Linux Mock Interview Questions & Answers (For DevOps)

1. 1. Q: What is the difference between Linux and Unix?

   A: Unix is proprietary and older, while Linux is an open-source Unix-like OS. Linux is widely used in servers, containers, DevOps, and cloud.

2. 2. Q: How do you check the Linux version?

   A: cat /etc/os-release | uname -r | lsb_release -a

3. 3. Q: Difference between absolute and relative path?

   A: Absolute: Full path from root `/` (e.g., `/home/user/file.txt`)
   Relative: Path with respect to current working directory (e.g., `../file.txt`).

4. 4. Q: What does pwd command do?

   A: Prints the present working directory.

5. 5. Q: How do you find hidden files in Linux?

   A: ls -a shows hidden files (files starting with `.`).

6. 6. Q: Difference between cp and mv?

   A: `cp` copies a file/directory.
   `mv` moves or renames.

7. 7. Q: How to create multiple files at once?

   A: touch file{1..10}.txt

8. 8. Q: What is the difference between hard link and soft link?

   A: Hard link → Same inode, cannot cross partitions, original deletion won't affect.
   Soft link → Points to path, can cross partitions, breaks if target is deleted.

9. 9. Q: How to find file size in Linux?

A: ls -lh file.txt OR du -sh file.txt

10. 10. Q: How to count lines, words, characters in a file?

A: wc -l -w -c file.txt

11. 11. Q: What is the difference between sudo and su?

A: `sudo` → Run a single command as root.
`su` → Switch user to root (or another user).

12. 12. Q: What does chmod 755 file.sh mean?

A: Owner → read/write/execute; Group & Others → read/execute.

13. 13. Q: How do you change file ownership?

A: chown user:group file.txt

14. 14. Q: How to lock and unlock a user account?

A: Lock: passwd -l username
Unlock: passwd -u username

15. 15. Q: How to check user's groups?

A: groups username

16. 16. Q: How do you check running processes?

A: ps -ef OR top OR htop

17. 17. Q: How to kill a process?

A: kill -9 <PID> OR pkill -f process_name

18. 18. Q: How to check system uptime?

A: uptime

19. 19. Q: How to check memory and CPU usage?

A: Memory → free -h
CPU → top OR vmstat

20. 20. Q: How do you check disk usage?

A: df -h → Disk space
du -sh * → Directory usage

21. 21. Q: How do you check IP address in Linux?

A: ip addr show OR ifconfig

22. 22. Q: How to test network connectivity?

A: ping google.com

23. 23. Q: How to check listening ports?

A: netstat -tulnp OR ss -tulnp

24. 24. Q: Difference between TCP and UDP?

A: TCP → Connection-oriented, reliable.
UDP → Connectionless, faster.

25. 25. Q: How to check DNS resolution?

A: nslookup domain.com OR dig domain.com

26. 26. Q: Difference between yum and apt?

A: `yum/dnf` → RHEL, CentOS, Fedora.
`apt` → Ubuntu, Debian.

27. 27. Q: How to search and install a package in RHEL?

A: yum search package
yum install package

28. 28. Q: How to update all packages in Ubuntu?

A: sudo apt update && sudo apt upgrade

29. 29. Q: How to check package details?

A: rpm -qi package (RHEL)
dpkg -l | grep package (Debian)

30. 30. Q: How to remove a package?

A: yum remove package OR apt remove package

31. 31. Q: Where are system logs stored?

A: /var/log/

32. 32. Q: How to view last 50 lines of a log file in real time?

A: tail -n 50 -f /var/log/messages

33. 33. Q: How to search for errors in logs?

A: grep -i error /var/log/syslog

34. 34. Q: How to check system boot logs?

A: dmesg | less

35. 35. Q: How to check failed login attempts?

A: cat /var/log/secure OR journalctl -xe

36. 36. Q: Write a script to print numbers 1 to 10.

A: for i in {1..10}; do echo $i; done

37. 37. Q: How to find number of running processes using script?

A: ps -ef | wc -l

38. 38. Q: Difference between sh and bash?

   A: `sh` → Basic shell.
`bash` → Advanced with more features.

39. 39. Q: How to make a script executable?

   A: chmod +x script.sh

40. 40. Q: How to schedule a script every day at midnight?

   A: crontab → 0 0 * * * /path/script.sh

41. 41. Q: How to check which process is using a port?

   A: lsof -i :8080

42. 42. Q: How do you troubleshoot high CPU usage in a container or VM?

   A: Use top, htop, ps aux --sort=-%cpu, then analyze logs.

43. 43. Q: How do you monitor disk space for automation alerts?

   A: Use df -h with scripts + cron + monitoring tools.

44. 44. Q: How do you check failed systemd services?

   A: systemctl --failed OR journalctl -u service

45. 45. Q: How do you analyze core dump files?

   A: ulimit -c unlimited + gdb program core

46. 46. Q: What is SELinux?

   A: Security-Enhanced Linux → kernel security module controlling access policies.

47. 47. Q: How do you find large files consuming disk space?

   A: find / -type f -size +500M

48. 48. Q: What is the difference between cron and at?

   A: cron → Repeated scheduled tasks.
at → One-time scheduled task.

49. 49. Q: How do you capture network packets for debugging?

   A: tcpdump -i eth0 port 80

50. 50. Q: How do you troubleshoot a server that is not booting?

   A: Check boot logs, GRUB config, rescue mode.