



Name:

Sec.

BN:

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

const int MAX = 20;
int fun(int n)
{
    static int memory[MAX] = {0};
    memory[0] = 0;
    memory[1] = 1;
    if(memory[n] == 0 & .....(1).....)
    {
        .....(2).....
        return memory[n];
    }
    else
        return memory[n];
}
```

```
int main()
{
    for (int i = 0; i < 10; i++)
    {
        cout<<fun(i)<<" ";
    }

    return 0;
}
```

Output : 0 1 1 2 3 5

Q1) Take a look at the Code snippet above then answer the following questions:

a) Complete the code above so that the function returns a correct result.

1)

2)

b) From the output of the function, what does the function fun() do? Complete the output of the program

c) If the value of MAX changed to 50, and the iterations of the loop in main() changed to 50, the output is.....

1. Correct

2. Incorrect

3. Compilation error

4. Runtime error

Why?

Q2) Write a function that return the number of occurrences of a certain element in an array then write a program that read a string of upper & lower letters, then compute the frequency of letters and print them like the example. For uppercase letters, treat them like lowercase ones.

Input: baaaBBzzA

Output: a 4

b 3

z 2