

Name: _____

ECE 270 Test #1

October 25, 1999

Honor code in effect

Closed Book and Notes

1. (20) Write a C program that will print your name 500 times. Please save this program as prog1.c on the floppy provided.
2. (20) Write a C program that will calculate the sum of all the digits from 1 to some positive integer number n entered by the user when the program is run. Please save this program as prog2.c on the floppy provided.
3. (20) Write a C program that will calculate the factorial of a positive integer number n entered by the user when the program is run. Please save this program as prog3.c on the floppy provided.
4. Please answer the following questions briefly as a comment at the end of prog3.c:
 - a) (10) Why should goto statements generally be avoided?
 - b) (10) When are opening and closing braces required following an if statement?
 - c) (10) Consider the following code fragment:

```
int a;  
a = -1;  
if (a)  
    printf("Hi there!");
```

Please explain what will happen and why when this portion of the code is run and why.

- d) (10) Name one good way to make a program self documenting to minimize the number of comments required so that others can understand the program?

Note: You may only use the floppy disk that has been provided for this test. Also, please call your first program prog1.c and your second program prog2.c. It would be a good idea to save backup copies of your programs using file names like prog1bu.c and prog2bu.c. Please return this sheet with your name on it when you turn your tests and floppies in. **Be sure to include your name as a comment in each program and sign the honor code below.**

I have neither given nor received aid on this graded examination _____