



**ISC2**

## **Exam Questions SSCP**

System Security Certified Practitioner (SSCP)

### NEW QUESTION 1

- (Topic 1)

Which of the following pairings uses technology to enforce access control policies?

- A. Preventive/Administrative
- B. Preventive/Technical
- C. Preventive/Physical
- D. Detective/Administrative

**Answer: B**

#### Explanation:

The preventive/technical pairing uses technology to enforce access control policies.

#### TECHNICAL CONTROLS

Technical security involves the use of safeguards incorporated in computer hardware, operations or applications software, communications hardware and software, and related devices. Technical controls are sometimes referred to as logical controls.

#### Preventive Technical Controls

Preventive technical controls are used to prevent unauthorized personnel or programs from gaining remote access to computing resources. Examples of these controls include:

Access control software. Antivirus software. Library control systems. Passwords.

Smart cards. Encryption.

Dial-up access control and callback systems.

#### Preventive Physical Controls

Preventive physical controls are employed to prevent unauthorized personnel from entering computing facilities (i.e., locations housing computing resources, supporting utilities, computer hard copy, and input data media) and to help protect against natural disasters. Examples of these controls include:

Backup files and documentation. Fences.

Security guards. Badge systems. Double door systems. Locks and keys. Backup power.

Biometric access controls. Site selection.

Fire extinguishers.

#### Preventive Administrative Controls

Preventive administrative controls are personnel-oriented techniques for controlling people's behavior to ensure the confidentiality, integrity, and availability of computing data and programs. Examples of preventive administrative controls include:

Security awareness and technical training. Separation of duties.

Procedures for recruiting and terminating employees. Security policies and procedures.

Supervision.

Disaster recovery, contingency, and emergency plans. User registration for computer access.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 34.

### NEW QUESTION 2

- (Topic 1)

The type of discretionary access control (DAC) that is based on an individual's identity is also called:

- A. Identity-based Access control
- B. Rule-based Access control
- C. Non-Discretionary Access Control
- D. Lattice-based Access control

**Answer: A**

#### Explanation:

An identity-based access control is a type of Discretionary Access Control (DAC) that is based on an individual's identity.

DAC is good for low level security environment. The owner of the file decides who has access to the file.

If a user creates a file, he is the owner of that file. An identifier for this user is placed in the file header and/or in an access control matrix within the operating system.

Ownership might also be granted to a specific individual. For example, a manager for a certain department might be made the owner of the files and resources within her department. A system that uses discretionary access control (DAC) enables the owner of the resource to specify which subjects can access specific resources.

This model is called discretionary because the control of access is based on the discretion of the owner. Many times department managers, or business unit managers, are the owners of the data within their specific department. Being the owner, they can specify who should have access and who should not.

Reference(s) used for this question:

Harris, Shon (2012-10-18). CISSP All-in-One Exam Guide, 6th Edition (p. 220). McGraw- Hill . Kindle Edition.

### NEW QUESTION 3

- (Topic 1)

Controlling access to information systems and associated networks is necessary for the preservation of their:

- A. Authenticity, confidentiality and availability
- B. Confidentiality, integrity, and availability.
- C. integrity and availability.
- D. authenticity, confidentiality, integrity and availability.

**Answer: B**

#### Explanation:

Controlling access to information systems and associated networks is necessary for the preservation of their confidentiality, integrity and availability.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 31.

#### NEW QUESTION 4

- (Topic 1)

A potential problem related to the physical installation of the Iris Scanner in regards to the usage of the iris pattern within a biometric system is:

- A. concern that the laser beam may cause eye damage
- B. the iris pattern changes as a person grows older.
- C. there is a relatively high rate of false accepts.
- D. the optical unit must be positioned so that the sun does not shine into the aperture.

**Answer:** D

#### Explanation:

Because the optical unit utilizes a camera and infrared light to create the images, sun light can impact the aperture so it must not be positioned in direct light of any type. Because the subject does not need to have direct contact with the optical reader, direct light can impact the reader.

An Iris recognition is a form of biometrics that is based on the uniqueness of a subject's iris. A camera like device records the patterns of the iris creating what is known as Iriscode.

It is the unique patterns of the iris that allow it to be one of the most accurate forms of biometric identification of an individual. Unlike other types of biometrics, the iris rarely changes over time. Fingerprints can change over time due to scaring and manual labor, voice patterns can change due to a variety of causes, hand geometry can also change as well. But barring surgery or an accident it is not usual for an iris to change. The subject has a high-resolution image taken of their iris and this is then converted to Iriscode. The current standard for the Iriscode was developed by John Daugman. When the subject attempts to be authenticated an infrared light is used to capture the iris image and this image is then compared to the Iriscode. If there is a match the subject's identity is confirmed. The subject does not need to have direct contact with the optical reader so it is a less invasive means of authentication then retinal scanning would be.

Reference(s) used for this question: AIO, 3rd edition, Access Control, p 134. AIO, 4th edition, Access Control, p 182.

Wikipedia - [http://en.wikipedia.org/wiki/Iris\\_recognition](http://en.wikipedia.org/wiki/Iris_recognition) The following answers are incorrect:

concern that the laser beam may cause eye damage. The optical readers do not use laser so, concern that the laser beam may cause eye damage is not an issue. the iris pattern changes as a person grows older. The question asked about the physical installation of the scanner, so this was not the best answer. If the question would have been about long term problems then it could have been the best choice. Recent research has shown that Irises actually do change over time:

<http://www.nature.com/news/ageing-eyes-hinder-biometric-scans-1.10722>

there is a relatively high rate of false accepts. Since the advent of the Iriscode there is a very low rate of false accepts, in fact the algorithm used has never had a false match. This all depends on the quality of the equipment used but because of the uniqueness of the iris even when comparing identical twins, iris patterns are unique.

#### NEW QUESTION 5

- (Topic 1)

Which of following is not a service provided by AAA servers (Radius, TACACS and DIAMETER)?

- A. Authentication
- B. Administration
- C. Accounting
- D. Authorization

**Answer:** B

#### Explanation:

Radius, TACACS and DIAMETER are classified as authentication, authorization, and accounting (AAA) servers.

Source: TIPTON, Harold F. & KRAUSE, MICKI, Information Security Management Handbook, 4th Edition, Volume 2, 2001, CRC Press, NY, Page 33.

also see:

The term "AAA" is often used, describing cornerstone concepts [of the AIC triad] Authentication, Authorization, and Accountability. Left out of the AAA acronym is Identification which is required before the three "A's" can follow. Identity is a claim, Authentication proves an identity, Authorization describes the action you can perform on a system once you have been identified and authenticated, and accountability holds users accountable for their actions.

Reference: CISSP Study Guide, Conrad Misenar, Feldman p. 10-11, (c) 2010 Elsevier.

#### NEW QUESTION 6

- (Topic 1)

What is the main concern with single sign-on?

- A. Maximum unauthorized access would be possible if a password is disclosed.
- B. The security administrator's workload would increase.
- C. The users' password would be too hard to remember.
- D. User access rights would be increased.

**Answer:** A

#### Explanation:

A major concern with Single Sign-On (SSO) is that if a user's ID and password are compromised, the intruder would have access to all the systems that the user was authorized for.

The following answers are incorrect:

The security administrator's workload would increase. Is incorrect because the security administrator's workload would decrease and not increase. The admin would not be responsible for maintaining multiple user accounts just the one.

The users' password would be too hard to remember. Is incorrect because the users would have less passwords to remember.

User access rights would be increased. Is incorrect because the user access rights would not be any different than if they had to log into systems manually.

#### NEW QUESTION 7

- (Topic 1)

Crime Prevention Through Environmental Design (CPTED) is a discipline that:

- A. Outlines how the proper design of a physical environment can reduce crime by directly affecting human behavior.
- B. Outlines how the proper design of the logical environment can reduce crime by directly affecting human behavior.
- C. Outlines how the proper design of the detective control environment can reduce crime by directly affecting human behavior.
- D. Outlines how the proper design of the administrative control environment can reduce crime by directly affecting human behavior.

**Answer:** A

**Explanation:**

Crime Prevention Through Environmental Design (CPTED) is a discipline that outlines how the proper design of a physical environment can reduce crime by directly affecting human behavior. It provides guidance about lost and crime prevention through proper facility construction and environmental components and procedures.

CPTED concepts were developed in the 1960s. They have been expanded upon and have matured as our environments and crime types have evolved. CPTED has been used not just to develop corporate physical security programs, but also for large-scale activities such as development of neighborhoods, towns, and cities. It addresses landscaping, entrances, facility and neighborhood layouts, lighting, road placement, and traffic circulation patterns. It looks at microenvironments, such as offices and rest-rooms, and macroenvironments, like campuses and cities.

Reference(s) used for this question:

Harris, Shon (2012-10-18). CISSP All-in-One Exam Guide, 6th Edition (p. 435). McGraw- Hill. Kindle Edition.

and

CPTED Guide Book

**NEW QUESTION 8**

- (Topic 1)

What is called the type of access control where there are pairs of elements that have the least upper bound of values and greatest lower bound of values?

- A. Mandatory model
- B. Discretionary model
- C. Lattice model
- D. Rule model

**Answer:** C

**Explanation:**

In a lattice model, there are pairs of elements that have the least upper bound of values and greatest lower bound of values.

Reference(s) used for this question:

KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 34.

**NEW QUESTION 9**

- (Topic 1)

Which of the following would be used to implement Mandatory Access Control (MAC)?

- A. Clark-Wilson Access Control
- B. Role-based access control
- C. Lattice-based access control
- D. User dictated access control

**Answer:** C

**Explanation:**

The lattice is a mechanism use to implement Mandatory Access Control (MAC)

Under Mandatory Access Control (MAC) you have: Mandatory Access Control

Under Non Discretionary Access Control (NDAC) you have: Rule-Based Access Control

Role-Based Access Control

Under Discretionary Access Control (DAC) you have: Discretionary Access Control

The Lattice Based Access Control is a type of access control used to implement other access control method. A lattice is an ordered list of elements that has a least upper bound and a most lower bound. The lattice can be used for MAC, DAC, Integrity level, File Permission, and more

For example in the case of MAC, if we look at common government classifications, we have the following:

TOP SECRET

SECRET -----I am the user at secret CONFIDENTIAL

SENSITIVE BUT UNCLASSIFIED UNCLASSIFIED

If you look at the diagram above where I am a user at SECRET it means that I can access document at lower classification but not document at TOP SECRET.

The lattice is a list of ORDERED ELEMENT, in this case the ordered elements are classification levels. My least upper bound is SECRET and my most lower bound is UNCLASSIFIED.

However the lattice could also be used for Integrity Levels such as: VERY HIGH

HIGH

MEDIUM -----I am a user, process, application at the medium level LOW

VERY LOW

In the case of of Integrity levels you have to think about TRUST. Of course if I take for example the the VISTA operating system which is based on Biba then

Integrity Levels would be used. As a user having access to the system I cannot tell a process running with administrative privilege what to do. Else any users on the system could take control of the system by getting highly privilege process to do things on their behalf. So no read down would be allowed in this case and this is an example of the Biba model.

Last but not least the lattice could be use for file permissions: RWX

RW -----User at this level

R

If I am a user with READ and WRITE (RW) access privilege then I cannot execute the file

because I do not have execute permission which is the X under linux and UNIX.

Many people confuse the Lattice Model and many books says MAC = LATTICE, however the lattice can be use for other purposes.

There is also Role Based Access Control (RBAC) that exists out there. It COULD be used to simulate MAC but it is not MAC as it does not make use of Label on objects indicating sensitivity and categories. MAC also require a clearance that dominates the object.

You can get more info about RBAC at:<http://csrc.nist.gov/groups/SNS/rbac/faq.html#03> Also note that many book uses the same acronym for Role Based Access Control and Rule

Based Access Control which is RBAC, this can be confusing.

The proper way of writing the acronym for Rule Based Access Control is RuBAC, unfortunately it is not commonly used.

