(b) What are Storage Classes? How many types of storage classes are used in C? Explain them.

4. (a) Write a C Program to find roots of Quadratic equation. 8

(b) Write a C program to check whether character is vowel or not using switch statement. 7

UNIT–III

5. (a) Define Recursion. Write a C program to Print Fibonacci series using Recursion. 7

(b) Differentiate between Formal and Actual Parameters with example. 8

6. (a) Write a C Program that uses a function to reverse a string. 8

(b) What is Parameter Passing techniques? Explain with example. 7

UNIT–IV

7. (a) Explain file handling modes in C and their uses. 7

(b) Describe Pointers. Write a C program using pointers to read an array of integers. 8

8. (a) Differentiate between union and structure. Write a C Program to implement unions. 8

(b) Write a program that counts the number of characters and number of lines in a text file. 7

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PROGRAMMING FOR PROBLEM SOLVING

Paper–ES-105A

Time Allowed : 3 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) What is Algorithm? Write an algorithm to print factorial of a number.   7

   (b) What is Primary Memory? Explain its different types.   8

2. (a) Convert the following: 10

   (i) $(653.472)_8 = (?)_{10}$

   (ii) $(6FDA.2C)_{16} = (?)_8$

   (b) Discuss the role of Compiler, Interpreter, Linker, Loader, and Assembler in C.   5

UNIT–II

3. (a) Explain formatted and unformatted input/output functions in C.   7