Question1. (10 Points):

Write down the output of each of the following programs. Assume all necessary libraries are included.

- If the program includes a syntax error, write Syntax Error
- If the program causes an infinite loop, write INF

A.

```
int main () {
  for(int num = 2; num <= 6; )
  {
    switch (num)
    {
      case 3:
        cout << num * (++num) << endl;
      case 4:
        cout << ((++num%2==0)? "True":"False") << endl;
      case 5:
        cout << (num * num) << endl;
    }
    {
      int num = 1;
      num++;
    }
    cout << num++ <<endl;
  }
  return 0;
}
```

Answer

B.

```
void tryMe(int& v) {
  int val = v-2;
  if (v % 2 == 0) {
    val++;
    v = v + 3;
  } else {
    val--;
    v = v + 5;
  }
  cout << v << ", " << val << endl;
}
int main() {
  int x = 5;
  for (int count = 1; count < 5; count++)
    tryMe(x);
  return 0;
}
```

Answer

2/4

Question2. (10 Points):

Write a C++ program that asks the user to enter a stream of characters, and will print out the count of vowel letters in the stream (vowel letters in English are: A, E, I, O, U).

The stream of characters should be ended with the forward slash character (i.e '/').

You need to create a user defined function called **isVowel()** to check if a certain character is a vowel letter or not.

Hint: Do not use string library.

Example of the program output:

Enter a stream of characters ended by /
AabbBaccE$oOp894/
Count of vowels in the stream is 6
__Answer__

}

```
# include <io stream>
using namespace std;

void main ( )

    char stream; char
coutcc input astream of characters;

*   cin>> stream;

For(char i A ; "A'< ='z';    char i ++
          char a 9 x;
        if ('a' < = 'z')
        x = a++
    Coul << i << x <<  ;

    return o;
```

Question3. (10 Points):

Write a C++ program that uses the loop to get five positive integers from the user. The program then needs to find and output the integer which includes the largest count of digit 1.

You need to create a user defined function called getOnes() to count and return the total number of digit 1 in a given integer.

Example of program output:

Enter 5 integers:
982011
65101
119191
8890
33178
The integer with the largest total number of 1's is: 119191

Answer

```
# include <io stream>
using namespace std;
int get ones (int x, y, z, r, f)
cin >> x, y, z, r, f,
int getones Madsenety,
for (int i = 0; i <= 5; i++)
if
# include <io stream>
```