References:

There is a great article on technet that talks about the lattice in VISTA: <http://blogs.technet.com/b/steriley/archive/2006/07/21/442870.aspx>

also see:

KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access

control systems (page 33).  
and  
[http://www.microsoft-watch.com/content/vista/gaging\\_vistas\\_integrity.html](http://www.microsoft-watch.com/content/vista/gaging_vistas_integrity.html)

#### NEW QUESTION 10

- (Topic 1)

Which of the following questions is less likely to help in assessing identification and authentication controls?

- A. Is a current list maintained and approved of authorized users and their access?
- B. Are passwords changed at least every ninety days or earlier if needed?
- C. Are inactive user identifications disabled after a specified period of time?
- D. Is there a process for reporting incidents?

**Answer:** D

#### Explanation:

Identification and authentication is a technical measure that prevents unauthorized people (or unauthorized processes) from entering an IT system. Access control usually requires that the system be able to identify and differentiate among users. Reporting incidents is more related to incident response capability (operational control) than to identification and authentication (technical control).

Source: SWANSON, Marianne, NIST Special Publication 800-26, Security Self- Assessment Guide for Information Technology Systems, November 2001 (Pages A-30 to A-32).

#### NEW QUESTION 10

- (Topic 1)

Logical or technical controls involve the restriction of access to systems and the protection of information. Which of the following statements pertaining to these types of controls is correct?

- A. Examples of these types of controls include policies and procedures, security awareness training, background checks, work habit checks but do not include a review of vacation history, and also do not include increased supervision.
- B. Examples of these types of controls do not include encryption, smart cards, access lists, and transmission protocols.
- C. Examples of these types of controls are encryption, smart cards, access lists, and transmission protocols.
- D. Examples of these types of controls include policies and procedures, security awareness training, background checks, work habit checks, a review of vacation history, and increased supervision.

**Answer:** C

#### Explanation:

Logical or technical controls involve the restriction of access to systems and the protection of information. Examples of these types of controls are encryption, smart cards, access lists, and transmission protocols.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 33.

#### NEW QUESTION 14

- (Topic 1)

Organizations should consider which of the following first before allowing external access to their LANs via the Internet?

- A. plan for implementing workstation locking mechanisms.
- B. plan for protecting the modem pool.
- C. plan for providing the user with his account usage information.
- D. plan for considering proper authentication options.

**Answer:** D

#### Explanation:

Before a LAN is connected to the Internet, you need to determine what the access controls mechanisms are to be used, this would include how you are going to authenticate individuals that may access your network externally through access control.

The following answers are incorrect:

plan for implementing workstation locking mechanisms. This is incorrect because locking the workstations have no impact on the LAN or Internet access.

plan for protecting the modem pool. This is incorrect because protecting the modem pool has no impact on the LAN or Internet access, it just protects the modem.

plan for providing the user with his account usage information. This is incorrect because the question asks what should be done first. While important your primary concern should be focused on security.

#### NEW QUESTION 15

- (Topic 1)

Which access control model provides upper and lower bounds of access capabilities for a subject?

- A. Role-based access control
- B. Lattice-based access control
- C. Biba access control
- D. Content-dependent access control

**Answer:** B

#### Explanation:

In the lattice model, users are assigned security clearances and the data is classified. Access decisions are made based on the clearance of the user and the classification of the object. Lattice-based access control is an essential ingredient of formal security models such as Bell-LaPadula, Biba, Chinese Wall, etc.

The bounds concept comes from the formal definition of a lattice as a "partially ordered set for which every pair of elements has a greatest lower bound and a least upper bound." To see the application, consider a file classified as "SECRET" and a user Joe with a security clearance of "TOP SECRET." Under Bell-LaPadula, Joe's "least upper bound" access to the file is "READ" and his least lower bound is "NO WRITE" (star property).

Role-based access control is incorrect. Under RBAC, the access is controlled by the permissions assigned to a role and the specific role assigned to the user. Biba access control is incorrect. The Biba integrity model is based on a lattice structure but the context of the question disqualifies it as the best answer. Content-dependent access control is incorrect. In content dependent access control, the actual content of the information determines access as enforced by the arbiter.

References:

CBK, pp. 324-325.

AIO3, pp. 291-293. See particularly Figure 5-19 on p. 293 for an illustration of bounds in action.

#### NEW QUESTION 16

- (Topic 1)

Which of the following security models does NOT concern itself with the flow of data?

- A. The information flow model
- B. The Biba model
- C. The Bell-LaPadula model
- D. The noninterference model

**Answer: D**

#### Explanation:

The goal of a noninterference model is to strictly separate differing security levels to assure that higher-level actions do not determine what lower-level users can see. This is in contrast to other security models that control information flows between differing levels of users. By maintaining strict separation of security levels, a noninterference model minimizes leakages that might happen through a covert channel.

The Bell-LaPadula model is incorrect. The Bell-LaPadula model is concerned with confidentiality and bases access control decisions on the classification of objects and the clearances of subjects.

The information flow model is incorrect. The information flow models have a similar framework to the Bell-LaPadula model and control how information may flow between objects based on security classes.

The Biba model is incorrect. The Biba model is concerned with integrity and is a complement to the Bell-LaPadula model in that higher levels of integrity are more trusted than lower levels. Access control is based on these integrity levels to assure that read/write operations do not decrease an object's integrity.

References:

CBK, pp 325 - 326

AIO3, pp. 290 - 291

#### NEW QUESTION 18

- (Topic 1)

Which access control type has a central authority that determine to what objects the subjects have access to and it is based on role or on the organizational security policy?

- A. Mandatory Access Control
- B. Discretionary Access Control
- C. Non-Discretionary Access Control
- D. Rule-based Access control

**Answer: C**

#### Explanation:

Non Discretionary Access Control include Role Based Access Control (RBAC) and Rule Based Access Control (RBAC or RuBAC). RBAC being a subset of NDAC, it was easy to eliminate RBAC as it was covered under NDAC already.

Some people think that RBAC is synonymous with NDAC but RuBAC would also fall into this category.

Discretionary Access control is for environment with very low level of security. There is no control on the dissemination of the information. A user who has access to a file can copy the file or further share it with other users.

Rule Based Access Control is when you have ONE set of rules applied uniformly to all users. A good example would be a firewall at the edge of your network. A single rule based is applied against any packets received from the internet.

Mandatory Access Control is a very rigid type of access control. The subject must dominate the object and the subject must have a Need To Know to access the information. Objects have labels that indicate the sensitivity (classification) and there is also categories to enforce the Need To Know (NTK).

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 33.

#### NEW QUESTION 19

- (Topic 1)

What is the PRIMARY use of a password?

- A. Allow access to files.
- B. Identify the user.
- C. Authenticate the user.
- D. Segregate various user's accesses.

**Answer: C**

#### Explanation:

Source: TIPTON, Hal, (ISC)2, Introduction to the CISSP Exam presentation.

#### NEW QUESTION 22

- (Topic 1)

Which of the following would assist the most in Host Based intrusion detection?

- A. audit trails.
- B. access control lists.
- C. security clearances.

D. host-based authentication.

**Answer:** A

**Explanation:**

To assist in Intrusion Detection you would review audit logs for access violations.

The following answers are incorrect:

access control lists. This is incorrect because access control lists determine who has access to what but do not detect intrusions.

security clearances. This is incorrect because security clearances determine who has access to what but do not detect intrusions.

host-based authentication. This is incorrect because host-based authentication determine who have been authenticated to the system but do not detect intrusions.

**NEW QUESTION 24**

- (Topic 1)

What is the main objective of proper separation of duties?

A. To prevent employees from disclosing sensitive information.

B. To ensure access controls are in place.

C. To ensure that no single individual can compromise a system.

D. To ensure that audit trails are not tampered with.

**Answer:** C

**Explanation:**

The primary objective of proper separation of duties is to ensure that one person acting alone cannot compromise the company's security in any way. A proper separation of duties does not prevent employees from disclosing information, nor does it ensure that access controls are in place or that audit trails are not tampered with. Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw- Hill/Osborne, 2002, Chapter 12: Operations Security (Page 808).

**NEW QUESTION 26**

- (Topic 1)

Which of the following would constitute the best example of a password to use for access to a system by a network administrator?

A. holiday

B. Christmas12

C. Jenny

D. GyN19Za!

**Answer:** D

**Explanation:**

GyN19Za! would be the the best answer because it contains a mixture of upper and lower case characters, alphabetic and numeric characters, and a special character making it less vulnerable to password attacks.

All of the other answers are incorrect because they are vulnerable to brute force or dictionary attacks. Passwords should not be common words or names. The addition of a number to the end of a common word only marginally strengthens it because a common password attack would also check combinations of words: Christmas23 Christmas123 etc...

**NEW QUESTION 31**

- (Topic 1)

Which of the following is not a physical control for physical security?

A. lighting

B. fences

C. training

D. facility construction materials

**Answer:** C

**Explanation:**

Some physical controls include fences, lights, locks, and facility construction materials. Some administrative controls include facility selection and construction, facility management, personnel controls, training, and emergency response and procedures.

From: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, 3rd. Ed., Chapter 6, page 403.

**NEW QUESTION 34**

- (Topic 1)

RADIUS incorporates which of the following services?

A. Authentication server and PIN codes.

B. Authentication of clients and static passwords generation.

C. Authentication of clients and dynamic passwords generation.

D. Authentication server as well as support for Static and Dynamic passwords.

**Answer:** D

**Explanation:**

A Network Access Server (NAS) operates as a client of RADIUS. The client is responsible for passing user information to designated RADIUS servers, and then acting on the response which is returned.

RADIUS servers are responsible for receiving user connection requests, authenticating the user, and then returning all configuration information necessary for the client to deliver service to the user.

RADIUS authentication is based on provisions of simple username/password credentials.

These credentials are encrypted

by the client using a shared secret between the client and the RADIUS server. OIG 2007, Page 513

RADIUS incorporates an authentication server and can make use of both dynamic and static passwords.

Since it uses the PAP and CHAP protocols, it also includes static passwords.

RADIUS is an Internet protocol. RADIUS carries authentication, authorization, and configuration information between a Network Access Server and a shared Authentication Server. RADIUS features and functions are described primarily in the IETF (International Engineering Task Force) document RFC2138.

The term "RADIUS" is an acronym which stands for Remote Authentication Dial In User Service.

The main advantage to using a RADIUS approach to authentication is that it can provide a stronger form of authentication. RADIUS is capable of using a strong, two-factor form of authentication, in which users need to possess both a user ID and a hardware or software token to gain access.

Token-based schemes use dynamic passwords. Every minute or so, the token generates a unique 4-, 6- or 8-digit access number that is synchronized with the security server. To gain entry into the system, the user must generate both this one-time number and provide his or her user ID and password.

Although protocols such as RADIUS cannot protect against theft of an authenticated session via some realtime attacks, such as wiretapping, using unique, unpredictable authentication requests can protect against a wide range of active attacks.

**RADIUS: Key Features and Benefits**

RADIUS supports dynamic passwords and challenge/response passwords. Improved system security due to the fact that passwords are not static.

It is much more difficult for a bogus host to spoof users into giving up their passwords or password-generation algorithms.

RADIUS allows the user to have a single user ID and password for all computers in a network.

Improved usability due to the fact that the user has to remember only one login combination.

RADIUS is able to:

Prevent RADIUS users from logging in via login (or ftp). Require them to log in via login (or ftp)

Require them to login to a specific network access server (NAS); Control access by time of day.

Provides very granular control over the types of logins allowed, on a per-user basis. The time-out interval for failing over from an unresponsive primary RADIUS server to a

backup RADIUS server is site-configurable.

RADIUS gives System Administrator more flexibility in managing which users can login from which hosts or devices.

Stratus Technology Product Brief <http://www.stratus.com/products/vos/openvos/radius.htm>

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Pages 43, 44.

Also check: MILLER, Lawrence & GREGORY, Peter, CISSP for Dummies, 2002, Wiley Publishing, Inc., pages 45-46.

### NEW QUESTION 39

- (Topic 1)

Which of the following control pairings include: organizational policies and procedures, pre-employment background checks, strict hiring practices, employment agreements, employee termination procedures, vacation scheduling, labeling of sensitive materials, increased supervision, security awareness training, behavior awareness, and sign-up procedures to obtain access to information systems and networks?

