Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.E. Sem-I Remedial Examination March / April 2010

Subject code:110003   **Subject Name : Comp. Prog. &Utilization**
Date:01 / 04 /2010   **Time: 12.00 Noon – 02.30 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)** Draw a flow chart to find factorial of a given number.   **05**
     (b) Write a program to find maximum element from 3×3 metrics.   **05**
     (c) Write a program to Accept three number from user and print maximum   **04**
number.

Q.2 **(a)** Give output of following .   **07**

```
( i ) main()                        (ii) main()
  { int n=6, t=1;                      { int a=3 b=5,c,*p,*q;
    for(;n<10;n=n+2)                     p=&b; a=&a;
    printf("%d %d\n",n ,++ t);        c=*p % *q;   ++(*p);
  }                                    printf ("%d %d",*p,*q);
                                       printf ("\n %d %d", c ,b);
                                     }
```

     (b) Explain if…else if ..ladder with flowchart.   **07**
<div align="center">OR</div>

     (b) Explain for loop. Differentiate use of continue, break and go to statement. **07**

Q.3 **(a)** Write a program which declares array of 10 integers, enter the data and sum **07**
all the elements which are even. Also find the maximum number from them.

     (b) Explain implicit type conversion and explicit type conversion with **07**
example.
<div align="center">OR</div>

Q.3 **(a)** Write a program to print following pattern using loop statement for n row. **06**
1
1 3
1 3 5
1 3 5 7
…………………..

     (b) Explain operator precedence and associtivity.   **04**
     (c) Explain different operators used in C language.   **04**

Q.4 **(a)** Write a function which receives number as argument and return sum of **06**
digit of that number.
     (b) What is dynamic memory alllocation? What is difference   **04**
between malloc and calloc ?
     (c) Explain strcat( ), strcpy( ) ,strncmp( ) and strstr( ) string manipulation **04**
function.
<div align="center">OR</div>

Q.4 **(a)** What is a pointer? Write a program using pointer to read in an array of **06** integers and print its elements in reverse order.

(b) State difference between Structure and Union. **04**

(c) Which are various categories of functions. Explain any one with example. **04**

Q.5 **(a)** Explain function overloading with proper example. **04**

(b) Explain friend function with example. **04**

(c) Define a distance class, which has greatest function which returns **06** maximum distance of its two arguments distance object.

OR

Q.5 **(a)** Write a short note on multiple inheritance **04**

(b) Explain operator overloading with example **04**

(c) Define a base class rectangle with length and width parameter and area **06** function. Then derive class cube which has extra parameter height and volume calculate function

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