Introduction to Computing

CS 151 - 040

Department of Physical and Computer Sciences

Medgar Evers College

Exam 2 - Take Home

Name: _____

Directions: Read the questions carefully. Write legibly to earn credit. Good Luck!

Section	Max Points	Points Earned
1	8	
2	8	
3	4	
Total	20	

Section 1: Syntax

Write ONLY the statements requested and required.

1) Write the function definition of the function named `negation()` that takes an int parameter named n, and returns an int. It returns positive n if n is negative, negative n if n is positive, or 0 if n is zero.

2) Given int variable, x, that had been initialized, write a statement(s) that displays 2 if x is a multiple of 2, 3 if x is a multiple of 3, 6 if x is a multiple of both 2 and 3, or otherwise 1.

3) Write the function definition of the function named `concatenate()` that takes two string parameters named *frst* and *scnd* respectively and returns a string. It should return the first parameter concatenated to the end of the second parameter.

4) Given float variables, a, b and emphc, that had been initialized, write a statement(s) that displays the minimum of the variables.

5) Write the function definition of the function named `distance()` that takes teo int parameters and returns an int. It should return the distance between the parameters.

6) Given int variable, s, that had been initialized, write a statement(s) that displays "To" if s is a multiple of 3, "Fro" if s is a multiple of 5, or 'To Fro' if it is a multiple of 15.

7) Write the function definition of the function named `piecewise()` that takes an int named n as a parameter and returns an int. It should return five more than n if it is non-negative; otherwise, it returns one less than the square of n.

8) Write the function prototype of the function named `perimeter()` that takes five double and a double reference as parameters, and it returns nothing.

Section 2: Debugging

Identify the lines with logic and/or syntax errors by circling their line number; and then, rewrite the lines with corrections in correction section to receive points. To omit a line, rewrite it as a comment.

	Code Segment	**Correction**
01	`int short(int n)`	
02	`{`	
03	`  if(n == 0) {`	
04	`   return 0;}`	
05	`  else {`	
06	`   return s(n - 1) + 2 * n - 1;`	
07	`}`	
08		
09	`int e(const int& n)`	
10	`{`	
11	`  if(n > 0) {`	
12	`   return n * n}`	
13	`  else if(n < 0) {`	
14	`   return -1 * n;}`	
15	`}`	
16		
17	`int main()`	
18	`}`	
19	`  int tS;`	
20	`  cin >> ts;`	
21	`  cout << s(e(tS)) << "/n";`	
22	`  cout << s(e(-5)) << '/n';`	
23	`}`	
24		

Section 3: Extra Credit

Write the following code segment.

Write the function definition of the function named `LCM()` that takes two int parameters, named m and n respectively, and returns an int. It should return the least common multiple of the absolute values of m and n. If either value is 0, it should return 0. You cannot use any pre-defined functions, but you can define additional functions if needed.