

C++ TEST-19 (VIRTUAL FUNCTION)

Total points 50/50 ?

STUDENT NAME *

VIVA
.....

✓ 1. What is a virtual function in C++? *

1/1

- ☐ A) A function that can be called only inside the class
- ☒ B) A function that allows run-time polymorphism
- ☐ C) A function that executes at compile-time
- ☐ D) A function declared with const



✓ 2. Which keyword is used to declare a virtual function? *

1/1

- ☐ A) dynamic
- ☒ B) virtual
- ☐ C) override
- ☐ D) base



✓ 3. Virtual functions are mainly used for: *

1/1

- ☐ A) Compile-time binding
- ☒ B) Run-time binding
- ☐ C) Static binding
- ☐ D) Overloading



✓ 4. Virtual functions enable: *

1/1

- ☐ A) Function overloading
- ☒ B) Function overriding
- ☐ C) Function hiding
- ☐ D) Function templates



✓ 5. Can constructors be virtual in C++? *

1/1

- ☐ A) Yes
- ☒ B) No



✓ 6. Can destructors be virtual in C++? *

1/1

- ☒ A) Yes
- ☐ B) No



✓ 7. Virtual functions must be: *

1/1

- ☐ A) Static
- ☒ B) Non-static



✓ 8. What type of function is resolved at runtime? *

1/1

- ☒ A) Virtual function
- ☐ B) Inline function
- ☐ C) Friend function
- ☐ D) Static function



✓ 9. Which table stores virtual function addresses? *

1/1

- ☐ A) Class table
- ☒ B) V-table
- ☐ C) Function table
- ☐ D) Runtime table



✓ 10. Each object of a class containing virtual functions has a hidden pointer called:

*1/1

- ☐ A) Base pointer
- ☒ B) Virtual pointer (vptr)
- ☐ C) Function pointer
- ☐ D) Object pointer



✓ 11. The concept of virtual functions is used to implement: *

1/1

- ☐ A) Data hiding
- ☐ B) Inheritance
- ☒ C) Polymorphism
- ☐ D) Abstraction



✓ 12. What is the default type of function binding in C++? *

1/1

- ☒ A) Static binding
- ☐ B) Dynamic binding



✓ 13. When does dynamic binding occur? *

1/1

- ☐ A) At compile-time
- ☒ B) At run-time



✓ 14. A pure virtual function is defined as: *

1/1

- ☐ A) virtual void show() {}
- ☒ B) virtual void show() = 0;
- ☐ C) void show() = 0;
- ☐ D) static void show();



✓ 15. A class containing at least one pure virtual function is called: * 1/1

- ☒ A) Abstract class
- ☐ B) Concrete class
- ☐ C) Virtual class
- ☐ D) Static class



✓ 16. Can we create an object of an abstract class? * 1/1

- ☐ A) Yes
- ☒ B) No



✓ 17. Can a pure virtual function have a body? * 1/1

- ☒ A) Yes
- ☐ B) No



✓ 18. Can static functions be virtual? * 1/1

- ☐ A) Yes
- ☒ B) No



✓ 19. Which function is invoked when deleting a derived object through a base pointer without virtual destructor? *1/1

- ☐ A) Derived destructor
- ☒ B) Base destructor only



✓ 20. Why should destructors be declared virtual in base classes? * 1/1

- ☐ A) To save memory
- ☒ B) To ensure proper cleanup of derived class objects
- ☐ C) To make constructors virtual
- ☐ D) To improve performance



✓ 21. Which of the following can be virtual? * 1/1

- ☐ A) Constructor
- ☒ B) Destructor
- ☐ C) Static function
- ☐ D) Friend function



✓ 22. Which keyword ensures that a function in derived class overrides the base class version? *1/1

- ☐ A) virtual
- ☒ B) override
- ☐ C) static
- ☐ D) base



✓ 23. Which keyword prevents further overriding of a virtual function? * 1/1

- ☐ A) stop
- ☒ B) final
- ☐ C) restrict
- ☐ D) end



✓ 24. Virtual functions cannot be: * 1/1

- ☒ A) Friend functions
- ☐ B) Member functions



✓ 25. Can we call a virtual function from a constructor? * 1/1

- ☐ A) Yes, always
- ☒ B) Yes, but it calls base class version
- ☐ C) No, compiler error



