



Examination : Block Exam

Seat No. :

Date :

Day :

Time :

Max. Marks : 36

INSTRUCTIONS:

1. Figures to the right indicate maximum marks for that question.
 2. The symbols used carry their usual meanings.
 3. Assume suitable data, if required & mention them clearly.
 4. Draw neat sketches wherever necessary.
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Q.1 Do as directed. [12]

(a) Construct expression tree for the following postfix expression: [03]

$A B + C - D E + F * -$

(b) Discuss: Linear probing and chaining. [03]

(c) List the properties of red black trees. [02]

(d) Draw a complete binary tree with exactly 6 nodes. [02]

(e) Which data structure is used to perform recursion? Why? [02]

Q.2 Attempt following questions. [12]

(a) Write an algorithm to perform list sort using doubly link list. Algorithm should sort data elements according to physical location. Data set is logically sorted. [06]

(b) Write recursive and non recursive algorithm to perform inorder traversal. [06]

Q.3 Attempt following questions [12]

(a) Write an algorithm to implement recursive merge sort on array of integers. [06]

(b) Write an Algorithm to insert an element in Maximum Heap. [06]