

Exam Questions SSCP

System Security Certified Practitioner (SSCP)

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NEW QUESTION 1

- (Topic 1)

The Terminal Access Controller Access Control System (TACACS) employs which of the following?

- A. a user ID and static password for network access
- B. a user ID and dynamic password for network access
- C. a user ID and symmetric password for network access
- D. a user ID and asymmetric password for network access

Answer: A

Explanation:

For networked applications, the Terminal Access Controller Access Control System (TACACS) employs a user ID and a static password for network access.
Source: 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 2

- (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 3

- (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 4

- (Topic 1)

Which access control model achieves data integrity through well-formed transactions and separation of duties?

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

Answer: A

Explanation:

The Clark-Wilson model differs from other models that are subject- and object- oriented by introducing a third access element programs resulting in what is called an access triple, which prevents unauthorized users from modifying data or programs. The Biba model uses objects and subjects and addresses integrity based on a hierarchical

lattice of integrity levels. The non-interference model is related to the information flow model with restrictions on the information flow. The Sutherland model approaches integrity by focusing on the problem of inference.

Source: ANDRESS, Mandy, Exam Cram CISSP, Coriolis, 2001, Chapter 2: Access Control Systems and Methodology (page 12).

And: KRAUSE, Micki & TIPTON, Harold F., Handbook of Information Security Management, CRC Press, 1997, Domain 1: Access Control.

NEW QUESTION 5

- (Topic 1)

Which is the last line of defense in a physical security sense?

- A. people
- B. interior barriers
- C. exterior barriers
- D. perimeter barriers

Answer: A

Explanation:

"Ultimately, people are the last line of defense for your company's assets" (Pastore & Dulaney, 2006, p. 529).

Pastore, M. and Dulaney, E. (2006). CompTIA Security+ study guide: Exam SY0-101. Indianapolis, IN: Sybex.

NEW QUESTION 6

- (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 7

- (Topic 1)

Smart cards are an example of which type of control?

- A. Detective control
- B. Administrative control
- C. Technical control
- D. Physical control

Answer: C

Explanation:

Logical or technical controls involve the restriction of access to systems and the protection of information. Smart cards and encryption are examples of these types of control.

Controls are put into place to reduce the risk an organization faces, and they come in three main flavors: administrative, technical, and physical. Administrative controls are commonly referred to as "soft controls" because they are more management-oriented. Examples of administrative controls are security documentation, risk management, personnel security, and training. Technical controls (also called logical controls) are software or hardware components, as in firewalls, IDS, encryption, identification and authentication mechanisms. And physical controls are items put into place to protect facility, personnel, and resources. Examples of physical controls are security guards, locks, fencing, and lighting.

Many types of technical controls enable a user to access a system and the resources within that system. A technical control may be a username and password combination, a Kerberos implementation, biometrics, public key infrastructure (PKI), RADIUS, TACACS +, or authentication using a smart card through a reader connected to a system. These technologies verify the user is who he says he is by using different types of authentication methods. Once a user is properly authenticated, he can be authorized and allowed access to network resources.

Reference(s) used for this question:

Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (p. 245). 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 32).

NEW QUESTION 8

- (Topic 1)

Physical security is accomplished through proper facility construction, fire and water protection, anti-theft mechanisms, intrusion detection systems, and security procedures that are adhered to and enforced. Which of the following is not a component that achieves this type of security?

- A. Administrative control mechanisms
- B. Integrity control mechanisms
- C. Technical control mechanisms
- D. Physical control mechanisms

Answer: B

Explanation:

Integrity Controls Mechanisms are not part of physical security. All of the other detractors were correct this one was the wrong one that does not belong to Physical Security. Below you have more details extracted from the SearchSecurity web site: Information security depends on the security and management of the physical space in which computer systems operate. Domain 9 of the CISSP exam's Common Body of Knowledge addresses the challenges of securing the physical space, its systems and the people who work within it by use of administrative, technical and physical controls. The following QUESTION NO: s are covered:

Facilities management: The administrative processes that govern the maintenance and protection of the physical operations space, from site selection through emergency response.

Risks, issues and protection strategies: Risk identification and the selection of security protection components.

Perimeter security: Typical physical protection controls.

Facilities management

Facilities management is a complex component of corporate security that ranges from the planning of a secure physical site to the management of the physical information system environment. Facilities management responsibilities include site selection and physical security planning (i.e. facility construction, design and layout, fire and water damage protection, antitheft mechanisms, intrusion detection and security procedures.) Protections must extend to both people and assets. The necessary level of protection depends on the value of the assets and data. CISSP® candidates must learn the concept of critical-path analysis as a means of determining a component's business function criticality relative to the cost of operation and replacement. Furthermore, students need to gain an understanding of the optimal location and physical attributes of a secure facility. Among the QUESTION NO: s covered in this domain are site inspection, location, accessibility and obscurity, considering the area crime rate, and the likelihood of natural hazards such as floods or earthquakes.

