

Roll No. ....

Total Pages : 2

BT-I/D-19

**31038**

PROGRAMMING FOR PROBLEM SOLVING

Paper-ES 105A

Opt. I

Time : Three Hours]

[Maximum Marks : 75

**Note :** Attempt *five* questions in all selecting at least *one* question from each unit. All questions carry equal marks.

**UNIT-I**

1. (a) Draw the block diagram of computer and explain it. 8  
(b) Explain hexadecimal and octal number systems with the help of suitable examples. 7
2. (a) Describe the following terms:  
(i) Assembler  
(ii) Loader 8  
(b) Write a short note on algorithm and flowchart representation. 7

**UNIT-II**

3. (a) Explain the different types of operators in C. 10  
(b) Discuss the precedence of operators with the help of suitable examples. 5

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4. Explain various types of control statements in C. 15

### UNIT-III

5. (a) Discuss the concept of array and its initialization with the help of an example. 8  
(b) What do you understand by functions in C. 7
6. (a) Explain the term 'recursion'. 8  
(b) Write a short note on built-in functions with examples. 7



### UNIT-IV

7. (a) Write a short note on declaration of pointer and operations on pointers. 10  
(b) What do you understand by dynamic memory allocation. 5
8. (a) Explain the use of union. 8  
(b) Explain the I/O operations on files. 7
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