Quiz 2

(20 points)

PROBLEM SOLVING IN C
(CSCE 105, SPRING 2006)
URL: http://www.cse.unl.edu/~cstrope/csce105s06/
27th March, 2006

Name :
Course No : **CSCE105**

1. (5 points)

   During the execution of the following program segment, how many lines of asterisks are displayed?

```
for(i = 0; i < 10; i++)
    for(j = 0; j < 5; j++)
        printf("***********\n");
```

   `i` will run from 0...9, or 10 times through the loop. Each time through the loop, `j` will run from 0...4, or 5 times. Thus, 50 lines of asterisks will be printed.

2. (5 points)
   During the execution of the following program segment:

   (a) How many times does the first call to `printf` execute?

   (b) How many times does the second call to `printf` execute?

   (c) What is the last value displayed?

```
for(i = 0; i < 7; i++) {
    for(j = 0; j < i; i++)
        printf("%4d", i * j);
    printf("\n");
}
```

   The first `printf` will be executed 0 times, then 1 time, ..., then 6 times, so $1+2+\ldots+6$, or 21 times.

   The second `printf` will be executed as many times as the first `for` loop, or 7 times.

3. (5 points) Rewrite the following program segment using a `for` loop:

```
count = 0;
i = 0;
while(i < n) {
    scanf("%d", &x);
    if(x == i)
        count++;
    i++;
}
```

```
count = 0;
for(i = 0; i < n; i++) {
    scanf("%d", &x);
    if(x == i) count++;
}
```

4. (5 points) What is displayed by the following code fragment when the user inputs the value 16?

```
scanf("%d", &n);
ev = 1;
while(ev <= n){
    printf("%d\n", ev);
    ev += n % ev + 2;
}
```

1
3
6
12