

V Semester B.Sc. (I.T.) Examination, June/July 2010
ALGORITHMS

Time : 3 Hours

Max. Marks : 75

***Instruction** : Answer **all** questions from Part A, and answer **any five** questions from Part B.*

PART – A

(12×2+1×1=25)

1. How do you test an algorithm ?
2. What is prefixing ?
3. What is the difference between quick sort and bubble sort ?
4. What is the basic method adopted by merge sort ?
5. How do you calculate time and space complexity ?
6. What is searching ?
7. What is the need of optimizing binary search trees ?
8. What is the concept of multistage graph ?
9. How does the graph differ from tree ?
10. State the problem of sum of sets.
11. Name the factors on which the efficiency of back tracking depends on.
12. What is Hamilton cycle ?
13. Define post order traversal.

P.T.O.



PART – B

Answer **any five** :

(5×10=50)

1. Explain in detail how to validate and test the algorithm.
 2. What is recursion ? Explain with suitable example program.
 3. What is sorting ? Explain bubble sort with suitable example.
 4. Explain the fundamental concept of quick sort with suitable data.
 5. Write a short notes on
 - i) Spanning tree
 - ii) Two way merge tree
 6. Write an algorithm and explain backward approach.
 7. Write an algorithm and explain inorder and preorder tree traversal methods.
 8. Explain 8 queens problem and seek a solution.
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