

Question - 1	SCORE: 5 points
Medium Python	
What is the output of the following?	
<pre>def foo(n): for x in range(n): yield x**3</pre>	
<pre>for x in foo(5): print x,</pre>	
01234	
0 3 6 9 12	
0 1 8 27 64	
None of the above	
Question - 2	SCORE: 5 points
Easy Python	
What is the output of the following?	
print "foo" * 3	
print 2 ** 3	
foo foo foo 2 2 2 2	
foofoofoo 222	
foo foo foo 8	
foofoofoo 8	
Question - 3	SCORE: 5 points
C Medium C++ Classes Object Oriented Programming	

Is it possible to create an object of an empty class type such as:

class xyz {};

If so, what is the size of such an object?

- Yes, it is possible, and its size is zero.
- Yes, it is possible, and its size is greater than zero.

No, it is not possible to create an empty class; it results in a compiler error.

No, it results in a runtime error.

Question - 4

SCORE: 5 points

C++	Medium	Pointers	Memory Management

Will the following C++ program compile?

If yes, write the statement that helps you free the entire memory allocated to \mathbf{p} .

- Program does not compile.
- free(p);
- delete p;
- delete[] p;

Question - 5

SCORE: 5 points

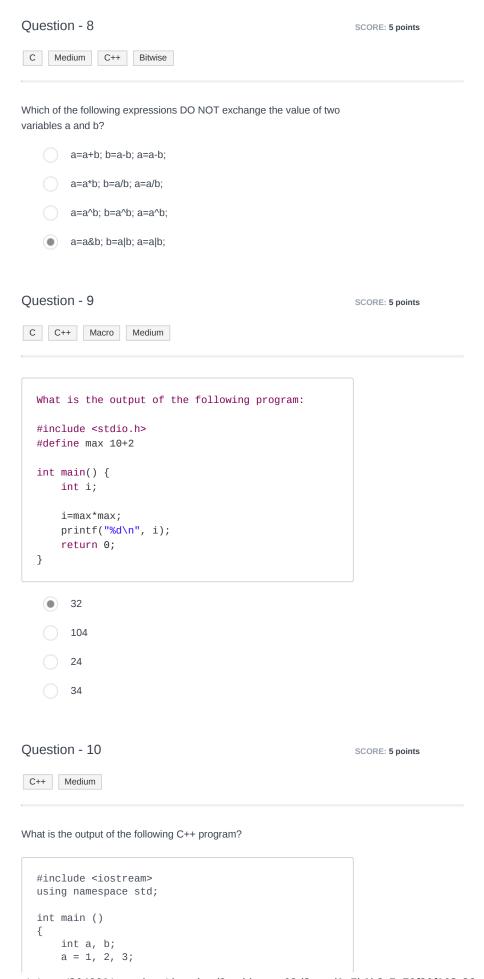
Template	C++	Medium

What is the output of the following C++ program?

```
#include<iostream>
   using namespace std;
   template <typename T, int count>
   void foo( T x )
   {
            T val[count];
            for ( int i = 0; i < count ; i++ )
                      val[i] = x++;
                      cout << val[i] << " ";
            }
   };
   int main()
   {
            float y = 2.1;
            foo<float, 3>(y);
   }
         2.1
         3.1
         4.1
         2.1 3.1 4.1
Question - 6
                                                                  SCORE: 5 points
                  Classes
       Medium
How do you declare an 'interface' class?
         By making all the methods pure virtual in a class.
By making all the methods abstract using the keyword 'abstract' in a
class.
         By declaring the class as interface with the keyword 'interface'.
         It is not possible to create interface classes in C++.
Question - 7
                                                                  SCORE: 5 points
 Medium C C++ Memory Management
Which of the following can cause segmentation fault in a program?

    Attempting to access a nonexistent memory address

         Attempting to write read-only memory (such as code segment)
         Both a & b
         None of the above
```



void displayData()

cout << a << b;

{

};

```
class Derived
{
    int c;
    int d;
public:
    Derived()
    { c=0; d=0;}
    Derived(int c, int d)
    { this->c = c; this->d = d;}
    void displayData()
        cout << c << d;
};
int main()
    Base b(10,20);
    b.displayData();
    Derived d(30,40);
    d.displayData();
    Derived c;
    c.displayData();
    return 0;
}
```

- 1020102000
- 10200000
- 1020304000
- 102030401020

Question - 13 Adjacency matrix

SCORE: 5 points

Graph Easy Data Structures Core CS

An adjacency matrix representation of a graph cannot contain information of:

- nodes
- edges
- direction of edge
- parallel edges