**General Instructions:**

* **Follow the instructions given in each section.**
* **Make sure that you attempt the questions in order.**

**SECTION-A (10\*1 mark=10 marks)**

***(All questions are compulsory)***

Q1. Which command displays the system's current date and time?

a. uptime

**b. date**

c. hostname

d. uname

Q2. Which command displays information about the current running processes?

a. uptime

**b. ps**

c. which

d. nice

Q3. Which command is used to run a command in the background?

a. fg

b. ps

**c. bg**

d. nice

Q4. Which command is used to display network interface configuration information?

**a. ifconfig**

b. ping

c. traceroute

d. netstat

Q5. Which command is used to troubleshoot DNS issues?

a. ifconfig

b. ping

c. traceroute

**d. nslookup**

Q6. Which command is used to create a new shell script file?

a. touch

**b. cat**

c. nano

d. echo

Q7. Which type of shell is commonly used in Linux systems?

a. cmd

**b. bash**

c. powershell

d. zsh

Q.8 What is the command used to display the current working directory?

**a. pwd**

b. ls

c. cd

d. echo

Q.9 Which command is used to display a calendar for a specific month and year?

a. date

**b. cal**

c. bc

d. uptime

Q10. Which command is used to terminate a process in Linux?

**a. kill**

b. stop

c. pause

d. exit

**SECTION-B (5\*2 mark=10 marks)**

***(All questions are compulsory)***

Q1. How can you use the 'bc' command to calculate the value of 5 raised to the power of 3?

**a. echo "5 \* 5 \* 5" | bc**

b. echo "5 ^ 3" | bc

c. echo "5 \*\* 3" | bc

d. echo "5 ^^^ 3" | bc

Q2. Which command is used to display a calendar for a specific month and year?

a. cal

b. date

**c. cal -m**

d. cal -y

Q3. What does the 'nice' command do?

a. Displays the current system load average

b. Starts a process in the background

**c. Changes the priority of a process**

d. Kills a process

Q4. Which command is used to send a running process to the background?

**a. bg**

b. fg

c. ps

d. kill

Q5. Which command can you use to check the network connectivity between two hosts?

**a. ping**

b. traceroute

c. ifconfig

d. nslookup

**SECTION-C() (4x5 marks=20 marks)**

Q1. How would you use the "lsof" command to troubleshoot a network connection issue?

Answer: The "lsof" command can be used to identify which processes have open network connections. To troubleshoot a network connection issue, you can use "lsof -i" to list all processes with network connections. You can then filter the output to identify the process associated with the problematic connection.

Q2. Write commands to execute following:

a.display the current date and time on the command line

Answer: Use the date command. For example, date +"%Y-%m-%d %H:%M:%S" will display the date and time in the format of "year-month-day hour:minute:second".

b.How do you check the system uptime?

Answer: Use the uptime command. It will display the current time, how long the system has been running, the number of users currently logged on, and the system load averages for the past 1, 5, and 15 minutes.

Q3. You have recently installed a new operating system on your server and want to check the system details.

a) Which command will you use to find the uptime of the system?

b) How can you find the system hostname?

Answer:

a) To find the uptime of the system, we can use the "uptime" command.

b) To find the system hostname, we can use the "hostname" command.

Q4.You want to manage running processes on your Linux system.

a) How can you see the list of running processes using the "ps" command?

b) How can you move a process from the foreground to the background using the "bg" command?

Answer:

a) To see the list of running processes, we can use the "ps" command with the "-ef" option.

b) To move a process from the foreground to the background, we can use the "bg" command followed by the job ID of the process.