28 Lecture - CS304

Important Mcqs

1. **What is the purpose of virtual functions in C++?**
   A. To achieve static polymorphism
   B. To achieve dynamic polymorphism
   C. To improve code readability
   D. To increase program performance
   Answer: B

   Which keyword is used to declare a function as virtual in C++?
   A. static
   B. virtual
   C. dynamic
   D. polymorphic
   Answer: B

   In which class are virtual functions declared in C++?
   A. Base class
   B. Derived class
   C. Abstract class
   D. Static class
   Answer: A

   Which function is called when a virtual function is invoked through a base class pointer?
   A. Base class function
   B. Derived class function
   C. Default function
   D. Static function
   Answer: B

   What is a virtual function table (vtable) in C++?
   A. A table that stores the addresses of all virtual functions in a class hierarchy
   B. A table that stores the names of all virtual functions in a class hierarchy
   C. A table that stores the values of all virtual functions in a class hierarchy
   D. A table that stores the types of all virtual functions in a class hierarchy
   Answer: A

   Can a derived class override a non-virtual function of its base class in C++?
   A. Yes
   B. No
   Answer: A

   What is the syntax for providing a default implementation of a virtual function in C++?
   A. virtual void functionName() { ... }
   B. virtual void functionName() = 0;

C. virtual void functionName() default;
D. virtual void functionName() { ... } default;
Answer: D

What is the difference between a pure virtual function and a virtual function with a default implementation in C++?
A. A pure virtual function has no implementation, while a virtual function with a default implementation does
B. A pure virtual function cannot be called, while a virtual function with a default implementation can be
C. A pure virtual function is declared with the = 0 syntax, while a virtual function with a default implementation is declared with the = default syntax
D. There is no difference between the two
Answer: A

Can virtual functions be defined as private in a C++ class?
A. Yes
B. No
Answer: A

What is the purpose of a virtual destructor in C++?
A. To improve program performance
B. To allow objects to be destroyed properly in a class hierarchy
C. To prevent memory leaks
D. To allow objects to be cloned easily
Answer: B