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B.E. / B.Tech (Full Time) DEGREE ARREAR EXAMINATIONS, NOV / DEC 2011
ELECTRONICS AND COMMUNICATION ENGINEERING BRANCH

THIRD SEMESTER

EC 273 – PROGRAMMING AND DATA STRUCTURES

(REGULATION 2004)

7

Time: 3 Hours

Max.marks: 100

Answer ALL questions

Part-A (10x2=20 Marks)

1. Define: "Structured programming"?
2. What is meant by Step Wise Refinement?
3. Write the name of Tree Traversal Techniques.
4. Define: Complete Binary Tree.
5. What is meant by "Heap"? What are its classes?
6. Define: Priority Queue.
7. Write the time complexities of Quick Sort and Selection Sort.
8. Write the name of sorting algorithms uses divide and conquer techniques.
9. Define: Tree in terms of Graph.
10. Define: Minimal Spanning Tree.

Part-B (5x16=80 Marks)

11. What is Linked List? How Linked List is superior than Arrays? Explain.
 - 12.(a) Construct Binary Search Tree and perform Binary Search for a given number.
OR
 - 12.(b) Explain the procedure to construct a binary tree from Inorder and Postorder traversal sequence.
 - 13.(a) Explain how trees are used for arranging numbers in increasing order.
OR
 - 13.(b) Illustrate the "Hasting" with an example.
 - 14.(a) Develop algorithm to arrange numbers in increasing order using divide and conquer technique.
OR
 - 14.(b) Explain the process of Radix Sort.
 - 15.(a) What is meant by Transitive closure of a Graph? Explain the procedure to find it.
OR
 - 15.(b) Explain the Kruskal's Algorithm to find Maximal Spanning Tree for a given graph.
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