

Ranking	Functions	Details
	Data Types & Variables	Data Types Example sizeof and modifier variables: declare, define , initaze storage classes rvalue lvalue
	Preprocessors	#define - Macro and Function-Like Macros Conditional Compilation The # and ## Operators Predefined C++ Macros Header guard Macro vs Inline
	C/C++ Compilation	gcc/g++ Build Pipeline Static Linking Dynamic Linking
	Memory layout	Stack, Heap, Data Segment, Text - variable and allocation, Call stack, Recursion
	Pointer Basic	Definition Understand difference between pointer and normal variables Practice
	Pointers and References	Size of Pointer Const Pointer Pointer to Const Const Pointer to Const Function Pointer Pointer vs Array? Pointer Arithmetic? Pointer Cast Type? Opaque pointer (optional) Return reference, Return pointer Pass by Value, Pass by Reference, Pass by Pointer
	Functions	Standard library functions User-defined function how function Work in C/C++? Recursion? Return reference default parameter return pointer Callback lambda function? lambda function vs function pointer? parameter list Function Call? Performance compared to macros?
DEV1	Class & Object	Create a Class Create a object Create a instance Access Data Members and Member Functions SizeOf Class, data Alignment Local Class Nested Class Pass Objects to Function Return Objects to Function Method in class Constructor, Destructor

	Size of Struct? Data alignment Access Members of a Structure Struct & Pointer Struct & Union in Embed Function in Struct Nested Structure typedef
Struct, Union & Enumerations	
Constructor and Destructor	Default Constructor, Parameters Constructor, Rvalue vs Lvalue, Copy Constructor, -> Shallow copy vs Deep Copy Move Constructor, Destructor, Virtual destructor
Abstraction	Definition virtual method pure virtual method abstract class interface
Encapsulation	definition, access modifier, geter vs seter
Inheritance	definition, access modifier, constructor-destructor calling order, single inheritance, multiple inheritance, issues in multiple inheritance, diamond problem
Polymorphism	definition, virtual function, pure virtual function, overloading, overriding, compile time polymorphism, runtime polymorphism, vpointer vs vtable, virtual destructor
Namespace & Template	
Exception Handling	Why Exception Handling? Exceptions vs Error try, catch, throw, finally standard exception libraries
Data structures and Algorithms	data structures : array, linked list, stack , queue, tree, binary tree search, self balance tree, hash function, hash table c++ data structure libraries : vector, stack, queue, map, set, list, pair, unorder_map Sorting Searching
Smart pointer	What is smart pointer ? unique pointer share pointer weak pointer
Websocket	windows ws2
Design Pattern	MVC, Singleton, Prototype
Analyze Requirement	
High Level Design vs Low Level Design	
Assign Tasks, Review Code	

DEV2

	What and Why Multi Thread? Lifecycle Threading? Basic Thread with C++ Why do we need Thread Safety? Mutex, Semaphore, Lock, Synchronize
MultiThread	
Clean Code vs Debugging	