**1. What is C++**

C++ is created by Bjarne Stroustrup of AT&T Bell Labs as an extension of C, C++ is an object-oriented computer language used in the development of enterprise and commercial applications. Microsoft’s Visual C++ became the premier language of choice among developers and programmers.

**2. Difference between C/C++**

C++ is an object oriented programing but c is a procedure oriented programing. C is super set of C++. C can’t support inheritance, function overloading, method overloading etc. but C++ can do this. In c-program the main function could not return a value but in the C++ the main function should return a value.

**3. What do you mean by implicit conversion?**

Whenever data types are mixed in an expression then C++ performs the conversion automatically. Here smaller type is converted to wider type.

Example : in case of integer and float integer is converted into float type.

**4. What is the difference between class and structure?**

By default, the members of structures are public while that tor class is private. Structures doesn’t provide something like data hiding which is provided by the classes. Structures contains only data while class bind both data and member functions

**5. What is dynamic binding?**

Dynamic binding (also known as late binding) means that the code associated with a given procedure call is not known until the time of the call at run time. It is associated with polymorphism and inheritance.

**6. What is friend function?**

The function declaration should be preceded by the keyword friend. The function definitions does not use either the keyword or the scope operator ::. The functions that are declared with the keyword friend as friend function. Thus, a friend function is an ordinary function or a member of another class.

**7. What is an iterator?**

Iterators are like pointers. They are used to access the elements of containers thus providing a link between algorithms and containers. Iterators are defined for specific containers and used as arguments to algorithms.

**8. What are the differences between new and malloc?**

New initializes the allocated memory by calling the constructor. Memory allocated with new should be released with delete. Malloc allocates uninitialized memory.

The allocated memory has to be released with free. New automatically calls the constructor while malloc (doesn’t).

**9. What is an explicit constructor?**

A conversion constructor declared with the explicit keyword. The compiler does not use an explicit constructor to implement an implied conversion of types. It’s purpose is reserved explicitly for construction. Explicit constructors are simply constructors that cannot take part in an implicit conversion.

**10. What is the difference between a copy constructor and an overloaded assignment operator?**

A copy constructor constructs a new object by using the content of the argument object. An overloaded assignment operator assigns the contents of an existing object to another existing object of the same class.

**11. What is difference between C++ and Java?**  
 C++ has pointers Java does not.  
Java is platform independent C++ is not.  
Java has garbage collection C++ does not.

12. **What do you mean by virtual methods?**

Virtual methods are used to use the polymorphism feature in C++. Say class A is inherited from class B. If we declare say function f() as virtual in class B and override the same function in class A then at runtime appropriate method of the class will be called depending upon the type of the object.

13. **What is the Standard Template Library?**  
 A library of container templates approved by the ANSI committee for inclusion in the standard C++ specification. A programmer who then launches into a discussion of the generic programming model, iterators, allocators, algorithms, and such, has a higher than average understanding of the new technology that STL brings to C++ programming.

**14. What are the elements of object oriented Programming?**

There are Eight basic elements in Object oriented Language.

1. Object
2. Class
3. Data Abstraction
4. Encapsulation
5. Data Hiding
6. Inheritance
7. Polymorphism
8. Dynamic Binding

15. **What do you mean by C++ access specifiers ?**

Access specifiers are used to define how the members (functions and variables) can be accessed outside the class. There are three access specifiers defined which are *public, private, and protected*

* private:  
  Members declared as private are accessible only with in the same class and they cannot be accessed outside the class they are declared.
* public:  
  Members declared as public are accessible from any where.
* protected:  
  Members declared as protected can not be accessed from outside the class except a child class. This access specifier has significance in the context of inheritance.