- A. Preventive/Administrative Pairing
- B. Preventive/Technical Pairing
- C. Preventive/Physical Pairing
- D. Detective/Administrative Pairing

**Answer: A**

#### Explanation:

The Answer: Preventive/Administrative Pairing: These mechanisms include organizational policies and procedures, pre-employment background checks, strict hiring practices, employment agreements, friendly and unfriendly employee termination procedures, vacation scheduling, labeling of sensitive materials, increased supervision, security awareness training, behavior awareness, and sign-up procedures to obtain access to information systems and networks.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 34.

### NEW QUESTION 41

- (Topic 1)

Which of the following statements relating to the Bell-LaPadula security model is FALSE (assuming the Strong Star property is not being used) ?

- A. A subject is not allowed to read up.
- B. The property restriction can be escaped by temporarily downgrading a high level subject.
- C. A subject is not allowed to read down.
- D. It is restricted to confidentiality.

**Answer: C**

#### Explanation:

It is not a property of Bell LaPadula model. The other answers are incorrect because:

A subject is not allowed to read up is a property of the 'simple security rule' of Bell LaPadula model.

The property restriction can be escaped by temporarily downgrading a high level subject can be escaped by temporarily downgrading a high level subject or by identifying a set of trusted objects which are permitted to violate the property as long as it is not in the middle of an operation.

It is restricted to confidentiality as it is a state machine model that enforces the confidentiality aspects of access control.

Reference: Shon Harris AIO v3, Chapter-5 : Security Models and Architecture, Page:279-

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### NEW QUESTION 43

- (Topic 1)

Guards are appropriate whenever the function required by the security program involves which of the following?

- A. The use of discriminating judgment
- B. The use of physical force
- C. The operation of access control devices
- D. The need to detect unauthorized access

**Answer: A**

**Explanation:**

The Answer The use of discriminating judgment, a guard can make the determinations that hardware or other automated security devices cannot make due to its ability to adjust to rapidly changing conditions, to learn and alter recognizable patterns, and to respond to various conditions in the environment. Guards are better at making value decisions at times of incidents. They are appropriate whenever immediate, discriminating judgment is required by the security entity.

The following answers are incorrect:

The use of physical force This is not the best answer. A guard provides discriminating judgment, and the ability to discern the need for physical force.

The operation of access control devices A guard is often uninvolved in the operations of an automated access control device such as a biometric reader, a smart lock, mantrap, etc. The need to detect unauthorized access The primary function of a guard is not to detect unauthorized access, but to prevent unauthorized physical access attempts and may deter social engineering attempts.

The following reference(s) were/was used to create this question:

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 10: Physical security (page 339).

Source: ISC2 Official Guide to the CBK page 288-289.

**NEW QUESTION 46**

- (Topic 1)

Which of the following control pairing places emphasis on "soft" mechanisms that support the access control objectives?

- A. Preventive/Technical Pairing
- B. Preventive/Administrative Pairing
- C. Preventive/Physical Pairing
- D. Detective/Administrative Pairing

**Answer: B**

**Explanation:**

Soft Control is another way of referring to Administrative control.

Technical and Physical controls are NOT soft control, so any choice listing them was not the best answer.

Preventative/Technical is incorrect because although access control can be technical control, it is commonly not referred to as a "soft" control

Preventative/Administrative is correct because access controls are preventative in nature. it is always best to prevent a negative event, however there are times where controls might fail and you cannot prevent everything. Administrative controls are roles, responsibilities, policies, etc which are usually paper based. In the administrative category you would find audit, monitoring, and security awareness as well.

Preventative/Physical pairing is incorrect because Access controls with an emphasis on "soft" mechanisms conflict with the basic concept of physical controls, physical controls are usually tangible objects such as fences, gates, door locks, sensors, etc...

Detective/Administrative Pairing is incorrect because access control is a preventative control used to control access, not to detect violations to access.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 34.

**NEW QUESTION 47**

- (Topic 1)

What is called the verification that the user's claimed identity is valid and is usually implemented through a user password at log-on time?

- A. Authentication
- B. Identification
- C. Integrity
- D. Confidentiality

**Answer: A**

**Explanation:**

Authentication is verification that the user's claimed identity is valid and is usually implemented through a user password at log-on time.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 36.

**NEW QUESTION 50**

- (Topic 1)

Which of the following forms of authentication would most likely apply a digital signature algorithm to every bit of data that is sent from the claimant to the verifier?

- A. Dynamic authentication
- B. Continuous authentication
- C. Encrypted authentication
- D. Robust authentication

**Answer: B**

**Explanation:**

Continuous authentication is a type of authentication that provides protection against impostors who can see, alter, and insert information passed between the claimant and verifier even after the claimant/verifier authentication is complete. These are typically referred to as active attacks, since they assume that the imposter can actively influence the connection between claimant and verifier. One way to provide this form of authentication is to apply a digital signature algorithm to every bit of data that is sent from the claimant to the verifier. There are other combinations of cryptography that can provide this form of authentication but current strategies rely on applying some type of cryptography to every bit

of data sent. Otherwise, any unprotected bit would be suspect. Robust authentication relies on dynamic authentication data that changes with each authenticated session between a claimant and a verifier, but does not provide protection against active attacks. Encrypted authentication is a distracter.

Source: GUTTMAN, Barbara & BAGWILL, Robert, NIST Special Publication 800-xx, Internet Security Policy: A Technical Guide, Draft Version, May 25, 2000 (page 34).

**NEW QUESTION 51**

- (Topic 1)

How would nonrepudiation be best classified as?

- A. A preventive control

- B. A logical control
- C. A corrective control
- D. A compensating control

**Answer:** A

**Explanation:**

Systems accountability depends on the ability to ensure that senders cannot deny sending information and that receivers cannot deny receiving it. Because the mechanisms implemented in nonrepudiation prevent the ability to successfully repudiate an action, it can be considered as a preventive control.

Source: STONEBURNER, Gary, NIST Special Publication 800-33: Underlying Technical Models for Information Technology Security, National Institute of Standards and Technology, December 2001, page 7.

**NEW QUESTION 52**

- (Topic 1)

This baseline sets certain thresholds for specific errors or mistakes allowed and the amount of these occurrences that can take place before it is considered suspicious?

- A. Checkpoint level
- B. Ceiling level
- C. Clipping level
- D. Threshold level

**Answer:** C

**Explanation:**

Organizations usually forgive a particular type, number, or pattern of violations, thus permitting a predetermined number of user errors before gathering this data for analysis. An organization attempting to track all violations, without sophisticated statistical computing ability, would be unable to manage the sheer quantity of such data. To make a violation listing effective, a clipping level must be established.

The clipping level establishes a baseline for violation activities that may be normal user errors. Only after this baseline is exceeded is a violation record produced. This solution is particularly effective for small- to medium-sized installations. Organizations with large-scale computing facilities often track all violations and use statistical routines to cull out the minor infractions (e.g., forgetting a password or mistyping it several times).

If the number of violations being tracked becomes unmanageable, the first step in correcting the problems should be to analyze why the condition has occurred.

Do users understand how they are to interact with the computer resource? Are the rules too difficult to follow? Violation tracking and analysis can be valuable tools in assisting an organization to develop thorough but useable controls. Once these are in place and records are produced that accurately reflect serious violations, tracking and analysis become the first line of defense. With this procedure, intrusions are discovered before major damage occurs and sometimes early enough to catch the perpetrator. In addition, business protection and preservation are strengthened.

The following answers are incorrect:

All of the other choices presented were simply detractors. The following reference(s) were used for this question:

Handbook of Information Security Management

**NEW QUESTION 55**

- (Topic 1)

In addition to the accuracy of the biometric systems, there are other factors that must also be considered:

- A. These factors include the enrollment time and the throughput rate, but not acceptability.
- B. These factors do not include the enrollment time, the throughput rate, and acceptability.
- C. These factors include the enrollment time, the throughput rate, and acceptability.
- D. These factors include the enrollment time, but not the throughput rate, neither the acceptability.

**Answer:** C

**Explanation:**

In addition to the accuracy of the biometric systems, there are other factors that must also be considered.

These factors include the enrollment time, the throughput rate, and acceptability. Enrollment time is the time it takes to initially "register" with a system by providing samples

of the biometric characteristic to be evaluated. An acceptable enrollment time is around two minutes.

For example, in fingerprint systems, the actual fingerprint is stored and requires approximately 250kb per finger for a high quality image. This level of information is required for one-to-many searches in forensics applications on very large databases.

In finger-scan technology, a full fingerprint is not stored-the features extracted from this fingerprint are stored using a small template that requires approximately 500 to 1000 bytes of storage. The original fingerprint cannot be reconstructed from this template.

Updates of the enrollment information may be required because some biometric characteristics, such as voice and signature, may change with time.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 37 & 38.

**NEW QUESTION 57**

- (Topic 1)

In biometrics, "one-to-many" search against database of stored biometric images is done in:

- A. Authentication
- B. Identification
- C. Identities
- D. Identity-based access control

**Answer:** B

**Explanation:**

In biometrics, identification is a "one-to-many" search of an individual's characteristics from a database of stored images.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 38.

#### NEW QUESTION 62

- (Topic 1)

Access control is the collection of mechanisms that permits managers of a system to exercise a directing or restraining influence over the behavior, use, and content of a system. It does not permit management to:

- A. specify what users can do
- B. specify which resources they can access
- C. specify how to restrain hackers
- D. specify what operations they can perform on a system.

**Answer: C**

#### Explanation:

Access control is the collection of mechanisms that permits managers of a system to exercise a directing or restraining influence over the behavior, use, and content of a system. It permits management to specify what users can do, which resources they can access, and what operations they can perform on a system. Specifying HOW to restrain hackers is not directly linked to access control.

Source: DUPUIS, Clement, Access Control Systems and Methodology, Version 1, May 2002, CISSP Open Study Group Study Guide for Domain 1, Page 12.

#### NEW QUESTION 65

- (Topic 1)

Who developed one of the first mathematical models of a multilevel-security computer system?

- A. Diffie and Hellman.
- B. Clark and Wilson.
- C. Bell and LaPadula.
- D. Gasser and Lipner.

**Answer: C**

#### Explanation:

In 1973 Bell and LaPadula created the first mathematical model of a multi-level security system.

The following answers are incorrect:

Diffie and Hellman. This is incorrect because Diffie and Hellman was involved with cryptography.

Clark and Wilson. This is incorrect because Bell and LaPadula was the first model. The Clark-Wilson model came later, 1987.

Gasser and Lipner. This is incorrect, it is a distractor. Bell and LaPadula was the first model.

#### NEW QUESTION 66

- (Topic 1)

Who first described the DoD multilevel military security policy in abstract, formal terms?

- A. David Bell and Leonard LaPadula
- B. Rivest, Shamir and Adleman
- C. Whitfield Diffie and Martin Hellman
- D. David Clark and David Wilson

**Answer: A**

#### Explanation:

It was David Bell and Leonard LaPadula who, in 1973, first described the DoD multilevel military security policy in abstract, formal terms. The Bell-LaPadula is a Mandatory Access Control (MAC) model concerned with confidentiality. Rivest, Shamir and Adleman (RSA) developed the RSA encryption algorithm. Whitfield Diffie and Martin Hellman published the Diffie-Hellman key agreement algorithm in 1976. David Clark and David Wilson developed the Clark-Wilson integrity model, more appropriate for security in commercial activities.

Source: RUSSEL, Deborah & GANGEMI, G.T. Sr., Computer Security Basics, O'Reilly, July 1992 (pages 78,109).

#### NEW QUESTION 67

- (Topic 1)

Which of the following is true about Kerberos?

- A. It utilizes public key cryptography.
- B. It encrypts data after a ticket is granted, but passwords are exchanged in plain text.
- C. It depends upon symmetric ciphers.
- D. It is a second party authentication system.

**Answer: C**

#### Explanation:

Kerberos depends on secret keys (symmetric ciphers). Kerberos is a third party authentication protocol. It was designed and developed in the mid 1980's by MIT. It is considered open source but is copyrighted and owned by MIT. It relies on the user's secret keys. The password is used to encrypt and decrypt the keys.

