Name:_____ (50 minutes)	CSCI 2490 C++ Programming Armstrong Atlantic State University Instructor: Dr. Y. Daniel Liang

(Open book test, you can only bring the textbook)

Part I: Multiple Choice Questions:

5 quizzes for Chapter 1

1 Why do computers use zeros and ones?

A. because binary numbers are the bases upon which all other number systems are built.
B. because combinations of zeros and ones can represent any numbers and characters.
C. because digital devices have two stable states and it is natural to use one state for 0 and the other for 1.
D. because binary numbers are simplest.

2 A block is enclosed inside _____.

A. Brackets
B. Braces
C. Parentheses
D. Quotes

3 The following program displays _____.

```
#include <iostream>
using namespace std;

int main()
{
  cout << "A";
  cout << "B";

  return 0;
}
```

A. AB
B. BA
C. B A
D. A B

4 _____ is the brain of a computer.

A. Hardware
B. Memory
C. CPU
D. Disk

5 The extension name of a C++ source code file is

A. .class
B. .java
C. .exe
D. .cpp
E. .obj

10 quizzes for Chapter 2
6 To improve readability and maintainability, you should declare _____ instead of using literal values such as 3.14159.

A. constants
B. variables
C. classes
D. functions

7 To assign a value 1 to variable x, you write

A. x := 1;
B. 1 := x;
C. 1 = x;
D. x = 1;
E. x == 1;

8 The ASCII of 'a' is 97. What is the ASCII for 'c'?

A. 97
B. 98
C. 96
D. 99

9 Which of the following statement prints smith\exam1\test.txt?

A. cout << "smith\\exam1\\test.txt";
B. cout << "smith"\exam1"\test.txt";
C. cout << "smith\"exam1\"test.txt";
D. cout << "smith\exam1\test.txt";

10 A character is stored in _____.

A. three bytes
B. two bytes
C. four bytes
D. one byte

11 Suppose x is 1. What is x after x -= 1?

A. -1
B. 0
C. 1
D. 2
E. -2

12 Programming style is important, because _____.

A. a program may not compile if it has a bad style
B. good programming style makes a program more readable
C. good programming style helps reduce programming errors
D. good programming style can make a program run faster

13 To add a value 1 to variable x, you write

A. x = x + 1;
B. x := 1;
C. 1 + x = x;
D. x += 1;
E. x = 1 + x;

14 Which of the following expression will yield 0.5?

A. 1.0 / 2
B. 1 / 2.0
C. (double) 1 / 2
D. (double) (1 / 2)
E. 1 / 2

15 Note that the ASCII for character A is 65. The expression 'A' + 1 evaluates to _____.

A. B
B. 66
C. A1
D. Illegal expression

Part II: Find and correct errors in the following code: (5 pts)

```
#include <iostream>
using namespace std;

int main()
{
  int j = i + 1;
  int k = 5.5;

  cout << "j is " << j << "and
    k is " << k;
```

```
  return 0;
}
```

Part III: Show the output of the following code:
(8 pts)

```
#include <iostream>
using namespace std;

int main()
{
  int x1, x2, i, j, k, y, z;
  float f;
  x1 = 1;
  x2 = 1;
  y = 5 + x1--;
  z = 5 + ++x2;
  i = 6 % 4;
  j = 1;
  j += j + 3;
  k = 25 / 2;
  f = (float)((2 / 5) * k);

  cout << "x1 is " << x1 << endl;
  cout << "x2 is " << x2 << endl;
  cout << "i is " << i << endl;
  cout << "j is " << j << endl;
  cout << "k is " << k << endl;
  cout << "y is " << y << endl;
  cout << "z is " << z << endl;
  cout << "f is " << f;

  return 0;
}
```

Part IV: (10 pts) Write a program that prompts the user to enter two points (x1, y1) and (x2, y2) and displays their distances. The formula for computing the distance is $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$. Note you can use pow(a, 0.5) to compute $\sqrt{a}$. Here is a sample run.

<Output>

```
Enter x1 and y1: 1.5 -3.4
Enter x2 and y2: 4 5
The distance of the two points is 8.764131445842194
```

<End Output>