1) C++ was created by _____ (full name) at Bell labs in 1979.
- Bjarne Stroustrup

2) C++ has as a language design objective the position that preprocessor usage should be eliminated. Give a scenario when the preprocessor must be used in C++ since there is no way to do such within the language.
- It must be used to establish #include guards.

3) Briefly explain what std::cerr is.
- std::cerr is a global std::ostream object that writes its output to standard error.

4) Explain how one can easily determine if a C++ expression/variable is an lvalue or an rvalue expression?
- It is an lvalue if the expression result is a named variable, otherwise it is an rvalue.

5) What is the type of nullptr in C++?
- nullptr_t

6) Explain how one can declare and use references (not pointers!) to references (not pointers!) in C++.
- One cannot. The C++ language explicit proscribes references to references.

7) What is/are the difference(s) if any between using "struct" or "class" to define a type in C++?
- A struct's members are public by default and it inherits with public scope by default.
- A class' members are private by default and it inherits with private scope by default.

8) The presence of _____ (i.e., you must give its proper name!) in a class makes the class an abstract class.
- a pure virtual function

9) All Java class inheritance would be implemented as _____ _____ (two words) inheritance in C++.
- public, virtual

10) All Java abstract functions would be implemented as _____ _____ functions in C++.
- pure, virtual

11) Most Java enumeration types would be implemented as _____ types in C++.
- enum(enumeration)

12) Before optimizing any code, one would first implement all variables inheriting from the Object class as _____ to instances that are all dynamically allocated on the heap to make it easy to preserve the Java code's reference semantics.
- pointers

13) All Java casts (initially before optimizing anything ported over to C++) would be implemented using which C++ cast operator?
- dynamic_cast

14) Everything that requires or performs sorting within the C++ Standard Library relies on the _____ operator(s) (list all that apply) to order/sort the data.
- < (less than)

15) The ordering C++ uses for sorted data is not a strict total order but is a(n) _____. (For full marks the full term written out fully must be provided –no abbreviations or acronyms.)
- strict weak order

16) The presence of _____ (i.e., you must give its proper name!) in a class makes the class an abstract class.
- a pure virtual function

17)