Section: A

Quiz 9

Roll number: BSSE23058

Q1. Which access specifier allows members of the same class and derived classes to access the data, but prevents access from any other class?

A) Friend
B) Protected
C) Private
D) Both B & C

Q2. Which of the following is true about friend functions?

A) They can access only public members of the class.
B) They can access private and protected members of the class
C) They are members of the class.
D) None of the above

Q3. When a class uses objects of another class as its members, this OOP concept is known as:

A) Encapsulation
B)Polymorphism
C) Composition
D) Inheritance

A

Q4. In C++, if class B is derived from class A, which statement is true regarding inheritance?

B : A.

A) B can access all members of A, including private membe
B) B cannot access private members of A directly.
C) B becomes a friend class of A automatically.
D) A must explicitly declare B as a friend class to allow access.

Q5. Which OOP concept enables a class to acquire properties and methods from another class?

A) Encapsulation
B) Inheritance
C) Abstraction
D) Composition

Q6. Given the following code structure in C++, which inheritance type is being used?

```
class A {};
class B : public A {};
class C : public B {};
```

A) Multiple Inheritance
B) Hierarchical inheritance
C) Multilevel Inheritance
D) None of these

UBS ITU INFORMATION TECHNOLOGY UNIVERSITY

Section: A

Quiz 9

Roll number: _____

Q7. Which of the following statements is true about operator overloading in C++?

A) Operators ::, ., ., and ?: cannot be overloaded.*
B) The = operator can be overloaded to prevent an object from being copied.
C) Operator overloading can change the precedence of operators.
D) All operators in C++ can be overloaded.

Q8. What is the correct way to declare a friend function that allows it to access private members of 'class foo'?

A) `public friend void accessFunction(foo&);`
B) `void friend accessFunction(foo&);`
C) `friend void accessFunction(foo&);`
D) `private friend void accessFunction(foo&);`

Q9. In multilevel inheritance, if class C inherits from class B, and class B inherits from class A, which of the following is true?

A) Class C can directly access protected members of class A.
B) Class B acts as a virtual class automatically.
C) Class C cannot access any members of class A.
D) Class A constructors are called after class B and C constructors.

Q10.Analyze the following C++ classes:

```
class Wheel {
public:
    Wheel() { cout << "Wheel is attached." << endl; }
};

class Car {
    Wheel wheels[4];
public:
    Car() { cout << "Car is created with 4 wheels." << endl; }
    void drive() { cout << "Car is driving." << endl; }
};
```

A) The Wheel class is derived from the Car class, indicating multilevel inheritance.
B) The Car class uses dynamic polymorphism to attach wheels, showcasing abstraction.
C) The Car class contains Wheel objects, demonstrating composition.
D) The Wheel objects are independent of the Car class.