**C++**

**Easy Level Questions**

1. **Which of the following is the correct syntax for declaring a class in C++?**  
   A. class MyClass { }  
   B. class { MyClass }  
   C. class MyClass[] { }  
   D. class { } MyClass  
   **Answer:** A
2. **What is the default value of a static integer variable in C++?**  
   A. 0  
   B. undefined  
   C. -1  
   D. NULL  
   **Answer:** A
3. **What is the correct way to declare a constant in C++?**  
   A. const int x = 5;  
   B. constant int x = 5;  
   C. define x 5  
   D. constant x = 5  
   **Answer:** A
4. **What is the output of the following C++ code?**

cpp

CopyEdit

int x = 10;

if (x == 10) {

cout << "Hello";

}

A. Hello  
B. 10  
C. Error  
D. Nothing  
**Answer:** A

1. **Which function is used to find the length of a string in C++?**  
   A. length()  
   B. size()  
   C. getSize()  
   D. getLength()  
   **Answer:** A
2. **Which of the following is true about constructors in C++?**  
   A. Constructors have the same name as the class.  
   B. Constructors return values.  
   C. Constructors are inherited from parent classes.  
   D. Constructors are never invoked explicitly.  
   **Answer:** A
3. **What does the new operator do in C++?**  
   A. Allocates memory for a variable.  
   B. Releases the memory allocated to a variable.  
   C. Initializes a variable to 0.  
   D. Creates an array.  
   **Answer:** A
4. **Which of the following statements is true about C++?**  
   A. C++ supports multiple inheritance.  
   B. C++ does not support constructors.  
   C. C++ does not support object-oriented programming.  
   D. C++ does not support polymorphism.  
   **Answer:** A
5. **Which of the following is used to output data in C++?**  
   A. cin  
   B. scanf  
   C. cout  
   D. printf  
   **Answer:** C
6. **Which data type is used to store a character in C++?**  
   A. char  
   B. int  
   C. float  
   D. string  
   **Answer:** A
7. **What is the output of the following code?**

cpp

CopyEdit

cout << "Hello, World!";

A. Hello, World!  
B. Hello World  
C. Error  
D. World!  
**Answer:** A

1. **What is the default value of a static integer variable in C++?**  
   A. 0  
   B. undefined  
   C. -1  
   D. NULL  
   **Answer:** A
2. **What is the correct way to declare a constant in C++?**  
   A. const int x = 5;  
   B. constant int x = 5;  
   C. define x 5  
   D. constant x = 5  
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   B. Constructors return values.  
   C. Constructors are inherited from parent classes.  
   D. Constructors are never invoked explicitly.  
   **Answer:** A
4. **What will be the output of the following C++ code?**

cpp

CopyEdit

int x = 10;

if (x == 10) {

cout << "Hello";

}

A. Hello  
B. 10  
C. Error  
D. Nothing  
**Answer:** A

1. **Which function is used to find the length of a string in C++?**  
   A. length()  
   B. size()  
   C. getSize()  
   D. getLength()  
   **Answer:** A
2. **What is the correct syntax for declaring a class in C++?**  
   A. class MyClass { }  
   B. class { MyClass }  
   C. class MyClass[] { }  
   D. class { } MyClass  
   **Answer:** A
3. **Which of the following statements is true about C++?**  
   A. C++ supports multiple inheritance.  
   B. C++ does not support constructors.  
   C. C++ does not support object-oriented programming.  
   D. C++ does not support polymorphism.  
   **Answer:** A
4. **Which of the following is used to allocate dynamic memory for a variable in C++?**  
   A. new  
   B. malloc()  
   C. alloc()  
   D. create()  
   **Answer:** A
5. **Which of the following is the correct syntax to declare an array of pointers in C++?**  
   A. int\* arr[10];  
   B. int\* arr(10);  
   C. int arr[10\*];  
   D. int[10]\* arr;  
   **Answer:** A
6. **What is the output of the following C++ code?**

cpp

CopyEdit

int a = 5;

int b = 10;

cout << (a == b ? "Equal" : "Not Equal");

A. Equal  
B. Not Equal  
C. Error  
D. Nothing  
**Answer:** B

1. **What is the difference between a constructor and a destructor in C++?**  
   A. A constructor initializes objects; a destructor cleans up after objects.  
   B. A constructor destroys objects; a destructor initializes objects.  
   C. A constructor returns values; a destructor does not.  
   D. A constructor is called explicitly; a destructor is called implicitly.  
   **Answer:** A
2. **What is the result of the following code?**

cpp

CopyEdit

int x = 0;

if (x == 0) {

cout << "Zero";

} else {

cout << "Non-zero";

}

A. Zero  
B. Non-zero  
C. Error  
D. Nothing  
**Answer:** A

1. **What will be the output of the following C++ code?**

cpp

CopyEdit

int x = 5;

x++;

cout << x;

