* What are your main achievements on your previous positions that you’re proud of?  
  I do not like answering this kind of question, but
  + I worked (work) in really great places   
    And I took part in the creation of a lot of great products (some of them reported in the famous journals). Concerning software products created/supported by me, I can shortly present later
    - PCI
    - JINR
    - DESY
* What operating system do you develop on?
  + Windows
  + Linux
  + Mac
* What do you use as your primary desktop OS for daily tasks?   
  Currently Windows
* What IDE do you use?  
  I write in the order of usage frequency
  + Qt creator
  + Visual Studio
  + XCode (very rarely)
* What database engines are you familiar with?   
  I have the experience to work with the following DBs
  + SQLlite
  + pgSQL (<https://www.postgresql.org/>)
  + Xapian (<https://xapian.org/>)
* Do you use templates and metaprogramming?

yes

* What are drawbacks of using templates and metaprogramming?
  + Templates are in the headers, which require a complete rebuild of all project pieces when changes are made.
  + For some environments sometimes difficult to debug template functions
  + Sometimes big executable code size, because all possible instances instantiated
* Which C++ 11 feature do you use most? Why?   
  I’ll mention some widely used classes and APIs
  + Threading (::std::thread)
  + Variadic templates (see my example code: <https://github.com/davitkalantaryan/educational-std_thread/blob/master/include/doocs/thread.impl.hpp#L36>)
  + Thread local storage (I mean thread\_local specifier)
  + ::std::mutex (with helper classes (::std::lock\_guard))
  + ::std::unordered\_map, ::std::unordered\_set (that is real hash table)
  + Lambda functions
  + User defined literals
* Which C++ 14-20 feature do you use most? Why?
  + ::std::shared\_lock
* In which cases would you prefer using class instead of struct?

Generally speaking only default visibility (private, public) is different.   
I like the answer here <https://stackoverflow.com/questions/54585/when-should-you-use-a-class-vs-a-struct-in-c> (use struct for plain-old-data structures without any class-like features, …)  
One more answer from me: if you create an interface that probably can be used by C code also, then use structs, that c code does not have a problem with corresponding headers

* In which cases would you prefer using enum instead of enum class?

The first thing that comes to my mind is having a header that potentially can be used by c code

* In which cases would you prefer using const instead of constexpr?

When constexpr is not possible, otherwise constexpr could help to make some calculations compile-time and reduce throughput.

* In which cases would you prefer using typedef instead of using?

I have a preference to use using (when I need so-called template typedef), but I do not remember a case where typedef will benefit

* When do you find using macro appropriate?

When I have a repeating pattern, and no chance to make this using C++ tools (to make something in compile time)

* What could curly braces mean in C++?

Code block (<https://drive.google.com/file/d/14k2a319-zES81LjkyAMwo_sHrMqHIeKV/view> => I think I can skip very basic questions)

* What will be the output of this code snippet:

auto sum = [](auto a, auto b) { std::cout << a << " + " << b << " = " << (a + b); };

int i = 0;

sum(i += 2, i += 3);  
2 + 5 = 7  
!!! but this is not standard, and most probably if all warnings are switched on the compiler will produce a warning here: you never know if a compiler first evaluates the first argument of the function or the second argument, so I mean in the case of different compiler implementation, one can see the output  
5 + 3 = 8

* Is it okay to throw exceptions in constructors or destructors?   
  In the constructor, yes
* Which synchronization methods do you use in multi-threaded code and when: mutex, condition variable or both?

It depends (or one can say both)

* What can be reasons to use int32\_t instead of int?

When the following assumptions take place

* + Strictly 32 bit is needed
  + You assume that your code will live longer than int is 32 bit for the desired compiler :)
* Write a simple method that prints the given enum class value as int?  
  <https://ide.geeksforgeeks.org/66f324f8-09e0-4891-8f9f-07bbd56086ee>
* Is it possible to inherit enum class from, say, an integer primitive type?  
  No
* When is git merge more suitable than git rebase?   
  I use git merge to merge the master (main) branch to my ongoing branch, and I use rebase to join my developed and tested code to master
* Have you been involved with any open-source projects?  
  Yes
  + Zmq: <https://github.com/zeromq/libzmq/commit/dfc85af4d04e818698f7775f25ac0efbd26bcc3e>
  + Linux device drivers (one example: https://github.com/MicroTCA/upciedev/blob/master/read\_write\_inline.h)
* Can you provide source code samples you consider to be good code (and are proud of)?

For example https://github.com/davitkalantaryan/crash\_investigator

* Which book has influenced you most (you would recommend it to each developer)?

<https://www.stroustrup.com/4th.html>