B.C.A. DEGREE EXAMINATION,APRIL 2019
II Year III Semester
Data Structures and Algorithms

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. Define Data structure.
2. What is an array?
3. Define recursion.
4. Mention the applications of queue.
5. How to represent a polynomial?
6. Write down the operations of doubly linked list.
7. Define binary tree.
8. What is meant by hashing?
9. What is an algorithm?
10. Define graph.
11. What is space complexity?
12. What is searching?

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. Explain asymoptic notation.
14. Discuss the operations of queue.
15. What is singly linked list? Explain the operations of singly linked list.
16. How to convert a forest to binary tree? Explain.
17. Explain merge sort.
18. Discuss maze problem.
19. Discuss DFS & BFS.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Explain the operations of arrays.
21. How to convert the infix expression to postfix? Explain.
22. What are the different types of tree traversals? Explain in detail.
23. Explain binary search.
24. How to add two polynomials? Discuss in detail.

B.C.A. DEGREE EXAMINATION,APRIL 2019
II Year III Semester
Data Structures and Algorithms

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. Define Data structure.
2. What is an array?
3. Define recursion.
4. Mention the applications of queue.
5. How to represent a polynomial?
6. Write down the operations of doubly linked list.
7. Define binary tree.
8. What is meant by hashing?
9. What is an algorithm?
10. Define graph.
11. What is space complexity?
12. What is searching?

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. Explain asymoptic notation.
14. Discuss the operations of queue.
15. What is singly linked list? Explain the operations of singly linked list.
16. How to convert a forest to binary tree? Explain.
17. Explain merge sort.
18. Discuss maze problem.
19. Discuss DFS & BFS.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Explain the operations of arrays.
21. How to convert the infix expression to postfix? Explain.
22. What are the different types of tree traversals? Explain in detail.
23. Explain binary search.
24. How to add two polynomials? Discuss in detail.