

GUJARAT TECHNOLOGICAL UNIVERSITY
P.D.D.C. Sem- I Regular / Remedial Examination January. 2011

Subject code: X10002

Subject Name: Computer Programming & Utilisation

Date: 04 / 01 /2011

Time: 10.30 am – 01.00 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) Explain algorithm and flowchart with simple c program. **07**
(b) Draw the block diagram of computer and explain function of various computer components. **07**

Q.2 (a) Enlist the operators used in the 'C' language. Explain any two in details. **07**
(b) What is an array? How the single and two dimensional array can be declared and initialized? **07**

OR

(b) Write a c program to print reverse number (i.e. 1256 print as 6521). **07**

Q.3 (a) What is recursion? Explain with small example. **07**
(b) Write a program to sort given number in ascending order (Use one dimensional array). **07**

OR

Q.3 (a) Write a program to find the length of a sting and reverse the string. **07**
(b) Describe the features of object oriented programming language. **07**

Q.4 (a) Write a program to print following output using for loop. **07**
1
1 2
1 2 3
1 2 3 4

(b) Explain the friend function with c++ program. **07**

OR

Q.4 (a) Describe inline function in C++ language. Write a program to calculate area of circle using inline function. **07**

Q.4 (b) What is constructor and destructor in c++ language? Explain with program. **07**

Q.5 (a) What is Dynamic memory allocation, compare it with static memory allocation. **07**
(b) What is pointer? How is a pointer initialized? Explain with small example. **07**

OR

Q.5 (a) Write a function program to evaluate the following. **07**
$$x + \frac{x^2}{x!} + \frac{x^4}{4!} + \frac{x^6}{6!} + \dots + \frac{x^n}{n!}$$

(b) Explain 'break' and 'continue' using example. **07**
