

FD-2875

BCA (Part-III) Examination, 2022

Paper - V

Data Structure

Time: Three Hours] [Maximum Marks: 80 [Minimum Pass Marks: 27]

Note : Answer any **two** parts from each question. All questions carry equal marks.

Unit-I

- 1. (a) What is the time complexity of basic operations get() and put() in Hashmap class?
 - (b) Explain Data structure type and write applications of data structure.
 - (c) What is time space complexity? Explain it.

Unit-II

- 2. (a) How do we find duplicate elements in Array? Write program for this.
 - (b) Write a program for addition of matrix.
 - (c) What is pointer? Explain Null, Wild and Generic pointer.

Unit-III

- **3.** (a) Write difference between Linear array and Linked list.
 - (b) Explain push and pop operation of stack through program.
 - (c) Describe priority queue and circular queue.

Unit-IV

- **4.** (a) What is tree? Explain various types of tree traversal.
 - (b) Explain insertion and deletion in Binary search tree.
 - (c) Write short note on thread.

Unit-V

5. (a) Write a program to sort elements of Array using bubble sort method.

(b) Write difference between Quick sort and Merge sort.

(c) Explain Hashing using example.
