(1) If a necessary condition is satisfied, what conclusion can we draw?

We can not draw any conclusion.

(2) What does “performance” in computer system mean (at least four examples)?

- (execution) speed (measured in time)
- memory requirement (measured in bytes)
- reliability (measured in the probability of bugs)
- one more – such as, portability, ease of use, backward compatibility, price

(3) What are three different types of “program files”? Which format do processors understand?

(a) Program source code files in high-level programming languages.

(b) Program source code files in an assembly language (“assembly source code files”).

(c) Binary executable files.

Processors understand only the binary executable files for their program executions.
(4) What is the primary purpose of “assembly source code files”? 

Assembly source code files allow human (assembly) programmers understand how a processor executes the programs in terms of step-by-step details. This brings us the following advantages:

- Debugging easier.
- More code optimization.

Assembly source code files are used (or created) because of the above advantages.

(5) What is the software tool that translates “(human) programmers’ source code files” into “assembly source code files”?

Compilers