403
78

BT-2/M-22

42035

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) Explain working of a computer along with its block diagram in detail.   7½

    (b) Differentiate between machine, assembly and high-level languages.   7½

2. (a) What is a flowchart? Draw a flowchart to find maximum of n numbers.   7½

    (b) Convert $(64.25)_{10}$ to binary, octal and hexadecimal numbers.   7½

UNIT–II

3. (a) Explain various data types available in 'C'.   7½

    (b) Discuss different storage classes in C language in brief.   7½

4. (a) Describe the various input and output functions in C language using suitable examples.   7½

    (b) Write a program in C to find roots of a quadratic equation.   7½

42035/K/2085/900   **P. T. O.**

UNIT–III

5. (a) What do you understand by function? Explain the various benefits of using functions. 7½

(b) Write a user-defined function in C to compare two strings and identify that whether two string are equal. If not, which string is greater? 7½

6. (a) Write down a program in 'C' to search a number from a given list of numbers. 7½

(b) What is recursion? Write down a recursive program to generate Fibonacci sequence of numbers. 7½

UNIT–IV

7. (a) What is a pointer? What are the various operations that can take place on pointers? Explain using suitable examples in brief. 7½

(b) Explain advantages and disadvantages of structures and union. 7½

8. How can you create and use a file in C language? Write a program in C to read the contents of a file and copy these contents to another file. 15