

**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 defined 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**