PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech Winter 2024 - 25 Examination

Semester: 1   **Date: 23-12-2024**
Subject Code: 303105102   **Time: 2:00pm to 4:30pm**
Subject Name: Programming for problem solving   **Total Marks: 60**

Instructions:

1. This question paper comprises of two sections. Write answer of both the sections in separate answer books.

2. From Section A, **Q.1 is compulsory, attempt any THREE from Q. 2 to Q. 5**

3. From Section B, **Q.1 is compulsory, attempt any THREE from Q. 2 to Q. 5**

4. Make suitable assumptions wherever necessary.

5. Start new question on new page.

6. For **BTL** (**Bloom's Taxonomy Level**): **L1-**Remembering**, L2-**Understanding**, L3-**Applying**, L4-**Analyzing**, L5-**Evaluating**, L6-**Creating.

Section-A (30 Marks)

Q.1	**Objective Type Questions** - (State, Define, List, etc)	(6)	CO	BTL
	(All are compulsory and each of two marks)			
	1. List out the reserved keywords in C programming.		CO2	L1
	2. Differentiate Algorithm and Flowchart.		CO2	L3
	3. Find Out the 1's and 2's Complement of 00100010		CO1	L6
Q.2	**Answer the following questions**.			
	1. Define for loop with its structure.	(2)	CO2	L1
	2. Explain Structure of 'C' programming in detail.	(6)	CO2	L2
Q.3	**Answer the following questions**.			
	1. Explain the features of C programming language?	(2)	CO2	L2
	2. Draw flow chart of average of three numbers.	(6)	CO3	L4
Q.4	**Answer the following questions**.			
	1. Convert $(121)_8$ into hexadecimal.	(2)	CO1	L2
	2. Explain the different types of number systems and explain any three with example.	(6)	CO2	L2
Q.5	**Answer the following questions**.			
	1. Define Go to statement with its structure.	(2)	CO2	L1
	2. What is Data Type? Explain different data type with Example.	(6)	CO2	L2

Section-B (30 Marks)

Q.1	**Objective Type Questions** - (State, Define, List, etc)	(6)	CO	BTL
	(All are compulsory and each of two marks)			
	1. Convert the binary number 1101 to its decimal equivalent		CO1	L5
	2.What is array.. Explain its types .		CO2	L1
	3. Evaluate the following expressions: **3-2+4*6**		CO1	L5
Q.2	**Answer the following questions**.			
	1. Determine Function and its types.	(2)	CO2	L1
	2. Describe the different types of operators in C. Provide examples of each type and explain their usage.	(6)	CO2	L2
Q.3	**Answer the following questions**.			
	1. Explain 1D array with example.	(2)	CO2	L3
	2. Explain Algorithm and flowchart and explain symbols of flowchart in detail.	(6)	CO2	L4
Q.4	**Answer the following questions**.			
	1. Explain 2D array with example.	(2)	CO2	L1
	2. Explain Actual and Formal Parameter with example.	(6)	CO2	L1
Q.5	**Answer the following questions**.			
	1. Define String and its different function.	(2)	CO2	L1
	2.Write a program to find the largest of the three nos. using Nested-If-Else statement.	(6)	CO3	L3