The following answers are incorrect:

It utilizes public key cryptography. Is incorrect because Kerberos depends on secret keys (symmetric ciphers).

It encrypts data after a ticket is granted, but passwords are exchanged in plain text. Is incorrect because the passwords are not exchanged but used for encryption and decryption of the keys.

It is a second party authentication system. Is incorrect because Kerberos is a third party authentication system, you authenticate to the third party (Kerberos) and not the system you are accessing.

References:

MIT <http://web.mit.edu/kerberos/>

Wikipedi [http://en.wikipedia.org/wiki/Kerberos\\_%28protocol%29](http://en.wikipedia.org/wiki/Kerberos_%28protocol%29)

OIG CBK Access Control (pages 181 - 184) AIOv3 Access Control (pages 151 - 155)

#### NEW QUESTION 69

- (Topic 1)

Which of the following would be true about Static password tokens?

- A. The owner identity is authenticated by the token
- B. The owner will never be authenticated by the token.
- C. The owner will authenticate himself to the system.
- D. The token does not authenticates the token owner but the system.

**Answer:** A

#### Explanation:

Password Tokens

Tokens are electronic devices or cards that supply a user's password for them. A token system can be used to supply either a static or a dynamic password. There is a big difference between the static and dynamic systems, a static system will normally log a user in but a dynamic system the user will often have to log themselves in.

Static Password Tokens:

The owner identity is authenticated by the token. This is done by the person who issues the token to the owner (normally the employer). The owner of the token is now authenticated by "something you have". The token authenticates the identity of the owner to the information system. An example of this occurring is when an employee swipes his or her smart card over an electronic lock to gain access to a store room.

Synchronous Dynamic Password Tokens:

This system is a lot more complex than the static token password. The synchronous dynamic password tokens generate new passwords at certain time intervals that are synched with the main system. The password is generated on a small device similar to a pager or a calculator that can often be attached to the user's key ring. Each password is only valid for a certain time period, typing in the wrong password in the wrong time period will invalidate the authentication. The time factor can also be the systems downfall. If a clock on the system or the password token device becomes out of synch, a user can have troubles authenticating themselves to the system.

Asynchronous Dynamic Password Tokens:

The clock synching problem is eliminated with asynchronous dynamic password tokens. This system works on the same principal as the synchronous one but it does not have a time frame. A lot of big companies use this system especially for employee's who may work from home on the companies VPN (Virtual private Network).

Challenge Response Tokens:

This is an interesting system. A user will be sent special "challenge" strings at either random or timed intervals. The user inputs this challenge string into their token device and the device will respond by generating a challenge response. The user then types this response into the system and if it is correct they are authenticated.

Reference(s) used for this question: <http://www.informit.com/guides/content.aspx?g=security&seqNum=146>

and

KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 37.

#### NEW QUESTION 70

- (Topic 1)

Which division of the Orange Book deals with discretionary protection (need-to-know)?

- A. D
- B. C
- C. B
- D. A

**Answer:** B

#### Explanation:

C deals with discretionary protection. See matrix below:

### TNI/TCSEC MATRIX

	A1	B3	B2	B1	C2	C1
<b>DISCRETIONARY ACCESS</b>						
Discretionary Access Control						
Identification and Authentication						
System Integrity						
System Architecture						
Security Testing						
Security Features User's Guide Trusted Facility Manual Design Documentation Test Documentation						
<b>CONTROLLED ACCESS</b>						
Protect Audit Trails						
Object Reuse						
<b>MANDATORY ACCESS CONTROL</b>						
Labels						
Mandatory Access Control						
Process isolation in system architecture						
Design Specification & Verification						
Device labels						
Subject Sensitivity Labels						
Trusted Path						
Separation of Administrator and User functions						
Covert Channel Analysis (Only Covert Storage Channel at B2)						
Trusted Facility Management						
Configuration Management						
Trusted Recovery						
Covert Channel Analysis (Both Timing and Covert Channel analysis at B3)						
Security Administrator Role Defined						
Monitor events and notify security personnel						
Trusted Distribution						
Formal Methods						
	A1	B3	B2	B1	C2	C1

C:\Users\MCS\Desktop\1.jpg

TCSEC Matric

The following are incorrect answers:

D is incorrect. D deals with minimal security.

B is incorrect. B deals with mandatory protection. A is incorrect. A deals with verified protection. Reference(s) used for this question:

CBK, p. 329 – 330

and

Shon Harris, CISSP All In One (AIO), 6th Edition , page 392-393

#### NEW QUESTION 71

- (Topic 1)

Which access control model was proposed for enforcing access control in government and military applications?

- A. Bell-LaPadula model
- B. Biba model
- C. Sutherland model
- D. Brewer-Nash model

**Answer:** A

#### Explanation:

The Bell-LaPadula model, mostly concerned with confidentiality, was proposed for enforcing access control in government and military applications. It supports mandatory access control by determining the access rights from the security levels associated with subjects and objects. It also supports discretionary access control by checking access rights from an access matrix. The Biba model, introduced in 1977, the Sutherland model, published in 1986, and the Brewer-Nash model, published in 1989, are concerned with integrity.

Source: ANDRESS, Mandy, Exam Cram CISSP, Coriolis, 2001, Chapter 2: Access Control Systems and Methodology (page 11).

#### NEW QUESTION 76

- (Topic 1)

Which of the following is NOT a compensating measure for access violations?

- A. Backups
- B. Business continuity planning
- C. Insurance
- D. Security awareness

**Answer:** D

#### Explanation:

Security awareness is a preventive measure, not a compensating measure for access violations.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access control systems (page 50).

#### NEW QUESTION 77

- (Topic 1)

What physical characteristic does a retinal scan biometric device measure?

- A. The amount of light reaching the retina
- B. The amount of light reflected by the retina
- C. The pattern of light receptors at the back of the eye
- D. The pattern of blood vessels at the back of the eye

**Answer: D**

**Explanation:**

The retina, a thin nerve (1/50th of an inch) on the back of the eye, is the part of the eye which senses light and transmits impulses through the optic nerve to the brain - the equivalent of film in a camera. Blood vessels used for biometric identification are located along the neural retina, the outermost of retina's four cell layers.

The following answers are incorrect:

The amount of light reaching the retina The amount of light reaching the retina is not used in the biometric scan of the retina.

The amount of light reflected by the retina The amount of light reflected by the retina is not used in the biometric scan of the retina.

The pattern of light receptors at the back of the eye This is a distractor The following reference(s) were/was used to create this question: Reference: Retina Scan Technology.

ISC2 Official Guide to the CBK, 2007 (Page 161)

**NEW QUESTION 79**

- (Topic 1)

Which of the following can be defined as a framework that supports multiple, optional authentication mechanisms for PPP, including cleartext passwords, challenge-response, and arbitrary dialog sequences?

- A. Extensible Authentication Protocol
- B. Challenge Handshake Authentication Protocol
- C. Remote Authentication Dial-In User Service
- D. Multilevel Authentication Protocol.

**Answer: A**

**Explanation:**

RFC 2828 (Internet Security Glossary) defines the Extensible Authentication Protocol as a framework that supports multiple, optional authentication mechanisms for PPP, including cleartext passwords, challenge-response, and arbitrary dialog sequences. It is intended for use primarily by a host or router that connects to a PPP network server via switched circuits or dial-up lines. The Remote Authentication Dial-In User Service (RADIUS) is defined as an Internet protocol for carrying dial-in user's authentication information and configuration information between a shared, centralized authentication server and a network access server that needs to authenticate the users of its network access ports. The other option is a distractor.

Source: SHIREY, Robert W., RFC2828: Internet Security Glossary, may 2000.

**NEW QUESTION 83**

- (Topic 1)

Which of the following statements pertaining to Kerberos is TRUE?

- A. Kerberos does not address availability
- B. Kerberos does not address integrity
- C. Kerberos does not make use of Symmetric Keys
- D. Kerberos cannot address confidentiality of information

**Answer: A**

**Explanation:**

The question was asking for a TRUE statement and the only correct statement is "Kerberos does not address availability".

Kerberos addresses the confidentiality and integrity of information. It does not directly address availability.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access control systems (page 42).

**NEW QUESTION 84**

- (Topic 1)

When a biometric system is used, which error type deals with the possibility of GRANTING access to impostors who should be REJECTED?

- A. Type I error
- B. Type II error
- C. Type III error
- D. Crossover error

**Answer: B**

**Explanation:**

When the biometric system accepts impostors who should have been rejected, it is called a Type II error or False Acceptance Rate or False Accept Rate. Biometrics verifies an individual's identity by analyzing a unique personal attribute or behavior, which is one of the most effective and accurate methods of verifying identification.

Biometrics is a very sophisticated technology; thus, it is much more expensive and complex than the other types of identity verification processes. A biometric system can make authentication decisions based on an individual's behavior, as in signature dynamics, but these can change over time and possibly be forged. Biometric systems that base authentication decisions on physical attributes (iris, retina, fingerprint) provide more accuracy, because physical attributes typically don't change much, absent some disfiguring injury, and are harder to impersonate.

When a biometric system rejects an authorized individual, it is called a Type I error (False Rejection Rate (FRR) or False Reject Rate (FRR)).

When the system accepts impostors who should be rejected, it is called a Type II error (False Acceptance Rate (FAR) or False Accept Rate (FAR)). Type II errors

are the most dangerous and thus the most important to avoid.

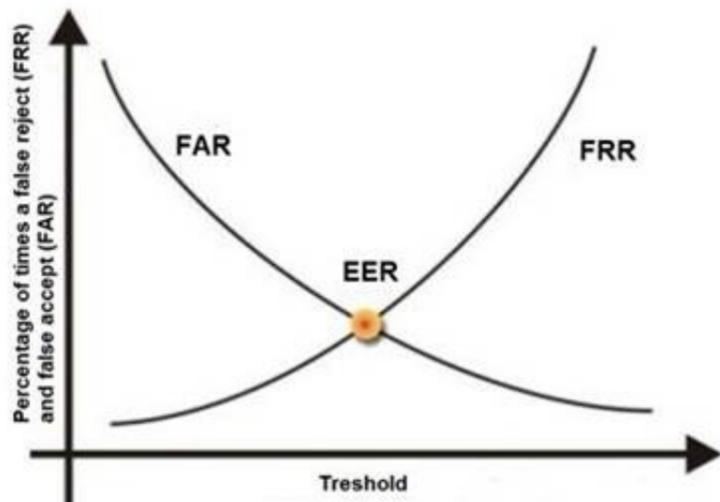
The goal is to obtain low numbers for each type of error, but When comparing different biometric systems, many different variables are used, but one of the most important metrics is the crossover error rate (CER).

The accuracy of any biometric method is measured in terms of Failed Acceptance Rate (FAR) and Failed Rejection Rate (FRR). Both are expressed as percentages. The FAR is the rate at which attempts by unauthorized users are incorrectly accepted as valid. The FRR is just the opposite. It measures the rate at which authorized users are denied access.

The relationship between FRR (Type I) and FAR (Type II) is depicted in the graphic below . As one rate increases, the other decreases. The Cross-over Error Rate (CER) is sometimes considered a good indicator of the overall accuracy of a biometric system. This

is the point at which the FRR and the FAR have the same value. Solutions with a lower CER are typically more accurate.

See graphic below from Biometria showing this relationship. The Cross-over Error Rate (CER) is also called the Equal Error Rate (EER), the two are synonymous.



C:\Users\MCS\Desktop\1.jpg Cross Over Error Rate

The other answers are incorrect:

Type I error is also called as False Rejection Rate where a valid user is rejected by the system.

Type III error : there is no such error type in biometric system.

Crossover error rate stated in percentage , represents the point at which false rejection equals the false acceptance rate.

Reference(s) used for this question: <http://www.biometria.sk/en/principles-of-biometrics.html>

and

Shon Harris, CISSP All In One (AIO), 6th Edition , Chapter 3, Access Control, Page 188- 189

and

Tech Republic, Reduce Multi\_Factor Authentication Cost

#### NEW QUESTION 89

- (Topic 1)

Which of the following is true of two-factor authentication?

