Roll No. | | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 18

MCA (Sem.–1)

ADVANCED DATA STRUCTURES

Subject Code : PGCA-1952

Paper ID : 79037

Time : 3 Hrs. **Max. Marks : 70**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION - B & C. have FOUR questions each.**
3. **Attempt any FIVE questions from SECTION B & C carrying TEN marks each.**
4. **Select atleast TWO questions from SECTION - B & C.**

SECTION-A

Write short notes on :

1) Sorting

2) Complexity

3) Algorithm

4) Underflow

5) Recursion

6) Garbage Collection

7) Prefix

8) Out Degree

9) Hash Function

10) KMP

SECTION-B

11) Explain Data Structures and its types in detail.

12) What is a heap and its types? How to insert and delete the nodes from heap?

13) Write an algorithm to perform quick sort with example.

14) What is hashing and hash table? How it is implemented?

SECTION-C

15) Explain the Dijkstra's and Kruskal Algorithms.

16) What is a string? Write an algorithm to check weather string is palindrome.

17) Discuss with example Boyer-Moore algorithm.

18) What is MST? How it is found? Explain.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.