Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– 1st / 2nd • EXAMINATION – SUMMER 2013

Subject Code: 110003 **Date: 17-06-2013**

Subject Name: Computer Programming and Utilization

Time: 02:30 pm – 05:00 pm **Total Marks: 70**

Instructions:

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Draw block diagram of computer system. Explain each part of it.	**05**
	(b)	List and explain types of computer languages.	**05**
	(c)	What is flow chart? Draw the flow chart to add first 20 odd numbers.	**04**
Q.2	**(a)**	List and explain fundamental data types of 'C' language.	**05**
	(b)	Explain different types of operators used in 'C'.	**05**
	(c)	What is Type conversion and Type casting? State difference between them.	**04**
Q.3	**(a)**	What is looping? Explain Entry control and Exit control loops with appropriate flow chart and syntax.	**07**
	(b)	Write a program to reverse the number. (e.g. 456 → 654)	**07**
Q.4	**(a)**	State the syntax of Switch-case statement. Explain it with appropriate example.	**07**
	(b)	Write a 'C' program to count ODD and EVEN numbers from given 10 numbers.	**07**
Q.5	**(a)**	Explain various string functions.	**07**
	(b)	Write a 'C' program to count number of words in a given string.	**07**
Q. 6	**(a)**	Explain the difference between "call by value" and "call by reference" with suitable examples.	**07**
	(b)	What is recursive function? Explain with suitable example.	**07**
Q. 7	**(a)**	What is pointer? Explain how pointers are declared and initialized.	**04**
	(b)	Attempt Any two :	**10**

(1) Difference between Structure and Union.

(2) Write a 'C' program to print following pattern.

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

(3) Explain " if-else-if ladder" with appropriate flow chart and 'C' syntax

****