- A. It uses the RSA public-key signature based on integers with large prime factors.
- B. It requires two measurements of hand geometry.
- C. It does not use single sign-on technology.
- D. It relies on two independent proofs of identity.

**Answer:** D

#### Explanation:

The Answer It relies on two independent proofs of identity. Two-factor authentication refers to using two independent proofs of identity, such as something the user has (e.g. a token card) and something the user knows (a password). Two-factor authentication may be used with single sign-on.

The following answers are incorrect: It requires two measurements of hand geometry. Measuring hand geometry twice does not yield two independent proofs.

It uses the RSA public-key signature based on integers with large prime factors. RSA encryption uses integers with exactly two prime factors, but the term "two-factor authentication" is not used in that context.

It does not use single sign-on technology. This is a detractor. The following reference(s) were/was used to create this question:

Shon Harris AIO v.3 p.129

ISC2 OIG, 2007 p. 126

#### NEW QUESTION 92

- (Topic 1)

What security model implies a central authority that define rules and sometimes global rules, dictating what subjects can have access to what objects?

- A. Flow Model
- B. Discretionary access control
- C. Mandatory access control
- D. Non-discretionary access control

**Answer:** D

#### Explanation:

As a security administrator you might configure user profiles so that users cannot change the system's time, alter system configuration files, access a command prompt, or install unapproved applications. This type of access control is referred to as nondiscretionary, meaning that access decisions are not made at the discretion of the user. Nondiscretionary access controls are put into place by an authoritative entity (usually a security administrator) with the goal of protecting the organization's most critical assets.

Non-discretionary access control is when a central authority determines what subjects can have access to what objects based on the organizational security policy. Centralized access control is not an existing security model.

Both, Rule Based Access Control (RuBAC or RBAC) and Role Based Access Controls (RBAC) falls into this category.

Reference(s) used for this question:

Harris, Shon (2012-10-18). CISSP All-in-One Exam Guide, 6th Edition (p. 221). McGraw- Hill. Kindle Edition.

and

KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access control systems (page 33).

#### NEW QUESTION 97

- (Topic 1)

Which of the following exemplifies proper separation of duties?

- A. Operators are not permitted modify the system time.
- B. Programmers are permitted to use the system console.
- C. Console operators are permitted to mount tapes and disks.
- D. Tape operators are permitted to use the system console.

**Answer:** A

#### Explanation:

This is an example of Separation of Duties because operators are prevented from modifying the system time which could lead to fraud. Tasks of this nature should be performed by they system administrators.

AIO defines Separation of Duties as a security principle that splits up a critical task among two or more individuals to ensure that one person cannot complete a risky task by himself.

The following answers are incorrect:

Programmers are permitted to use the system console. Is incorrect because programmers should not be permitted to use the system console, this task should be performed by operators. Allowing programmers access to the system console could allow fraud to occur so this is not an example of Separation of Duties..

Console operators are permitted to mount tapes and disks. Is incorrect because operators should be able to mount tapes and disks so this is not an example of Separation of Duties.

Tape operators are permitted to use the system console. Is incorrect because operators should be able to use the system console so this is not an example of Separation of Duties.

References:

OIG CBK Access Control (page 98 - 101) AIOv3 Access Control (page 182)

#### NEW QUESTION 99

- (Topic 1)

Sensitivity labels are an example of what application control type?

- A. Preventive security controls
- B. Detective security controls
- C. Compensating administrative controls
- D. Preventive accuracy controls

**Answer:** A

#### Explanation:

Sensitivity labels are a preventive security application controls, such as are firewalls, reference monitors, traffic padding, encryption, data classification, one-time passwords, contingency planning, separation of development, application and test environments.

The incorrect answers are:

Detective security controls - Intrusion detection systems (IDS), monitoring activities, and audit trails.

Compensating administrative controls - There no such application control. Preventive accuracy controls - data checks, forms, custom screens, validity checks, contingency planning, and backups. Sources:

KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 7: Applications and Systems Development (page 264).

KRUTZ, Ronald & VINES, Russel, The CISSP Prep Guide: Gold Edition, Wiley Publishing Inc., 2003, Chapter 7: Application Controls, Figure 7.1 (page 360).

#### NEW QUESTION 100

- (Topic 1)

What is called the percentage of valid subjects that are falsely rejected by a Biometric Authentication system?

- A. False Rejection Rate (FRR) or Type I Error
- B. False Acceptance Rate (FAR) or Type II Error
- C. Crossover Error Rate (CER)
- D. True Rejection Rate (TRR) or Type III Error

**Answer:** A

#### Explanation:

The percentage of valid subjects that are falsely rejected is called the False Rejection Rate (FRR) or Type I Error.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 38.

#### NEW QUESTION 105

- (Topic 1)

Which of the following protection devices is used for spot protection within a few inches of the object, rather than for overall room security monitoring?

- A. Wave pattern motion detectors
- B. Capacitance detectors
- C. Field-powered devices
- D. Audio detectors

**Answer:** B

#### Explanation:

Capacitance detectors monitor an electrical field surrounding the object being monitored. They are used for spot protection within a few inches of the object, rather

than for overall room security monitoring used by wave detectors. Penetration of this field changes the electrical capacitance of the field enough to generate and alarm. Wave pattern motion detectors generate a frequency wave pattern and send an alarm if the pattern is disturbed as it is reflected back to its receiver. Field-powered devices are a type of personnel access control devices. Audio detectors simply monitor a room for any abnormal sound wave generation and trigger an alarm.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 10: Physical security (page 344).

#### NEW QUESTION 109

- (Topic 1)

Which of the following biometric devices offers the LOWEST CER?

- A. Keystroke dynamics
- B. Voice verification
- C. Iris scan
- D. Fingerprint

**Answer: C**

#### Explanation:

From most effective (lowest CER) to least effective (highest CER) are: Iris scan, fingerprint, voice verification, keystroke dynamics.

Reference : Shon Harris Aio v3 , Chapter-4 : Access Control , Page : 131

Also see: [http://www.sans.org/reading\\_room/whitepapers/authentication/biometric-selection-body-parts-online\\_139](http://www.sans.org/reading_room/whitepapers/authentication/biometric-selection-body-parts-online_139)

#### NEW QUESTION 112

- (Topic 1)

How can an individual/person best be identified or authenticated to prevent local masquerading attacks?

- A. UserId and password
- B. Smart card and PIN code
- C. Two-factor authentication
- D. Biometrics

**Answer: D**

#### Explanation:

The only way to be truly positive in authenticating identity for access is to base the authentication on the physical attributes of the persons themselves (i.e., biometric

identification). Physical attributes cannot be shared, borrowed, or duplicated. They ensure that you do identify the person, however they are not perfect and they would have to be supplemented by another factor.

Some people are getting thrown off by the term Masquerade. In general, a masquerade is a disguise. In terms of communications security issues, a masquerade is a type of attack where the attacker pretends to be an authorized user of a system in order to gain access to it or to gain greater privileges than they are authorized for. A masquerade may be attempted through the use of stolen logon IDs and passwords, through finding security gaps in programs, or through bypassing the authentication mechanism. Spoofing is another term used to describe this type of attack as well.

A UserId only provides for identification.

A password is a weak authentication mechanism since passwords can be disclosed, shared, written down, and more.

A smart card can be stolen and its corresponding PIN code can be guessed by an intruder. A smartcard can be borrowed by a friend of yours and you would have no clue as to who is really logging in using that smart card.

Any form of two-factor authentication not involving biometrics cannot be as reliable as a biometric system to identify the person.

Biometric identifying verification systems control people. If the person with the correct hand, eye, face, signature, or voice is not present, the identification and verification cannot take place and the desired action (i.e., portal passage, data, or resource access) does not occur.

As has been demonstrated many times, adversaries and criminals obtain and successfully use access cards, even those that require the addition of a PIN. This is because these systems control only pieces of plastic (and sometimes information), rather than people. Real asset and resource protection can only be accomplished by people, not cards and information, because unauthorized persons can (and do) obtain the cards and information.

Further, life-cycle costs are significantly reduced because no card or PIN administration system or personnel are required. The authorized person does not lose physical characteristics (i.e., hands, face, eyes, signature, or voice), but cards and PINs are continuously lost, stolen, or forgotten. This is why card access systems require systems and people to administer, control, record, and issue (new) cards and PINs. Moreover, the cards are an expensive and recurring cost.

NOTE FROM CLEMENT:

This question has been generating lots of interest. The keyword in the question is: Individual (the person) and also the authenticated portion as well.

I totally agree with you that Two Factors or Strong Authentication would be the strongest means of authentication. However the question is not asking what is the strongest mean of authentication, it is asking what is the best way to identify the user (individual) behind the technology. When answering questions do not make assumptions to facts not presented in the question or answers.

Nothing can beat Biometrics in such case. You cannot lend your fingerprint and pin to someone else, you cannot borrow one of my eye balls to defeat the Iris or Retina scan. This is why it is the best method to authenticate the user.

I think the reference is playing with semantics and that makes it a bit confusing. I have improved the question to make it a lot clearer and I have also improve the explanations attached with the question.

The reference mentioned above refers to authenticating the identity for access. So the distinction is being made that there is identity and there is authentication. In the case of physical security the enrollment process is where the identity of the user would be validated and then the biometrics features provided by the user would authenticate the user on a one to one matching basis (for authentication) with the reference contained in the database of biometrics templates. In the case of system access, the user might have to provide a username, a pin, a passphrase, a smart card, and then provide his biometric attributes.

Biometric can also be used for Identification purpose where you do a one to many match. You take a facial scan of someone within an airport and you attempt to match it with a large database of known criminal and terrorists. This is how you could use biometric for Identification.

There are always THREE means of authentication, they are: Something you know (Type 1)

Something you have (Type 2)

Something you are (Type 3)

Reference(s) used for this question:

TIPTON, Harold F. & KRAUSE, Micki, Information Security Management Handbook, 4th edition (volume 1) , 2000, CRC Press, Chapter 1, Biometric Identification (page 7).

and

Search Security at <http://searchsecurity.techtarget.com/definition/masquerade>

#### NEW QUESTION 114

- (Topic 1)

Which of the following is the LEAST user accepted biometric device?

- A. Fingerprint
- B. Iris scan
- C. Retina scan
- D. Voice verification

**Answer: C**

#### Explanation:

The biometric device that is least user accepted is the retina scan, where a system scans the blood-vessel pattern on the backside of the eyeball. When using this device, an individual has to place their eye up to a device, and may require a puff of air to be blown into the eye. The iris scan only needs for an individual to glance at a camera that could be placed above a door.

Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw- Hill/Osborne, 2002, Chapter 4: Access Control (page 131).

#### NEW QUESTION 115

- (Topic 1)

Examples of types of physical access controls include all EXCEPT which of the following?

- A. badges
- B. locks
- C. guards
- D. passwords

**Answer: D**

#### Explanation:

Passwords are considered a Preventive/Technical (logical) control. The following answers are incorrect:

badges Badges are a physical control used to identify an individual. A badge can include a smart device which can be used for authentication and thus a Technical control, but the actual badge itself is primarily a physical control.

locks Locks are a Preventative Physical control and has no Technical association. guards Guards are a Preventative Physical control and has no Technical association.

The following reference(s) were/was used to create this question:

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access control systems (page 35).

#### NEW QUESTION 119

- (Topic 1)

Which of the following access control models introduces user security clearance and data classification?

- A. Role-based access control
- B. Discretionary access control
- C. Non-discretionary access control
- D. Mandatory access control

**Answer: D**

#### Explanation:

The mandatory access control model is based on a security label system. Users are given a security clearance and data is classified. The classification is stored in the security labels of the resources. Classification labels specify the level of trust a user must have to access a certain file.

Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw- Hill/Osborne, 2002, Chapter 4: Access Control (Page 154).

#### NEW QUESTION 121

- (Topic 1)

The number of violations that will be accepted or forgiven before a violation record is produced is called which of the following?

