Name: KEY **Id#**

ICS 103, Term 132

Computer Programming in C

Quiz# 2

Date: Sunday, March 9, 2014

Q1. Consider the following program. What will be the output for the different values of x typed by the user?

```
#include <stdio.h>

int main()
{
      int x;
      printf("Enter a value for x: ");
      scanf("%d", &x);

      switch(x) {
            case 1: x=x+2;
                  break;
            case 3: x=x+1;
            case 5: if(x==4)
                  x=x+6;
            case 6: x=x+3;
                  break;
            default : x=x-1;
      }

      printf("%d\n",x);

      return 0;
}
```

Value of x typed by user	Program output
1	3
2	1
3	13
5	8
6	9

Q2. Consider the following program. What will be the output for the different values of x typed by the user?

```
#include <stdio.h>

int main() {

int x;
printf("Enter a value for x >");
scanf("%d",&x);

if(x >= 5 ) {
  if(x < 10){
    if(x > 8)
       printf("A");
    else
       printf("B");
  }
  else{
    if ( x >= 20)
      printf("C");
    else
      printf("D");
  }
}
else
      printf("F");

return 0;
}
```

Value of x typed by user	Program output
3	F
7	B
20	C
10	D
9	A

Q3. Write a function that receives the Cartesian coordinates of two points (x1,y1) and (x2,y2) and computes their distance computed by the following formula:

$$\text{distance} = \sqrt{(x2 - x1)^2 + (y2 - y1)^2}$$

Assume that the input and output arguments are of type double.

```
double distance (double x1, double y1, double x2, double y2)
{

  return sqrt( pow(x2-x1,2) + pow(y2-y1,2));

}
```