

Q1. A) Write and execute the following Commands on Linux

- i) Create file student.txt and display size of file in bytes.

```
touch student.txt
stat -c %s student.txt
```

- ii) Count number of files in current working directory.

```
ls -l | grep -v '^d' | wc -l
```

- iii) Redirect output of long listing of directories in abc.txt

```
ls -l > abc.txt
```

- iv) Create file as follows and write commands for same.

Linux Unix Solaris HP-UX AIX

Write a linux command to merge a file by pasting the data into 2 columns

```
paste - - < file.txt
```

- v) Write vi command to delete first n lines.

```
ndd
```

Q1.B) Write a shell script to accept a file name and display its contents.

```
#!/bin/bash
if [ $# -ne 1 ]; then
    echo "Usage: $0 <file_name>"
    exit 1
fi

file_name=$1

if [ ! -f "$file_name" ]; then
    echo "File $file_name does not exist."
    exit 1
fi

cat "$file_name"
```

Q2. Write menu driven program to perform arithmetic operations.

```
#!/bin/bash
echo "Enter the first number:"
read a
echo "Enter the second number:"
read b

while true; do
    echo -e "\nChoose an operation:"
    echo "1. Addition"
    echo "2. Subtraction"
    echo "3. Multiplication"
    echo "4. Division"
    echo "5. Exit"
    read -p "Enter your choice: " choice

    case $choice in
        1)
            echo "Result of addition: $((a + b))"
            ;;
        2)
            echo "Result of subtraction: $((a - b))"
            ;;
        3)
            echo "Result of multiplication: $((a * b))"
            ;;
        4)
            if [ $b -ne 0 ]; then
                echo "Result of division: $((a / b))"
            else
                echo "Error: Division by zero"
            fi
            ;;
        5)
            echo "Exiting..."
            exit 0
            ;;
        *)
            echo "Invalid choice. Please enter a number between 1 and 5."
            ;;
    esac
done
```

Or

Q2. Write a shell script to display odd numbers and their sum.

```
#!/bin/bash sum=0
echo "First 10 odd numbers:"
for ((i = 1; i <= 19; i += 2)); do
    echo $i
    sum=$((sum + i))
done
echo "Sum of the first 10 odd numbers: $sum"
```