- A. clipping level
- B. acceptance level
- C. forgiveness level
- D. logging level

**Answer: A**

#### Explanation:

The correct answer is "clipping level". This is the point at which a system decides to take some sort of action when an action repeats a preset number of times. That action may be to log the activity, lock a user account, temporarily close a port, etc.

Example: The most classic example of a clipping level is failed login attempts. If you have a system configured to lock a user's account after three failed login attempts, that is the "clipping level".

The other answers are not correct because:

Acceptance level, forgiveness level, and logging level are nonsensical terms that do not exist (to my knowledge) within network security.

Reference:

Official ISC2 Guide - The term "clipping level" is not in the glossary or index of that book. I cannot find it in the text either. However, I'm quite certain that it would be considered part of the CBK, despite its exclusion from the Official Guide.

All in One Third Edition page: 136 - 137

#### NEW QUESTION 124

- (Topic 1)

Which of the following is most appropriate to notify an internal user that session monitoring is being conducted?

- A. Logon Banners
- B. Wall poster
- C. Employee Handbook
- D. Written agreement

**Answer: D**

**Explanation:**

This is a tricky question, the keyword in the question is Internal users.

There are two possible answers based on how the question is presented, this question could either apply to internal users or ANY anonymous/external users.

Internal users should always have a written agreement first, then logon banners serve as a constant reminder.

Banners at the log-on time should be used to notify external users of any monitoring that is being conducted. A good banner will give you a better legal stand and also makes it obvious the user was warned about who should access the system, who is authorized and unauthorized, and if it is an unauthorized user then he is fully aware of trespassing. Anonymous/External users, such as those logging into a web site, ftp server or even a mail server; their only notification system is the use of a logon banner.

References used for this question:

KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 50.

and

Shon Harris, CISSP All-in-one, 5th edition, pg 873

**NEW QUESTION 127**

- (Topic 1)

Which of the following Kerberos components holds all users' and services' cryptographic keys?

- A. The Key Distribution Service
- B. The Authentication Service
- C. The Key Distribution Center
- D. The Key Granting Service

**Answer: C**

**Explanation:**

The Key Distribution Center (KDC) holds all users' and services' cryptographic keys. It provides authentication services, as well as key distribution functionality.

The Authentication Service is the part of the KDC that authenticates a principal. The Key Distribution Service and Key Granting Service are distracters and are not defined Kerberos components.

Source: WALLHOFF, John, CISSP Summary 2002, April 2002, CBK#1 Access Control System & Methodology (page 3)

**NEW QUESTION 131**

- (Topic 1)

Which type of attack involves impersonating a user or a system?

- A. Smurfing attack
- B. Spoofing attack
- C. Spamming attack
- D. Sniffing attack

**Answer: B**

**Explanation:**

A spoofing attack is when an attempt is made to gain access to a computer system by posing as an authorized user or system. Spamming refers to sending out or posting junk advertising and unsolicited mail. A smurf attack is a type of denial-of-service attack using PING and a spoofed address. Sniffing refers to observing packets passing on a network.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the

Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 3: Telecommunications and Network Security (page 77).

**NEW QUESTION 136**

- (Topic 1)

Which one of the following factors is NOT one on which Authentication is based?

- A. Type 1. Something you know, such as a PIN or password
- B. Type 2. Something you have, such as an ATM card or smart card
- C. Type 3. Something you are (based upon one or more intrinsic physical or behavioral traits), such as a fingerprint or retina scan
- D. Type 4. Something you are, such as a system administrator or security administrator

**Answer: D**

**Explanation:**

Authentication is based on the following three factor types:

Type 1. Something you know, such as a PIN or password

Type 2. Something you have, such as an ATM card or smart card

Type 3. Something you are (Unique physical characteristic), such as a fingerprint or retina scan

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 36.

Also: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, 2002, chapter 4: Access Control (pages 132-133).

**NEW QUESTION 140**

- (Topic 1)

The "vulnerability of a facility" to damage or attack may be assessed by all of the following except:

- A. Inspection
- B. History of losses
- C. Security controls
- D. security budget

**Answer:** D

**Explanation:**

Source: The CISSP Examination Textbook- Volume 2: Practice by S. Rao Vallabhaneni.

**NEW QUESTION 142**

- (Topic 1)

Which of the following best ensures accountability of users for the actions taken within a system or domain?

- A. Identification
- B. Authentication
- C. Authorization
- D. Credentials

**Answer:** B

**Explanation:**

Details:

The only way to ensure accountability is if the subject is uniquely identified and authenticated. Identification alone does not provide proof the user is who they claim to be. After showing proper credentials, a user is authorized access to resources.

References:

HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, 2002, Chapter 4: Access Control (page 126).

**NEW QUESTION 147**

- (Topic 1)

Which of the following would be an example of the best password?

- A. golf001
- B. Elizabeth
- C. T1me4g0lF
- D. password

**Answer:** C

**Explanation:**

The best passwords are those that are both easy to remember and hard to crack using a dictionary attack. The best way to create passwords that fulfil both criteria is to use two small unrelated words or phonemes, ideally with upper and lower case characters, a special character, and/or a number. Shouldn't be used: common names, DOB, spouse, phone numbers, words found in dictionaries or system defaults.

Source: ROTHKE, Ben, CISSP CBK Review presentation on domain 1.

**NEW QUESTION 148**

- (Topic 1)

Which of the following does not apply to system-generated passwords?

- A. Passwords are harder to remember for users.
- B. If the password-generating algorithm gets to be known, the entire system is in jeopardy.
- C. Passwords are more vulnerable to brute force and dictionary attacks.
- D. Passwords are harder to guess for attackers.

**Answer:** C

**Explanation:**

Users tend to choose easier to remember passwords. System-generated passwords can provide stronger, harder to guess passwords. Since they are based on rules provided by the administrator, they can include combinations of uppercase/lowercase letters, numbers and special characters, making them less vulnerable to brute force and dictionary attacks. One danger is that they are also harder to remember for users, who will tend to write them down, making them more vulnerable to anyone having access to the user's desk. Another danger with system-generated passwords is that if the password-generating algorithm gets to be known, the entire system is in jeopardy.

Source: RUSSEL, Deborah & GANGEMI, G.T. Sr., Computer Security Basics, O'Reilly, July 1992 (page 64).

**NEW QUESTION 150**

- (Topic 1)

What is the Biba security model concerned with?

- A. Confidentiality
- B. Reliability
- C. Availability
- D. Integrity

**Answer:** D

**Explanation:**

The Biba security model addresses the integrity of data being threatened when subjects at lower security levels are able to write to objects at higher security levels and when subjects can read data at lower levels.

Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw- Hill/Osborne, 2002, Chapter 5: Security Models and Architecture (Page 244).

#### NEW QUESTION 151

- (Topic 1)

Which of the following statements pertaining to the Bell-LaPadula is TRUE if you are NOT making use of the strong star property?

- A. It allows "read up."
- B. It addresses covert channels.
- C. It addresses management of access controls.
- D. It allows "write up."

**Answer: D**

#### Explanation:

Bell-LaPadula Confidentiality Model<sup>10</sup> The Bell-LaPadula model is perhaps the most well-known and significant security model, in addition to being one of the oldest models used in the creation of modern secure computing systems. Like the Trusted Computer System Evaluation Criteria (or TCSEC), it was inspired by early U.S. Department of Defense security policies and the need to prove that confidentiality could be maintained. In other words, its primary goal is to prevent disclosure as the model system moves from one state (one point in time) to another.

When the strong star property is not being used it means that both the property and the Simple Security Property rules would be applied.

The Star (\*) property rule of the Bell-LaPadula model says that subjects cannot write down, this would compromise the confidentiality of the information if someone at the secret layer would write the object down to a confidential container for example.

The Simple Security Property rule states that the subject cannot read up which means that a subject at the secret layer would not be able to access objects at Top Secret for example.

You must remember: The model tells you about are NOT allowed to do. Anything else would be allowed. For example within the Bell LaPadula model you would be allowed to write up as it does not compromise the security of the information. In fact it would upgrade it to the point that you could lock yourself out of your own information if you have only a secret security clearance.

The following are incorrect answers because they are all FALSE:

"It allows read up" is incorrect. The "simple security" property forbids read up.

"It addresses covert channels" is incorrect. Covert channels are not addressed by the Bell- LaPadula model.

"It addresses management of access controls" is incorrect. Management of access controls are beyond the scope of the Bell-LaPadula model.

Reference(s) used for this question:

Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 17595-17600). Auerbach Publications. Kindle Edition.

#### NEW QUESTION 153

- (Topic 1)

Which of the following protects a password from eavesdroppers and supports the encryption of communication?

- A. Challenge Handshake Authentication Protocol (CHAP)
- B. Challenge Handshake Identification Protocol (CHIP)
- C. Challenge Handshake Encryption Protocol (CHEP)
- D. Challenge Handshake Substitution Protocol (CHSP)

**Answer: A**

#### Explanation:

CHAP: A protocol that uses a three way handshake The server sends the client a challenge which includes a random value(a nonce) to thwart replay attacks. The client responds with the MD5 hash of the nonce and the password.

The authentication is successful if the client's response is the one that the server expected. Reference: Page 450, OIG 2007.

CHAP protects the password from eavesdroppers and supports the encryption of communication.

Reference: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 44.

#### NEW QUESTION 156

- (Topic 1)

In biometric identification systems, the parts of the body conveniently available for identification are:

- A. neck and mouth
- B. hands, face, and eyes
- C. feet and hair
- D. voice and neck

**Answer: B**

#### Explanation:

Today implementation of fast, accurate, reliable, and user-acceptable biometric identification systems are already under way. Because most identity authentication takes place when a people are fully clothed (neck to feet and wrists), the parts of the body conveniently available for this purpose are hands, face, and eyes. From: TIPTON, Harold F. & KRAUSE, MICKI, Information Security Management Handbook, 4th Edition, Volume 1, Page 7.

#### NEW QUESTION 161

- (Topic 1)

The three classic ways of authenticating yourself to the computer security software are: something you know, something you have, and something:

- A. you need.
- B. you read.
- C. you are.
- D. you do.

**Answer:** C

**Explanation:**

Source: TIPTON, Hal, (ISC)2, Introduction to the CISSP Exam presentation.

**NEW QUESTION 164**

- (Topic 1)

Which security model uses division of operations into different parts and requires different users to perform each part?

- A. Bell-LaPadula model
- B. Biba model
- C. Clark-Wilson model
- D. Non-interference model

**Answer:** C

**Explanation:**

The Clark-Wilson model uses separation of duties, which divides an operation into different parts and requires different users to perform each part. This prevents authorized users from making unauthorized modifications to data, thereby protecting its integrity.

The Clark-Wilson integrity model provides a foundation for specifying and analyzing an integrity policy for a computing system.

The model is primarily concerned with formalizing the notion of information integrity. Information integrity is maintained by preventing corruption of data items in a system due to either error or malicious intent. An integrity policy describes how the data items in the system should be kept valid from one state of the system to the next and specifies the capabilities of various principals in the system. The model defines enforcement rules and certification rules.

The model's enforcement and certification rules define data items and processes that provide the basis for an integrity policy. The core of the model is based on the notion of a transaction.

A well-formed transaction is a series of operations that transition a system from one consistent state to another consistent state.

In this model the integrity policy addresses the integrity of the transactions.

The principle of separation of duty requires that the certifier of a transaction and the implementer be different entities.

The model contains a number of basic constructs that represent both data items and processes that operate on those data items. The key data type in the Clark-Wilson model is a Constrained Data Item (CDI). An Integrity Verification Procedure (IVP) ensures that all CDIs in the system are valid at a certain state.

Transactions that enforce the integrity policy are represented by Transformation Procedures (TPs). A TP takes as input a CDI or Unconstrained Data Item (UDI) and produces a CDI. A TP must transition the system from one valid state to another valid state. UDIs represent system input (such as that provided by a user or adversary). A TP must guarantee (via certification) that it transforms all possible values of a UDI to a "safe" CDI.

