

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.