GUJARAT TECHNOLOGICAL UNIVERSITY
M.SC(IT)- INTEGRATED– SEMESTER I- EXAMINATION –SUMMER-2024

Subject Code: 1310503   **Date: 14/05/2024**
Subject Name: Fundamentals of Computer and Basics of Programming
Time: 02:30 PM TO 05:00 PM   **Total Marks: 70**
Instructions:

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

Q.1	**(a)**	What is software? Explain types of software.	03
	(b)	Differentiate between compiler and interpreter.	04
	(c)	Draw block diagram of computer. Explain its components in detail.	07
Q.2	**(a)**	Explain data types of C.	03
	(b)	Differentiate between Procedure Oriented and Object-Oriented Language.	04
	(c)	Explain flowchart in detail and draw a flowchart to calculate simple interest.	07

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	(c)	Write a C program to find factorial number.	07
Q.3	**(a)**	Explain the use of break and continue statement.	03
	(b)	Explain branching statements.	04
	(c)	Write a C program to check whether a given string is palindrome or not.	07

<div align="center">OR</div>

Q.3	**(a)**	Explain the use of go to statement with example.	03
	(b)	Explain strcat() and strcpy() functions with example.	04
	(c)	Explain types of loop in detail with example.	07
Q.4	**(a)**	Explain pre-processor directives in C.	03
	(b)	Differentiate between call by value and call by reference.	04
	(c)	Explain an array in detail with example.	07

<div align="center">OR</div>

Q.4	**(a)**	What is function? Explain user-defined functions.	03
	(b)	Explain pointers in detail.	04
	(c)	Write a C program to print Fibonacci series.	07
Q.5	**(a)**	What is union? Explain it with example	03
	(b)	Explain Polymorphism and Encapsulation.	04
	(c)	Write a C program to print minimum and maximum number from an array of N elements.	07

<div align="center">OR</div>

Q.5	**(a)**	Explain class and object with example.	03
	(b)	Explain fseek() and fprintf() with example.	04
	(c)	Explain structure in detail with example.	07

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