

Member ID: _____

Time: _____

Rank: _____



Linux Operating System Fundamentals (350)

REGIONAL 2025

Multiple Choice:

50 @ 2 points each

_____ (100 points)

Test Time: 60 minutes

GENERAL GUIDELINES:

Failure to adhere to any of the following rules will result in disqualification:

1. Member must hand in this test booklet and all printouts if any. Failure to do so will result in disqualification.
2. No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests (handwritten, photocopied, or keyed) are allowed in the testing area.
3. Electronic devices will be monitored according to ACT standards.

1. Which command is used to list all files and directories in the current directory?
 - A. ls
 - B. list
 - C. dir
 - D. show
2. How do you view the contents of a file in the terminal?
 - A. cat
 - B. see
 - C. view
 - D. open
3. Which command changes the current working directory?
 - A. cd
 - B. pwd
 - C. mv
 - D. dir
4. What command is used to display the current working directory?
 - A. cwd
 - B. pwd
 - C. dir
 - D. where
5. How do you search for a specific string within a file?
 - A. find
 - B. search
 - C. grep
 - D. locate
6. Which of the following commands shows the current users logged in to the system?
 - A. who
 - B. users
 - C. w
 - D. login
7. How do you schedule a job to run at a later time?
 - A. cron
 - B. at
 - C. schedule
 - D. timed

8. How do you create a symbolic link to a file?
 - A. link
 - B. symlink
 - C. ln -s
 - D. shortcut
9. Which command is used to switch to a different user account?
 - A. switch
 - B. su
 - C. user
 - D. sudo
10. What command do you use to display the last 10 lines of a file?
 - A. head
 - B. tail
 - C. end
 - D. view
11. Which command is used to terminate a process by its ID?
 - A. kill
 - B. end
 - C. terminate
 - D. stop
12. What is the default shell in most Linux distributions?
 - A. zsh
 - B. fish
 - C. bash
 - D. ksh
13. How do you list all currently set environment variables?
 - A. set
 - B. export
 - C. vars
 - D. env
14. How do you remove a directory and its contents recursively?
 - A. rm -r
 - B. deldir
 - C. rmdir -r
 - D. rm

15. Which command is used to shut down the Linux system immediately?
 - A. reboot
 - B. halt
 - C. shutdown -h now
 - D. poweroff
16. How do you reboot a Linux system?
 - A. shutdown -r now
 - B. restart
 - C. reboot
 - D. init 6
17. Which command is used to change the runlevel of a Linux system?
 - A. Runlevel
 - B. init
 - C. level
 - D. sysctl
18. What command shows the current runlevel?
 - A. runlevel
 - B. level
 - C. sysctl
 - D. init
19. How do you view the startup services in a systemd-based Linux distribution?
 - A. systemctl list-unit-files
 - B. service --status-all
 - C. chkconfig --list
 - D. systemctl list-services
20. Which command is used to view the system boot log?
 - A. dmesg
 - B. bootlog
 - C. logview
 - D. journalctl
21. How do you list all installed packages on a Debian-based system?
 - A. dpkg -l
 - B. apt list
 - C. rpm -qa
 - D. pkginfo

22. Which command is used to display information about all block devices?
- A. lsblk
 - B. blkid
 - C. fdisk -l
 - D. df
23. How do you create a new partition on a disk using fdisk?
- A. fdisk /dev/sda
 - B. fdisk -n
 - C. fdisk -c
 - D. fdisk -p
24. Which command is used to format a partition with the ext4 file system?
- A. mkfs.ext4
 - B. mkfs -t ext4
 - C. format -t ext4
 - D. mkpart ext4
25. How do you check the available disk space on all mounted file systems?
- A. df -h
 - B. du -h
 - C. lsblk -f
 - D. mount
26. Which command is used to resize an existing partition?
- A. resize2fs
 - B. growpart
 - C. parted resize
 - D. lvextend
27. If you have a 500GB disk, and you create three partitions of 100GB, 150GB, and 200GB, how much space is left?
- A. 0GB
 - B. 50GB
 - C. 100GB
 - D. 200GB
28. How do you add a new disk to a Linux LVM volume group?
- A. vgextend
 - B. lvextend
 - C. pvcreate
 - D. lvcreate

