Reg. No. : .....

Name : .....

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First Semester M.C.A. Degree Examination, April 2007
PROGRAMMING IN C

Time: 3 Hours

Max. Marks: 100

PART – A

Answer **all** questions. **All** questions carry **equal** marks.

1. Explain the various syntactic elements of a programming language.
2. Define the term 'Expression'. How it is represented ?
3. What's the difference between

   const MAXSIZE = 100; and

   # define MAXSIZE 100
4. How can you define a pair of mutually referential structures ?
5. What are the differences between exit control and entry control loops in C programming language ?
6. How comma operators are useful in 'for' statements ?
7. What do you mean by Global Variables ? How does it differ from static variables ?
8. What are the differences between malloc and calloc functions ?
9. Write the use of 'lseek' function in C programming.
10. Write a C program to sum the diagonal elements of a NXM matrix.

(10×4=40 Marks)

PART – B

Answer **any two** questions from **each** Module. **All** questions carry **equal** marks.

Module – I

11. Write a short note on programming languages. "C – can be considered as a semi-level language". Comment with suitable examples.

P.T.O.

12. Find the largest number in a list of N integer numbers. Explain your method and problem solving through flowchart and algorithm.

13. Explain the various facilities available in your C programming editor for debugging and testing your program. **(2×10=20 Marks)**

Module – II

14. Define a structure to manipulate student record (roll no, name, marks say 5). Write a program to read and print the details of N students. There is a function called 'is Passed', that accepts a student record as parameter and returns whether the student is passed or not.

15. Write a function using pointers to add two matrices and to return the resultant matrix to the calling function.

16. Write a function :
    void printreverse (char *ptr[], int n);
    Which displays on the screen all the lines of text in the array of strings **ptr in reverse order, that is last string in the array should be displayed first, then the second last string, down to the first string which should be displayed last.
    (2×10=20 Marks)

Module – III

17. Write the disadvantageous (if any) of static arrays. Specify and explain some strategies to solve these problems. Your answer should contain enough examples.

18. Write the program segment to list the data elements in a singly linked list in reverse order.

19. Write a C program that will accept two file names as command line arguments and it will copy the content of first file into the second file. **(2×10=20 Marks)**
