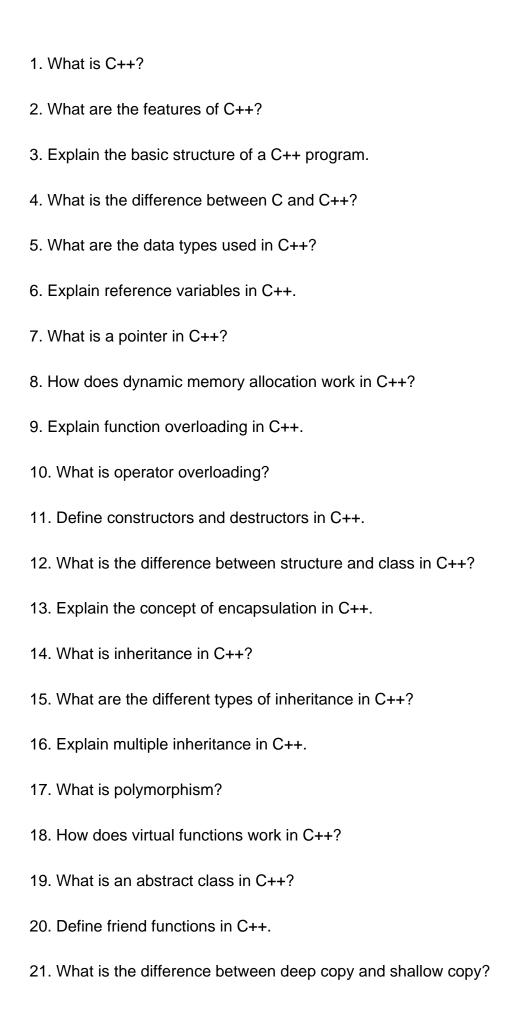
## 100 C++ Programming Questions



22. Explain exception handling in C++. 23. What are templates in C++? 24. What is STL (Standard Template Library) in C++? 25. How does a vector work in C++? 26. What is a map in C++ STL? 27. Explain iterators in C++ STL. 28. What is a lambda function in C++? 29. How does a file handling work in C++? 30. What are manipulators in C++? 31. What is the use of 'this' pointer? 32. Explain the use of 'mutable' keyword in C++. 33. What is a namespace in C++? 34. How does type casting work in C++? 35. Explain the difference between 'new' and 'malloc'. 36. What is the difference between 'delete' and 'free'? 37. What are function pointers in C++? 38. Explain the difference between pass by value and pass by reference. 39. What is RAII (Resource Acquisition Is Initialization)? 40. What is a smart pointer in C++? 41. Explain unique\_ptr in C++. 42. What is shared\_ptr in C++? 43. How does weak\_ptr work in C++?

44. What are move semantics in C++? 45. Explain rvalue references in C++. 46. What is a lambda capture in C++? 47. How does constexpr work in C++? 48. What is the difference between 'volatile' and 'const' in C++? 49. How does multi-threading work in C++? 50. What is the role of mutex in C++? 51. What is a condition variable in C++? 52. Explain the difference between fork() and thread in C++. 53. What is a race condition in C++ multi-threading? 54. How does the 'explicit' keyword work in C++? 55. Explain the role of 'static' in C++. 56. What is memory leak and how can you prevent it? 57. What is a virtual destructor in C++? 58. How does the 'override' keyword work? 59. What is the use of 'final' keyword in C++? 60. How does perfect forwarding work in C++? 61. What is SFINAE in C++? 62. How does the 'alignas' keyword work? 63. What is std::any in C++? 64. What is std::variant? 65. How does std::optional work?

66. What is memory fragmentation? 67. What is the use of 'inline' functions? 68. Explain preprocessor directives in C++. 69. What is a macro in C++? 70. What is the role of 'typedef' in C++? 71. Explain 'using' keyword in C++. 72. What is the difference between 'struct' and 'class'? 73. What is the function of 'friend' keyword? 74. How does 'nullptr' work in C++? 75. What is the difference between 'enum' and 'enum class'? 76. What is an inline namespace? 77. How does the 'export' keyword work? 78. Explain the term 'decltype' in C++. 79. What is an aggregate type in C++? 80. What is std::tuple and how is it used? 81. How does std::array differ from C-style arrays? 82. What is std::deque and how does it work? 83. How is std::list different from std::vector? 84. What are the advantages of unordered\_map? 85. What is the role of priority\_queue? 86. How does std::stack work? 87. What is std::bitset used for?

- 88. What is std::chrono?
- 89. How does std::thread work?
- 90. What is a function object (functor)?
- 91. How does std::bind work?
- 92. What are futures and promises in C++?
- 93. What is std::atomic?
- 94. What is a type-trait in C++?
- 95. How does std::conditional work?
- 96. What is std::enable\_if used for?
- 97. What is std::is\_same?
- 98. How does std::move work?
- 99. What is std::forward?
- 100. What is std::exchange and how is it used?