

**A-1290**

Total Pages : 3

Roll No. ....

**DIT-06**

**Diploma in Information Technology (DIT)**

**Introduction to Computer  
Programming Using C**

Examination February, 2026

Time : 2:00 Hrs.

Max. Marks : 100

*Note :-* This paper is of Hundred (100) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

**Section-A**

**(Long Answer Type Questions) (2×26=52)**

*Note :-* Section 'A' contains Five (05) Long-answer type questions of Twenty Six (26) marks each. Learners are required to answer any *two* (02) questions only.

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( 1 )

P.T.O.

1. Explain in detail the process of problem-solving using algorithms, flowcharts, and pseudo-code. Illustrate with a program that calculates the factorial of a number.
2. Write a detailed note on arithmetic, relational, logical, and bitwise operators. Discuss their syntax, function and practical applications with examples.
3. Discuss looping structures in C language. Compare them and write a program that prints a multiplication table using all three types of loops.
4. Describe macros and preprocessor directives in C. Write a program that demonstrates the use of macros and conditional compilation directives.
5. Explain in detail the steps involved in file handling in C. Write a program that opens a file, writes data to it, and then reads the same data back for display.

### **Section–B**

**(Short Answer Type Questions) (4×12=48)**

**Note** :- Section ‘B’ contains Eight (08) Short-answer type questions of Twelve (12) marks each. Learners are required to answer any *four* (04) questions only.

1. Define data types, variables, constants, and identifiers. Explain their importance in programming with examples.
2. Write a program to calculate the area and circumference of a circle using expressions.
3. Discuss the use of break, continue, and goto statements with examples.
4. Explain the different storage classes available in C language.
5. Explain the concept of recursion with the help of example. Discuss its advantages and limitations.
6. Define Structure. Write a program to store and display the details of students using structures.
7. What is an Array ? Write a program to find the average of N numbers using arrays.
8. Discuss the various file opening modes in C. Explain their use and effect on existing files.

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