



## Chapter 9 Important Points

This is a summary of the parts of Chapter 9 that you should understand and be able to explain. In addition you should be able to solve problems related to them.

1. Hardware needed for memory protection
2. Address binding
3. Logical versus physical addresses
4. Relocatable code
5. Purpose and functions of a MMU
6. Differences between dynamic linking and dynamic loading
7. Contiguous allocation
  - (a) Multiple-partition allocation, variable size partitions
  - (b) First fit, best fit, worst fit methods
  - (c) external and internal fragmentation
8. Paging
  - (a) address translation
  - (b) required hardware
  - (c) calculating page table sizes and page table entry sizes
  - (d) calculating internal fragmentation
  - (e) performance issues
9. Translation Lookaside Buffers (TLBs)
  - (a) hardware
  - (b) performance improvement
  - (c) effective access time calculation
10. Memory protection
  - (a) valid/invalid bits
  - (b) read-only or write-bit and page sharing
11. Page Table Implementations
  - (a) Hierarchical page tables
  - (b) Two-Level paging scheme
  - (c) Three-level paging scheme
  - (d) Inverted page tables