Roll No .....

MCA - 103

M.C.A. I Semester

Examination, December 2014

Programming and Problem Solving in C

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each question are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.

1. a) What is an algorithm?
   b) What is a flowchart?
   c) Describe the characteristics of a good programming.
   d) What is the system development life cycle? Explain various phases of it.

   OR

   Discuss top-down and bottom up design techniques.

2. a) What is a variable?
   b) What is an expression?
   c) What is an array variable?
   d) What is the purpose of the for statement? How does it differ from the while statement and the do while statement.

OR

Write a program to check whether a given number is a Palindrome or not.

3. a) What is function?
   b) What are arguments?
   c) What is the purpose of the return statement?
   d) Distinguish between the following:
      i) Global and local variables
      ii) Automatic and static variables

   OR

   Write a program to subtract two matrices.

4. a) What is a structure?
   b) What is a union?
   c) What is meant by dynamic memory allocation?
   d) What is the principal difference between the function malloc and calloc?

   OR

   Write a program to sort string of names.

5. a) What is a significance of EOF.
   b) Explain the general format of f seek function.
   c) Explain the role of the C preprocessor.
   d) Distinguish between the following functions
      i) Getch and getchar
      ii) Print f and f print f

   OR

   Write a program to create and count the number of character in a file.

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