GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER– 1 EXAMINATION – WINTER 2018

Subject Code: 3610001   **Date: 01-01-2019**

Subject Name: Fundamentals of Programming-1

Time: 10.30 am to 1.00 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)**	Attempt the following questions:	**07**
		1) What is array variable?	
		2) What is local variable?	
		3) What is data type?	
		4) Differentiate between j=++i; j=i++;	
		5) What is the return data type of scanf()?	
		6) Define token.	
		7) What is type casting?	
	(b)	Define the terms: float, typedef, for(), while()	**07**
Q.2	**(a)**	Write a note on storage representation of Array with example.	**07**
	(b)	Differentiate in between Entry control loop and Exit Control loop.	**07**
		OR	
	(b)	Explain Logical operators and relational operators available in C using example.	**07**
Q.3	**(a)**	Differentiate between Recursion and iteration with suitable examples.	**07**
	(b)	Write a C program to read a 2-D array and find out the minimum element and its' position.	**07**
		OR	
Q.3	**(a)**	What are strings? List and Explain operations that can be performed on strings with example.	**07**
	(b)	Develop a C program to display 2, 4, 6, 8… series. Last number of the series, is accepted as an input.	**07**
Q.4	**(a)**	Write a short note on storage classes available in C.	**07**
	(b)	Explain with diagram of compilation and execution process of C program.	**07**
		OR	
Q.4	**(a)**	Write a program to read a string and to reverse that string without using in-built function.	**07**
	(b)	Explain arithmetic operators available in C using example.	**07**
Q.5	**(a)**	Develop a C program to print following pattern. Number of rows is given as an input.	**07**

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

	(b)	Write a brief account on structure of C program with proper example.	**07**
		OR	
Q.5	**(a)**	Develop a program which accepts a number and power which computes X^n. Using function to compute this X^n which takes two parameter (X, n) in the function.	**07**
	(b)	Write a short note on data types in C.	**07**

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