

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER- 1<sup>st</sup> / 2<sup>nd</sup> • 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.  

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

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

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