A. 5  
B. 6  
C. Error  
D. None of the above  
**Answer:** B

1. **Which of the following is used for dynamic memory allocation in C++?**  
   A. alloc()  
   B. malloc()  
   C. new  
   D. create()  
   **Answer:** C
2. **Which of the following is the correct syntax to create a reference variable in C++?**  
   A. int &ref = num;  
   B. int ref = &num;  
   C. int ref = num;  
   D. int \*ref = num;  
   **Answer:** A
3. **What is the output of the following C++ code using function overloading?**

cpp

CopyEdit

void display(int x) {

cout << "Integer: " << x;

}

void display(double x) {

cout << "Double: " << x;

}

int main() {

display(5.5);

return 0;

}

A. Integer: 5  
B. Double: 5.5  
C. Error  
D. Nothing  
**Answer:** B

1. **Which of the following is used to output data in C++?**  
   A. cin  
   B. scanf  
   C. cout  
   D. printf  
   **Answer:** C

**Medium Level Questions**

1. **What will be the output of the following code?**

cpp

CopyEdit

int main() {

int a = 5;

cout << ++a;

return 0;

}

A. 5  
B. 6  
C. Error  
D. None of the above  
**Answer:** B

1. **What is the purpose of a virtual function in C++?**  
   A. To prevent a function from being overridden.  
   B. To ensure that a function is not called outside of a class.  
   C. To allow a function to be overridden in derived classes.  
   D. To define an abstract function.  
   **Answer:** C
2. **Which of the following is used to allocate dynamic memory for a 2D array in C++?**  
   A. new[]  
   B. malloc()  
   C. alloc()  
   D. new  
   **Answer:** A
3. **What is the output of the following C++ code?**

cpp

CopyEdit

class Base {

public:

void display() {

cout << "Base class";

}

};

class Derived : public Base {

public:

void display() {

cout << "Derived class";

}

};

int main() {

Base\* b;

Derived d;

b = &d;

b->display();

return 0;

}

A. Base class  
B. Derived class  
C. Error  
D. Base class Derived class  
**Answer:** B

1. **Which of the following is the correct syntax to declare an array of pointers in C++?**  
   A. int\* arr[10];  
   B. int\* arr(10);  
   C. int arr[10\*];  
   D. int[10]\* arr;  
   **Answer:** A
2. **What is the difference between a constructor and a destructor in C++?**  
   A. A constructor initializes objects; a destructor cleans up after objects.  
   B. A constructor destroys objects; a destructor initializes objects.  
   C. A constructor returns values; a destructor does not.  
   D. A constructor is called explicitly; a destructor is called implicitly.  
   **Answer:** A
3. **Which of the following is used for dynamic memory allocation in C++?**  
   A. alloc()  
   B. malloc()  
   C. new  
   D. create()  
   **Answer:** C
4. **What is the correct syntax to create a reference variable in C++?**  
   A. int &ref = num;  
   B. int ref = &num;  
   C. int ref = num;  
   D. int \*ref = num;  
   **Answer:** A
5. **What will be the output of the following code?**

cpp

CopyEdit

int a = 5;

int b = 10;

cout << (a == b ? "Equal" : "Not Equal");

* 1. Equal  
     B. Not Equal  
     C. Error  
     D. None of the above  
     **Answer:** B

1. **What is the output of the following C++ code?**

cpp

CopyEdit

class Base {

public:

void display() {

cout << "Base class";

}

};

class Derived : public Base {

public:

void display() {

cout << "Derived class";

}

};

int main() {

Base\* b;

Derived d;

b = &d;

b->display();

return 0;

}

A. Base class  
B. Derived class  
C. Error  
D. Base class Derived class  
**Answer:** B

 **What will be the output of the following code?**

cpp

CopyEdit

int a = 10, b = 20;

if (a > b)

cout << "a > b";

else

cout << "b > a";

A. a > b  
B. b > a  
C. Error  
D. Nothing  
**Answer:** B

 **Which of the following is used to allocate dynamic memory for a 2D array in C++?**  
A. new[]  
B. malloc()  
C. alloc()  
D. new  
**Answer:** A

 **What is the output of the following C++ code?**

cpp

CopyEdit

int a = 10;

int \*ptr = &a;

cout << \*ptr;

A. 10  
B. \*ptr  
C. Error  
D. Nothing  
**Answer:** A

 **Which of the following is true about virtual functions in C++?**  
A. Virtual functions are used for function overloading.  
B. Virtual functions are used to implement inheritance.  
C. Virtual functions are used to achieve run-time polymorphism.  
D. Virtual functions are used to implement compile-time polymorphism.  
**Answer:** C

 **What will be the output of the following C++ code?**

cpp

CopyEdit

int main() {

int x = 5;

int y = 10;

cout << x + y;

return 0;

}

A. 15  
B. 5  
C. 10  
D. Error  
**Answer:** A

 **What is the correct way to define a function that returns a reference in C++?**  
A. int& func() { return x; }  
B. int func&() { return x; }  
C. int func() & { return x; }  
D. int& func() & { return x; }  
**Answer:** A