In general, preservation of data integrity has three goals: Prevent data modification by unauthorized parties

Prevent unauthorized data modification by authorized parties

Maintain internal and external consistency (i.e. data reflects the real world)

Clark-Wilson addresses all three rules but BIBA addresses only the first rule of integrity. References:

HARRIS, Shon, All-In-One CISSP Certification Fifth Edition, McGraw-Hill/Osborne, Chapter 5: Security Architecture and Design (Page 341-344).

and

[http://en.wikipedia.org/wiki/Clark-Wilson\\_model](http://en.wikipedia.org/wiki/Clark-Wilson_model)

**NEW QUESTION 169**

- (Topic 1)

Considerations of privacy, invasiveness, and psychological and physical comfort when using the system are important elements for which of the following?

- A. Accountability of biometrics systems
- B. Acceptability of biometrics systems
- C. Availability of biometrics systems
- D. Adaptability of biometrics systems

**Answer:** B

**Explanation:**

Acceptability refers to considerations of privacy, invasiveness, and psychological and physical comfort when using the system.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 39.

**NEW QUESTION 171**

- (Topic 1)

Which security model introduces access to objects only through programs?

- A. The Biba model
- B. The Bell-LaPadula model
- C. The Clark-Wilson model
- D. The information flow model

**Answer:** C

**Explanation:**

In the Clark-Wilson model, the subject no longer has direct access to objects but instead must access them through programs (well-formed transactions).

The Clark-Wilson integrity model provides a foundation for specifying and analyzing an integrity policy for a computing system.

The model is primarily concerned with formalizing the notion of information integrity. Information integrity is maintained by preventing corruption of data items in a system due to either error or malicious intent. An integrity policy describes how the data items in the system should be kept valid from one state of the system to the next and specifies the capabilities of various principals in the system. The model defines enforcement rules and certification rules.

Clark-Wilson is more clearly applicable to business and industry processes in which the integrity of the information content is paramount at any level of classification.

Integrity goals of Clark-Wilson model:

Prevent unauthorized users from making modification (Only this one is addressed by the Biba model).

Separation of duties prevents authorized users from making improper modifications. Well formed transactions: maintain internal and external consistency i.e. it is a series of operations that are carried out to transfer the data from one consistent state to the other.

The following are incorrect answers:

The Biba model is incorrect. The Biba model is concerned with integrity and controls access to objects based on a comparison of the security level of the subject to that of the object.

The Bell-LaPdaula model is incorrect. The Bell-LaPaula model is concerned with confidentiality and controls access to objects based on a comparison of the clearance level of the subject to the classification level of the object.

The information flow model is incorrect. The information flow model uses a lattice where objects are labelled with security classes and information can flow either upward or at the

same level. It is similar in framework to the Bell-LaPadula model. References:

ISC2 Official Study Guide, Pages 325 - 327 AIO3, pp. 284 - 287

AIOv4 Security Architecture and Design (pages 338 - 342) AIOv5 Security Architecture and Design (pages 341 - 344) Wikipedia at:

[https://en.wikipedia.org/wiki/Clark-Wilson\\_model](https://en.wikipedia.org/wiki/Clark-Wilson_model)

### NEW QUESTION 173

- (Topic 1)

What is a common problem when using vibration detection devices for perimeter control?

- A. They are vulnerable to non-adversarial disturbances.
- B. They can be defeated by electronic means.
- C. Signal amplitude is affected by weather conditions.
- D. They must be buried below the frost line.

**Answer:** A

#### Explanation:

Vibration sensors are similar and are also implemented to detect forced entry. Financial institutions may choose to implement these types of sensors on exterior walls, where bank robbers may attempt to drive a vehicle through. They are also commonly used around the ceiling and flooring of vaults to detect someone trying to make an unauthorized bank withdrawal.

Such sensors are prone to false positive. If there is a large truck with heavy equipment driving by it may trigger the sensor. The same with a storm with thunder and lightning, it may trigger the alarm even though there are no adversarial threat or disturbance.

The following are incorrect answers: All of the other choices are incorrect. Reference used for this question:

Harris, Shon (2012-10-18). CISSP All-in-One Exam Guide, 6th Edition (pp. 495-496).

McGraw-Hill . Kindle Edition.

### NEW QUESTION 174

- (Topic 1)

An attack initiated by an entity that is authorized to access system resources but uses them in a way not approved by those who granted the authorization is known as a(n):

- A. active attack
- B. outside attack
- C. inside attack
- D. passive attack

**Answer:** C

#### Explanation:

An inside attack is an attack initiated by an entity inside the security perimeter, an entity that is authorized to access system resources but uses them in a way not approved by those who granted the authorization whereas an outside attack is initiated from outside the perimeter, by an unauthorized or illegitimate user of the system. An active attack attempts to alter system resources to affect their operation and a passive attack attempts to learn or make use of the information from the system but does not affect system resources.

Source: SHIREY, Robert W., RFC2828: Internet Security Glossary, may 2000.

### NEW QUESTION 176

- (Topic 1)

What are called user interfaces that limit the functions that can be selected by a user?

- A. Constrained user interfaces
- B. Limited user interfaces
- C. Mini user interfaces
- D. Unlimited user interfaces

**Answer:** A

#### Explanation:

Constrained user interfaces limit the functions that can be selected by a user.

Another method for controlling access is by restricting users to specific functions based on their role in the system. This is typically implemented by limiting available menus, data views, encryption, or by physically constraining the user interfaces.

This is common on devices such as an automated teller machine (ATM). The advantage of a constrained user interface is that it limits potential avenues of attack and system failure by restricting the processing options that are available to the user.

On an ATM machine, if a user does not have a checking account with the bank he or she will not be shown the "Withdraw money from checking" option. Likewise, an information system might have an "Add/Remove Users" menu option for administrators, but if a normal, non-administrative user logs in he or she will not even see that menu option. By not even identifying potential options for non-qualifying users, the system limits the potentially harmful execution of unauthorized system or application commands.

Many database management systems have the concept of "views." A database view is an extract of the data stored in the database that is filtered based on predefined user or system criteria. This permits multiple users to access the same database while only having the ability to access data they need (or are allowed to have) and not data for another user. The use of database views is another example of a constrained user interface.

The following were incorrect answers:

All of the other choices presented were bogus answers.

The following reference(s) were used for this question:

Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 1989-2002). Auerbach Publications. Kindle Edition.

#### NEW QUESTION 177

- (Topic 1)

An alternative to using passwords for authentication in logical or technical access control is:

- A. manage without passwords
- B. biometrics
- C. not there
- D. use of them for physical access control

**Answer: B**

#### Explanation:

An alternative to using passwords for authentication in logical or technical access control is biometrics. Biometrics are based on the Type 3 authentication mechanism-something you are.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 37.

#### NEW QUESTION 181

- (Topic 1)

Which type of control is concerned with restoring controls?

- A. Compensating controls
- B. Corrective controls
- C. Detective controls
- D. Preventive controls

**Answer: B**

#### Explanation:

Corrective controls are concerned with remedying circumstances and restoring controls.

Detective controls are concerned with investigating what happen after the fact such as logs and video surveillance tapes for example.

Compensating controls are alternative controls, used to compensate weaknesses in other controls.

Preventive controls are concerned with avoiding occurrences of risks. Source: TIPTON, Hal, (ISC)2, Introduction to the CISSP Exam presentation.

#### NEW QUESTION 182

- (Topic 1)

Which of the following classes is the first level (lower) defined in the TCSEC (Orange Book) as mandatory protection?

- A. B
- B. A
- C. C
- D. D

**Answer: A**

#### Explanation:

B level is the first Mandatory Access Control Level.

First published in 1983 and updated in 1985, the TCSEC, frequently referred to as the Orange Book, was a United States Government Department of Defense (DoD) standard that sets basic standards for the implementation of security protections in computing systems. Primarily intended to help the DoD find products that met those basic standards, TCSEC was used to evaluate, classify, and select computer systems being considered for the processing, storage, and retrieval of sensitive or classified information on military and government systems. As such, it was strongly focused on enforcing confidentiality with no focus on other aspects of security such as integrity or availability. Although it has since been superseded by the common criteria, it influenced the development of other product evaluation criteria, and some of its basic approach and terminology continues to be used.

Reference used for this question:

Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 17920-17926). Auerbach Publications. Kindle Edition.

and

THE source for all TCSEC "level" questions: <http://csrc.nist.gov/publications/secpubs/rainbow/std001.txt> (paragraph 3 for this one)

#### NEW QUESTION 183

- (Topic 1)

Which of the following classes is defined in the TCSEC (Orange Book) as discretionary protection?

- A. C
- B. B
- C. A
- D. D

**Answer: A**

#### Explanation:

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, page 197.

Also: THE source for all TCSEC "level" questions: <http://csrc.nist.gov/publications/secpubs/rainbow/std001.txt>

#### NEW QUESTION 186

- (Topic 1)

In Discretionary Access Control the subject has authority, within certain limitations,

- A. but he is not permitted to specify what objects can be accessible and so we need to get an independent third party to specify what objects can be accessible.

- B. to specify what objects can be accessible.
- C. to specify on an aggregate basis without understanding what objects can be accessible.
- D. to specify in full detail what objects can be accessible.

**Answer:** B

**Explanation:**

With Discretionary Access Control, the subject has authority, within certain limitations, to specify what objects can be accessible.

For example, access control lists can be used. This type of access control is used in local, dynamic situations where the subjects must have the discretion to specify what resources certain users are permitted to access.

When a user, within certain limitations, has the right to alter the access control to certain objects, this is termed as user-directed discretionary access control. In some instances, a hybrid approach is used, which combines the features of user-based and identity-based discretionary access control.

References:

KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 33.

and

HARRIS, Shon, All-In-One CISSP Certification Exam Guide 5th Edition, McGraw- Hill/Osborne, 2010, Chapter 4: Access Control (page 210-211).

**NEW QUESTION 187**

- (Topic 1)

How should a doorway of a manned facility with automatic locks be configured?

- A. It should be configured to be fail-secure.
- B. It should be configured to be fail-safe.
- C. It should have a door delay cipher lock.
- D. It should not allow piggybacking.

**Answer:** B

**Explanation:**

Access controls are meant to protect facilities and computers as well as people.

In some situations, the objectives of physical access controls and the protection of people's lives may come into conflict. In these situations, a person's life always takes precedence.

Many physical security controls make entry into and out of a facility hard, if not impossible. However, special consideration needs to be taken when this could affect lives. In an information processing facility, different types of locks can be used and piggybacking should be prevented, but the issue here with automatic locks is that they can either be configured as fail-safe or fail-secure.

Since there should only be one access door to an information processing facility, the

automatic lock to the only door to a man-operated room must be configured to allow people out in case of emergency, hence to be fail-safe (sometimes called fail-open), meaning that upon fire alarm activation or electric power failure, the locking device unlocks. This is because the solenoid that maintains power to the lock to keep it in a locked state fails and thus opens or unlocks the electronic lock.

Fail Secure works just the other way. The lock device is in a locked or secure state with no power applied. Upon authorized entry, a solenoid unlocks the lock temporarily. Thus in a Fail Secure lock, loss of power or fire alarm activation causes the lock to remain in a secure mode.

Reference(s) used for this question:

Harris, Shon (2012-10-18). CISSP All-in-One Exam Guide, 6th Edition (p. 451). McGraw- Hill. Kindle Edition.

and

Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 20249-20251). Auerbach Publications. Kindle Edition.

**NEW QUESTION 192**

- (Topic 2)

Related to information security, availability is the opposite of which of the following?

- A. delegation
- B. distribution
- C. documentation
- D. destruction

**Answer:** D

**Explanation:**

Availability is the opposite of "destruction."

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 59.

**NEW QUESTION 197**

- (Topic 2)

Which of the following is BEST defined as a physical control?

- A. Monitoring of system activity
- B. Fencing
- C. Identification and authentication methods
- D. Logical access control mechanisms

**Answer:** B

**Explanation:**

Physical controls are items put into place to protect facility, personnel, and resources. Examples of physical controls are security guards, locks, fencing, and lighting.

The following answers are incorrect answers:

Monitoring of system activity is considered to be administrative control.

