

Roll No. 2021218211

Total Pages : 2

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

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UNIT-III

5. (a) What do you understand by function? Explain the various benefits of using functions. $7\frac{1}{2}$
- (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? $7\frac{1}{2}$
6. (a) Write down a program in 'C' to search a number from a given list of numbers. $7\frac{1}{2}$
- (b) What is recursion? Write down a recursive program to generate Fibonacci sequence of numbers. $7\frac{1}{2}$

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. $7\frac{1}{2}$
- (b) Explain advantages and disadvantages of structures and union. $7\frac{1}{2}$
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