



BBB-2338

Seat No. _____

M. Sc. (CA & IT) (Sem. VIII) Examination

April / May - 2014

803 : Advance Algorithms

Time : 3 Hours]

[Total Marks : 70

- 1 Attempt following : (any three) 15
- (a) Differentiate : Static and Dynamic Storage Allocation.
 - (b) Write an algorithm for Breadth First Search.
 - (c) Explain applications of Depth First Search.
 - (d) Write an algorithm for Merge sort (divide and conquer approach).
 - (e) Explain string matching with finite automata.
- 2 Attempt following : (any three) 15
- (a) What is Linked list ? Explain types of Linked list.
 - (b) Write an algorithm for insert and remove operations of Binary Tree.
 - (c) Write a short note on Minimum cost spanning trees.
 - (d) Explain elements of Dynamic Programming.
 - (e) Write an algorithm for Rabin-karp.
- 3 Attempt following : (any three) 15
- (a) Write an algorithms to insert an elements into Sorted Linked List.
 - (b) What is Binary Tree ? Explain Tree Traversal operations of Binary Tree.

- (c) Explain applications of linked list and tree data structure.
- (d) Write an algorithm for strassen's for matrix multiplication.
- (e) Explain NP-Complete problem.

4 Attempt following : (any three) **15**

- (a) Write an algorithm to delete an elements from Singly Linked List (All Positions).
- (b) Explain Depth First Search with example.
- (c) Write an algorithm for kruskal's for finding minimum cost spanning trees.
- (d) Explain elements of Greedy strategy.
- (e) Explain NP-Completeness and Reducibility.

5 Attempt following : **10**

- (a) Define : Minimum spanning trees, Forest, Cycle, Loop.
- (b) Draw the node structure of Doubly Circular linked list.
- (c) Explain Divide and Conquer approach.
- (d) What is Dynamic Programming ?
- (e) Explain String Matching.
