

**GUJARAT TECHNOLOGICAL UNIVERSITY****MCA – SEMESTER – I • EXAMINATION – SUMMER 2018****Subject Code: 3610001****Date: 19-May-2018****Subject Name: Fundamentals of Programming-1****Time: 02.30 pm to 5.00 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 header file consists of?
  - 2) What is type casting?
  - 3) What is the return data type of scanf()?
  - 4) What is dangling else problem?
  - 5) Why should we use i++ rather than i=i+1?
  - 6) Define array.
  - 7) What is function?
- (b)** Which are the control structures available in C? Explain any one with example. **07**
- Q.2 (a)**
- 1) Break statement Vs Continue statement **04**
  - 2) Prefix operators Vs Postfix operators **03**
- (b)** Explain Logical operators and relational operators available in C using example. **07**
- OR**
- (b)** Write a C program to check whether given number is prime number or not. **07**
- Q.3 (a)** Write a short note on storage classes available in C. **07**
- (b)** Explain Call by value and Call by reference with suitable examples. **07**
- OR**
- Q.3 (a)** Explain the concept of global variable and local variable with suitable example. **07**
- (b)** Write a C program to read a matrix and find out the maximum element and its position. **07**
- Q.4 (a)**
- 1) Differentiate between actual parameters and formal parameters **04**
  - 2) Differentiate between L- value and R- value **03**
- (b)** Write a program to accept a string (one word) from user and display it in triangle. e.g. INDIA will display as follows **07**
- ```

I
I N
I N D
I N D I
I N D I A

```
- OR**
- Q.4 (a)** Write a C program to convert given decimal number to its binary equivalent. **07**
- (b)** “Functions make C programming modular” Comment on this statement. What is the difference between inbuilt function and user dined function? **07**
- Q.5 (a)** Explain scanf conversion facility used with scanf() with proper example. **07**
- (b)** Explain initialization of one dimensional arrays, two dimensional arrays and strings with example. **07**
- OR**
- Q.5 (a)** Explain following functions: **07**
- (1) strcmp() (2) strcat() (3) strncat() (4) strlen()
- (b)** Write a program to read a string and rewrite it in alphabetical order. **07**