NetID: xinruiy2 QuizID: 20845 Score: 3 / 4 Answer Source: PrairieLearn

1. Suppose class `sport` contains exactly one pure virtual function called `getDomain` and that class `volleyball` is a `public sport` that implements `getDomain`.

Which of the following C++ statements will certainly result in a compiler error? Make sure to read **all** options carefully.

A. `volleyball a; a.getDomain();`
B. `sport * a = new volleyball(); a->getDomain();`
C. It is possible that none of these will result in a compiler error.
D. More than one of these will result in a compiler error.
E. [Correct Answer] [Your Answer] `sport a; a.getDomain();`

2. Consider the following class definitions:

```
class Test{
public:
    int fun() const;
private:
    double score;
};

class Midterm: public Test {
public:
    int games();
};
```

Where could the assignment `score = 90.0;` appear for the private variable `score`?

A. [Your Answer] `fun()` can make the assignment, but `games()` cannot.
B. `games()` can make the assignment, but `fun()` cannot.
C. Both `fun()` and `games()` can make the assignment.
D. [Correct Answer] Neither `fun()` nor `games()` can make the assignment.
E. The answer to this question cannot be determined from the given code.

3. What will be the output of the following program?

```
class Base {
    public:
        Auxilliary *a1;
        Base() { a1 = new Auxilliary(); }
        virtual ~Base() { cout << "Base "; delete a1; }
};

class Derived : public Base {
    public:
        virtual ~Derived() { cout<< "Derived "; }
};

class Auxilliary {
   public:
       ~Auxilliary() { cout << "Auxilliary "; }
};

int main() {
    Base* b = new Derived;
    delete b;
}
```

A. `"Base Auxilliary "`
B. `"Derived Auxilliary Base "`
C. `"Base "`
D. [Correct Answer] [Your Answer] `"Derived Base Auxilliary "`
E. `"Base Auxilliary Derived "`

4. What will be the output of the following program?

```
class Animal {
    public:
        void saySomething() { cout << "I don't know what to say"; }
};

class Dog : public Animal {
    public:
        virtual void saySomething() { cout << "Woof! Woof!"; }
};

int main() {
    Animal* a;
    Dog d;
    a = &d;
    a->saySomething();
}
```

A. `"Woof! Woof!"`
B. `"I don't know what to say Woof! Woof!"`
C. Runtime Error
D. None of the above
E. [Correct Answer] [Your Answer] `"I don't know what to say"`

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