

## Section A: Multiple Choice Questions

1. What is the default access specifier for class members in C++?  
B. `private`
2. Which of the following is true about `cin` in C++?  
B. It is an object of class `istream`
3. What does the `explicit` keyword prevent in constructors?  
B. Implicit type conversion
4. Which operator is used for formatted output in C++?  
B. `<<`
5. What is the purpose of a friend function?  
B. To access private members of a class
6. Which of the following is a correct way to prevent multiple inclusions of a header file?  
D. All of the above
7. What is the result of passing a variable by reference?  
C. The address of the variable is passed
8. Which of the following is true about virtual destructors?  
D. They ensure proper cleanup of derived class objects
9. What is the purpose of the `override` keyword in C++11?  
B. To indicate that a function is overriding a base class function
10. Which of the following best describes the role of a constructor initializer list?  
A. To initialize member variables before the constructor body executes

## Section B: Short Answer Questions

- 1) Value-based vs Reference-based Object Models:  
Value-based means objects are copied when assigned or passed.  
Reference-based means objects are accessed using references or pointers, avoiding copies.
  
- 2) Operator Overloading (+):  
Operator overloading allows custom behavior for operators with user-defined types by defining special functions like operator+.
  
- 3) Role of const:  
const prevents modification. It is used to declare constant variables, to make references or pointers read-only, and to ensure member functions do not modify the object.
  
- 4) Inheritance and Access Specifiers:  
Inheritance allows a class to reuse another class's features.  
Access specifiers control visibility: public keeps original access, protected makes base members protected, and private makes them private
  
- 5) Virtual Function and Polymorphism:  
A virtual function allows a derived class to override a base class method.  
It supports runtime polymorphism by calling the correct method based on the actual object type.