

# **C++ Interview Questions & Answers**

## **1. What is C++?**

Answer: C++ is an extension of C supporting object-oriented programming.

## **2. What is a class?**

Answer: Blueprint for creating objects.

## **3. What is an object?**

Answer: Instance of a class.

## **4. Explain constructors and destructors.**

Answer: Constructor: initializes; Destructor: cleans up.

## **5. What is inheritance?**

Answer: Mechanism to derive new class from existing class.

## **6. What is polymorphism?**

Answer: Ability of object to take many forms.

## **7. What is encapsulation?**

Answer: Hiding data using access specifiers.

## **8. What is abstraction?**

Answer: Hiding implementation details from user.

## **9. What is virtual function?**

Answer: Function allowing runtime polymorphism.

## **10. Difference between overloading and overriding?**

Answer: Overloading: compile-time; Overriding: runtime.

## **11. What is operator overloading?**

Answer: Redefining operator behavior for classes.

## **12. What is a template?**

Answer: Generic programming for functions/classes.

## **13. What is namespace?**

Answer: Container to avoid name conflicts.

**14. Difference between stack and heap?**

Answer: Stack: function calls; Heap: dynamic memory.

**15. What is a pointer?**

Answer: Variable storing memory address.

**16. Explain reference variables.**

Answer: Alias for another variable.

**17. What is dynamic memory allocation?**

Answer: Allocating memory at runtime.

**18. Difference between shallow and deep copy?**

Answer: Shallow: references shared; Deep: copies data.

**19. What is friend function?**

Answer: Can access private members of a class.

**20. What is RTTI?**

Answer: Run-time type information.