

The American University in Cairo
Department of Computer Science & Engineering
CSCE 106-03&08

Dr. KHALIL	Quiz III	Spring 2011
Last Name :		ID:
First Name:		Form – I

EXAMINATION INSTRUCTIONS

- * Do not turn this page until asked to do so.
- * Exam time is **45** minutes.
- * Put the answers on the same question sheet, do not use any additional papers, even for scratch.
- * Write your name, ID, section no. in the indicated places.
- * Read the exam instructions.
- * Read the honesty policy.
- * Sign the following statement.

Academic Integrity Policy

Cheating in Exams is a violation of the Academic Integrity policy of AUC. Whispering, talking, looking at someone else's paper, or copying from any source is considered cheating. Any one who does any of these actions or her/his answers indicates that she/he did any of them, will receive a punishment ranging from zero in this exam to failing the course. If repeated, it may lead to dismissal from AUC.

I have read the honesty policy and exam instructions and I am presenting this exam as entirely my effort.

Signature: _____

DO NOT USE THIS SECTION

Question	Points	Grade
1	10	
2	10	
3	10	
4	10	
Total	40	

Question 1 (10 points)

At AUC, the academic standing of a student is determined based on the number of the credit hours that the student has achieved. The rules are as follows:

Number of Credit Hours (CrH)	Academic Standing (AcSt)
CrH < 30	Freshman
30 <= CrH < 60	Sophomore
60 <= CrH < 90	Junior
CrH >= 90	Senior

The following C++ program accepts the number of credit hours (CrH) achieved by the student and print out his/her academic standing (AcSt). The program validates the user input to accept only valid number of credit hours in the range **1** to **130** (inclusive). There are some missings (represented by dots) in the given program. Complete these missings such that the program could be compiled and run correctly.

```
# include <iostream>
.....
using namespace std;
void main ()
{
    int CrH;           // Number of Credit Hours
    string AcSt;        // Academic Standing
    cout << "Enter the number of Credit Houres between 1 and 130: ";
    cin >> CrH;
    while (.....)
    { cout << "Invalid Input!!, CrH must be greater than 0 and less than 131" << endl;
      cin >> CrH;
    }
    switch (.....)
    {   case 0:
        AcSt = "Freshman";
        .....;

        case .....
        .....;
        .....;

        case .....
        .....;
        .....;

        default:
        .....;
    }
    cout << "The Academic Standing is " << AcSt << endl;
}
```

Question 2 (10 points)

Tick only one possible answer for each of the following:

- 1) The equivalent expression of **((x <= y) && True)** is:
- a. **(x > y)** ☐
 - b. **(x <= y)** ☐
 - c. **True** ☐
 - d. **none of the above** ☐
- 2) The equivalent expression of **! ((x <= y) || (s > t))** is:
- a. **((x > y) || (s <= t))** ☐
 - b. **((x > y) && (s <= t))** ☐
 - c. **False** ☐
 - d. **none of the above** ☐
- 3) The value of **((x - 4) != 4) && ((x - 4) == 4)** is:
- a. **(x - 4)** ☐
 - b. **True** ☐
 - c. **(x + 4)** ☐
 - d. **none of the above** ☐
- 4) The equivalent expression of **! (x < y)** is:
- a. **(x > y)** ☐
 - b. **False** ☐
 - c. **(x >= 4)** ☐
 - d. **none of the above** ☐
- 5) The value of **((x <= y) || True)** is:
- a. **(x > y)** ☐
 - b. **(x <= y)** ☐
 - c. **False** ☐
 - d. **none of the above** ☐

Question 3 (10 points)

Show the output of each of the following program segments:

<pre>int a = 2, b = 5, c = 3; b /= a++; c /= ++a; cout << setw(3) << a << setw(3) << b << setw(3) << c << endl;</pre>	
<pre>for (int k=5; k <= 10; k++) if ((k % 3) != 0) cout << k; cout << "k = " << k << endl;</pre>	
<pre>int a = 5, s = 0; while (a < 5) if (a % 2 != 0) s = s + a; cout << setw(3) << a << setw(3) << s << endl;</pre>	

Write a C++ program to enter 24 readings of temperature of a day, compute and print out the average and highest temperatures of the day.

[illegible]