

Sample Midterm

1. Please define the following terms in one or two sentences.
 - (a) assurance
 - (b) firewall
 - (c) availability
 - (d) cypherpunk remailer
2. Please circle the best answer, and *justify it*.
 - (a) Which of the following is a good password?
 - i. Mary
 - ii. banana
 - iii. Clas\$-1s+Boring
 - iv. kglem23+fy
 - (b) Which of the following is not an access control model?
 - i. DAC
 - ii. ORCON
 - iii. RBAC
 - iv. FTP
 - (c) Which of the following best describes a computer worm?
 - i. A program that copies itself into other programs
 - ii. A program that copies itself to other computer systems
 - iii. A program that copies keystrokes and sends them to another system over the network
 - iv. A program that accepts commands from a remote server and sends spam to a list of emails
 - (d) Which of the following is *not* a principle of secure programs?
 - i. Paranoia: assume the user will try to attack the system using the program
 - ii. Stupidity: assume the user will not know anything about the program
 - iii. Impossibility: assume anything that can't happen, will happen
 - iv. Clarity: assume the user needs to know, and rely on, the way the internals of the program works
3. What is non-repudiation? Please give an example of a situation requiring non-repudiation.
4. Why is a precise statement of security requirements critical to the determination of whether a given system is secure?
5. Please label the following as a “policy” or a “mechanism”. Justify your answers.
 - (a) Only students may use the system.
 - (b) A program that checks that the user enters the correct password.
 - (c) Systems can be connected to the Internet on alternate Thursdays only.
 - (d) A firewall that prevents access to the system from non-University systems.