Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER–I • EXAMINATION – SUMMER • 2014

Subject Code: X10002 **Date: 19-06-2014**

Subject Name: Computer Programming and Utilization

Time: 02:30 pm - 05:00 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)** Answer the following questions.

1) Give difference between hardware and software. **03**
2) Draw flow chart for logic to find maximum numbers from given 100 numbers. **04**

(b) Explain concepts of recursive functions and implementation of these in 'C' language. **07**

Q.2 **(a)** Write a C language program to print the tables of squares of 1 to 25. **07**

(b) Write a C language program to print the following pattern. **07**

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

OR

(b) Explain concept of constructors and destructors in C++ with suitable example. **07**

Q.3 **(a)** Write a C language program to calculate no. characters in a input string. **07**

(b) Explain concept of function with various types of parameters. **07**

OR

Q.3 **(a)** Write a C language program to arrange array of 10 numbers into ascending order. **07**

(b) Explain arrays within structures with example. **07**

Q.4 **(a)** Explain difference between structure and union. **07**

(b) Explain principle of Object oriented programming. **07**

OR

Q.4 **(a)** Explain concepts of pointers with suitable example. **07**

(b) Write a C++ program to calculate factorial of first ten numbers using recursive function.

Q.5 **(a)** Explain concept of nesting of member functions for C++. **07**

(b) Explain in short for C++. **07**

1) Friend function,
2) Const member function.

OR

Q.5 **(a)** Explain in short for C++. **07**

1) Classes
2) Objects.

(b) Write a C ++ program to find the minimum number from the 10 numbers with the help of class and object. **07**

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