B.E. 1st Semester Examination, 2006
Introduction to Computing (CST 1201)

F.M: 35 " Time: 2 hrs.

Attempt question no. 1 and any FIVE from the rest.

1. Answer any five questions. (10)

a)Convert the following:-

i) $(23)io = (?)_2$

ii) $(101011)_2 = (?)_8$

b) Write any two major functions of Compiler.

c) What is the utility of a Function?

d) What isrthe difference&between a structure and a union?

e) What do you mean by Universal Gate?

f) Differentiate Keyword and Identifier.

g) Discuss the advantage of using a register storage class.

2. a) What is Recursive function? (2)

b) Write a recursive function to compute the multiplication of any two positive integers. (3)

"*T.* 'a) What are the advantages of parameter-passing technique in any programming language? (2)

b) Discuss with example two major parameter-passing techniques used in C-language. ■ (3)

G-.C-D

4. Write a function that returns the g.c.d. (greatest common divisor) of any two positive integers. (And heaee write a program that will access the above function ■ to find out the gre^L of any three numbers. (3+2)

5. a) How many different loop structures are there in C-programming? (1)

b) Compare and contrast any two loop statement with a particular example. (4)

6. Write a program (or an algorithm) to arrange a given string in reverse order. (5)

7. Write short notes on any two of the following. (5)

   a. Ternary or Conditional Operator.
   b. Pointer variable.
   c. Two Dimensional Array

8. Draw the basic block diagram of a digital computer system and discuss briefly the functions of each component. (5)

9. What will be the output of the following programs? (any two) (5)

i)
```
#include<stdio.h> .
main () { int *px,
*py;
  static int a[6]={l, 2, 3, 4, 5, 6}
  px=&a[0]; py=&a[5]; printf("py -
  px = %x",-py-px);
}
```

ii)
```
#include<stdio.h>
main () { int i, j, x
= 0;
  for (i = 0; i < 4; i + +)


      printf("%d", x);
    } printf("\nx =%d",
  x);
```

iii)
```
#include<stdio.h>
main () {
  ____________
 while( i < 20)   {

      x + = i; printf(
      "%d ", x);


   }
   printf("\n x = %d", x);
```