

C-Programming

1. Question: What is the correct syntax to declare a variable in C?

- A) `variable int x;`
- B) `int x;`
- C) `x = int;`
- D) `declare x as int;`

2. Question: What is the purpose of the `sizeof` operator in C?

- A) Calculate the size of a data type
- B) Find the square root of a number
- C) Concatenate strings
- D) Increment a variable

3. Question: Which keyword is used to define a constant in C?

- A) `const`
- B) `constant`
- C) `final`
- D) `var`

4. Question: What is the purpose of the `break` statement in C?

- A) Exit the program
- B) Terminate a loop or switch statement
- C) Skip the current iteration of a loop
- D) Print a message to the console

5. Question: What does the `%d` format specifier represent in `printf` for integers?

- A) Double
- B) Decimal
- C) String
- D) Character

6. Question: How do you allocate dynamic memory in C?

- A) `new`
- B) `malloc`
- C) `allocate`
- D) `dynamic`

7. Question: What is the purpose of the `void` keyword in a function declaration?

- A) Indicate that the function returns nothing
- B) Specify the data type of the return value
- C) Declare a variable
- D) Enable recursive function calls

8. Question: How do you include a header file in C?

- A) `include "header.h"`
- B) `#header "header.h"`
- C) `#include <header.h>`
- D) `use header.h`

9. Question: What is the result of the expression `5 / 2` in C?

- A) `2.5`
- B) `2`
- C) `2.0`
- D) `2.25`

10. Question: Which operator is used for pointer access in C?

- A) `->` - B) `.` - C) `*` - D) `&`

C++

1. Question: What is the correct syntax to declare a class in C++?

- A) `class MyClass;`
- B) `declare class MyClass;`
- C) `new class MyClass()`
- D) `define class MyClass {}`

2. Question: Which of the following is not a fundamental data type in C++?

- A) `int`
- B) `float`
- C) `string`
- D) `char`

3. Question: What is the purpose of the `this` pointer in C++?

- A) Points to the next memory location
- B) Points to the current object
- C) Refers to the previous function
- D) Points to a static variable

4. Question: How do you achieve function overloading in C++?

- A) By using the `override` keyword
- B) By using the `overload` keyword
- C) By defining multiple functions with the same name but different parameters
- D) By declaring a function as `overloaded`

5. Question: What is the purpose of the `virtual` keyword in C++?

- A) Declare a variable as virtual
- B) Enable runtime polymorphism
- C) Specify a constant value
- D) Disable inheritance

JAVA

1. Question: What is the main purpose of the `static` keyword in Java?

- A) Indicate that a variable is constant
- B) Define a class variable or method
- C) Allocate memory dynamically
- D) Enable multithreading

2. Question: Which keyword is used to create a new instance of a class in Java?

- A) `new`
- B) `create`
- C) `instance`
- D) `alloc`

3. Question: What is the default value of an instance variable in Java if it is not explicitly initialized?

- A) 0
- B) 1
- C) Null
- D) Undefined

4. Question: What is the purpose of the `final` keyword in Java?

- A) Indicate the end of a program
- B) Mark a variable as constant
- C) Specify the entry point of a program
- D) Enable polymorphism

5. Question: Which method is called automatically when an object is created in Java?

- A) `start()`
- B) `initialize()`
- C) `construct()`

- D) `constructor()`

6. Question: What is the purpose of the `super` keyword in Java?

- A) Call the superclass constructor
- B) Reference the current object
- C) Enable multiple inheritance
- D) Override a method in the superclass

7. Question: What is the Java Virtual Machine (JVM)?

- A) A virtual reality simulation engine
- B) A compiler for Java programs
- C) An interpreter for Java bytecode
- D) A hardware device for Java execution

8. Question: What is the difference between `==` and `.equals()` when comparing objects in Java?

- A) They are identical in functionality
- B) `==` compares object references, while `.equals()` compares object content
- C) `.equals()` compares object references, while `==` compares object content
- D) Both are used for numerical comparison

9. Question: Which keyword is used to implement multiple inheritances in Java?

- A) `multi`
- B) `inherits`
- C) `extends`
- D) Java does not support multiple inheritance

10. Question: What is the purpose of the `throws` clause in a method declaration in Java?

- A) Indicate that the method is throwing an exception
- B) Declare the return type of the method
- C) Define the access modifier of the method
- D) Specify the number of parameters the method accepts