

Roll No. :

Total No. of Pages : 4

BCA-204

BCA SECOND YEAR EXAMINATION, 2023

DATA STRUCTURE

Paper - IV

Time Allowed : Three Hours

Maximum Marks : 100

PART-A [Marks : 20]

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

PART-B [Marks : 50]

Note: Answer five questions (250 words each). Selecting one from each unit. All questions carry equal marks.

PART-C [Marks : 30]

Note: Answer any two questions (300 words each). All questions carry equal marks.

PART-A

- (i) Give characteristics Array.
- (ii) Write two applications of Array.

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- (iii) What is Linked List ?
- (iv) What operations performed on Linked List ?
- (v) What is Tree Data Structure ?
- (vi) What is mean by Tree Traversal ?
- (vii) What is Graph ?
- (viii) What is Transitive Closure ?
- (ix) Define Searching.
- (x) Define Sorting.

PART-B

UNIT-I

2. Discuss the applications of Stack.

OR

3. Discuss Queue Data Structure.

UNIT-II

- A. Discuss Circular Linked List with example.

OR

5. Discuss Doubly Linked List and its advantages.

UNIT-III

6. Explain Binary Search Tree with example.

OR

7. Explain the searching process in Binary Search Tree.

UNIT-IV

8. Write an algorithm of BFS in Graph and give example.

OR

9. Explain any algorithm to find shortest path.

UNIT-V

10. Explain Sequential Search process and its algorithm.

OR

11. Explain Selection Sort technique with example.

PART-C

12. Explain Stack operations and its Algorithm.

13. Describe the types of Linked List.

14. Explain various Tree Traversals.

15. Explain various Graph representations.

16. Explain Bubble Sort with example.

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OR

UNIT-II

OR

UNIT-V

OR

PART-C