

BT-I/D-20**41038****PROGRAMMING FOR PROBLEM SOLVING**

Paper-ES 105A

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) Solve the following :

(i) $(543)_6 - (535)_6$.

(ii) $(FCDA.CD)_{16} + (6EF5.BE)_{16}$.

(iii) $(4537.524)_8 = (?)_{10}$. 9

(b) Explain the working principle of laser printer with block diagram. 6

2. (a) Solve the following :

(i) $(593E.03D)_{16} = (?)_r$ where $r = 8$ and 10 .

(ii) $(5FCD)_{16} - (30D8)_{16}$ using r' complement. 9

(b) What do you understand by algorithm? Write algorithm for search an element from the array. 6

UNIT-II

3. (a) Write a program to roots of a quadratic equation using switch statement. 8
- (b) Write the use of break, continue, go to statements with examples. 7
4. (a) Write a program to construct a pyramid of * in C. 7
- (b) Explain the storages classes in C with examples. 8

UNIT-III

5. (a) Write a program to check whether sting is palindrome or not without using string function. 8
- (b) How user defined function with argument but no return can be created, explain with suitable example ? 7
6. (a) What is recursion? Write a program to find the Fibonacci series using recursion. 7
- (b) What are the parameter passing techniques to function with example? 8

UNIT-IV

7. (a) How the array can be handled by the pointers in C language ? Explain. 8
- (b) Explain the use of array within union with suitable example. 7

8. (a) Explain the following with syntax :
- (i) fread. 8
 - (ii) fwrite.
 - (iii) fgetc.
 - (iv) fopen.
 - (v) fputs. 8
- (b) Write a program to concatenate two strings without using string functions. 7
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