

Operating Systems Lab: CSE 4510 (B)
Mid Test, Total Marks: 30

Name _____ ID _____ Section _____

Please answer questions 1 to 10 in this table:

1	2	3	4	5	6	7	8	9	10

1. What is the correct command to delete a directory in Linux?
 - A) dlt directory
 - B) remove directory
 - C) rm directory
 - D) rm -r directory
2. What is the purpose of the 'chmod a+x filename' command?
 - A) Makes 'filename' hidden
 - B) Changes the owner of 'filename'
 - C) Adds execute permission for all users to 'filename'
 - D) Removes all permissions from 'filename'
3. Which of the following Bash commands can be used to rename a file?
 - A) `mv oldname.txt newname.txt`
 - B) `cp oldname.txt newname.txt`
 - C) `rm oldname.txt newname.txt`
 - D) `cat oldname.txt > newname.txt`
4. What does the command 'grep -i "pattern" file' do?
 - A) Searches for "pattern" in file, ignoring case
 - B) Searches for "pattern" in file, case-sensitive
 - C) Searches for inverted "pattern" in file
 - D) Searches for all patterns except "pattern" in file
5. In Bash, how do you check if a number is greater than 100 in an if statement?
 - A) `if [$num < 100]`
 - B) `if [$num -gt 100]`
 - C) `if ($num > 100)`
 - D) `if { $num -gt 100 }`

6. What is the output of 'echo \$((10 / 3))'?

- A) 3.33
- B) 3
- C) 4
- D) Error

7. What will be the output of the following script?

```
counter=0
while [ $counter -lt 3 ]
do
    echo "$counter"
    ((counter++))
done
```

- A) 1 2 3
- B) 0 1 2
- C) 0 1 2 3
- D) Script will run in an infinite loop

8. What is the output of this script?

```
function math_operation() {
    result=$(( $1 $2 $3 ))
    echo $result
}
math_operation 10 + 5
math_operation 20 - 7
```

- A) 15 13
- B) 10 + 5 20 - 7
- C) Error
- D) 15 followed by an error

9. Analyze the following Bash script and determine its output:

```
x=1
myfunc() { local x=2; ((x++)); echo $x; }
myfunc
echo $x
```

- A) 2 2

- B) 3 1
- C) 1 1
- D) 3 2

10. What is the output of the following code snippet?

```
function check_number {  
    if [ $1 -gt 10 ]  
    then  
        echo "Greater"  
        return 0  
    else  
        echo "Smaller or equal"  
        return 1  
    fi  
}
```

```
check_number 15  
if [ $? -eq 0 ]  
then  
    echo "Success"  
else  
    echo "Failure"  
fi
```

- A) Greater Success
 - B) Greater Failure
 - C) Smaller or equal Failure
 - D) Smaller or equal Success
11. Write a bash script that counts how many .sh files exist in the current directory and prints the count. [5]
12. Write a bash script that moves the .pdf files into 'books' folder and the .mp3 files into 'songs' folder from current directory. If the 'books' and 'songs' directory don't exist, the script should create them first. [5]
13. Write a function that takes a keyword as argument, finds all files containing the keyword and deletes them from the current directory. [5]
14. Write a Bash script that checks if a file named users.txt contains the line "admin" in the 3rd line and prints "Admin exists" if it does, or "No admin" if it doesn't. [5]