

Roll No.

Subject Code—8045-X

P.G.D.C.A./M.C.A. EXAMINATION

(First Semester)

(MCA 3 Years)

(Re-appear Batch 2009 Onwards)

MS-02

**COMPUTER PROGRAMMING
& PROBLEM SOLVING**

Time : 3 Hours

Maximum Marks : 70

Section A

Note : Attempt any *Seven* questions. **7×5=35**

1. What do you understand by flowcharts ?
Explain their different symbols and characteristics.
2. Differentiate between identifiers and variables.

3. What are symbolic constants ? Also discuss the rules required to define them.
4. Why are pre-processor statements needed ?
5. What are bit-wise operators ? Discuss them with examples.
6. How values are passed in functions ? Explain.
7. Differentiate between pre-increment and decrement and post-increment and decrement operators with examples.
8. Write a C program to convert a decimal number into its binary equivalent.
9. What are pointers ? Also explain their importance with suitable examples.
10. What are Unformatted Data Files ? Why are they needed ? Explain.

Section B

Note : Attempt all questions.

11. What do you understand by algorithms ? Write an algorithm to find the sum of the series $1 + X + X^2 + X^3 + \dots + X^n$. 12

Or

Write a program to sort a given sequence of N numbers in ascending order.

12. What are arrays ? What are they needed ? How are arrays passed in functions ? 12

Or

What do you mean by recursion ? Discuss its importance in programming ? Also write a program to calculate X^N using recursion.

13. (a) Explain various operations on Pointers.
(b) Demonstrate the use of files in C with the help of suitable example. 11

Or

Write a program in C swap two structure variables.