Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
PDDC SEM-I Examination-Dec-2011

Subject code: X10002   **Date: 27/12/2011**
Subject Name: Computer Programming & Utilization
Time: 10.30 am -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) What is pointer? Write a program to do swapping of two elements using pointers. **07**
(b) What is difference between 'for' loop and 'while' loop. **07**
Write a program using 'for' loop.

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

Q.2 (a) Draw the Block Diagram of Computer Architecture and explain each block with its functions. **07**
(b) How to define and declare Single dimensional array. Write a C program to arrange single dimensional array of 5 elements in Ascending order. **07**
OR
(b) What is the difference between 'while' loop and 'do while' loop. Write a program using 'while' loop to reverse the digits of the number. For example the number is 12345 should be printed as 54321. **07**

Q.3 (a) Write a Program to demonstrate the "call by value" and "call by reference" concept in C **07**
(b) Describe various string handling operation using sample 'C' codes **07**

OR
Q.3 (a) List out the categories of functions. Explain any one category with example. Also Explain difference between unions and structures. **07**
(b) Explain Nesting of IF…ELSE statement and the ELSE…..IF ladder with example. **07**

Q.4 (a) Explain the usage of constructor and destructor in C++. Write a C++ program to demonstrate the use of Constructor and Destructor. **07**
(b) Explain features of object oriented programming language **07**
OR
Q.4 (a) Write a C++ Program to demonstrate the operators' hierarchy **07**

(b) Give comparison of Static Memory Allocation and Dynamic Memory Allocation with a code snippet. **07**

Q.5 (a) What is Friend function? Write a C++ Program to show usage of Friend Function. **07**
(b) Describe various types of Inheritance **07**
OR
Q.5 (a) Write short note on Polymorphism **07**
(b) Write a C++ program to demonstrate copy constructor **07**
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1