clock**
- **raising resource usage limits and process priorities,**
- **setting the system's hostname**
- **configuring the network interface**
- **opening privileged network ports**
- **shutting down the system and changing process UID and GID**

32. What does the permission string rwx r-x r-- correspond with in octal?

Execute = x = 1 Write = w = 2 Read = r = 4. It corresponds to 754

33. What command can you use to get the host name of your primary server?

"nslookup"

34. What happens the first time you use the sudo command?

It'll ask you to enter the pwd

35. What file has to be modified to give a normal user root privileges?

"/etc/sudoers"

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36. What is the purpose of the following operator? >

Redirects

37. Which of the following is not a top level domain?

top level: com, edu, gov, mil, net, org, int, arpa, aero, biz, coop, info, jobs, museum, name, pro.

38. DNS defines?

Defines a hierarchical namespace for hosts and IP addresses, a distributed database of hostname and address info, a "resolver" – library routines that query this database improved routing for email, a mechanism for finding services on a network and a protocol for exchanging naming information.

39. DNS provides?

DNS provides hostname – IP lookup services.

40. Main task(s) for a desktop include?

Initial loading of system software and applications, updating system software and applications, and configuring network parameters.

41. Which features should a server have?

Redundant power supply, proper HVAC cooling.

42. Which command is used to check/repair issues with a filesystem?

"fsck"

43. Server appliances are typically not?

They do not require someone to be there at the console.

44. Which task is typically called by a startup script?

Setting name of computer, setting time zone, checking the disks with fsc, mounting the system disks, removing old files from /tmp, configuring network interfaces and starting daemons and network services.

45. Which run level allows full multiuser mode but with no graphical login manager?

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46. List 3 common tasks for a system administrator

Maintain hardware, user accounts, and documentation.

47. What is the difference between a daemon and process?

Daemon performs certain actions at certain times and isn't typically running while a process is usually running.

Main daemon is a client that responds to a client request. A process is any instantiation of a program.

48. Label the 4 states in the machine life-cycle diagram below. (View study guide)

- a. New
- b. Clean
- c. Configured
- d. Unknown
- e. off