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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