Chapter 4

Short Questions with Answers

Q1: List down the User Related Commands?

- `login` → to log into UNIX.
- `rlogin` → remote login.
- `telnet` → remote access to another machine.
- `passwd` → change password.
- `exit` → logout.

Q2: Briefly explain login & rlogin command?

- **login:** Starts a session on UNIX system.
  - Example: `login ali`
- **rlogin:** Allows login to remote UNIX system.
  - Example: `rlogin server1`

Q3: What do you know about telnet command?

- Used to connect to another system remotely.
- Works on **port 23**.
- Less secure (passwords sent as plain text).
  - Example: `telnet 192.168.1.5`

Q4: Explain passwd & exit command briefly?

- **passwd:** Changes user password.
  - Example: `passwd` → enter old/new password.
- **exit:** Ends the session and returns to previous shell.
  - Example: `exit` logs out.

Q5: List down Locating Commands?

- `which`
- `whence`
- `where`
- `man`

Q6: Explain which Command?

- Shows path of a command.
  - Example: `which ls` → `/bin/ls`

Q7: Write a note on whence Command?

- Tells how shell would interpret a command.
- Shows whether it is a built-in, alias, or executable.
  - Example: `whence ls`

Q8: What do you know about where Command?

- Locates all possible paths of a command.
  - Example: `where ls`

Q9: Write a note on man command?

- Shows **manual pages** of UNIX commands.
  - Example: `man cp`

Q10: List down sections of man commands?

1. User commands.
2. System calls.
3. Library functions.
4. File formats.
5. Administrative commands.

Q11: List down the Process–Related Commands?

- `ps`, `kill`, `nice`, `jobs`, `wait`, `nohup`, `sleep`.

Q12: Explain kill Command briefly?

- Terminates a process using PID.
  - Example: `kill 1234`

Q13: Explain nice Command briefly?

- Runs a process with a **priority level**.
  - Example: `nice -n 10 myprogram`

Q14: Explain ps Command briefly?

- Displays process status.
  - Example: `ps -ef`

Q15: Write a note on jobs Command?

- Lists background and suspended jobs.
  - Example: `jobs`

Q16: What do you know about wait Command?

- Makes shell wait until all background processes finish.
  - Example: `wait %1`

Q17: What is the purpose of nohup command?

- Runs a command even after logout.
  - Example: `nohup ./script.sh &`

Q18: Write the use of sleep Command?

- Pauses for a given number of seconds.
  - Example: `sleep 5`

Q19: List down File Manipulation Commands?

- `touch`, `chmod`, `chgrp`, `chown`, `rm`, `mv`, `cp`.

Q20: Write a note on touch Command?

- Creates an empty file or updates timestamp.
  - Example: `touch file1.txt`

Q21: Explain chmod Command?

- Changes file permissions.
  - Example: `chmod 755 file.sh`

Q22: Explain chgrp Command?

- Changes file's group ownership.
  - Example: `chgrp students file1`

Q23: Explain chown Command?

- Changes file owner.
  - Example: `chown ali file1`

Q24: Explain rm Command?

- Removes files.
  - Example: `rm file1.txt`

Q25: Explain mv Command?

- Moves or renames a file.
  - Example: `mv file1.txt file2.txt`

Q26: Explain cp Command?

- Copies file/directory.
  - Example: `cp file1.txt backup/`

Q27: List down Directory Manipulation Commands?

- `mkdir`, `rmdir`, `cd`, `pwd`.

Q28: Explain mkdir Command?

- Creates a new directory.
  - Example: `mkdir mydir`

Q29: Explain rmdir Command?

- Removes an empty directory.
  - Example: `rmdir mydir`

Q30: List down File Content Commands?

- `more`, `less`, `head`, `tail`, `wc`, `read`, `tee`, `strings`.

Q31: Explain more Command?

- Views file content page by page.
  - Example: `more notes.txt`

Q32: Explain less Command?

- Similar to `more`, but allows backward navigation.
  - Example: `less notes.txt`

Q33: Explain tail Command?

- Displays last lines of a file.
  - Example: `tail -n 10 logfile.log`

Q34: Explain head Command?

- Displays first lines of a file.
  - Example: `head -n 5 notes.txt`

Q35: Explain wc Command?

- Counts lines, words, and characters.
  - Example: `wc notes.txt`

Q36: Explain read Command?

- Reads input from user.
  - Example: `read name`

Q37: Explain tee Command?

- Sends output to both terminal and file.
  - Example: `ls | tee filelist.txt`

Q38: List down File Content Search Commands?

- `fgrep`, `strings`, `grep`.

Q39: Explain fgrep Command?

