

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. - SEMESTER – I • EXAMINATION – WINTER • 2014****Subject code: 110003****Date: 01-01-2015****Subject Name: Computer Programming and Utilization****Time: 10:30 am - 01:00 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) What is Algorithm and flowchart? Explain both with suitable example **07**
 (b) Write Types of IF..Else statement with example. **07**
- Q.2** (a) Write a program to demonstrate use of **07**
 • for (..)
 • while(..) loop.
- (b) Explain Following with Simple example **07**
 (1) Friend function (2) Pointer (3) Scope and life time of variable
 (4) Bitwise operators (5) Object (6) 'void' – data type (7) Dynamic memory allocation
- Q.3** (a) State the difference between Structure and Union with appropriate example. **07**
 (b) Write a short note on **07**
 a. Inheritance
 b. static member function
- Q.4** (a) Write the short notes on following. **07**
 a. Polymorphism
 b. Difference between Object Oriented and Procedure Oriented language.
- (b) What is pointer? Give its benefits. Write a program to do swapping of two elements pointers. **07**
- Q.5** (a) Explain strcat(), strcpy(), strcmp() and strstr() string manipulation function. **07**
 (b) Write a program to store 20 numbers in an array. Then find out Sum, Average of these 20 numbers. **07**
- Q.6** (a) Write a program to generate Fibonacci series of numbers (total 30 numbers) **07**
 i.e. 1, 1, 2, 3, 5, 8....etc
- (b) Explain Following with Simple example **07**
 (1) Token (2) Identifier (3) Constant (4) Type casting (5) Destructor
 (6) Storage class (7) Inline function
- Q.7** (a) What is an Array? Explain two dimensional array with suitable sample program in 'C' **07**
 (b) Write a program to print the following triangle for 4 lines **07**

```

      1
     2 3
    4 5 6
   7 8 9 10
  
```
