### 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 <mark>Answer: A</mark>

# 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