(1) What does “necessary condition” guarantee?

If a necessary condition is not satisfied, it guarantees that the goal of the necessary condition will not be achieved.

(2) What are the two primary advantages of learning “computer organization and architecture” by CS majors?

- Develop good debugging skills
- Develop efficient software products

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

- Fast program executions
- Less power (battery) consumption
- Less memory space use
- Reliable programs
(4) What does “low-level” in “low-level programming languages” mean?

The term, “low-level” means “close to hardware (processors)”, which means, very low (almost zero) abstraction (you will see every single activity a processors performs).

(5) What is the software tool that translates “assembly source code files” into “binary executable files”?

Assembler