الجامعة اللبنانية
كلية الاعلام
الفرع الاول

الامتحانات النهائية للفصل الأول
من العام الجامعي 2026- 2025

مرحلة: الاجازة	المادة: Introduction To Programming
السنة المنهجية:الاولى- الدورة الاولى	المدة: 120 دقيقة
الاختصاص: علم البيانات	الأستاذ: د.يوسف الاتات

Question 1 – Array of integers (30 points)

Let an integer array A[6] be defined as follows:

A = { 4, -1, 0, 7, 3, -2 }

1.1) Write a C/C++ program that declares the array A[6] and initializes it with the given values.

1.2) Write a program that replaces by 0 all negative elements of array A using a loop.

After execution, the array becomes:

A = { 4, 0, 0, 7, 3, 0 }

1.3) Write a program that computes and displays the sum of all elements of array A.

Question 2 – Matrix (35 points)

Consider the following integer matrix M[3][3]:

1 2 3
4 5 6
7 8 9

3.1) Write a C program that initializes the matrix M[3][3] with the values given above.

3.2) Write a C program that counts the number of elements of M that are greater than 5.

3.3) Write a C program that displays the main diagonal of matrix M.

Question 3 – Functions (35 points)

2.1) Define a function:

int sum(int n)

that returns the sum of all integers from 1 to n.
Example: if n = 5, then sum(5) = 15

2.2) Give the output of the following program:

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

int f(int a = 0, int b = 3)
{
   int s = 0;
   for(int i = a; i <= b; i++)
      s += i;
   return s;
}

int main()
{
   cout << f() << endl;
   cout << f(2, 4) << endl;
   cout << f(1) << endl;
   return 0;
}
```