

# Main Memory



## Review Questions

### Section 7.1

- 7.1 What two registers can be used to provide a simple form of memory protection? (
- 7.2 List the three different times at which address binding may occur.
- 7.3 True or False? An address generated by the CPU is also referred to as a physical address.
- 7.4 What is the hardware device that maps virtual to physical addresses?

### Section 7.2

- 7.5 What is the backing store?
- 7.6 True or False? Mobile systems typically use swapping.

### Section 7.3

- 7.7 What are the three strategies for selecting a free hole from the set of available holes?
- 7.8 What are the two forms of fragmentation?

### Section 7.4

- 7.9 List at least two possible parts of a program that may be assigned separate segments.

### Section 7.5

- 7.10 What are the two parts of an address generated by the CPU?
- 7.11 What does each entry in the page table contain?
- 7.12 True or False? Fragmentation can still occur in paging systems.

16 Chapter 7 Main Memory

7.13 What is the term that describes when a page number is not present in the TLB?

**Section 7.6**

7.14 If a page offset is 13 bits, how large (in bytes) is the page?

7.15 How many entries are in a two-level page table with a 20-bit page number?

7.16 What is an alternative to hierarchical paging for large (> 32 bits) address sizes?

**Section 7.7**

7.17 True or False? IA-32 address translation involves both paging and segmentation.

7.18 True or False? In practice, all 64 bits are used with IA-64 addressing.

**Section 7.8**

7.19 What are the three components of a 32-bit ARM address?