CISS240: Introduction to Programming
Quiz q2002

Name: _____ Score: [ ]

This is a closed-book, no C++ compiler, 6-minute quiz.

Q1. Complete the following function that accepts an array and a length, and overwrites the negative values in the array with 0. For instance if the function is called with the array `{-1, 2, -3, -4, 5, 6, -7, 4}` and 8, on returning from the function, the array becomes `{0, 2, 0, 0, 5, 6, 0, 4}`.
Answer:

```
void clear_negative(double x[], int len)
{

}
```

Q2. Complete the following function that accepts a 2D array `x` and `n` (at most 1024) and fill `x` with values so that for instance if `n` is `5`, `x` is

```
1 1 1 1 1
1 0 0 0 1
1 0 0 0 1
1 0 0 0 1
1 1 1 1 1
```

i.e., `1`s on the boundary of the 5×5 area surrounding `0`s. (Top left corresponding to row 0, column 0 of the array.)
Answer:

```
void f(int x[1024][1024], int n)
{
}
```

Q3. What is the output (or write ERROR).

```
int x[10][10] = {0};

for (int i = 0; i < 10; i++)
{
    x[i][0] = 1;
```

```
    x[0][i] = 1;
}

for (int i = 1; i < 10; i++)
{
    for (int j = 1; j < 10; j++)
    {
        x[i][j] = x[i - 1][j] + x[i][j - 1] + x[i - 1][j - 1];
    }
}

std::cout << x[1][2] << '\n';
```

Answer:

Q4. What is the output (or write ERROR).

```
#include <iostream>

void set_to_zero(int x)
{
    x = 0;
}

void set_to_one(int & x)
{
    x = 1;
}

int main()
{
    int x = 42;
    set_to_zero(x);
    std::cout << x << ' ';
    set_to_one(x);
    std::cout << x << '\n';
    return 0;
}
```

Answer: