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## **BCA-204**

**B.C.A. IInd Year Examination, 2022**

**DATA STRUCTURE**

**Paper-IV**

*Time Allowed : 1½ Hours*

*Maximum Marks : 100*

**Part-A**

**[Marks : 30]**

**Note** :- Answer all questions (50 words each). All questions carry equal marks.

**Part-B**

**[Marks : 70]**

**Note** :- Answer any *two* questions (250 words each). All questions carry equal marks.

**Part-A**

1. (i) Define Stack.
- (ii) What is Linear Structure ?

- (iii) Define *Three-dimensional* Array.
- (iv) Write about List Representation.
- (v) Write about Get Node and Free Node.
- (vi) Define Tree Structure.
- (vii) What is Circular Linked List ?
- (viii) What is Binary Tree ?
- (ix) Define Graph Traversal.
- (x) What is Queue ?

### **Part-B**

2. Discuss the array with an example.
3. Discuss the various operations on queue with examples.
4. Discuss the circular linked list with an example.
5. Discuss the various operations on linked list with example.

6. What is Tree ? Explain the binary search tree with example.
7. What is Graph Traversal ? Explain the BFS and DFS with example.
8. Explain the Adjacency Matrix with example.
9. Explain the reflexive transitive closure with example.