General Instructions:

* Follow the instructions given in each section.
* Do not write anything on the question paper, except your roll no.
* Make sure that you attempt the questions in order.

**Section - A**

**(Q 1 to 10: Each question carries 1 mark)**

Q.1. “who” command prints information about user/users who are/were\_\_\_\_\_\_?

**a) currently logged in**

b) logged in before system shutdown

c) logged out before system shutdown

d) all the users that exist in the system

Q.2. CentOS is a part of which Linux family?

**a) Red Hat Family**

b) Debian Family

c) Fedora Family

d) None of the above

Q.3. What is the POST test performed by the bios?

a) Power Off Self Test

b) Power Operated System Test

c) Power On Sync Test

**d) Power On Self Test**

Q.4**.** Is the BIOS dependent on the OS?

**a) No**

b) Yes

Q.5. Which test does the BIOS perform?

**a) System integrity test**

b) System directory test

c) System enhancement test

d) None of the above

Q.6. What is the full form of RHEL?

a) Red Hat Environment Linux

**b) Red Hat Enterprise Linux**

c) Red Hat Enterprise Limited

d) None of the above

Q.7. Upon modifying a “file” with “chmod 000 /file” command, who all can read and write?

a) User who created the file

b) Group(user) – Users of the same group as the owner of the file

c) Others – All other users which are not the creator or part of the group(user)

**d) None of the above**

Q.8.What UID and PID does the SYSTEMD/SYSTEM V/init Process typically hold?

a) UID = 1 and PID = 0

b) UID = 1 and PID = 1

c) UID = 0 and PID = 0

**d) UID = 0 and PID = 1**

Q.9.Up to how many primary partitions can be supported by a GPT?

**a) 128**

b) 16

c) 64

d) 4

Q.10. Up to how many number of primary partitions can be supported by a MBR?

**a) 4**

b) 128

c) 64

d) 8

**Section - B**

**(Q 11 to 15 : Each question carries 2 marks)**

Q.11. What will be the output of the following command? echo “I am having a bad day” | grep -c “bad”

**a) 1**

b) 0

c) I am having a bad day

d) bad

Q.12. Which of the following commands will copy a file “file1” to “DIRECTORY” directory?

a) cp file1 /SYSTEM/OTHER/DIRECTORY/

b) cp file1 /SYSTEM/OTHER/DIRECTORY

c) cp file1 /SYSTEM/OTHER/DIRECTORY/file1

**d) All given**

Q.13. Which of the following commands will move “file1” to a directory “DIRECTORY” and rename the file to “file2”?

a) mv file1 /SYSTEM/OTHER/DIRECTORY/file1 rename file1

**b) mv file1 /SYSTEM/OTHER/DIRECTORY/file2**

c) mv file1/SYSTEM/OTHER/DIRECTORY/file1 file2

d) mv rename file1 file2 /SYSTEM/OTHER/DIRECTORY/file2

Q.14. Which of the following command will be used to create a new group “new\_group” and set this group for a file

named “abc.txt”?

1. **sudo addgroup new\_group ; sudo chgrp new\_group abc.txt**
2. sudo addgroup new\_group ; chgrp new\_group abc.txt
3. addgroup new\_group ; sudo chgrp new\_group abc.txt
4. addgroup new\_group ; chgrp new\_group abc.txt

Q.15. A file “file1” created by the user “Hitesh” which is modified using command “chmod 777 file1”. Which of the following would be the correct permissions modified to the given file?

a) -rw-rw-rw-

b) drw-rw-rw-

c) drwxrwxrwx

d) -rwxrwxrwx

**Section – C**

**(Q 16 to 19: Each question carries 5 marks)**

Q.16. What is file linking in Linux? Explain the different types of linking and commands used for that.

**Solution:**

Linking files is a great option available in the Linux filesystem. If you need to maintain two (or more) copies of the same fi le on the system, instead of having separate physical copies, you can use one physical copy and multiple virtual copies, called links. A link is a placeholder in a directory that points to the real location of the file. Two types of file links are available in Linux:

1. A symbolic link: A symbolic link is simply a physical fi le that points to another fi le somewhere in the virtual directory structure. The two symbolically linked together fi les do not share the same contents.

We can then use the ln command with the -s option to create the symbolic link.

Syntax: $ ls -l data\_file

1. A hard link: A hard link creates a separate virtual fi le that contains information about the original fi le and where to locate it. However, they are physically the same fi le. When you reference the hard link fi le, it’s just as if you’re referencing the original fi le. To create a hard link, again the original fi le must pre-exist, except that this time no parameter is needed on the ln command.

Syntax: $ ls -l code\_file

Q.17. Write commands for following task ( 1 mark each )

**Solution:**

1 . sdiff file1 file2

2 . Convert units from one scale to another. The units are defined in an external data file. You can use the extensive data file that comes with this program, or you can provide your own data file to suit your needs. You can use the program interactively with prompts, or you can use it from the command line.

3 . (i) For knowing the history of the bash.

3. (ii) For implementing old used commands

4. free -h

5. ping google.com (for checking the connectivity of the network)

Q.18. Write commands for following operations

i) Display the text from file.txt with line numbers (including blank lines) (1 mark)

ii) Display the text from file.txt with line numbers (excluding blank lines) (1 mark)

iii) Display the count of words in file.txt (1 mark)

iv) Display the count of character in file.txt (1 mark)

v) Display only starting 5 lines from file.txt (1 mark)

**Solution:**

1. cat -n file.txt
2. nl file.txt
3. wc -w file.txt
4. wc -c file.txt
5. head -5 file.txt

Q.19. Write the commands for the following tasks (in the given order)

1.  Make 2 files thor.txt and hulk.txt                                          (2 marks)

2. Make a directory named avengers.                                         (1 marks)

3. Move the files thor.txt and hulk.txt to avengers directory.    (1 marks)

4.  Display the contents of the directory avengers.                      (1 marks)

**Solution:**

1. cat thor.txt

cat hulk.txt

2. mkdir avengers

3. mv thor.txt avengers && mv hulk.txt avengers

4. ls avengers