

M.C.M.- I (CBCS Pattern) Semester-II
PCMCMT104.2 - Elective-II Paper-IV - Data Structure & File Systems

P. Pages : 2

Time : Three Hours



GUG/S/25/10769

Max. Marks : 80

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- Notes :
1. All questions are compulsory and carry equal marks.
 2. Draw neat and labelled diagram and use supporting data wherever necessary.
 3. Avoid vague answer and write specific answer related to question.

Either:

1. a) Explain different approaches for designing algorithm in detail. 8
- b) Explain the types of Array with declaration. 8

OR

- c) What are the applications of stocks? Explain. 8
- d) Discuss Jagged Array with suitable example. 8

Either:

2. a) What are the key properties of recursion? Explain. 8
- b) Describe the tower of Hanoi in detail. 8

OR

- c) Explain the Dynamic memory management in detail. 8
- d) Explain the concepts of linked list and its Application in detail. 8

Either:

3. a) Explain different types of Binary trees and their characteristics. 8
- b) Define Graph and explain its sequential representation. 8

OR

- c) Describe the various Transversal Techniques of Binary Tree. 8
- d) Distinguish between B-tree and Binary search tree. 8

Either:

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| 4. | a) | Explain the different types of searching techniques with example. | 8 |
| | b) | What is sorting? Explain different types of sorting. | 8 |

OR

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| | c) | What are the different file organisation method. | 8 |
| | d) | What is topological sorting and explain in detail. | 8 |
| 5. | | Solve all the question. | |
| | a) | Explain Abstract datatypes in brief. | 4 |
| | b) | What is Nested Recursion? Explain. | 4 |
| | c) | Write note on Threaded Binary Tree. | 4 |
| | d) | Explain the working of Quick Sort. | 4 |
