Computer Security Exam

Introduction to Computer Security

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Downloadable Exam

- Two from three questions
- To be completed in 150 minutes after download
- Allow two hours to answer the selected questions, with half hour for upload

Academic Integrity

- You MAY access online materials, notes, etc. during this examination. You must complete this assessment on your own and in your own words. DO NOT discuss this assessment with others before the end of its 2.5-hour window. By submitting this assessment, you confirm that your assessment includes no instances of academic misconduct, for example, plagiarism or collusion. Any instance of academic misconduct will be thoroughly investigated in accordance with our academic misconduct regulations.

Question Example

1. Explain the strengths and weaknesses of each of the following firewall depending scenarios in defending servers, desktop machines and laptops against network threats

   a) A firewall in the network perimeter. (10 marks)

   b) Firewalls on every end host machine. (10 marks)

   c) A firewall on the network perimeter and on every end host machine. (10 marks)

Question Bookwork Examples

1. Charles is a junior software developer who wants to learn public-key cryptosystems to apply it in an e-commerce web application. Before applying it in his project, what are the general requirements of public-key cryptosystems that he should be aware of? (20 marks)

Thinking Question Examples

1. Suppose the fictional company BrightonTravels store their users' passwords as hashes. For login, a programmer wants to hash passwords at the client side rather than at the server. Do you think it is a good idea or not? Explain your view.

2. John has arranged a blind date for Kelly and Brendan. They are both cryptographers, and they didn't know each other before. John has given Kelly and Brendan a secret number K and nobody else knows K. Brendan wants to make sure that the person he is dating is actually Kelly, not somebody else. Explain how cryptographically Kelly can prove herself without revealing the secret number K.