

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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