

Examples of exam questions connected to the introductory studies “Basics”

2011-08-25

Problem 1

Classify each of the following as a violation of confidentiality, of integrity, of availability, or of some combination of these three. Explain and motivate your classifications.

- a) A student copies another student's assignment hand-in and submits it as their own.
- b) Close to the hand-in deadline a student (who is not ready with their hand-in) finds a buffer overflow bug in the system that receives hand-ins and manages to utilise that bug to crash the server at will, thereby earning more time to work on the assignment.
- c) A student eavesdrops the examiner's password and uses it to change his/her grade from an F to an A.
- d) A teacher pretends to be a student in an on-line forum that is meant only for students in order to keep track of what students are saying about him/her behind his/her back.
- e) A teacher, assuming that students use their computers to chat and play games during lectures rather than as study tools, disconnects the wireless lan in the lecture hall, even though the students are fully within their rights to use computers and the network.

2010-10-22

Problem 1

One practical security measure might be to encrypt a computer's hard drive so that only after correct authentication would the content be decrypted. Based and structured on the CIA triad, discuss and explain how this measure can be said to effect system security, both positively and negatively.

2010-11-27

Problem 1

Give motivated arguments that updates are both good and bad for system security.

Problem 4

Describe each of the following IT security related terms. Also, for each of these terms further illustrate the concept by choosing a closely connected IT security concept and explaining the relationship between the concepts. Furthermore, give an example of an application of these tools/threats/concepts. Give concrete examples wherever possible. Structure each of your answers with headings *description*, *relationship to [your chosen related concept]*, and *example*.

Some students may find it helpful to use the pre-printed problem 4 answer sheet for their answer. Those who choose not to should take care to follow the above instructions extra carefully.

- Covert channel

- **Non-repudiation**
- Worm
- Pseudo-anonymous remailer

2009-10-20

Problem 1

Bruce Schneier has coined the term *Security Theatre* which he describes thus:

“Security theater consists of security countermeasures intended to provide the feeling of improved security while doing little or nothing to actually improve security.” [Schneier03,p38]

- a) Discuss what influences in society may encourage security theater.
- b) Suggest in outline a more methodical approach to implementing security measures that would hopefully avoid the negative effects of security theater.

Reference

Schneier03 Schneier, Bruce. *Beyond Fear: Thinking Sensibly about Security in an Uncertain World*. Copernicus Books. 2003

2008-10-22

Problem 1

One possible measure to protect an IT system is an Intrusion Detection System. Suggest and motivate three other general, effective measures that a systems administrator can use to protect an IT system before the stage at which an IDS becomes necessary. Include at least one non-technical measure. Good answers will show a breadth of possible measures.

2008-12-06