B.Sc. (G & W.D / I.T) / BCA (Sem.–3)
DATA STRUCTURES
Subject Code : UGCA-1915
M.Code : 78181
Date of Examination : 19-06-2024

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. **Write briefly :**

   a) Discuss analysis of Algorithm.

   b) What is Dynamic Memory?

   c) Discuss Double Linked List.

   d) What is a Pointer?

   e) Write a short note on Strings.

   f) Explain multiple stack.

   g) What is B Tree?

   h) Discuss Quick sort.

   i) Write concept of Graph Traversal.

   j) What is Hash Collision?

SECTION-B

2. Write an operation to Delete *n* nodes after *m* nodes of a linked list.

3. Discuss various operations on queues. How it can be implemented?

4. How a two dimensional array is represented in memory?

5. Give the brief introduction to AVL trees and its applications in data structure.

6. What is Hashing? Write the types of Hash Function.

7. Discuss use and working of Shortest Path Algorithm.

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.