Identification and authentication methods are considered to be a technical control. Logical access control mechanisms is also considered to be a technical control.

Reference(s) used for this question:

Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (Kindle Locations 1280-1282). McGraw-Hill. Kindle Edition.

#### NEW QUESTION 199

- (Topic 2)

Which of the following is an advantage in using a bottom-up versus a top-down approach to software testing?

- A. Interface errors are detected earlier.
- B. Errors in critical modules are detected earlier.
- C. Confidence in the system is achieved earlier.
- D. Major functions and processing are tested earlier.

**Answer: B**

#### Explanation:

The bottom-up approach to software testing begins with the testing of atomic units, such as programs and modules, and work upwards until a complete system testing has taken place. The advantages of using a bottom-up approach to software testing are the fact that there is no need for stubs or drivers and errors in critical modules are found earlier. The other choices refer to advantages of a top down approach which follows the opposite path.

Source: Information Systems Audit and Control Association, Certified Information Systems Auditor 2002 review manual, chapter 6: Business Application System Development, Acquisition, Implementation and Maintenance (page 299).

#### NEW QUESTION 203

- (Topic 2)

Which of the following should NOT be performed by an operator?

- A. Implementing the initial program load
- B. Monitoring execution of the system
- C. Data entry
- D. Controlling job flow

**Answer: C**

#### Explanation:

Under the principle of separation of duties, an operator should not be performing data entry. This should be left to data entry personnel.

System operators represent a class of users typically found in data center environments where mainframe systems are used. They provide day-to-day operations of the mainframe environment, ensuring that scheduled jobs are running effectively and troubleshooting problems that may arise. They also act as the arms and legs of the mainframe environment, load and unloading tape and results of job print runs. Operators have elevated privileges, but less than those of system administrators. If misused, these privileges may be used to circumvent the system's security policy. As such, use of these privileges should be monitored through audit logs.

Some of the privileges and responsibilities assigned to operators include:

Implementing the initial program load: This is used to start the operating system. The boot process or initial program load of a system is a critical time for ensuring system security. Interruptions to this process may reduce the integrity of the system or cause the system to crash, precluding its availability.

Monitoring execution of the system: Operators respond to various events, to include errors, interruptions, and job completion messages.

Volume mounting: This allows the desired application access to the system and its data. Controlling job flow: Operators can initiate, pause, or terminate programs. This may allow

an operator to affect the scheduling of jobs. Controlling job flow involves the manipulation

of configuration information needed by the system. Operators with the ability to control a job or application can cause output to be altered or diverted, which can threaten the confidentiality.

Bypass label processing: This allows the operator to bypass security label information to run foreign tapes (foreign tapes are those from a different data center that would not be using the same label format that the system could run). This privilege should be strictly controlled to prevent unauthorized access.

Renaming and relabeling resources: This is sometimes necessary in the mainframe environment to allow programs to properly execute. Use of this privilege should be monitored, as it can allow the unauthorized viewing of sensitive information.

Reassignment of ports and lines: Operators are allowed to reassign ports or lines. If misused, reassignment can cause program errors, such as sending sensitive output to an unsecured location. Furthermore, an incidental port may be opened, subjecting the system to an attack through the creation of a new entry point into the system.

Reference(s) used for this question:

Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 19367-19395). Auerbach Publications. Kindle Edition.

#### NEW QUESTION 208

- (Topic 2)

Which software development model is actually a meta-model that incorporates a number of the software development models?

- A. The Waterfall model
- B. The modified Waterfall model
- C. The Spiral model
- D. The Critical Path Model (CPM)

**Answer: C**

#### Explanation:

The spiral model is actually a meta-model that incorporates a number of the software development models. This model depicts a spiral that incorporates the various phases of software development. The model states that each cycle of the spiral involves the same series of steps for each part of the project. CPM refers to the Critical Path Methodology.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 7: Applications and Systems Development (page 246).

#### NEW QUESTION 213

- (Topic 2)

Which of the following security controls might force an operator into collusion with personnel assigned organizationally within a different function in order to gain

access to unauthorized data?

- A. Limiting the local access of operations personnel
- B. Job rotation of operations personnel
- C. Management monitoring of audit logs
- D. Enforcing regular password changes

**Answer:** A

**Explanation:**

The questions specifically said: "within a different function" which eliminate Job Rotation as a choice.

Management monitoring of audit logs is a detective control and it would not prevent collusion.

Changing passwords regularly would not prevent such attack.

This question validates if you understand the concept of separation of duties and least privilege. By having operators that have only the minimum access level they need and only what they need to do their duties within a company, the operations personnel would be force to use collusion to defeat those security mechanism.

Source: TIPTON, Hal, (ISC)2, Introduction to the CISSP Exam presentation.

**NEW QUESTION 216**

- (Topic 2)

Which must bear the primary responsibility for determining the level of protection needed for information systems resources?

- A. IS security specialists
- B. Senior Management
- C. Senior security analysts
- D. systems Auditors

**Answer:** B

**Explanation:**

If there is no support by senior management to implement, execute, and enforce security policies and procedure, then they won't work. Senior management must be involved in this because they have an obligation to the organization to protect the assets . The requirement here is for management to show "due diligence" in establishing an effective compliance, or security program. It is senior management that could face legal repercussions if they do not have sufficient controls in place.

The following answers are incorrect:

IS security specialists. Is incorrect because it is not the best answer. Senior management bears the primary responsibility for determining the level of protection needed.

Senior security analysts. Is incorrect because it is not the best answer. Senior management bears the primary responsibility for determining the level of protection needed.

systems auditors. Is incorrect because it is not the best answer, system auditors are responsible that the controls in place are effective. Senior management bears the primary responsibility for determining the level of protection needed.

**NEW QUESTION 218**

- (Topic 2)

During which phase of an IT system life cycle are security requirements developed?

- A. Operation
- B. Initiation
- C. Functional design analysis and Planning
- D. Implementation

**Answer:** C

**Explanation:**

The software development life cycle (SDLC) (sometimes referred to as the System Development Life Cycle) is the process of creating or altering software systems, and the models and methodologies that people use to develop these systems.

The NIST SP 800-64 revision 2 has within the description section of para 3.2.1:

This section addresses security considerations unique to the second SDLC phase. Key security activities for this phase include:

- Conduct the risk assessment and use the results to supplement the baseline security controls;
- Analyze security requirements;
- Perform functional and security testing;
- Prepare initial documents for system certification and accreditation; and
- Design security architecture.

Reviewing this publication you may want to pick development/acquisition. Although initiation would be a decent choice, it is correct to say during this phase you would only brainstorm the idea of security requirements. Once you start to develop and acquire hardware/software components then you would also develop the security controls for these. The Shon Harris reference below is correct as well.

Shon Harris' Book (All-in-One CISSP Certification Exam Guide) divides the SDLC differently:

Project initiation

Functional design analysis and planning System design specifications

Software development Installation Maintenance support

Revision and replacement

According to the author (Shon Harris), security requirements should be developed during the functional design analysis and planning phase.

SDLC POSITIONING FROM NIST 800-64



**FIGURE 2-1. POSITIONING SECURITY CONSIDERATIONS**

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**SDLC Positioning in the enterprise**

Information system security processes and activities provide valuable input into managing IT systems and their development, enabling risk identification, planning and mitigation. A risk management approach involves continually balancing the protection of agency information and assets with the cost of security controls and mitigation strategies throughout the complete information system development life cycle (see Figure 2-1 above). The most effective way to implement risk management is to identify critical assets and operations, as well as systemic vulnerabilities across the agency. Risks are shared and not bound by organization, revenue source, or topologies. Identification and verification of critical assets and operations and their interconnections can be achieved through the system security planning process, as well as through the compilation of information from the Capital Planning and Investment Control (CPIC) and Enterprise Architecture (EA) processes to establish insight into the agency's vital business operations, their supporting assets, and existing interdependencies and relationships. With critical assets and operations identified, the organization can and should perform a business impact analysis (BIA). The purpose of the BIA is to relate systems and assets with the critical services they provide and assess the consequences of their disruption. By identifying these systems, an agency can manage security effectively by establishing priorities. This positions the security office to facilitate the IT program's cost-effective performance as well as articulate its business impact and value to the agency.

**SDLC OVERVIEW FROM NIST 800-64**

**SDLC Overview from NIST 800-64 Revision 2**



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NIST 800-64 Revision 2 is one publication within the NIST standards that I would recommend you look at for more details about the SDLC. It describes in great details what activities would take place and they have a nice diagram for each of the phases of the SDLC. You will find a copy at:

<http://csrc.nist.gov/publications/nistpubs/800-64-Rev2/SP800-64-Revision2.pdf> DISCUSSION:

Different sources present slightly different info as far as the phases names are concerned.

People sometimes get confused with some of the NIST standards. For example NIST 800-64 Security Considerations in the Information System Development Life Cycle has slightly different names, the activities mostly remain the same.

NIST clearly specifies that Security requirements would be considered throughout ALL of the phases. The keyword here is considered, if a question is about which phase they would be developed than Functional Design Analysis would be the correct choice.

Within the NIST standard they use different phase, however under the second phase you will see that they talk specifically about Security Functional requirements analysis which confirms it is not at the initiation stage so it becomes easier to come out with the answer to this question. Here is what is stated:

The security functional requirements analysis considers the system security environment, including the enterprise information security policy and the enterprise security architecture. The analysis should address all requirements for confidentiality, integrity, and availability of information, and should include a review of all legal, functional, and other security requirements contained in applicable laws, regulations, and guidance.

At the initiation step you would NOT have enough detailed yet to produce the Security Requirements. You are mostly brainstorming on all of the issues listed but you do not develop them all at that stage.

By considering security early in the information system development life cycle (SDLC), you may be able to avoid higher costs later on and develop a more secure system from the start.

NIST says:

NIST's Information Technology Laboratory recently issued Special Publication (SP) 800-64, Security Considerations in the Information System Development Life Cycle, by Tim Grance, Joan Hash, and Marc Stevens, to help organizations include security requirements in their planning for every phase of the system life cycle, and to select, acquire, and use appropriate and cost-effective security controls.

I must admit this is all very tricky but reading skills and paying attention to KEY WORDS is a must for this exam.

References:

HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, Fifth Edition, Page 956

and

NIST S-64 Revision 2 at <http://csrc.nist.gov/publications/nistpubs/800-64-Rev2/SP800-64-Revision2.pdf> and

<http://www.mks.com/resources/resource-pages/software-development-life-cycle-sdlc-system-development>

<http://www.mks.com/resources/resource-pages/software-development-life-cycle-sdlc-system-development>

#### NEW QUESTION 221

- (Topic 2)

Which of the following are NOT a countermeasure to traffic analysis?

- A. Padding messages.
- B. Eavesdropping.
- C. Sending noise.
- D. Faraday Cage

**Answer: B**

#### Explanation:

Eavesdropping is not a countermeasure, it is a type of attack where you are collecting traffic and attempting to see what is being send between entities communicating with each other.

The following answers are incorrect:

Padding Messages. Is incorrect because it is considered a countermeasure you make messages uniform size, padding can be used to counter this kind of attack, in which decoy traffic is sent out over the network to disguise patterns and make it more difficult to uncover patterns.

Sending Noise. Is incorrect because it is considered a countermeasure, tansmitting non- informational data elements to disguise real data.

Faraday Cage Is incorrect because it is a tool used to prevent emanation of electromagnetic waves. It is a very effective tool to prevent traffic analysis.

#### NEW QUESTION 223

- (Topic 2)

Ensuring least privilege does not require:

- A. Identifying what the user's job is.
- B. Ensuring that the user alone does not have sufficient rights to subvert an important process.
- C. Determining the minimum set of privileges required for a user to perform their duties.
- D. Restricting the user to required privileges and nothing more.

**Answer: B**

#### Explanation:

Ensuring that the user alone does not have sufficient rights to subvert an important process is a concern of the separation of duties principle and it does not concern the least privilege principle.

Source: DUPUIS, Clément, Access Control Systems and Methodology CISSP Open Study Guide, version 1.0, march 2002 (page 33).

#### NEW QUESTION 227

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