This domain also covers the quality of construction material, such as its protective qualities and load capabilities, as well as how to lay out the structure to minimize risk of forcible entry and accidental damage. Regulatory compliance is also touched on, as is preferred proximity to civil protection services, such as fire and police stations. Attention is given to computer and equipment rooms, including their location, configuration (entrance/egress requirements) and their proximity to wiring distribution centers at the site.

Physical risks, issues and protection strategies

An overview of physical security risks includes risk of theft, service interruption, physical damage, compromised system integrity and unauthorized disclosure of information. Interruptions to business can manifest due to loss of power, services, telecommunications connectivity and water supply. These can also seriously compromise electronic security monitoring alarm/response devices. Backup options are also covered in this domain, as is a strategy for quantifying the risk exposure by simple formula.

Investment in preventive security can be costly. Appropriate redundancy of people skills, systems and infrastructure must be based on the criticality of the data and assets to be preserved. Therefore a strategy is presented that helps determine the selection of cost appropriate controls. Among the QUESTION NO: s covered in this domain are regulatory and legal requirements, common standard security protections such as locks and fences, and the importance of establishing service level agreements for maintenance and disaster support. Rounding out the optimization approach are simple calculations for determining mean time between failure and mean time to repair (used to estimate average equipment life expectancy) — essential for estimating the cost/benefit of purchasing and maintaining redundant equipment.

As the lifeblood of computer systems, special attention is placed on adequacy, quality and protection of power supplies. CISSP candidates need to understand power supply concepts and terminology, including those for quality (i.e. transient noise vs. clean power); types of interference (EMI and RFI); and types of interruptions such as power excess by spikes and surges, power loss by fault or blackout, and power degradation from sags and brownouts. A simple formula is presented for determining the total cost per hour for backup power. Proving power reliability through testing is recommended and the advantages of three power protection approaches are discussed (standby UPS, power line conditioners and backup sources) including minimum requirements for primary and alternate power provided.

Environmental controls are explored in this domain, including the value of positive pressure water drains and climate monitoring devices used to control temperature, humidity and reduce static electricity. Optimal temperatures and humidity settings are provided.

Recommendations include strict procedures during emergencies, preventing typical risks (such as blocked fans), and the use of antistatic armbands and hygrometers. Positive pressurization for proper ventilation and monitoring for air born contaminants is stressed.

The pros and cons of several detection response systems are deeply explored in this domain. The concept of combustion, the classes of fire and fire extinguisher ratings are detailed. Mechanisms behind smoke-activated, heat-activated and flame-activated devices and Automatic Dial-up alarms are covered, along with their advantages, costs and shortcomings. Types of fire sources are distinguished and the effectiveness of fire suppression methods for each is included. For instance, Halon and its approved replacements are covered, as are the advantages and the inherent risks to equipment of the use of water sprinklers.

Administrative controls

The physical security domain also deals with administrative controls applied to physical sites and assets. The need for skilled personnel, knowledge sharing between them, separation of duties, and appropriate oversight in the care and maintenance of equipment and environments is stressed. A list of management duties including hiring checks, employee maintenance activities and recommended termination procedures is offered. Emergency measures include accountability for evacuation and system shutdown procedures, integration with disaster and business continuity plans, assuring documented procedures are easily available during different types of emergencies, the scheduling of periodic equipment testing, administrative reviews of documentation, procedures and recovery plans, responsibilities delegation, and personnel training and drills.

Perimeter security

Domain nine also covers the devices and techniques used to control access to a space. These include access control devices, surveillance monitoring, intrusion detection and corrective actions. Specifications are provided for optimal external boundary protection, including fence heights and placement, and lighting placement and types. Selection of door types and lock characteristics are covered. Surveillance methods and intrusion-detection methods are explained, including the use of video monitoring, guards, dogs, proximity detection systems, photoelectric/photometric systems, wave pattern devices, passive infrared systems, and sound and motion detectors, and current flow sensitivity devices that specifically address computer theft. Room lock types — both preset and cipher locks (and their variations) -- device locks, such as portable laptop locks, lockable server bays, switch control locks and slot locks, port controls, peripheral switch controls and cable trap locks are also covered. Personal access control methods used to identify authorized users for site entry are covered at length, noting social engineering risks such as piggybacking. Wireless proximity devices, both user access and system sensing readers are covered (i.e. transponder based, passive devices and field powered devices) in this domain.

