

Name (PRINTED): _____

Student ID #: _____

Section # (or TA's: _____
name and time)

CMSC 106

Quiz #3

Fall 2007

1. [9 pts.] Give the output produced by the following C program:

```
#include <stdio.h>
#define LARGE 20
#define SMALL 10
int main(){
    int value = 7;
    if (value > LARGE)
        printf("large\n");
    if (value > SMALL)
        printf("med\n");
    else
        printf("small\n");
    return 0;
}
```

small

2. [9 pts.] Give the complete output of the following (C) program for each of the sets of input values shown. If the program has no output for any of the input data sets, say so. You may not need all blank lines presented.

```
#include <stdio.h>
main(){
    int a, b, c;
    scanf("%d%d%d",&a, &b, &c);
    if (a < b || a < c)
        printf("Line 1\n");
    if (a == b && a > 0){
        printf("Line 2\n");
        if (c > a)
            printf("Line 3\n");
        if (c > 0)
            printf("Line 4\n");
    }
    else if (b > 0)
        printf("Line 5\n");
    else
        printf("Line 6\n");
    return 0;
}
```

a. 5 -3 1

Line 6

b. 1 3 5

Line 1

Line 5

c. 2 2 5

Line 1

Line 2

Line 3

Line 4

(over)

3. [22 pts.] Write a complete C program which will request and read three exam grades from the standard input. These exam grades will be positive floating point numbers. Your program must find the average of those three grades and then tell the person the letter grade they earned based on the following chart of cutoffs. (They can only earn an A, a C or an F.)

90 or above	A
70 or above	C
below 70	F

Your program need not contain any comments but should be written **neatly** and use logical indentation.

```
#include <stdio.h>
#define A_CUTOFF 90
#define C_CUTOFF 70

int main(){
    float ex1, e2, ex3, average;
    printf("give three grades: ");
    scanf("%f %f %f", &ex1, &ex2, &ex3);
    average = (ex1 + e2 + ex3)/3;
    if (average >= A_CUTOFF){
        printf("A");
    }
    else if (average >= C_CUTOFF){
        printf("C");
    }
    else{
        printf("F");
    }
    return 0;
}
```