M2 CySec 2016-2017

Physical Security

Hardware and Embedded Systems

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<u>No documents allowed</u>

50 minutes

Last name: **First name:**

Questions

1. Why is security in embedded system important? Cite a few domains where embedded systems should be secured, and describe at least an example of an embedded system that was compromised.

2. Power consumption and ElectroMagnetic emissions can be very sensitive in a secure application: why, and how do they differ? Which countermeasures can be adopted?

3. Describe how test structures may constitute a vulnerability for secure systems, and which solutions can be adopted to avoid the problem.

4. Describe the steps to define and implement an error detecting code to protect a secure implementation against fault attacks. Which are the pro and the against of this technique?

5. Define and describe Hardware Trojans.