 **Which of the following is the correct syntax for defining a constructor in C++?**  
A. void ClassName() {}  
B. ClassName() {}  
C. ClassName::ClassName() {}  
D. ClassName(void) {}  
**Answer:** B

 **What is the output of the following C++ code?**

cpp

CopyEdit

int x = 0;

if (x == 0)

cout << "Zero";

else

cout << "Non-zero";

A. Zero  
B. Non-zero  
C. Error  
D. Nothing  
**Answer:** A

 **Which keyword is used to declare a class in C++?**  
A. class  
B. struct  
C. object  
D. interface  
**Answer:** A

**Hard Level Questions (61-100)**

1. **What will be the output of the following C++ code?**

cpp

CopyEdit

class MyClass {

public:

MyClass() {

cout << "Constructor called";

}

};

int main() {

MyClass obj1, obj2;

return 0;

}

A. Constructor calledConstructor called  
B. Constructor called  
C. Error  
D. Nothing  
**Answer:** A

1. **Which of the following is used to initialize a constant pointer in C++?**  
   A. const int\* ptr;  
   B. int\* const ptr;  
   C. const ptr = 10;  
   D. int ptr = const 10;  
   **Answer:** B
2. **What is the purpose of the virtual keyword in C++?**  
   A. To allow a class to be inherited.  
   B. To declare a class that can be used as a base class.  
   C. To allow method overriding in derived classes.  
   D. To make a function inline.  
   **Answer:** C
3. **What will be the output of the following C++ code?**

cpp

CopyEdit

class Base {

public:

virtual void display() {

cout << "Base class";

}

};

class Derived : public Base {

public:

void display() override {

cout << "Derived class";

}

};

int main() {

Base\* ptr = new Derived();

ptr->display();

return 0;

}

A. Base class  
B. Derived class  
C. Error  
D. Base class Derived class  
**Answer:** B

1. **Which of the following is used to declare a pure virtual function in C++?**  
   A. virtual void func() = 0;  
   B. virtual void func();  
   C. void func() = 0;  
   D. virtual void func() {}  
   **Answer:** A
2. **What is the output of the following code?**

cpp

CopyEdit

class A {

public:

virtual void display() {

cout << "A";

}

};

class B : public A {

public:

void display() {

cout << "B";

}

};

int main() {

A\* a;

B b;

a = &b;

a->display();

return 0;

}

A. A  
B. B  
C. Error  
D. AB  
**Answer:** B

1. **Which of the following is used to pass arguments to a function by reference in C++?**  
   A. &  
   B. \*  
   C. []  
   D. ->  
   **Answer:** A
2. **What is the output of the following C++ code?**

cpp

CopyEdit

int a = 10;

int& b = a;

b++;

cout << a;

A. 10  
B. 11  
C. Error  
D. Nothing  
**Answer:** B

1. **What is the purpose of the mutable keyword in C++?**  
   A. It allows the modification of a constant object.  
   B. It allows for memory allocation.  
   C. It allows for a variable to be constant.  
   D. It defines a global variable.  
   **Answer:** A
2. **What is the output of the following code?**

cpp

CopyEdit

#include <iostream>

using namespace std;

int main() {

int i = 10;

int\* ptr = &i;

cout << \*ptr;

return 0;

}

1. 10  
   B. ptr  
   C. \*ptr  
   D. Error  
   **Answer:** A
2. **What is the output of the following C++ code?**

cpp

CopyEdit

int main() {

int x = 0;

try {

if (x == 0)

throw x;

} catch (int e) {

cout << "Caught exception: " << e;

}

return 0;

}

A. Caught exception: 0  
B. Error  
C. Caught exception: x  
D. Nothing  
**Answer:** A

1. **What is the result of the following code?**

cpp

CopyEdit

class Base {

public:

virtual void show() {

cout << "Base class";

}

};

class Derived : public Base {

public:

void show() override {

cout << "Derived class";

}

};

int main() {

Base\* ptr = new Derived();

ptr->show();

return 0;

}

A. Base class  
B. Derived class  
C. Error  
D. Base class Derived class  
**Answer:** B

1. **Which of the following statements is true about templates in C++?**  
   A. Templates are used for function overloading.  
   B. Templates allow the creation of generic functions and classes.  
   C. Templates are not supported in C++.  
   D. Templates are only supported for functions, not classes.  
   **Answer:** B
2. **What is the output of the following C++ code?**

cpp

CopyEdit

class MyClass {

public:

MyClass() {

cout << "Constructor called";

}

};

int main() {

MyClass obj1, obj2;

return 0;

}

A. Constructor calledConstructor called  
B. Constructor called  
C. Error  
D. Nothing  
**Answer:** A

1. **What is the output of the following C++ code using function overloading?**

cpp

CopyEdit

void display(int x) {

cout << "Integer: " << x;

}

void display(double x) {

cout << "Double: " << x;

}

int main() {

display(5.5);

return 0;

}

A. Integer: 5  
B. Double: 5.5  
C. Error  
D. Nothing  
**Answer:** B