

| PCA 1 with Answers (Please refer sir's questions)

| UNIX Commands – Problem, Command and Expected Output

| 1

Problem: Print full path of current working directory

Command:

```
$ pwd
```

Expected Output:

```
/home/student
```

| 2

Problem: Display list of users currently logged in

Command:

```
$ who
```

Expected Output:

```
student pts/0 Feb 16 10:20  
user1 pts/1 Feb 16 10:45
```

| 3

Problem: Print current logged-in username

Command:

```
$ whoami
```

Expected Output:

```
student
```

| 4

Problem: Display current system date and time

Command:

```
$ date
```

Expected Output:

```
Mon Feb 16 20:10:15 IST 2026
```

| 5

Problem: Display only current year

Command:

```
$ date +%Y
```

Expected Output:

```
2026
```

| 6

Problem: Show current month calendar

Command:

```
$ cal
```

Expected Output:

```
February 2026  
Su Mo Tu We Th Fr Sa
```

```
1 2 3 4 5 6 7
```

```
...
```

| 7

Problem: Show calendar for August 2028

Command:

```
$ cal 8 2028
```

Expected Output:

```
August 2028
Su Mo Tu We Th Fr Sa
...
```

| 8

Problem: Show calendar for year 2027

Command:

```
$ cal 2027
```

Expected Output:

```
Calendar of year 2027 displayed
```

| 9

Problem: List files and count entries using pipeline

Command:

```
$ ls | wc -l
```

Expected Output:

5

| 10

Problem: Display data.txt and count number of lines

Command:

```
$ cat data.txt | wc -l
```

Expected Output:

20

| 11

Problem: View report.txt page by page and count words

Command:

```
$ more report.txt  
$ cat report.txt | wc -w
```

Expected Output:

350

| 12

Problem: Count number of files using pipeline

Command:

```
$ ls | wc -l
```

Expected Output:

10

| 13

Problem: Display notes.txt page wise and count lines

Command:

```
$ more notes.txt  
$ cat notes.txt | wc -l
```

Expected Output:

```
25
```

| 14

Problem: Create report.txt and copy to backup.txt

Command:

```
$ touch report.txt  
$ cp report.txt backup.txt
```

Expected Output:

```
File copied successfully
```

| 15

Problem: Copy notes.txt to /home/student/docs

Command:

```
$ cp notes.txt /home/student/docs
```

Expected Output:

```
(no output)
```

| 16

Problem: Copy file1.txt file2.txt file3.txt to archive

Command:

```
$ cp file1.txt file2.txt file3.txt archive/
```

Expected Output:

```
(no output)
```

| 17

Problem: Copy project directory to /backup

Command:

```
$ cp -r project /backup
```

Expected Output:

```
Directory copied
```

| 18

Problem: Copy with overwrite confirmation

Command:

```
$ cp -i data.txt data_backup.txt
```

Expected Output:

```
overwrite data_backup.txt? (y/n)
```

| 19

Problem: Rename oldname.txt to newname.txt

Command:

```
$ mv oldname.txt newname.txt
```

Expected Output:

```
(no output)
```

| 20

Problem: Move image.png to pictures directory

Command:

```
$ mv image.png /home/user/pictures
```

Expected Output:

```
(no output)
```

| 21

Problem: Copy only if source is newer

Command:

```
$ cp -u source.txt dest.txt
```

Expected Output:

```
Copied if newer
```

| 22

Problem: Move report.txt with backup of destination

Command:

```
$ mv -b report.txt report_final.txt
```

Expected Output:

```
Backup created if destination exists
```

| 23

Problem: Delete temp.txt

Command:

```
$ rm temp.txt
```

Expected Output:

```
(no output)
```

| 24

Problem: Delete multiple files

Command:

```
$ rm file1.txt file2.txt file3.txt
```

Expected Output:

```
(no output)
```

| 25

Problem: Delete data.txt with confirmation

Command:

```
$ rm -i data.txt
```

Expected Output:

```
remove regular file 'data.txt'?
```


| 26

Problem: Delete old.log without warning

Command:

```
$ rm -f old.log
```

Expected Output:

```
(no output)
```

| 27

Problem: Delete empty directory backup

Command:

```
$ rmdir backup
```

Expected Output:

```
(no output)
```

| 28

Problem: Delete project directory with contents

Command:

```
$ rm -r project
```

Expected Output:

```
Directory deleted
```

| 29

Problem: Delete directory interactively

Command:

```
$ rm -ri testdir
```

Expected Output:

```
remove file ... ?
```

| 30

Problem: Delete empty directories dir1 dir2 dir3

Command:

```
$ rmdir dir1 dir2 dir3
```

Expected Output:

```
(no output)
```

| 31

Problem: Use bc → 25 + 37

Command:

```
$ echo "25+37" | bc
```

Expected Output:

```
62
```

| 32

Problem: Divide 10 by 3 (2 decimal places)

Command:

```
$ echo "scale=2;10/3" | bc
```

Expected Output:

3.33

| 33

Problem: 5 raised to power 3

Command:

```
$ echo "5^3" | bc
```

Expected Output:

125

| 34

Problem: Square root of 144

Command:

```
$ echo "sqrt(144)" | bc
```

Expected Output:

12

| 35

Problem: Evaluate $(8+2)*5-6$

Command:

```
$ echo "(8+2)*5-6" | bc
```

Expected Output:

44

| 36

Problem: Create directory projects

Command:

```
$ mkdir projects
```

Expected Output:

```
(no output)
```

| 37

Problem: Create directory structure college/bca/semester1

Command:

```
$ mkdir -p college/bca/semester1
```

Expected Output:

```
Directories created
```

| 38

Problem: Move to /home/user/docs

Command:

```
$ cd /home/user/docs
```

Expected Output:

```
(no output)
```

| 39

Problem: Move one level up

Command:

```
$ cd ..
```

Expected Output:

```
(no output)
```

| 40

Problem: Create practice directory and enter it

Command:

```
$ mkdir practice  
$ cd practice
```

Expected Output:

```
(no output)
```

If you want, I can also give you a **MAKAUT lab-record perfect version** (exact formatting teachers expect — very scoring for practical copy).