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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Programming in Modern C++ (course)



Register for Certification
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Course outline

How does an NPTEL
online course work? ()

Week 0 ()

Week 1 ()

Week 2 ()

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

Week 3 ()

- Lecture 11 : Classes and Objects (unit? unit=42&lesson=43)
- Lecture12 : Access Specifiers (unit? unit=42&lesson=44)
- Lecture 13 : Constructors, Destructors & Object Lifetime (unit? unit=42&lesson=45)
- Lecture 14 : Copy Constructor and Copy Assignment Operator (unit?unit=42&lesson=46)
- Lecture 15 : Const-ness (unit?unit=42&lesson=47)
- Tutorial 03 : How to build a C/C++ program?: Part 3: make Utility (unit? unit=42&lesson=48)
- Week 3 Lecture Material (unit?unit=42&lesson=49)
- **Quiz: Week 3 : Assignment 3 (assessment? name=172)**
- W3_Programming_Qs-1 (/noc23_cs50/progassignment? name=173)

1) Consider the following program.

```
#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

2 points

● W3_Programming_Qs-2
(/noc23_cs50/progassignment?
name=174)

● W3_Programming_Qs-3
(/noc23_cs50/progassignment?
name=175)

● Week 3 Feedback Form
(unit?unit=42&lesson=50)

○ Assignment 3 Solution
(unit?unit=42&lesson=51)

Week 4 ()

Week 5 ()

Week 6 ()

Week 7 ()

Week 8 ()

Download Videos ()

Books ()

Transcripts ()

Problem Solving
Session ()

☒ a

☐ b

☐ c

☐ d

Yes, the answer is correct.
Score: 2

Accepted Answers:

a

2) Consider the following class.

```
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

1 point

- ☒ 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
- ☐ b) *mstr, *fstr, *lstr
- ☐ c
- ☐ d) *lstr, *fstr, *mstr

Yes, the answer is correct.

Score: 2

Accepted Answers:

a

2 points

6) Consider the following code segment.

```
#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

2 points

7) Consider the following code segment.

```
#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☒ c☒ d

Yes, the answer is correct.

Score: 2

Accepted Answers:

c

d