Figure 14.4a gives an example of this policy. We assume a superscalar pipeline capable of fetching and decoding two instructions at a time, having three separate functional units (e.g., two integer arithmetic and one floating-point arithmetic), and having two instances of the write-back pipeline stage. The example assumes the following constraints on a six-instruction code fragment:

- I1 requires two cycles to execute.
- I3 and I4 conflict for the same functional unit.
- I5 depends on the value produced by I4.
- I5 and I6 conflict for a functional unit.

![Diagram](image.png)

(a) In-order issue and in-order completion

![Diagram](image.png)

(b) In-order issue and out-of-order completion

![Diagram](image.png)

(c) Out-of-order issue and out-of-order completion

Figure 14.4 Superscalar Instruction Issue and Completion Policies