**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;**

**Answer: B) int x;**

**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

**Answer: A) Calculate the size of a data type**

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

* A) **const**
* B) **constant**
* C) **final**
* D) **var**

**Answer: A) const**

**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

**Answer: B) Terminate a loop or switch statement**

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

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

**Answer: B) Decimal**

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

* A) **new**
* B) **malloc**
* C) **allocate**
* D) **dynamic**

**Answer: B) malloc**

**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

**Answer: A) Indicate that the function returns nothing**

**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**

**Answer: C) #include <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**

**Answer: B) 2**

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

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

Answer : A) ->  
**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 {}**

**Answer: A) class MyClass;**

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

* A) **int**
* B) **float**
* C) **string**
* D) **char**

**Answer: C) string**

**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

**Answer: B) Points to the current object**

**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**

**Answer: C) By defining multiple functions with the same name but different parameters**

**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

**Answer: B) Enable runtime polymorphism**

**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

**Answer: B) Define a class variable or method**

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

* A) **new**
* B) **create**
* C) **instance**
* D) **alloc**

**Answer: A) new**

**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

**Answer: C) Null**

**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

**Answer: B) Mark a variable as constant**

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

* A) **start()**
* B) **initialize()**
* C) **construct()**
* D) **constructor()**

**Answer: 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

**Answer: A) Call the superclass constructor**

**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

**Answer: C) An interpreter for Java bytecode**

**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

**Answer: B) == compares object references, while .equals() compares object content**

**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

**Answer: 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

Answer a)