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# Week 3 : Assignment 3

**The due date for submitting this assignment has passed.**

**Due on 2023-02-15, 23:59 IST.**

Assignment submitted on 2023-02-07, 14:59 IST

1) Consider the following program. ***2 points***

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

class myClass{
    int pra = 5;
    public:
        int pub = 10;
        void set_pr(int x){ pra = x; }
        void set_pu(int x){ pub = x; }
};

int main(){
    myClass m;
    int a, b;
    a = m.pra;          //LINE-1
    b = m.pub;          //LINE-2
    m.set_pr(100);      //LINE-3
    m.set_pu(200);      //LINE-4
    return 0;
}
```

Which line/s will generate an error?

a) LINE-1

b) LINE-2

c) LINE-3

d) LINE-4

- [x] a
- [ ] b
- [ ] c
- [ ] d

Yes, the answer is correct.
Score: 2

Accepted Answers:
*a*

2) Consider the following class. ***1 point***

```
class Test{
    ________:
        int x;
    ________:
        int y;
    /* Some more code */
};
```

Fill in the blanks with proper access specifiers so that member y can be accessed from outside of the class but member x cannot be accessed.

a) public, public

b) public, private

c) private, public

d) private, private

- a
- b

- c
- d

Yes, the answer is correct.
Score: 1

Accepted Answers:
*c*

3) Consider the following code segment. **2 points**

```
#include <iostream>
using namespace std;
class myClass{
    public:
        myClass() { cout << "1st" << endl; }
        myClass(int x=0) { cout << "2nd" << endl; }
};

int main(){
    myClass m1;
    return 0;
}
```

What will be the output/error?

a) 1st

b) 2nd

c) 1st
   2nd

d) Compilation Error: call of overloaded 'myClass()' is ambiguous

- a
- b
- c
- d

Yes, the answer is correct.
Score: 2

Accepted Answers:
*d*

4) Consider the following code segment. **2 points**

```
#include <iostream>
using namespace std;
int i = 0;
class test {
    public:
        test() { i = 1;}
        ~test() { i = 2; }
};
void f(){
    test t;
}
int fun() {
    i = 3;
    f();
    return i++;
}
int main() {
    cout << fun() << " ";
    cout << i << endl;
    return 0;
}
```

What will be the output?

a) 1 2

b) 3 1

c) 2 3

d) 3 4

a

b

c

d

Yes, the answer is correct.
Score: 2

Accepted Answers:
*c*

5) Consider the following code segment. **2 points**

```
#include <iostream>
#include <cstring>
using namespace std;
class Fun {
    char ___________________________; // LINE-1: declare the data members
    public:
        Fun(char* _fstr, char* _mstr, char* _lstr) :
        fstr(setFstr(_fstr)), mstr(setMstr(_mstr)),
        lstr(setLstr(_lstr)){}
        char* setFstr(char* fn) {
            cout << fn << " ";
            return strdup(fn);
        }
        char* setMstr(char* mn) {
            cout << mn << " ";
            return strdup(mn);
        }
        char* setLstr(char* ln) {
            cout << ln << " ";
            return strdup(ln);
        }
};
int main() {
    Fun obj("coding", "is", "fun");
    return 0;
}
```

Fill in the blank at LINE-1 so that the program will print
fun is coding.

a) `*lstr, *mstr, *fstr`

b) `*mstr, *fstr, *lstr`

c) `*lstr, *fstr, *mstr`

d) `*fstr, *lstr, *mstr`

Yes, the answer is correct.
Score: 2

Accepted Answers:
*a*

6) Consider the following code segment. **2 points**

```
#include<iostream>
using namespace std;
class Point {
    int _x;
    int _y;
    Point(int x, int y) {
        _x = x;
        _y = y;
        cout << _x << " " << _y;
    }
};
int main() {
    Point pt(2, 7);
    return 0;
}
```

What will be the output?

a) 2 7

b) 0 0

c) Compilation error: no default constructor

d) Compilation error: constructor is private

- a
- b
- c
- d

Yes, the answer is correct.
Score: 2

Accepted Answers:
*d*

7) Consider the following code segment. **2 points**

```
#include <iostream>
using namespace std;
class Complex {
    int x, y;
    public:
        Complex(int _x, int _y) : x(_x), y(_y) { }
        Complex(Complex &c) : x(c.x), y(c.y){ }
        void change(Complex *new_c) { this = new_c; }
        void show() { cout << x << ", " << y << endl; }
};
int main() {
    Complex c1(10, 20);
    Complex c2(20, 50);
    Complex c3(c1);
    c3.change(&c2);
    c3.show();
    return 0;
}
```

What will be the output/error?

a) 10 20

b) 20 50

c) Compilation Error: lvalue required as left operand of assignment

d) Compilation Error: private data members are inaccessible

○ a

- b
- c
- d

Yes, the answer is correct.
Score: 2

Accepted Answers:
*c*

8) Consider the following code segment. **2 points**

```
#include<iostream>
using namespace std;
class Test {
    int x;
    public:
        Test(int a=0) : x(a){ cout << "1st "; }
        Test(const int &i) : x(i){ cout << "2nd "; }
};
int main() {
    Test m1=5;
    return 0;
}
```

What will be the output/error?

a) `1st`

b) `2nd`

c)
```
1st
2nd
```

d) `Compilation error: conversion from 'int' to 'Test' is ambiguous`

- a
- b
- c
- d

Yes, the answer is correct.
Score: 2

Accepted Answers:
*d*

9) Consider the following code segment. **2 points**

```
#include<iostream>
using namespace std;
class constC{
    ____________ x; //LINE-1
    public:
        constC(int _x) : x(_x) {}
        void setx(int a) const{
            x = a;
        }
        void print() const{
            cout << x << endl;
        }
};
int main(){
    const constC m(1);
    m.setx(5);
    m.print();
    return 0;
}
```

Fill in the blank at LINE-1 such that the program will print 5.

a) `int`

b) `const int`

c) `mutable int`

d) `int mutable`

☐ a

- [ ] b
- [x] c
- [x] d

Yes, the answer is correct.
Score: 2

Accepted Answers:

*c*

*d*