

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER 1&2 EXAMINATION – SUMMER 2020****Subject Code: 3110003****Date: 05/11/2020****Subject Name: Programming For Problem Solving****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		Marks
Q.1	(a) Explain different symbols used in flowchart.	03
	(b) Write algorithm or flowchart for finding maximum out of three numbers entered by user.	04
	(c) Explain different categories of operators available in C programming.	07
Q.2	(a) Explain entry controlled and exit controlled loop with proper syntax.	03
	(b) Explain 1) nested if-else statement 2) break statement.	04
	(c) Write a program to store 10 elements in array given by user and to find maximum out of those 10 elements.	07
	OR	
	(c) Write a program to find a character from the string, string and character to be searched both will be given by user.	07
Q.3	(a) Show 1D array declaration, initialization and iteration.	03
	(b) Explain type conversion and type casting with example.	04
	(c) Write a C program to read numbers 1 to 7 and print relatively day Sunday to Saturday using switch statement.	07
	OR	
Q.3	(a) List any three header file with its usage.	03
	(b) Explain four basic data types in C and provision to extend range for appropriate data types.	04
	(c) Write a C program to find factorial of a given number.	07
Q.4	(a) Write a program to find area of triangle.	03
	(b) Explain problem solving using recursion with any example.	04
	(c) What is user defined function? Explain pass by value and pass by reference in functions with example.	07
	OR	
Q.4	(a) Show 2D array declaration, initialization and iteration.	03
	(b) Explain any four inbuilt string functions.	04
	(c) Write a function in the program to return 1 if number passed is prime otherwise return 0.	07
Q.5	(a) Explain various file management function in C.	03
	(b) Show structure declaration and initialization with proper syntax.	04
	(c) Write a C program to find $1+1/2!+1/3!+1/4!+.....+1/n!$.	07

OR

- Q.5** (a) What is pointer? Explain with example to store and print the address of variable using pointer **03**
- (b) Show the usage of malloc() and calloc() with syntax. **04**
- (c) Define a structure “personal” that would contain person name, date of joining and salary. Using this structure read information of 5 people and print the same on screen. Also display sum of salary of all 5 people. **07**

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