# ADITYA DEGREE COLLEGES

♦ ANDHRA PRADESH ♦

PREFINAL- IV SEMESTER EXAMINATIONS BCA - DATA STRCTURES

Max. Marks : 75 M Time : 3 Hours

# SECTION - A

# Answer any THREE Questions:

- 1. Write about Data Types.
- 2. Write about Linear and Non-Linear structures.
- 3. Write about Queues.
- 4. How to represent Trees as Arrays?
- 5. Define Graph and How to represent Graph.
- 6. Write about Minimum Spanning Trees.
- 7. Write about Insertion Sort.
- 8. Write a program for Linear/Selection Sort.

#### **SECTION - B**

#### Answer the following Questions:

9. a) Write a program for Single Linked list.

OR

- b) Write a program for Double Linked list.
- 10. a) Write a program for Stack using Array.

## OR

- b) Write a program for Circular Queue using Array.
- 11. a) Explain about how to inserting and seaching data in Binary Search Trees (BST).

## OR

- b) Explain about Traversing in Binary Search Trees (BST).
- 12. a) Explain about Breadth-First Search.

## OR

- b) Explain about Depth-First Search.
- 13. a) Explain about Merge Sort.

## OR

b) Explain about Quick Sort.

5X5= 25M

5X10= 50M

Date: 27.03.2020