**CYB0103: Cybersecurity Design Principles**

**Question Bank**

**Chapter 3**

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**Part I: multiple choice questions:**

1. \_\_\_\_\_\_ is any part of a system that, by itself, provides all or a portion of the total functionality required of a system:
2. Component.
3. Trustworthy.
4. Trust.
5. Simplicity.

**Answer:** A

1. \_\_\_\_\_\_ is the degree to which the security behavior of the component is demonstrably compliant with its stated functionality:
2. Component.
3. Trustworthy.
4. Trust.
5. Simplicity.

**Answer:** B

1. \_\_\_\_\_\_ is the degree to which the user or a component depends on the trustworthiness of another component:
2. Component.
3. Trustworthy.
4. Trust.
5. Simplicity.

**Answer:** C

1. \_\_\_\_\_\_ is the quality of being easy to understand or use:
2. Component.
3. Trustworthy.
4. Trust.
5. Simplicity.

**Answer:** D

1. Which one of the following does NOT improve Simplicity in security:
2. Companies need to keep software design as simple and small as possible.
3. Companies need to evaluate what they need from multipurpose security suites.
4. Companies need to invest in prevention more than detection and response.
5. Companies need to avoid modern techniques that use the power of automation and machine learning.

**Answer:** D

1. \_\_\_\_\_\_ is a centralized piece of code through which control must pass:
2. Choke Point.
3. Hardening.
4. Minimization.
5. Complexity.

**Answer:** A

1. \_\_\_\_\_\_ means that all unnecessary services off by default:
2. Choke Point.
3. Hardening.
4. Minimization.
5. Complexity.

**Answer:** B

1. \_\_\_\_\_\_ means reducing the size, quantity, and complexity of what is to be protected, and limit externally facing points of attack:
2. Choke Point.
3. Hardening.
4. Minimization.
5. Complexity.

**Answer:** C

1. Remove or disable code known to create vulnerabilities, like JavaScript and Flash, is one way to apply:
2. Choke Point.
3. Hardening.
4. Minimization.
5. Simplicity.

**Answer:** C

1. Reduce the number of components used, keeping only those that are essential is one way to apply:
2. Choke Point.
3. Hardening.
4. Minimization.
5. Simplicity.

**Answer:** D

**Part II: true / false questions:**

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| **#** | **Question** | **Answer** |
| 1 | The worst enemy of security is simplicity. | F |
| 2 | Complexity increases security costs and risk. | T |
| 3 | Complexity makes vulnerabilities harder for developers and testers to find and fix. | T |
| 4 | Simple software is likely to have many more bugs and vulnerabilities than complex software. | F |
| 5 | The key to maintain software security is to keep the software as complex as possible. | F |
| 6 | Automation with Machine Learning increases software complexity hence decreases security. | F |
| 7 | Investment on detection and response more than prevention increases software simplicity hence increases security. | F |
| 8 | The less functionality one has to look at in a given application, the less security exposure and vulnerability that piece of software will have. | T |
| 9 | Simplicity allows system designers and programmers to identify unwanted access paths. | T |
| 10 | Simplicity makes testers able to cover all possible combinations and spot problems sooner. | T |
| 11 | Having all features of a system turned on by default increases software simplicity hence increases security. | F |
| 12 | The more enabled features of a system the more potential exploits and decreased security. | T |
| 13 | Intuitive and straightforward access control rules is an example of simplicity. | T |
| 14 | Easy to follow and maintain program statements is an example of simplicity. | T |
| 15 | Interface designs that allow correct application of security features is an example of simplicity. | T |