29. How do you display the size of all files in a directory in a human-readable format?
- A. `du -sh`
 - B. `df -h`
 - C. `ls -lh`
 - D. `size -h`
30. Which command is used to create a symbolic link to a file?
- A. `ln -s`
 - B. `link`
 - C. `symlink`
 - D. `ln`
31. How do you find files larger than 1GB in size in the /home directory?
- A. `find /home -size +1G`
 - B. `du -sh /home`
 - C. `locate /home -size +1G`
 - D. `ls -lh /home`
32. Which command is used to display the file system type of all mounted partitions?
- A. `df -T`
 - B. `lsblk -f`
 - C. `blkid`
 - D. `mount`
33. How do you configure a static IP address in a Debian-based system?
- A. Edit `/etc/network/interfaces`
 - B. Use `ipconfig`
 - C. Edit `/etc/sysconfig/network-scripts`
 - D. Use `ifup`
34. Which command is used to display the routing table in Linux?
- A. `route -n`
 - B. `ip route show`
 - C. `netstat -r`
 - D. `traceroute`
35. How do you permanently set the hostname in a Linux system?
- A. Edit `/etc/hostname`
 - B. Use `hostname` command
 - C. Use `hostnamectl` command
 - D. Edit `/etc/hosts`

36. Which command is used to add a new user in Linux?
- A. useradd
 - B. adduser
 - C. newuser
 - D. createuser
37. How do you change a user's password in Linux?
- A. passwd
 - B. chpasswd
 - C. usermod
 - D. chuser
38. Which file contains the encrypted passwords of users?
- A. /etc/shadow
 - B. /etc/passwd
 - C. /etc/group
 - D. /etc/security
39. How do you delete a user and their home directory in Linux?
- A. removeuser -h
 - B. deluser -r
 - C. rmuser -d
 - D. userdel -r
40. Which command is used to modify an existing user account?
- A. usermod
 - B. useradd
 - C. modifyuser
 - D. chuser
41. How do you lock a user account in Linux?
- A. passwd -l
 - B. usermod -N
 - C. lockuser
 - D. userdel -l
42. Which file contains the list of all users on the system?
- A. /etc/passwd
 - B. /etc/shadow
 - C. /etc/group
 - D. /etc/users

43. How do you create a user with a specific UID?
- A. `useradd -u`
 - B. `usermod -u`
 - C. `adduser -i`
 - D. `useradd -i`
44. Which command is used to view the last login times for all users?
- A. `lastlog`
 - B. `last`
 - C. `w`
 - D. `who`
45. How do you monitor real-time authentication logs on a Linux system?
- A. `tail -f /var/log/auth.log`
 - B. `watch /var/log/auth.log`
 - C. `cat /var/log/auth.log`
 - D. `monitor /var/log/auth.log`
46. Which command is used to list the currently active SSH sessions?
- A. `who`
 - B. `w`
 - C. `ss -t`
 - D. `last`
47. How do you temporarily disable all user logins without affecting root?
- A. `touch /etc/nologin`
 - B. `chmod 000 /etc/passwd`
 - C. `passwd -l all`
 - D. `service ssh stop`
48. Which file contains the list of users allowed to use sudo?
- A. `/etc/sudoers`
 - B. `/etc/passwd`
 - C. `/etc/group`
 - D. `/etc/security/sudo.conf`
49. How do you configure a user to be automatically logged out after 15 minutes of inactivity?
- A. `TMOU=900`
 - B. `TIMEOUT=900`
 - C. `export AUTOLOGOUT=15`
 - D. `idle-timeout 900`

50. Which command is used to monitor login attempts and failures?

- A. faillog
- B. lastlog
- C. loginlog
- D. authlog