- Searches fixed strings in file.
  - Example: `fgrep "main" program.c`

Q40: Explain strings Command?

- Extracts readable text from binary file.
  - Example: `strings a.out`

Q41: List down Printing Commands?

- `cancel`, `lp`, `pr`, `lpstat`.

Q42: Explain cancel Command?

- Cancels print job.
  - Example: `cancel 123`

Q43: Explain lp Command?

- Sends a file to printer.
  - Example: `lp file1.txt`

Q44: Explain pr Command?

- Formats a file for printing.
  - Example: `pr file1.txt | lp`

Q45: Explain lpstat Command?

- Shows status of printer queue.
  - Example: `lpstat -a`

Q46: List down Scheduling Commands?

- `at`, `atq`, `crontab`.

Q47: Explain at Command?

- Schedules a command to run once at a given time.
  - Example: `at 5pm`

Q48: Explain atq Command?

- Shows list of pending `at` jobs.
  - Example: `atq`

Q49: Explain crontab Command?

- Schedules tasks repeatedly at fixed times.
  - Example: `crontab -e`

Q50: List down Status Commands?

- `compress`, `cpio`, `dd`, `pcat`, `pack`, `uncompress`, `unpack`.

Q51: Explain compress Command?

- Compresses files to save space.
  - Example: `compress file.txt`

Q52: Explain cpio Command?

- Copies files to/from archives.
  - Example: `cpio -id < backup.cpio`

Q53: Explain dd Command?

- Converts and copies files at block level.
  - Example: `dd if=/dev/sda of=disk.img`

Q54: Explain pcat Command?

- Displays contents of packed files.
  - Example: `pcat file.z`

Q55: Explain pack Command?

- Compresses file into `.z` format.
  - Example: `pack file1`

Q56: Explain uncompress Command?

- Restores compressed file.
  - Example: `uncompress file1.Z`

Q57: Explain unpack Command?

- Restores `.z` packed file.
  - Example: `unpack file1.z`

Q58: List down Storage Commands?

- `date`, `env`, `iostat`, `sar`, `uptime`, `vmstat`.

Q59: Explain date Command?

- Shows or sets system date and time.
  - Example: `date`

Q60: Explain env Command?

- Displays environment variables.
  - Example: `env`

Q61: Explain iostat Command?

- Shows CPU and I/O statistics.
  - Example: `iostat -c 2`

Q62: Explain sar Command?

- Collects and reports system activity.
  - Example: `sar -u 5 3`

Q63: Explain uptime Command?

- Shows how long the system has been running.
  - Example: `uptime`

Q64: Explain vmstat Command?

- Shows memory, CPU, and process statistics.
  - Example: `vmstat 5`

Long Questions with Answers

Q1: What do you know about User Related Commands? Explain any three.

- **login:** Starts session.
- **rlogin:** Remote login.
- **telnet:** Connects remotely to another host.
  - These allow user access and authentication.

Q2: Explain Locating Commands with four examples.

- **which:** Shows command path.
- **whence:** Explains how shell interprets command.
- **where:** Shows all possible locations.
- **man:** Displays manual pages.

Q3: Write a note on Process Related Commands with examples.

- **ps:** Shows process status.
- **kill:** Terminates process.
- **nice:** Changes process priority.
- **jobs:** Lists background processes.

Q4: Explain Directory Manipulation Commands with examples.

- **mkdir mydir** → create directory.
- **rmdir mydir** → remove empty directory.
- **cd mydir** → change directory.
- **pwd** → print current path.

Q5: Explain File Manipulation Commands with examples.

- **touch new.txt** → create file.
- **rm old.txt** → delete file.
- **mv file1 file2** → rename/move file.
- **cp file1 backup/** → copy file.

Q6: Explain File Content Search Commands with three examples.

- **fgrep "word" file.txt** → find exact word.
- **strings a.out** → extract readable text.
- **grep "pattern" file.txt** → search using pattern.

Q7: What do you know about Printing Commands? Explain with three examples.

- **lp file.txt** → send file to printer.
- **cancel 123** → cancel print job.
- **lpstat -a** → show printer status.

Q8: What do you know about Scheduling Commands? Explain with three examples.

- **at 5pm** → run task once at 5pm.
- **atq** → check pending jobs.
- **crontab -e** → schedule repeated jobs.

Q9: What do you know about Storage Commands? Explain with three examples.

- **date** → display/set date.
- **env** → show environment variables.
- **vmstat 5** → show system statistics.

Q10: Write a note on any two of the following commands.

- **bc:** Calculator command.
- **calendar:** Shows calendar.
- **clear:** Clears terminal screen.
- **time:** Displays execution time of a command.