11. What is Linux ? Why is it popular ? Explain the file system of Linux.

12. Consider the following page reference string 1, 2, 3, 4, 5, 2, 6, 7, 3, 2, 4, 1, 7, 1, 4, 3, 2, 3, 4, 7, 1. Compare the number of page faults with frame sizes 3, 4 and 5 with any replacement algorithm.

13. Describe various internal and external commands in MS-DOS with suitable examples.

PGDCA-01/MSCCS-01/ PGDCA-101/MSCCS-101/ MSCCSC-101/MCA-101

December – Examination 2023

PGDCA/MSCCS (Pre.)/MCA (Ist Year) Examination

Computer Fundamental and System Software

Paper : PGDCA-01/MSCCS-01/PGDCA-101/ MSCCS-101/MSCCSC-101/MCA-101

*Time : **3** Hours*] [*Maximum Marks : **80***

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

Section–A **2×8=16**

(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) Convert $(6337)_8$ to $(?)_{16}$.

   (ii) Define the following terms : Tracks, sector and cylinder.

   (iii) What do you mean by mantissa and exponent ? Explain.

   (iv) What is Real-time OS ?

   (v) What do you mean by term Plug and Play ?

   (vi) Give difference between CD and DVD.

   (vii) What is the use of the *chmod* command ? Give an example.

   (viii) What are bar codes ? Give two applications of bar codes ?

Section–B **8×4=32**

(Short Answer Type Questions)

Note :– Answer any *four* questions. Each answer should not exceed **200** words. Each question carries 8 marks.

2. What are programming languages ? Explain difference between Machine, Assembly and High level language ? Give some examples for each.

3. What is critical section ? Why process entry to critical section is restricted ?

4. What does MICR stand for ? State the functioning of MICR input devices.

5. Distinguish between linker and Loader.

6. What is Modem ? Explain its working.

7. Explain any *two* input and output devices.

8. Compare and contrast the advantages and disadvantages of laser printer and thermal printers.

9. What is disk scheduling ? What are the main objectives of disk scheduling ?

Section–C **16×2=32**

(Long Answer Type Questions)

Note :– Answer any *two* questions. You have to delimit your each answer maximum up to **500** words. Each question carries 16 marks.

10. Discuss the various gates and their equivalent circuits and its truth table with suitable examples.