11. Describe the purpose and usage of the following Linux commands :

(a) ls

(b) cd

(c) mkdir

(d) rmdir

12. Discuss the role and characteristics of real-time systems. Provide examples of real-time applications.

13. Explain the concept of Network Information Service (NIS). What is the purpose of NIS and how does it facilitate centralized user and group management in a distributed environment ?

BCA–13

June – Examination 2023

B.C.A. (Part III) Examination

Operating System–II

Paper : BCA-13

Time : 3 Hours] [*Maximum Marks : 70*

Note :– The question paper is divided into three Sections A, B and C. Write answers as per the given instructions.

Section–A   **7×2=14**

(Very Short Answer Type Questions)

Note :– Answer all questions. As per the nature of the question delimit your answer in one word, one sentence or maximum up to **30** words. Each question carries 2 marks.

1. (i) What is the full form of GNU ?

(ii) Give the differences between single quotes (") and double quotes (" ") in shell scripting. Provide examples to illustrate their usage.

(iii) What do you mean by DCE Cloud ?

(iv) Why do we need a Kernel ?

(v) What do you mean by Null Buffering ?

(vi) Name *two* different types of shell used in Linux OS.

(vii) List *four* applications of multimedia ?

Section–B 4×7=28

(Short Answer Type Questions)

Note :– Answer any *four* questions. Each answer should not exceed **200** words. Each question carries 7 marks.

2. Differentiate between Password file and Shadow Password file in LINUX.

3. Discuss the concept of open-source software and its significance in the development of the Linux operating system. Explain the benefits of open-source software.

4. Write short note on Distributed Memory Management.

5. How failure are handled during Interprocess Communication ? Explain the complete process.

6. Explain any *one* technique for encryption and decryption.

7. Describe the role of stubs in RPC. How do client and server stubs facilitate communication between the client and server ?

8. How to perform real number calculation in shell script and store the result to the third variable, let's say $a = 5.66$, $b = 8.67$, $c = a + b$?

9. Write short note on Light weight RPC.

Section–C 2×14=28

(Long Answer Type Questions)

Note :– Answer any *two* questions. You have to delimit your each answer maximum up to **500** words. Each question carries 14 marks.

10. Compare SCAN and C-SCAN disk scheduling algorithms. Read write head is at 45. The request are 63, 52, 01, 93, 72, 13, 81 and 54 (8 requests). Compare total movement of R/W head.