Subject: Linux Summer Training 2023 **Total Duration: 1 hour and 30 minutes**
Model: A **Total Number of Pages: 4**

Name: **ID:**

Answer the following 3 questions. **(Total Mark: 60)**

Question 1 (True / False)	**20 Points**

1. `**pwd**` is used to list directory contents. **( )**
2. An **Archive file** is a collection of files and directories that are stored in one file. **( )**
3. Everything besides the kernel is a package in **Linux**. **( )**
4. "`OsC_Linux`" is considered a **WORD** in vim. **( )**
5. `**SIGKILL**` is used to request a process to terminate gracefully. **( )**
6. `**sudo apt update**` is used to upgrade all packages on a system. **( )**
7. Moving a **Hard link** across file systems could corrupt the link. **( )**
8. Only root user and users with sudo privileges can use the `**passwd**` command. **( )**
9. In regex, the symbol ***** matches the previous character zero or more times. **( )**
10. The regex **[A-Z]+** matches zero or more consecutive uppercase letters in a string. **( )**

Question 2 (Choose the correct answer)	**20 Points**

1. Which of the following is/are considered contents of packages metadata ?
   a) version b) dependencies c) signatures d) All the previous

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2. "`<h1> Vim is amazing </h1>`". What is the best way to make the inner text uppercase?
   a) cit b) gUit c) gui< d) gua>

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3. Which of the following paths is an example of an absolute path in Linux?

a) /home/user/documents b) documents/ c) ../files d) ./files

4. Zack wants to run `**`firefox`**` in the background. How could he accomplish that ?

a) firefox > b) jobs firefox c) firefox ^ d) firefox &

5. Which of the following is/are example(s) of a Daemon (background) process ?

a) Network Manager b) Firefox c) File Manager d) All the previous

6. Zack wants to redirect stdout and stderr of a program to a file. Which redirection should he use ?

a) >> file 2>&1 b) &<< file c) &>> file d) A and C

7. You work as a Linux system administrator. You are tasked with finding the UID and GIDs of the user **'thomas'**. What should you do ?

a) id b) ps thomas c) users thomas d) id thomas

8. Kevin is looking for his backup file, but all he could remember is the file size '512 byte'. Can you help him track it down ?

a) locate -size 512 byte b) find . -size 512 ct) find . -size 512c d) find . -size 512b

9. John wants to count the number of words in a file. How can you make John's life easier?

a) cat file.txt | wc -l b) cat file.txt > wc -c c) ls file.txt | wc -w d) cat file.txt | wc -w

10. The pattern “**a.b+c”** will match:

a) ac b) abc c) abbc d) abbbd

Question 3	20 Points

1. What does this block of commands do (if num is equal to 1) ? **(5 Points)**

```
while [[ $num -lt 11 ]]
do
    if [[ num -eq 3 ]]
    then
        let num+=1
        continue
    elif [[ num -eq 10 ]]
    then
        break
    fi
    echo $num
    let num+=1
done
```

a) Output: 1 → 11
b) Output: 1 → 9
c) Output: 1 → 11 excluding 3 &10
d) Output: 1 → 9 excluding 3

2. What does this script do ? **(5 Points)**

```
function hello
{
    for i in $(seq 1 $1)
    do
        echo "Hello $i!"
    done
}

echo "Enter a number: "
read num
hello $num
```

a) Prints a series of **"Hello"** with an increasing number from 1 to **num**
b) Prints **"Hello $i!" num** times
c) Error
d) Infinity loop and nothing is printed

3. Given this output. Answer the following questions. **(10 Points)**

```
-rwx-wx--x 1 osc osc 0 Aug 21 15:33 myFile
```

1. What are the user permissions ? **(2 Points)**

2. What are the group permissions ? **(2 Points)**

3. Who is the owner of the file ? **(2 Points)**

4. Write the command to make **people who aren't the user or people in his group** able to read and execute the file, other owners will stay the same. (use **symbolic** mode).

(2 Points)

5. If we have another user called **‘penguin’**. How can we give **‘penguin’** ownership of this file ?

(2 Points)

Good Luck
OSC Team