

Reg. No.														
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**B.Tech/ M.Tech (Integrated) DEGREE EXAMINATION, DECEMBER 2023**  
Fifth Semester

**21CSE399J – COMPREHENSIVE LINUX FOR ALL**  
(For the candidates admitted from the academic year 2022-2023 onwards)

**Note:**

- (i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40<sup>th</sup> minute.
- (ii) **Part - B** and **Part - C** should be answered in answer booklet.

Time: 3 Hours

Max. Marks: 75

**PART – A (20 × 1 = 20Marks)**

Answer **ALL** Questions

	Marks	BL	CO	PO
1. Which command lists all files, including hidden files, in a directory? (A) Is -c (B) Is -a (C) Is -l (D) Is -h	1	1	1	1
2. How do you remove a file or directory in Linux? (A) rm (B) rmdir (C) del (D) delete	1	1	1	1
3. Which linux distribution gives support to its customers (A) Centos (B) Fedora (C) Kali linux (D) Redhat	1	2	1	1
4. Who is the founder of Linux kernel (A) Elon Musk (B) Bill gates (C) Linus Torvalds (D) Richard Stallman	1	1	1	1
5. Which of the following is an advantage of open source? (A) Its free to use (B) The source code can be shared and modified for individual use (C) Its free to download and use (D) Its free but need to pay for support	1	2	1	1
6. How do you grant read, write, and execute permissions to a file in Linux? (A) chmod (B) chown (C) chgrp (D) chmodown	1	1	2	1
7. Explain the purpose of the /etc/group file in Linux. (A) It stores group account information (B) It stores system-wide environment variables (C) It stores network interface (D) It stores the system log configuration	1	2	2	1
8. What is the octal equivalent permission for "rw-" (A) 7 (B) 5 (C) 6 (D) 4	1	5	2	1

- |  |   |   |   |   |
|--|---|---|---|---|
| 9. What command is used to display the process status in Linux?  | 1 | 1 | 3 | 1 |
| (A) top  |   |   |   |   |
| (B) ps   |   |   |   |   |
| (C) pid  |   |   |   |   |
| (D) free   |   |   |   |   |
| 10. What is the command to check your system RAM in human readable format?   | 1 | 1 | 3 | 1 |
| (A) free-t   |   |   |   |   |
| (B) lsblk  |   |   |   |   |
| (C) free-h   |   |   |   |   |
| (D) df   |   |   |   |   |
| 11. What is the package for apache webserver installation in RHEL OS?  | 1 | 2 | 3 | 1 |
| (A) https  |   |   |   |   |
| (B) http   |   |   |   |   |
| (C) httpd  |   |   |   |   |
| (D) httpmod  |   |   |   |   |
| 12. What is the tcp port number of ssh protocol?   | 1 | 1 | 3 | 1 |
| (A) 20   |   |   |   |   |
| (B) 22   |   |   |   |   |
| (C) 24   |   |   |   |   |
| (D) 25   |   |   |   |   |
| 13. Intype of webserver the response get modified as per user request?   | 1 | 1 | 5 | 1 |
| (A) Static   |   |   |   |   |
| (B) Application  |   |   |   |   |
| (C) Dynamic  |   |   |   |   |
| (D) Secure   |   |   |   |   |
| 14. What is the default location of custom file in apache webserver?   | 1 | 1 | 5 | 1 |
| (A) /var/lib/www   |   |   |   |   |
| (B) /var/html/www  |   |   |   |   |
| (C) /var/www/html  |   |   |   |   |
| (D) /www/var/html  |   |   |   |   |
| 15. _____ encapsulate an application with all its dependencies, including system libraries, binaries, and configuration files. | 1 | 2 | 4 | 1 |
| (A) Compiler   |   |   |   |   |
| (B) Software   |   |   |   |   |
| (C) Virtual machine  |   |   |   |   |
| (D) Containers   |   |   |   |   |
| 16. What is the command used to create physical volume?  | 1 | 1 | 4 | 1 |
| (A) pvc  |   |   |   |   |
| (B) pvcreate   |   |   |   |   |
| (C) pv create  |   |   |   |   |
| (D) pv.create  |   |   |   |   |
| 17. Select the odd one out in following sequence   | 1 | 2 | 5 | 1 |
| (A) nginx  |   |   |   |   |
| (B) tomcat   |   |   |   |   |
| (C) mysql  |   |   |   |   |
| (D) apache   |   |   |   |   |
| 18. GIT is a _____.  | 1 | 1 | 5 | 1 |
| (A) Repository system  |   |   |   |   |
| (B) Version control system   |   |   |   |   |
| (C) Version changing system  |   |   |   |   |
| (D) Version copy system  |   |   |   |   |
| 19. Which type of cloud is considered to be more secure?   | 1 | 2 | 5 | 1 |
| (A) Private  |   |   |   |   |
| (B) Public   |   |   |   |   |
| (C) Hybrid   |   |   |   |   |
| (D) Community  |   |   |   |   |
| 20. Which tool is used for traffic analysis in Kali Linux?   | 1 | 1 | 6 | 1 |
| (A) Burp suite   |   |   |   |   |
| (B) Aircrack-ng  |   |   |   |   |
| (C) John the Ripper  |   |   |   |   |
| (D) Wireshark  |   |   |   |   |

