Question 1:
You are logged into a Linux server via SSH. Perform the following tasks:

1. Create a new directory called "exam_directory" in your home directory.
2. Create a new file called "exam_file.txt" inside the "exam_directory" directory.
3. Open the "exam_file.txt" file and add the following content to it:

> This is my exam file.
> Welcome to the Linux exam!

4. Display the contents of the "exam_file.txt" file on the terminal.
5. Rename the "exam_file.txt" file to "final_exam.txt".
6. Create a compressed archive of the "exam_directory" directory, named "exam_archive.tar.gz".
7. Remove the entire "exam_directory" directory and its contents.

Perform these tasks using appropriate Linux commands and provide the commands you would use to accomplish each task.

Question 2:
You are working on a Linux system and need to perform the following tasks:

1. Check the system's current date and time.
2. Create a new user account named "exam_user" with a home directory and a login shell.
3. Set a password for the "exam_user" account.
4. Grant the "exam_user" account sudo privileges.
5. List all the users on the system.
6. Display the current disk usage for the system.
7. Show the IP address assigned to the system.
8. Install the "httpd" package using the package manager.
9. Start the Apache web server.
10. Configure the Apache web server to serve a default "index.html" file from the "/var/www/html" directory.
11. Open a web browser and confirm that the Apache server is running by accessing the system's IP address.

Perform these tasks using appropriate Linux commands and provide the commands you would use to accomplish each task.

Question 3:
Write a Bash shell script that performs the following actions:

1. Prompts the user to enter their name.
2. Stores the name in a variable.
3. Displays a greeting message using the entered name.

4. Saves the script as "greeting.sh" and executes it.
5. Create a text file and input the given text

Cricket is a captivating sport that has captured the hearts of millions worldwide. Originating in England and now played in numerous countries, cricket is renowned for its rich history, strategic gameplay, and passionate fan base. It is a bat-and-ball game played between two teams, with the objective of scoring runs while simultaneously dismissing the opposition's batsmen. Cricket is played on a large oval field, and matches can span several days or be condensed into shorter formats such as One Day Internationals and Twenty20s. The sport demands a combination of skill, patience, and teamwork, as players navigate a variety of factors including pitch conditions, weather, and different styles of bowling and batting. Whether it's the exhilarating excitement of a six being hit out of the park or the tension-filled battles between bowlers and batsmen, football , offers a spectacle that continues to captivate sports enthusiasts worldwide.

Now replace the word football with word cricket using linux command.

Question 5:
Find the process named "httpd" and identify its process ID (PID). Terminate the "httpd" process and restart it.

1. Find all running processes
2. Use the appropriate command to search for the process named "httpd".
3. Once you have identified the process ID (PID) of the "httpd" process, use the correct command to terminate it.
4. Confirm that the "httpd" process has been successfully terminated.
5. Restart the "httpd" process using the appropriate command.
6. Verify that the "httpd" process has been restarted and is running.

Question 4:
You are working with Amazon Web Services (AWS) and need to perform the following tasks related to Amazon VPC and Amazon EC2:

1. Create a new Amazon VPC with the following specifications:
   CIDR block: 10.0.0.0/16
2. Create two subnets within the VPC:

   Subnet 1(public):
   CIDR block: 10.0.0.0/24
   Availability Zone: us-east-1a
   Subnet 2 (private):
   CIDR block: 10.0.1.0/24

Availability Zone: us-east-1b

3. Create an internet gateway and attach it to the VPC.

4. Create a route table for each subnet (private and public) . Think wisely for using NAT gateway and Internet gateway in route..

5. Launch two Amazon EC2 instances, each in a different subnet, with the following specifications:

   Instance type: t2.micro
   AMI (Amazon Machine Image): Amazon Linux 2
   Security group: Allow SSH (port 22) inbound traffic from your IP address

6. Connect to each EC2 instance using SSH.

7. Install Apache web server on both EC2 instances.

8. Create an index.html file Configure the Apache web server on a public EC2 instance to serve the index.html file.

```
#!/bin/bash
sudo yum update -y
sudo yum install -y httpd
sudo service httpd start
echo "<html><body><h1>Hello World!</h1></body></html>" >
/var/www/html/index.html
```

9. Test the connectivity to public EC2 instance by accessing the index.html file through a web browser.

Perform these tasks using appropriate AWS services and provide the steps you would take to accomplish each task.