**B.Sc 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 the term of Data Structure.
2. What is an Array?
3. Define Stack.
4. What is meant by Recursion?
5. Name the three fields of Doubly Linked list.
6. Define Singly Linked List.
7. What is meant by traversing?
8. What is a directed graph?
9. What is an Algorithm?
10. What is divide and conquer?
11. What are the use of hash table?
12. Convert the infix (a+b)*(c+d)/f into postfix & prefix expression.

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

Answer any **FIVE** questions

13. Explain the Primitive and Composite Data Types.
14. Bring out Application of Stacks.
15. How to represent of a polynomial? Explain of them.
16. Explain Breadth First Search traversal of Graph using an example.
17. Discuss on Binary Search with example.
18. Write detail about Quick and Selection Sort.
19. Explain Circular Queue.

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

Answer any **THREE** questions

20. Exemplify Operations on Arrays and Order lists with suitable example.
21. Illustrate Operations and Applications of Queue.
22. Write an algorithm to insert and delete a node in Doubly Linked List.
23. Explain Tree Traversal operation on Binary tree with example.
24. Write an algorithm Merge Sort with example.

**B.Sc 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 the term of Data Structure.
2. What is an Array?
3. Define Stack.
4. What is meant by Recursion?
5. Name the three fields of Doubly Linked list.
6. Define Singly Linked List.
7. What is meant by traversing?
8. What is a directed graph?
9. What is an Algorithm?
10. What is divide and conquer?
11. What are the use of hash table?
12. Convert the infix (a+b)*(c+d)/f into postfix & prefix expression.

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

Answer any **FIVE** questions

13. Explain the Primitive and Composite Data Types.
14. Bring out Application of Stacks.
15. How to represent of a polynomial? Explain of them.
16. Explain Breadth First Search traversal of Graph using an example.
17. Discuss on Binary Search with example.
18. Write detail about Quick and Selection Sort.
19. Explain Circular Queue.

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

Answer any **THREE** questions

20. Exemplify Operations on Arrays and Order lists with suitable example.
21. Illustrate Operations and Applications of Queue.
22. Write an algorithm to insert and delete a node in Doubly Linked List.
23. Explain Tree Traversal operation on Binary tree with example.
24. Write an algorithm Merge Sort with example.