Q1. List the types of inheritance supported in C++. (2)

A. Single, Multilevel, Multiple, Hierarchical and Hybrid

Q2. What is the difference between encapsulation and abstraction. (2)

A. Encapsulation:

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

Abstraction:

Abstraction refers to hiding the internal implementation and exhibiting only the necessary details.

Q3. What is an Abstract Class in C++. (2)

A. A class with at least one pure virtual function is called as abstract class. We cannot instantiate an abstract class.

Q4. What is a destructor? How will you overload a destructor? (2)

A. 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.

Q5 What are the valid operations on pointers? (2)

A. The only two permitted operations on pointers are

i)Comparision ii) Addition/Substraction (excluding void pointers)

Q6. What is the difference between delete and delete[]? (2)

A. Delete[] is used to release the array allocated memory which was allocated using new[] and delete is used to release one chunk of memory which was allocated using new.

Q7. If algorithm A has a time complexity O(n) and algorithm B has a time complexity

O(n^2), is it correct to say that A will always take less time to execute than B for

identical inputs assuming same programming and execution environment? Explain.

A. B may run faster for smaller values of N but A will always run faster for any N greater than some constant value ‘C’.

**Q 8 - How many number of arguments can a destructor of a class receives?**

[**A** - 0](javascript:void(0);) (2)

[**B** - 1](javascript:void(0);)

[**C** - 2](javascript:void(0);)

[**D** - None of the above.](javascript:void(0);)

A. Answer : A

### Explaination

The destructor receives no arguments and is only form to be provided. Hence destructor cannot be overloaded.

**Q9.Choose the invalid identifier from the below**

[**A** - Int](javascript:void(0);)

**B** - bool

[**C** - DOUBLE](javascript:void(0);)

[**D** - \_\_0\_\_](javascript:void(0);)

Answer : B

### Explaination

bool is the reserved keyword and cannot be used an identifier name.

Q8. Does an abstract class in C++ need to hold all pure virtual functions? (2)

A.Not necessarily, a class having at least one pure virtual function is abstract class too.

Q10. **Compiler generates \_\_\_ file (2)**

[**A** - Executable code](javascript:void(0);)

**B** - Object code

[**C** - Assembly code](javascript:void(0);)

[**D** - None of the above.](javascript:void(0);)

### Answer : B

### Explaination

Compilation is the process of translating high level language statements into equivalent machine code, which is object code.