Reg. No. | | | | | | | | | | | |

D.K.M. COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1

SEMESTER EXAMINATIONS

NOVEMBER – 2018 15CCA3C

ELECTIVE I: DATA STRUCTURE

Time : 3 Hrs **Max. Marks : 75**

SECTION-A (10 x 2 = 20)

Answer ALL the questions.

1. Define Recursion.
2. What is Composite Data Type?
3. Write any two Applications of Stack.
4. Define Infix Notation.
5. Define Linked List and its types.
6. Write the operations on Circular Queue.
7. Define Binary tree.
8. What is meant by DFS?
9. Define Linear search with example.
10. Define Sorting and its types.

SECTION-B (5 x 5 = 25)

Answer any FIVE of the following questions.

11. What is a Data Structure? Explain various Operations performed on it.
12. Discuss the algorithm for Adding and Deleting an element to the Stack with example.
13. Explain the singly Linked List and its operations.
14. Discuss the types of Graphs with examples.
15. Explain the Tree Terminology.
16. Write an algorithm to convert Infix Expression to Postfix Expression.
17. Explain the procedure to add Two Polynomials using linked list.
18. Discuss about Bubble sort with example.

SECTION-C (3 x 10 = 30)

Answer ALL the questions.

19. (a) Explain the various Operations on Arrays.

(Or)

(b) What is a queue? Explain the operation on Queue.

20. (a) Explain the various Operations on Doubly Linked List.

(Or)

(b) Discuss the three Binary Tree Traversal Algorithms with examples.

21. (a) Explain Breadth First Search algorithm with suitable examples.

(Or)

(b) Describe the concept of Binary Search.

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