1 Attempt following: (any three)  
   (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)  
   (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)  
   (a) Write 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.