Register Number :

Name of the Candidate :

6 1 2 3

B.E. DEGREE EXAMINATION, 2008

(COMPUTER SCIENE AND ENGINEERING)

(FOURTH SEMESTER)

COEC-404. DATA STRUCTURES

May] [Time : 3 Hours

Maximum : 60 Marks

Answer any ONE full question from each unit.

1. (a) Write short notes on arrays. (6)

   (b) Write a program to evaluate a post-fix expression. (6)

2. (a) What are the various operations on stack ? Explain. (6)

   (b) Convert the given expression to pre-fix and post-fix form. (6)

   (A + B)*(C – D)

Turn over

UNIT-II

3. Explain the following operations on linked list.

   (a) Merging of two lists. (4)

   (b) Interchange of values between two locations. (4)

   (c) Insertion and delection of nodes (at the beginning or at any arbitrary position). (4)

4. (a) Formulate an algorithm to delete a given node from a doubly linked list. (6)

   (b) Write an angorithm to perform addition and deletion in a circular queue. (6)

UNIT – III

5. Define the various tree traversal methods. Write a non-recursive algorithm for in-order tree traversal. (12)

6. With an example, explain Huffman algorithm. (12)

UNIT – IV

7. Explain bucket sort algorithm with an example. (12)

8. Write short notes on :

   (a) Insertion sort. (6)

   (b) Merge and radix sort. (6)

UNIT – V

9. (a) Explain dynamic hashing and extendible hashing. (8)

   (b) Write short notes on B-Trees. (4)

7. Explain the following :

   (a) Sequential searching. (6)

   (b) Indexed sequential search. (6)