

Midterm Study Guide

This is simply a guide of topics that I consider important for the midterm. I don't promise to ask you about them all, or about any of these in particular; but I may very well ask you about any of these, as well as anything we discussed in class or that is in the reading.

1. Fundamentals
 - a. What is security?
 - b. Basics of risk analysis
 - c. Relationship of security policy to security
 - d. Policy vs. mechanism
 - e. Assurance and security
2. Saltzer's and Schroeder's Principles of Secure Design
3. Robust Programming
4. Penetration Studies
 - a. Flaw Hypothesis Methodology
 - b. Using vulnerabilities models
5. Vulnerabilities Models
 - a. RISOS
 - b. PA
 - c. NRL
 - d. Aslam
6. Access Control Matrix
 - a. Matrix
 - b. Primitive Operations
 - c. Commands
7. Policies
 - a. Mandatory Access Control (MAC)
 - b. Discretionary Access Control (DAC)
 - c. Originator-Controlled Access Control (ORCON)
 - d. Role-Based Access Control (RBAC)
8. Confidentiality Models
 - a. Bell-LaPadula Model
 - b. Lattices and the BLP Model
9. Integrity Models
 - a. Biba Model
 - b. Clark-Wilson Model