MOTHER TERESA COLLEGE OF ARTS AND SCIENCE

METTUSALAI

ILLUPPUR

**SUBJECT:** PROGRAMMING IN C++

**CLASS :** I-B.Sc(COMPUTER SCIENCE)

**TWO MARK QUESTION AND ANSWER**

**1. What is C++?**  
 [C++](https://blog.oureducation.in/c-aptitude-questions-answers/) is a general purpose object oriented programming language invented in the early 1980 by bajarne stroutrup.

**2. What is class?**  
 A class can be declared as a collection of data members along with member’s function which allows association of data and functions into a single unit called encapsulation.

**3. What are the different features of c++?**  
Following are the different features of the Classes in C++,

Operators and function overloading

Free storage management

Constant types

References

Inline function

Virtual function

Templates

Exception handling

**4. Explain constructor?**  
 A constructor is a special member function whose task is to initialize the objects of its class. It is special because its name is same as class name. The constructor is invoked whenever an object of its associated class is created. It is called constructor because it constructs the values of data members of the class

**5. What is a function?**  
 A function is a block of code which executes the statements when we call it.  
It consists of three entities:  
1) the function name this is simply a unique identifier.  
2) The function parameters this is a set of zero or more typed identifier.  
3) The function return type this specifies the type of value function returns.

**6. Explain Inline function?**  
 Inline functions are those function whose function body is inserted in place of the function call.

**7. What is function overloading?**  
 Function polymorphism for function overloading is a concept that allows multiple function to share the same name with different arguments type assigning one or more function function body to the same name is known as function overloading.

**8. What is implicit and explicit type conversion?**  
 **Implicit:** casting in c++ compile automatically handles the type conversion. The final result expressed in the highest precision possible.

**Explicit:** the conversion of data type of two operands is not automatic but forced. We can force an expression to be a specific type by using a cast.

**9. What is inheritance in C++ and name the different types of inheritance?**  
 It is a technique of organizing information in a hierarchy form. It is like a child inheriting the features of its parent.  
The class which we are inheriting from is called as the base class and the class which inherits called as derived class.

**10. Different types of inheritance are as follows-:**1) single level  
2) Multi-level  
3) Multiple  
4) Hierarchical (hybrid)  
5) multipath

**11. What is friend function?**  
 A friend function is a function which is use to access the private data member of different class.

**12. What are tokens?** The smallest individual units in a program are known as tokens. C++ has the following tokens,

• Keyword  
• Identifiers  
• Constants  
• Strings  
• Operator

**13. What are keywords?** The keywords implement specific C++ language features. They are explicitly reserved identifiers and cannot be used as names for the program variables or other user defined program elements.  
 **Eg:** go to, If, struct , else ,union etc.

**14.** **What is static data member?** Static variable are normally used to maintain values common to the entire class.  
Feature:  
• It is initialized to zero when the first object is created. No other initialization is permitted  
• only one copy of that member is created for the entire class and is shared by all the objects  
• It is only visible within the class, but its life time is the entire class type and scope of each static member variable must be defined outside the class  
• It is stored separately rather than objects  
Eg: static int count//count is initialized to zero when an object is created.  
int classname::count;//definition of static data member.

**15. What is static member function?** A member function that is declared as static has the following properties  
 A static function can have access to only other static member declared in the same class  
 A static member function can be called using the classname as follows  
classname ::function\_name;

**16. How the objects are used as function argument?** This can be done in two ways  
 A copy of the entire object is passed to the argument  
 Only address of the objects is transferred to the function.

**17. What is called pass by reference?** In this method address of an object is passed, the called function works directly on the actual arguments.

**18. Define const member** If a member function does not alter any data in the class, then we may declare it as const member function as Void mul(int ,int)const;

**19. Define pointers to member** It is possible to take the address of a member of a class and assign it to a pointer. The address of a member can be obtained by applying the operator &to a “fully qualified” class member name. A class member pointer can be declared using the operator::\*with the class name

**20. What is polymorphism? What are its types?** Polymorphism is the ability to take more than one form. An operation may exhibit different behaviors in different. The behavior depends upon the type of data used.  
Polymorphism is of two types. They are  
• Function overloading  
• Operator overloading

**21. Define virtual function**

A virtual function is a member function which is declared within a base class and is re-defined (Overriden) by a derived class.

* Virtual functions ensure that the correct function is called for an object, regardless of the type of reference (or pointer) used for function call.
* They are mainly used to achieve Runtime polymorphism
* Functions are declared with a **virtual**keyword in base class.
* The resolving of function call is done at Run-time.

**22. What is function overloading? Give an example.** Function overloading means we can use the same function name to create functions that perform a variety of different tasks.  
**Eg:** An overloaded add ( ) function handles different data types as shown below.  
// Declarations  
i. int add( int a, int b); //add function with 2 arguments of same type  
ii. int add( int a, int b, int c); //add function with 3 arguments of same type  
iii. double add( int p, double q); //add function with 2 arguments of  
different type

**23. What is the difference between break & continue statements?  
 Break:** We can force immediate termination of a loop, bypassing the conditional, the loop expression & any remaining code in the body of the loop. When a break statement is encountered in a loop, the loop is terminated & the program control resumes at the next statement following the loop.  
 **Continue:** useful to force early termination. it continue running the loop, but stop processing the remainder of the code in its body for this particular iteration

**24. What is meant by file handling?**

Files are mainly dealt by using three classes fstream, ifstream, ofstream available in fstream headerfile.  
**ofstream:** Stream class to write on files  
**ifstream:** Stream class to read from files  
**fstream:**  Stream class to both read and write from/to files.

**25. What is Standard Template Library (STL)?**

The Standard Template Library (STL) is a set of C++ template classes to provide common programming data structures and functions such as vector, lists, stacks, etc. It is a library of container classes, algorithms, and iterators. It is a generalized library and so, its components are parameterized.