

# Problem Set 18

CS 311

Due Mar. 31, 2014

Due at the beginning of class in hardcopy.

Sections 8.5–8

1. Explain:
  - (a) Why address space identifiers (ASIDs) are used.
  - (b) Why translation look-aside buffers (TLBs) are used.
2. Consider a computer system with a 32-bit logical address and 4-KB page size. The system supports up to 512 MB of physical memory. How many entries are there in each of the following?
  - (a) A conventional, single-level page table
  - (b) An inverted page table
3. What is the purpose of paging the page table? Does a paged page table use more, the same, or less memory than a single-level page table?