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OBJECT ORIENTED PROGRAMMING USING C++

Kindly read the instructions carefully

1. **All these questions are important for examination point of view, so practice them well.**

2. **If you have any doubt or facing any problem regarding these questions you can mail us at coderslodgeofficial@gmail.com or drop a message in our WhatsApp or telegram group.**

3. **If you want to support us, give your valuable feedback so that next time we can improve while interacting with you.**

4. ***Reminder*-Practice all questions well it will build your concept clear, and you can easily score good in your exams.**

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1. What is a class?

Class is a blue print which reflects the entities attributes and actions. Technically defining a class is designing an user defined data type.

2. What is an object?

An instance of the class is called as object.

3. Explain what is the use of void main () in C++ language?

To run the C++ application it involves two steps, the first step is a compilation where conversion of C++ code to object code take place. While second step includes linking, where combining of object code from the programmer and from libraries takes place. This function is operated by main () in C++ language.

4. Explain what is Member Functions in Classes?

The member function regulates the behaviour of the class. It provides a definition for supporting various operations on data held in the form of an object.

5. What is namespace std; and what is consists of?

Namespace std; defines your standard C++ library, it consists of classes, objects and functions of the standard C++ library. You can specify the library by using namespace std or std: : throughout the code. Namespace is used to differentiate the same functions in a library by defining the name.

6. Explain how functions are classified in C++ ?

In C++ functions are classified as

- Return type

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- Function Name
- Parameters
- Function body

7. What is inheritance?

Inheritance is the process of acquiring the properties of the exiting class into the new class. The existing class is called as base/parent class and the inherited class is called as derived/child class.

8. What is an inline function?

A function prefixed with the keyword inline before the function definition is called as inline function. The inline functions are faster in execution when compared to normal functions as the compiler treats inline functions as macros.

9. Explain what is a reference variable in C++?

A reference variable is just like a pointer with few differences. It is declared using & Operator. In other words, reference is another name for an already existing variable.

10. Explain what is Polymorphism in C++?

Polymorphism in C++ is the ability to call different functions by using only one type of the function call. Polymorphism is referred to codes, operations or objects that behave differently in a different context.

11. Explain what is C++ exceptional handling?

The problem that arises during execution of a program is referred as exceptional handling. The exceptional handling in C++ is done by three keywords.

- Try: It identifies a block of code for which particular exceptions will be activated.
- Catch: The catch keyword indicates the catching of an exception by an exception handler at the place in a program.
- Throw: When a problem exists while running the code, the program throws an exception.

12. Explain what is data encapsulation in C++?

Encapsulation is an object-oriented programming concept (oops) which binds together the data and functions. It is also referred as data hiding mechanism.

13. Mention what are the types of Member Functions?

The types of member functions are

- Simple functions
- Static functions
- Const functions
- Inline functions
- Friend functions

14. What is a pure virtual function?

A virtual function with no function body and assigned with a value zero is called as pure virtual function.

15. What is role of static keyword on class member variable?

A static variable does exit though the objects for the respective class are not created. Static member variable share a common memory across all the objects created for the respective class. A static member variable can be referred using the class name itself.

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16. Explain what is COPY CONSTRUCTOR and what is it used for?

COPY CONSTRUCTOR is a technique that accepts an object of the same class and copies its data member to an object on the left part of the assignment.

17. Can we initialize a class/structure member variable as soon as the same is defined?

No, Defining a class/structure is just a type definition and will not allocated memory for the same.

18. What is function overloading?

Defining several functions with the same name with unique list of parameters is called as function overloading.

19. What is operator overloading?

Defining a new job for the existing operator w.r.t the class objects is called as operator overloading.

20. Name the default standard streams in C++.

cin, cout, cerr and clog.

21. What is a destructor? Can it be overloaded?

A destructor is the member function of the class which is having the same name as the class name and prefixed with tilde (~) symbol. It gets executed automatically w.r.t the object as soon as the object loses its scope. It cannot be overloaded and the only form is without the parameters.

22. Which operator can be used in C++ to allocate dynamic memory?

'new' is the operator can be used for the same.

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23. What is a friend function?

A function which is not a member of the class but still can access all the member of the class is called so. To make it happen we need to declare within the required class following the keyword 'friend'.

24. Are the exceptions and error same?

No, exceptions can be handled whereas program cannot resolve errors.

25. What is function overriding?

Defining the functions within the base and derived class with the same signature and name where the base class's function is virtual.

26. What is the difference between actual and formal parameters?

The parameters sent to the function at calling end are called as actual parameters while at the receiving of the function definition called as formal parameters.

27. What is encapsulation?

The process of binding the data and the functions acting on the data together in an entity (class) called as encapsulation.

28. When there are a Global variable and Local variable with the same name, how will you access the global variable?

When there are two variables with the same name but different scope, i.e., one is a local variable and the other is a global variable, the compiler will give preference to a local variable.

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In order to access the global variable, we make use of a "scope resolution operator (::)". Using this operator, we can access the value of the global variable.

29. What are the various Access Specifiers in C++?

C++ supports the following access specifiers:

- Public: Data members and functions are accessible outside the class.
- Private: Data members and functions are not accessible outside the class. The exception is the usage of a friend class.
- Protected: Data members and functions are accessible only to the derived classes.

30. What is the difference between Method Overloading and Method Overriding in C++?

Method overloading is having functions with the same name but different argument lists. This is a form of compile-time polymorphism.

Method overriding comes into picture when we rewrite the method that is derived from a base class. Method overriding is used while dealing with run-time polymorphism or virtual functions.

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