✓ 26. When a base pointer points to a derived object and calls a virtual function, which function executes? *1/1

- ☐ A) Base class version
- ☒ B) Derived class version



✓ 27. The size of an object with virtual functions increases because of: * 1/1

- ☐ A) Virtual function definitions
- ☒ B) V-table pointer (vptr)



✓ 28. If a derived class does not override a virtual function, which version is used? *1/1

- ☒ A) Base class version
- ☐ B) Derived class version



✓ 29. What is a vtable? * 1/1

- ☐ A) Table storing data members
- ☒ B) Table storing function addresses for virtual functions



✓ 30. Which of the following cannot be declared as virtual? * 1/1

- ☐ A) Destructors
- ☒ B) Constructors



✓ 31. What happens if a virtual function is not overridden in the derived class? *1/1

- ☐ A) Compiler error
- ☒ B) Base class function executes



✓ 32. What happens if you call a pure virtual function directly from base class constructor? *1/1

- ☐ A) Derived version runs
- ☐ B) Base class version runs
- ☒ C) Runtime error



✓ 33. Virtual functions achieve: * 1/1

- ☐ A) Early binding
- ☒ B) Late binding



✓ 34. A function declared as virtual in base class and redefined in derived class is an example of: *1/1

- ☐ A) Function overloading
- ☒ B) Function overriding



✓ 35. Can a non-virtual function be redefined in derived class? * 1/1

- ☒ A) Yes, but it causes function hiding
- ☐ B) No



✓ 36. When you call a virtual function through an object (not a pointer), which version is called? *1/1

- ☐ A) Base
- ☒ B) Derived



✓ 37. Virtual function mechanism uses: * 1/1

- ☐ A) Static binding
- ☒ B) Dynamic binding via vtable



✓ 38. What is the base requirement to achieve polymorphism in C++? * 1/1

- ☒ A) Inheritance and virtual functions
- ☐ B) Operator overloading
- ☐ C) Function templates



✓ 39. Which of the following statements is false about virtual functions? * 1/1

- ☐ A) They cannot be static
- ☐ B) They can be inline
- ☐ C) They cannot be friend
- ☒ D) They can be constructors



✓ 40. What is a pure virtual function also called? *

1/1

- ☒ A) Abstract function
- ☐ B) Static function
- ☐ C) Virtualized function



✓ 41. Virtual functions are resolved using: *

1/1

- ☐ A) Name mangling
- ☒ B) Virtual table lookup
- ☐ C) Operator overloading



✓ 42. Which of the following results in an abstract class? *

1/1

- ☒ A) Having one or more pure virtual functions
- ☐ B) Having only constructors



✓ 43. Which type of class cannot have virtual functions? *

1/1

- ☐ A) Template
- ☒ B) Union
- ☐ C) Structure



✓ 44. Can a virtual function return an object? *

1/1

- ☒ A) Yes
- ☐ B) No



✓ 45. Virtual functions help achieve which OOP feature? *

1/1

- ☐ A) Encapsulation
- ☐ B) Inheritance
- ☒ C) Polymorphism



✓ 46. Can we have a virtual copy constructor? *

1/1

- ☐ A) Yes
- ☒ B) No



✓ 47. Which statement about vtable is correct? *

1/1

- ☒ A) Each class with virtual functions has one vtable
- ☐ B) Each object has its own vtable



✓ 48. What happens if you delete a derived class object using a base class pointer and the base destructor is not virtual? *1/1

- ☐ A) Both destructors called
- ☒ B) Only base destructor called



✓ 49. Which of the following can be made pure virtual? *

1/1

- ☒ A) Destructors
- ☐ B) Constructors



✓ 50. Which feature is most closely related to virtual functions? *

1/1

- ☐ A) Static binding
- ☒ B) Dynamic binding



This content is neither created nor endorsed by Google. - [Contact form owner](#) - [Terms of Service](#) - [Privacy Policy](#).

Does this form look suspicious? [Report](#)

Google Forms



