

ANURAG Engineering College

(An Autonomous Institution)

I B.Tech I Semester Supplementary Examinations, January – 2025

PROGRAMMING FOR PROBLEM SOLVING – I**(COMMON TO ALL BRANCHES)****Time: 3 Hours****Max. Marks: 75****Section – A (Short Answer type questions)****(25 Marks)****Answer All Questions**

	Course Outcome	B.T Level	Marks
1. Define Algorithm and what are the properties of an algorithm?	CO1	L1	2M
2. List Primary Datatypes in C Language.	CO1	L1	3M
3. Explain the purpose and functionality of the conditional or ternary operator in C language.	CO2	L2	2M
4. Define Type Conversion and explain the different types of Type Conversions available.	CO2	L2	3M
5. List the different Conditional statements available in C.	CO3	L1	2M
6. Write a C program to demonstrate Switch statement.	CO3	L2	3M
7. Define Function.	CO4	L1	2M
8. Explain Recursive function with an example program.	CO4	L2	3M
9. Define an array? Give an example how to declare an array?	CO5	L1	2M
10. Define String. Explain how to declare a string and initialize it.	CO5	L2	3M

Section B (Essay Questions)**Answer all questions, each question carries equal marks.****(5 X 10M = 50M)**

11. A) i) Define flowchart? Draw a flowchart for finding roots of a quadratic equation with all cases.	CO1	L3	5M
ii) Define Variable and write the syntax for defining a variable in C language.			5M
OR			
B) i) Explain the structure of a C program with an example.	CO1	L2	5M
ii) Explain about the input and output statements in c language.			5M
12. A) Develop a C program to demonstrate Relational and Logical operators.	CO2	L3	10M
OR			
B) Explain in detail about the Increment and Decrement operators.	CO2	L2	10M
13. A) Explain while and do-while loop statements in C with example?	CO3	L2	10M
OR			
B) Develop a C program to accept 6 subjects' marks of a student, calculate Total marks and percentage. Print the Grade of a student based on percentage.	CO3	L3	10M
A Grade- 70% to 100%			
B Grade- 60% to 69%			
C Grade- 50% to 59%			
D Grade- Below 50%			

14. A) Describe and classify the various types of user-defined functions in the C language. CO4 L2 10M
- OR**
- B) Why we need storage classes? List and explain the various storage classes present in language 'C'. CO4 L2 10M
15. A) Develop a C program to perform Multiplication of two NxN Matrices. CO5 L3 10M
- OR**
- B) Explain various String handling Functions with syntax and example program. CO5 L2 10M