

1. What is a bash shell script? Give one example. (CO4)

Ans. A bash shell script is a text file which contains a series of Linux commands written to be executed by the Bash.

```
1 #!/bin/bash
2 # This is a simple Bash script
3 echo "Hello, World!"
```

```
priyanshu@priyanshu:~$ gedit hello.sh
priyanshu@priyanshu:~$ chmod +x hello.sh
priyanshu@priyanshu:~$ ./hello.sh
Hello, World!
priyanshu@priyanshu:~$
```

2. Write a simple shell script to print "Hello World". (CO4)

Ans.

```
1 #!/bin/bash
2 # This is a simple Bash script
3 echo "Hello World"
```

```
priyanshu@priyanshu:~$ gedit hello.sh
priyanshu@priyanshu:~$ chmod +x hello.sh
priyanshu@priyanshu:~$ ./hello.sh
Hello World
priyanshu@priyanshu:~$
```

3. What is the purpose of comments (#) in a shell script? (CO4)

Ans. The purpose of comments (#) in a shell script is to add explanation or notes that make the code easier to understand.

4. How do you declare variables (int, float, double, string, Boolean, and char) in a shell script? (CO4)

Ans.

For integers

```
1 num1=5
2 num2=10
3 sum=$((num1+num2))
4 echo "Sum: $sum"
```

For float

```
1 a=5.5
2 b=2.3
3 result=$(echo "$a + $b" | bc)
4 echo "Result: $result"
```

For boolean

```
1 is_valid=true
2 if [ "is_valid"=true ];then
3     echo "Valid!"
4 fi
```

5. Write a shell script to display the current date and time of the system. (CO4)

Ans.

```
1 #!/bin/bash
2 #This script displays the current date and time
3
4 echo "Current Date and Time:"
5 date
```

```
priyanshu@priyanshu:~$ gedit datetime.sh
priyanshu@priyanshu:~$ chmod +x datetime.sh
priyanshu@priyanshu:~$ ./datetime.sh
Current Date and Time:
Tue Oct 14 12:30:11 AM IST 2025
priyanshu@priyanshu:~$
```

6. Explain the difference between a constant and a variable in bash script. (CO4)

Ans.

Constant	Variable
It is a value that can change during script execution	It is a value that cannot be changed once assigned
It is assigned normally using =	It is declared using the readonly command or declare -r command
It is used when the values need to be modified or updated	It is used when the value need not to be changed
Example- count=5	Example- readonly PI=3.14

7. Write a shell script to read two integer number from the user and compute the sum of both the number. (CO4)

Ans.

```
1 num1=5
2 num2=10
3 sum=$((num1+num2))
4 echo "Sum: $sum"
```

8. What is the use of source command in shell scripting? (CO4)

Ans. The source command in the shell scripting is used to run a script in the current shell instead of starting a new shell. By this, any variable, functions or changes made by the script will stay in the current session.

9. How can you debug a shell script? Give two methods. (CO4)

Ans. We can debug a shell script using the following 2 methods-

1. Using -x command
2. Using -n option

10. Write a bash script to create and delete a file. (CO4)

Ans.

```
1 #!/bin/bash
2
3
4 echo "Enter the file name:"
5 read filename
6
7 touch "$filename"
8 echo 'File '$filename' created.'
9
10 sleep 2
11
12
13
14 rm "$filename"
15 echo "File '$filename' deleted."
```