**Roll No…………….. Total No. of Pages:……**

**Linux System Administration**

**Time allowed: 90 Minutes Max. Marks: 40**

**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)***

1. What is the vim editor in Linux?

A) A graphical text editor

B) A command line text editor

C) An integrated development environment

D) A word processor

Answer: B) A command line text editor

2. What is CentOS in Linux?

A) A distribution for servers and workstations

B) A distribution for desktops and laptops

C) A distribution for embedded systems

D) A distribution for mobile devices

Answer: A) A distribution for servers and workstations

3. What is CentOS Stream in Linux?

A) A rolling release distribution for developers

B) A long-term support distribution for servers

C) A distribution for desktops and laptops

D) A distribution for embedded systems

Answer: A) A rolling release distribution for developers

4. What is Ubuntu in Linux?

A) A distribution for servers and workstations

B) A distribution for desktops and laptops

C) A distribution for embedded systems

D) A distribution for mobile devices

Answer: B) A distribution for desktops and laptops

5. What are the different ways to install Linux?

A) Live CD, USB drive, network install, and virtual machine

B) Hard disk drive, floppy disk, optical disk, and network install

C) USB drive, hard disk drive, optical disk, and floppy disk

D) Virtual machine, network install, live CD, and USB drive

Answer: A) Live CD, USB drive, network install, and virtual machine

6. What is the purpose of the shell in Linux?

A) To provide a graphical user interface

B) To provide a command line interface

C) To provide a web-based interface

D) To provide a database interface

Answer: B) To provide a command line interface

7. What is the purpose of the kernel in Linux?

A) To provide a graphical user interface

B) To provide a command line interface

C) To manage the hardware and provide services to user-space programs

D) To provide a web-based interface

Answer: C) To manage the hardware and provide services to user-space programs

8. What is the purpose of utilities in Linux?

A) To provide a graphical user interface

B) To provide a command line interface

C) To manage the hardware and provide services to user-space programs

D) To provide various features and functions for the operating system

Answer: D) To provide various features and functions for the operating system

9. What is a boot process in Linux?

A) The process of shutting down the system

B) The process of restarting the system

C) The process of starting the system

D) The process of logging off the system

Answer: C) The process of starting the system

10. What is partitioning in Linux?

A) The process of dividing the hard drive into multiple partitions

B) The process of merging multiple partitions into a single partition

C) The process of formatting the hard drive

D) The process of copying data from one partition to another

Answer: A) The process of dividing the hard drive into multiple partitions

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

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

11. What does the command "diff" in Linux do?

A) Compresses files

B) Sorts the contents of a file

C) Compares two files

D) Searches for a pattern in a file

Answer: C) Compares two files

12. What does the command "cmp" in Linux do?

A) Counts the number of characters in a file

B) Searches for a pattern in a file

C) Compares two files

D) Sorts the contents of a file

Answer: C) Compares two files

13. What does the command "tar" in Linux do?

A) Counts the number of characters in a file

B) Compresses files

C) Searches for a pattern in a file

D) Compares two files

Answer: B) Compresses files

14. What does the command "gzip" in Linux do?

A) Sorts the contents of a file

B) Compresses files

C) Searches for a pattern in a file

D) Counts the number of characters in a file

Answer: B) Compresses files

15. What does the command "useradd" in Linux do?

A) Adds a new user to the system

B) Modifies the attributes of an existing user

C) Deletes a user from the system

D) Displays information about the users on the system

Answer: A) Adds a new user to the system

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

16. You are present in the following path –

/home/Attendance/statusReport/Batch2021/January

i) Move two level up in file hierarchy system using single command

ii) Now create a directory “RawReports” with read and write permissions for all users

iii) Rename “Batch2021” to “Batch2022”

Answer-

$ cd .. / ..

$ mkdir -m 777 RawReports

$ mv Batch2021 Batch2022

17. You have log file “PartsNet.log” of an application which crashed. You are supposed to go through the log file and find the cause.

i) Search for the word “Exception” in log file

ii) Search for the word “NullPointerException” but ignore the word “ERROR”

iii) Count the occurrence of the word “Exception” in the log file

Answer –

$ grep Exception PartsNet.log

$ grep NullPointerException PartsNet.log | grep -v ERROR

$ grep -c “Exception” PartsNet.log

18. You have error log file “CustomerNet.txt” present in path “/home/Logs/CNet”.

i) Check your present working directory and change the directory accordingly to the file.

ii) Print all the lines from file which match the given word “Timeout”

iii) Print first two words only from each line.

Answer –

$ pwd

$ cd /home/Logs/CNet

$ awk '/Timeout/ {print}' CustomerNet.txt

$ awk '{print $1,$2}' CustomerNet.txt

19. User “Mayank” is not able to use sudo commands. Check if the user has sudo access or not.

If not then login into root user and grant sudo access to this user. Give the appropriate commands.

Answer –

$ sudo -l -U Mayank

$ su -l

$ usermod -a G sudo Mayank