GUJARAT TECHNOLOGICAL UNIVERSITY
MCA Integrated- SEMESTER– I EXAMINATION – WINTER 2019

Subject Code: 4410603   **Date:21/12/2019**

Subject Name: Fundamentals of Programming-1

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.**

Q.1	**(a)**	Answer the following:	
		(i) State the types of comments available in 'C' programming language along with appropriate example.	**02**
		(ii) Describe how one-dimensional and two-dimensional arrays are initialized.	**02**
		(iii) Differentiate between entry-controlled loop and exit-controlled loop.	**03**
	(b)	Answer the following:	
		(i) What do you mean by scope and lifetime of a variable?	**02**
		(ii) Define the terms: "algorithm" and "flowchart".	**02**
		(iii) State and explain any three symbols for drawing a flowchart.	**03**
Q.2	**(a)**	Describe the process of compilation of a 'C' program in detail.	**07**
	(b)	What is an identifier in 'C' programming language? State the rules of naming an identifier along with appropriate example.	**07**
		OR	
	(b)	State various categories of operators available in 'C' programming language and explain any two categories in detail.	**07**
Q.3	**(a)**	Write a short note on if…else if…else ladder.	**07**
	(b)	Write a short note on nested loops.	**07**
		OR	
Q.3	**(a)**	Write a program in 'C' programming language to accept two integers from the user and print all the prime numbers existing between the two entered numbers.	**07**
	(b)	What is a function? Explain the importance and limitations of functions.	**07**
Q.4	**(a)**	Explain the concepts of local and global variables using appropriate example.	**07**
	(b)	Write a program in 'C' programming language to print a Fibonacci series by creating a recursive function.	**07**
		OR	
Q.4	**(a)**	Explain how arrays are passed to a function along with appropriate example.	**07**
	(b)	What is a recursive function? State its advantages and disadvantages.	**07**
Q.5	**(a)**	Write a program in 'C' programming language to calculate and print the product of two matrices entered by the user.	**07**
	(b)	Explain any four string handling functions mentioning their syntax and use.	**07**
		OR	
Q.5	**(a)**	Write a program in 'C' programming language to concatenate two strings entered by the user WITHOUT using any library function for string handling.	**07**
	(b)	What is a string? Explain how it is different from an integer array using appropriate example.	**07**

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