Roll No. ....   Total Pages : 3

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.

    (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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