11. Explain Linux/Unix system architecture with its basic features.

12. Write short notes on the following :

(a) Demand Paging

(b) Page Segmentation

13. Why Memory Management is necessary in Operating System ? Give memory partitions/holes of 100 KB, 500 KB, 200 KB, 30 KB and 600 KB. Processes request for allocation of memory space of 112 KB, 317 KB, 112 KB and 380 KB in order. Show how the memory will be allocated to different process using first fit, best fit and worst fit algorithms ?

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

December – Examination 2022

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   **8×2=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) What is the major difference between Printers and Plotters ?

(ii) Simplify the Boolean equations :

A.B.C. + A.B'.

(iii) What is the addition of the binary numbers 111000 and 000111 ?

(iv) What is the use of Control Panel ?

(v) What is Disk Defragmenter ?

(vi) What do you mean by Plug and Play ?

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

(viii) Arrange in ascending order the units of memory TB, KB, GB, MB. Also give the full form of each.

Section–B　　　　　4×8=32

(Short Answer Type Questions)

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

2. Distinguish among Complier, Interpreter, and Assembler.

3. What is Thread ? Explain the life-cycle of a thread with suitable examples.

4. Explain the various types of files in LINUX in brief.

5. Simplify the expression $Z = f'(A, B) = A'B' + A \cdot B' + A'B$ using K-map.

6. What are the features of Windows Operating System ? Also explain with suitable examples.

7. What do you mean by Process Control Block (PCB) ? Also explain the content of PCB.

8. What is Monitor ? Explain different types of Monitor.

9. What is Optical Disk Storage ? Explain the various types of Optical Disk Storage.

Section–C　　　　　2×16=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. Describe the logic gates with a suitable example :

(a) NAND Gate

(b) XOR Gate

(c) XNOR Gate

(d) OR Gate