**PART – B (5 × 8 = 40 Marks)**  
Answer ALL Questions

Marks BL CO PO

- |        |  |   |   |   |   |
|--------|--|---|---|---|---|
| 21. a. | Explain any five file processing commands in Linux with its syntax and suitable examples.  | 8 | 1 | 1 | 1 |
| (OR)   |  |   |   |   |   |
| b.i.   | What are the different types of shell variables in Linux?  | 4 | 1 | 1 | 1 |
| ii.    | Write short notes on shell keywords.   | 4 | 1 | 1 | 1 |
| 22. a. | Write a script that create a directory with a name SRM, set <i>userandgroup</i> as the owner of the directory and change permission mode to 770. | 8 | 2 | 2 | 1 |
| (OR)   |  |   |   |   |   |
| b.     | Write a shell script to count number of lines present in a text file with example input and output.  | 8 | 2 | 2 | 1 |
| 23. a. | What are the different commands for process management? Explain each with examples.  | 8 | 3 | 1 | 1 |
| (OR)   |  |   |   |   |   |
| b.     | What is redirection? Explain it in detail with examples.   | 8 | 3 | 1 | 1 |
| 24. a. | What is NFS? Write the steps for configuring NFS server and clients.   | 8 | 3 | 5 | 1 |
| (OR)   |  |   |   |   |   |
| b.     | What are the steps to setting up Samba File Server?  | 8 | 3 | 5 | 1 |
| 25. a. | Explain kali linux tools for ethical hacking.  | 8 | 1 | 6 | 1 |
| (OR)   |  |   |   |   |   |
| b.     | Explain essential characteristics of cloud computing.  | 8 | 1 | 6 | 1 |

**PART – C (1 × 15 = 15 Marks)**  
Answer ANY ONE Question

Marks BL CO PO

26. Refer the following snippet and answer the following questions using command(s) with suitable example.

```
home@VirtualBox: ~$ ls -l sample
-rw-rw-r-- 1 home home 55 2012-09-10 10:59 sample
```

- Setting all permissions to other users using symbolic notation and verify the same
- Add execute permission to the user group using numeric notation and verify the same
- Remove read permission for user
- Create student group and three new users u1,u3,u5 and move to student group
- Remove u5 from student group

- (vi) Delete the student group
- (vii) Create 20 empty files in root directory and move to /SRMIST/home directory
- (viii) Where group information is stored?
- (ix) Change ownership associated with sample file.
- (x) Change group associated with sample file

27. (i) Explain find and locate commands with suitable examples. (7)
- (ii) Explain the following commands with suitable examples. (8)
- (a) grep
  - (b) chmod and chown of a test file
  - (c) various uses of cat command
  - (d) hwinfo

15 3 3

\* \* \* \* \*