

Roll No.

97670

**BCA 3rd Semester
Examination – December, 2022**

DATA STRUCTURE - I

Paper : BCA-202

Time : Three Hours] [Maximum Marks : 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*.

1. Write short note on following : 16

- (i) Data structure
- (ii) Array
- (iii) Deque
- (iv) Graph

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UNIT – I

2. Define Data structure. Explain its categories and applications in detail. 16
3. (i) What do you mean by Pattern Matching algorithm. Explain in detail. 8
- (ii) Define string and string operation in detail. 8

UNIT – II

4. Explain the following : 16
- (i) Parallel arrays
- (ii) Deletion in on array
5. Describe the following : 16
- (i) Garbage collection
- (ii) Two way linked list

UNIT – III

6. (i) Define Stack. Explain different operation on stacks in detail. 8
- (ii) Give a complete description about recursion. 8

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7. Define queue. Explain operations on queues. Also describe its applications in detail. 16

UNIT – IV

8. What is traversing in data structure. Explain in detail. 16
9. Define graph. Explain sequential and linked representation of graphs. 16

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