Roll No. .....

Total Pages : 03

BT-2/M-24

42035

PROGRAMMING FOR PROBLEM SOLVING

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) Elaborate block diagram of computer. 5

   (b) Differentiate compiler and interpreter. 5

   (c) Write a short note on debugger, linker, loader and assembler. 5

2. (a) Discuss various types of memory in detail. 6

   (b) Solve the following : 9

   (i) Convert $(6735.47)_8$ into $(\ )_{10}$

   (ii) Convert $(59FD.4D)_{16}$ into $(\ )_{10}$

   (iii) $(126)_8 - (375)_8$

Unit II

3. (a) Discuss various storage classes in C language. 5

(b) Write a C program to find area of a circle. 5

(c) Write a C program to check whether a character is a Vowel or Consonant. 5

4. (a) Write a C program to print factorial of a number. 5

(b) Write a C program to print days of week using switch statement. 5

(c) Elaborate different iterative statements with suitable examples. 5

Unit III

5. (a) Discuss different parameters passing techniques with suitable example. 7

(b) Write a C program to print Fibonacci series using recursion. 8

6. (a) Write a C program to concatenate two strings without string function. 7

(b) Elaborate array how the length of array is calculated. Write a C program to multiply two matrices. 8

Unit IV

7. (a) Elaborate pointers. Write a C program to print array of pointers. 8

   (b) Differentiate structure and union. Write a C program to print union. 7

8. (a) Explain various file operations in C with suitable example. 7

   (b) Write short notes on the following : 8

   (i) Pointers and string

   (ii) Dynamic memory allocation.