

*Note:* This homework assignment is in two parts, Part I and Part II. Part I consists of problems from the textbook (Hennessy/Patterson 3rd ed., or “HP3”) whose solutions appear at the end of the book. These problems are for self-study only, and will not be graded, and therefore need not be submitted as part of your written work. Part II consists of problems that will count towards your grade for this homework.

**Part I (not graded):**

1. **Benchmarking Cached Systems.** Do HP3 Problem 5.1.
2. **Prefetching.** Do HP3 Problem 5.16.
3. **Single Disk vs. Striped Array.** Do HP3 Problem 7.8.

**Part II (to be graded):**

1. (35 points) **Caches: Block Replacement Policy.** Do HP3 Problem 5.12, *parts (a)–(c) only*.
2. (30 points) **Measuring Cache Miss Rates.** Do HP3 Problem 5.23.
3. (35 points) **Single Disk vs. Striped Array: Short vs. Long Reads.** Do HP3 Problems 7.9 and 7.10.