

PGDCA/MSCCS-01/MCA-101

December - Examination 2019

MSCCS / PGDCA /MCA I Year Examination**Computer Fundamental and System Software****Paper - PGDCA/MSCCS-01/MCA-101****Time : 3 Hours]****[Max. Marks :- 80**

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

Section - A**8 × 2 = 16****(Very Short Answer Questions)**

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

1.
 - i. Give two differences between Input Device and Output Devices? Also, give an example of each.
 - ii. Suppose currently you are in C directory and you want to see the content in the FRUIT directory (present in C directory). Write the correct DOS commands.
 - iii. Write all 3-Bit numbers (in binary) with their corresponding decimal values.
 - iv. What is Page fault?
 - v. Name any two types of Monitor.
 - vi. What is Refresh Rate of display?

- vii. Write any two applications of Bar Codes.
- viii. Draw the structure of PCB (Process Control Block).

Section - B

$4 \times 8 = 32$

(Short Answer Questions)

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

2. What is a plotter and how does it work?
3. Design OR gate using NAND gate. Also, explain it.
4. Distinguish between internal fragmentation and external fragmentation with a suitable example?
5. Write a short note on the File Allocation Table (FAT).
6. Describe in brief the following :
 - i. system calls
 - ii. system programs.
7. Explain the advantages of Linux in brief.
8. What is the thread? Explain the difference between a single-threaded and multithreaded process with a suitable example.
9. Explain the basic computer operations using the block structure of the computer.

Section - C

$2 \times 16 = 32$

(Long Answer Questions)

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

10. What do you understand by RAID Systems? Explain the functions and levels of RAID.
11. What is K-Map? Consider the expression $Z = f(A,B) = A.B + A.B' + A'.B$ plotted on the Karnaugh map.

12. Describe the features, advantages and structure of Windows Operating System.
 13. Suppose that a disk drive has 5000 cylinders, numbered 0 to 4999. The drive is currently serving a request at cylinder 143, and the previous request was at cylinder 125. The queue of pending requests, in FIFO order, is: 86, 1470, 913, 1774, 948, 1509, 1022, 1750, 130. Find the number of head movements in cylinders using FCFS scheduling and SCAN scheduling.
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