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III Semester B.Sc. (I.T.) Examination, June/July 2010
DATA STRUCTURES USING C

Time : 3 Hours   Max. Marks : 75

PART – A

Answer **all** the questions :   **(10×2+5×1=25)**

1. Define multidimensional arrays.

2. Write the advantages and disadvantages of Pointers.

3. Write the relation between pointers and array.

4. Define Register variable.

5. Explain dynamic memory allocation. Give one example.

6. What is primitive data structures with an example ?

7. What do you mean by sparse matrix ?

8. Define stacks and queues.

9. What are the applications of the linked lists ?

10. What do you mean by Binary Search tree ?

11. Explain the following terms :
    a) Leaf node
    b) Degree of a tree
    c) Edge
    d) Vertex
    e) Graph.

P.T.O.

BSIT 32 (OS)

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PART – B

Answer **any five** of the following questions :   **(5×10=50)**

1. What is Data Structure ? Explain the classification of data structure with an examples.

2. Briefly explain Enumerated data types with an example.

3. Explain the polynomial representation for one variable and two variable with an example.

4. Explain the Doubly-Linked list in detail.

5. Explain the memory representation of stacks and queues.

6. Implementation of queues using linked lists.

7. Write an algorithm for the breadth first search and depth first search traversal in a graph.

8. Briefly explain the quick sort and trace of quick sort method.

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