MCA–128   MCA-03/
PGDCA-02

M.C.A. DEGREE/PGDCA EXAMINATION –
JANUARY 2009.

First Semester/First Year

DATA STRUCTURES THROUGH C

Time : 3 hours   Maximum marks : 75

Answer for 5 marks question should not exceed
2 pages.

Answer for 10 marks questions should not exceed
5 pages.

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1.   Bring out the importance of Unary operator with an example.

2.   Write short notes on left shift operator.

3.   Explain the necessity of using Arrays.

4. What is meant by a structure? Explain with an example.

5. What is a Stack? Give example.

6. What is a pointer variable? In what way it is superior to normal variables?

7. How 'Exchange sort' works? Discuss.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Write a program to check whether the given string is a palindrome or not.

9. Write a program to find the sum and average of given numbers using an array variable and hence pointer to the array variables.

10. Write a program to add a node in the last of the list.

11. What are the applications of stack? Explain with an example, how evaluation of expression is done.

12. Explain array of structures with an example.

13.   Explain heap sort algorithm in detail.

14.   Illustrate the linear search algorithm in detail with an example. Explain its disadvantages.

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