

Study Questions for Patterson & Hennesey, Sections 1.5–2.3
Sections 1.5–2.3, A.1–5 for Wednesday, September 7, 2005

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Section 1.4

30 We covered Section 1.4 in a previous study guide, but I decided to add some lecture material from “Integrated Circuit [IC] Cost,” which is found on the textbook's CD. What is one exact equation used in calculating IC cost? One geometric approximation? One experimentally arrived at estimation? You do not need to remember the formulas, only what they refer to.

Section 1.5

33–34 If you are designing software that will take 5 years to build, what lesson should Figure 1.17 teach you about that?

Section 1.6

35 What do your textbook authors consider to be the five parts of a computer?

Section 2.1

49 John von Neumann is credited with the idea of treating instructions to a computer as data to be manipulated by the computer. What do your textbook authors call this concept?

Section 2.2

50 Give an example of the design principle that “Simplicity favors regularity.”

Section 2.3

54 In RISC, arithmetic operations can only take place in registers, not between memory and registers. How does this relate to the two design principles that we've met so far?

56 What do these terms mean: “little-endian,” “byte-addressable,” “offset,” and “word aligned”?

Appendix A

A.1–4 What is a symbol table? [p. A.12]

You may omit Pages A.13–17 of Section A.2. You may skim Sections A.3–4.