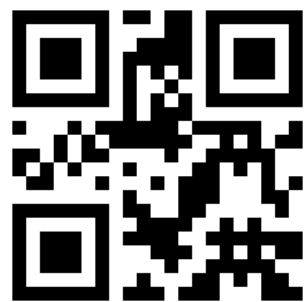


C++ Exam

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C++ Exam - Varianta 1

1. Which of the following is the correct way to declare a reference in C++?

- ☐ (A) `int &ref = variable;`
- ☐ (B) `int &ref == variable;`
- ☐ (C) `int ref& = variable;`
- ☐ (D) `int *ref = &variable;`
- ☐ (E) `int ref = &variable;`

2. What does the 'static' keyword mean when used inside a class method?

- ☐ (A) The method cannot be overridden
- ☐ (B) The method belongs to the class, not an instance
- ☐ (C) The method is private
- ☐ (D) The method can only be called once
- ☐ (E) The method is thread-safe

3. Which C++ feature allows a base class pointer to call a derived class method?

- ☐ (A) Inheritance
- ☐ (B) Polymorphism
- ☐ (C) Encapsulation
- ☐ (D) Overloading
- ☐ (E) Templates

4. What is the purpose of the 'explicit' keyword for constructors?

- ☐ (A) To make the constructor private
- ☐ (B) To prevent implicit type conversions
- ☐ (C) To allow multiple constructor definitions
- ☐ (D) To create a default constructor
- ☐ (E) To make the constructor static

5. Which smart pointer automatically deletes its resource when it goes out of scope?

- ☐ (A) `std::unique_ptr`
- ☐ (B) `std::shared_ptr`
- ☐ (C) `std::weak_ptr`
- ☐ (D) `std::auto_ptr`
- ☐ (E) `std::raw_ptr`

C++ Exam - Varianta 1

6. What is the primary difference between 'new' and 'malloc()'?

- ☐ (A) malloc() is faster
- ☐ (B) new is a C function, malloc() is C++
- ☐ (C) new calls constructors, malloc() does not
- ☐ (D) malloc() is more type-safe
- ☐ (E) new cannot allocate arrays

7. Which C++11 feature allows declaring a function that can accept any number of arguments?

- ☐ (A) Function overloading
- ☐ (B) Default arguments
- ☐ (C) Variadic templates
- ☐ (D) Lambda expressions
- ☐ (E) Function pointers

8. What does the 'constexpr' keyword indicate?

- ☐ (A) A constant variable
- ☐ (B) A function that can be evaluated at compile-time
- ☐ (C) An immutable reference
- ☐ (D) A runtime constant
- ☐ (E) A static variable

9. Which standard library container provides constant-time insertion and deletion at both ends?

- ☐ (A) std::vector
- ☐ (B) std::list
- ☐ (C) std::array
- ☐ (D) std::deque
- ☐ (E) std::map

10. What is the primary purpose of move semantics in C++11?

- ☐ (A) To create temporary objects
- ☐ (B) To improve performance by reducing unnecessary copying
- ☐ (C) To enable multiple inheritance
- ☐ (D) To create abstract classes
- ☐ (E) To implement runtime polymorphism