Now that you've been introduced to the key concepts of Domain 9, watch the Domain 9, Physical Security video

Return to the CISSP Essentials Security School main page

See all SearchSecurity.com's resources on CISSP certification training Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, 2001, Page 280.

NEW QUESTION 9

- (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 scarring 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 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 10

- (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 10

- (Topic 1)

Which of the following biometric characteristics cannot be used to uniquely authenticate an individual's identity?

- A. Retina scans
- B. Iris scans
- C. Palm scans
- D. Skin scans

Answer: D

Explanation:

The following are typical biometric characteristics that are used to uniquely authenticate an individual's identity:

Fingerprints Retina scans Iris scans Facial scans Palm scans Hand geometry Voice

Handwritten signature dynamics

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

And: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, 2002, chapter 4: Access Control (pages 127-131).

NEW QUESTION 14

- (Topic 1)

Which of the following is most affected by denial-of-service (DOS) attacks?

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

Answer: D

Explanation:

Denial of service attacks obviously affect availability of targeted systems. 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 61).

NEW QUESTION 19

- (Topic 1)

Which of the following offers advantages such as the ability to use stronger passwords, easier password administration, one set of credential, and faster resource access?

- A. Smart cards
- B. Single Sign-On (SSO)
- C. Symmetric Ciphers
- D. Public Key Infrastructure (PKI)

Answer: B

Explanation:

The advantages of SSO include having the ability to use stronger passwords, easier administration as far as changing or deleting the passwords, minimize the risks of orphan accounts, and requiring less time to access resources.

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 20

- (Topic 1)

Which of the following is a trusted, third party authentication protocol that was developed under Project Athena at MIT?

- A. Kerberos
- B. SESAME
- C. KryptoKnight
- D. NetSP

Answer: A

Explanation:

Kerberos is a trusted, third party authentication protocol that was developed under Project Athena at MIT.

Kerberos is a network authentication protocol. It is designed to provide strong authentication for client/server applications by using secret-key cryptography. A free implementation of this protocol is available from the Massachusetts Institute of Technology. Kerberos is available in many commercial products as well.

The Internet is an insecure place. Many of the protocols used in the Internet do not provide any security. Tools to "sniff" passwords off of the network are in common use by systems crackers. Thus, applications which send an unencrypted password over the network are extremely vulnerable. Worse yet, other client/server applications rely on the client program to be "honest" about the identity of the user who is using it. Other applications rely on the client to restrict its activities to those which it is allowed to do, with no other enforcement by the server.

Some sites attempt to use firewalls to solve their network security problems. Unfortunately, firewalls assume that "the bad guys" are on the outside, which is often a very bad

assumption. Most of the really damaging incidents of computer crime are carried out by insiders. Firewalls also have a significant disadvantage in that they restrict how your users can use the Internet. (After all, firewalls are simply a less extreme example of the dictum that there is nothing more secure than a computer which is not connected to the network --- and powered off!) In many places, these restrictions are simply unrealistic and unacceptable.

Kerberos was created by MIT as a solution to these network security problems. The Kerberos protocol uses strong cryptography so that a client can prove its identity to a server (and vice versa) across an insecure network connection. After a client and server have used Kerberos to prove their identity, they can also encrypt all of their communications to assure privacy and data integrity as they go about their business.

Kerberos is freely available from MIT, under a copyright permission notice very similar to the one used for the BSD operating and X11 Windowing system. MIT provides Kerberos in source form, so that anyone who wishes to use it may look over the code for themselves and assure themselves that the code is trustworthy. In addition, for those who prefer to rely on a professional supported product, Kerberos is available as a product from many different vendors.

In summary, Kerberos is a solution to your network security problems. It provides the tools of authentication and strong cryptography over the network to help you secure your information systems across your entire enterprise. We hope you find Kerberos as useful as it has been to us. At MIT, Kerberos has been invaluable to our Information/Technology architecture.

KryptoKnight is a Peer to Peer authentication protocol incorporated into the NetSP product from IBM.

SESAME is an authentication and access control protocol, that also supports communication confidentiality and integrity. It provides public key based authentication along with the Kerberos style authentication, that uses symmetric key cryptography. Sesame supports the Kerberos protocol and adds some security extensions like public key based authentication and an ECMA-style Privilege Attribute Service. The complete Sesame protocol is a two step process. In the first step, the client successfully authenticates itself to the Authentication Server and obtains a ticket that can be presented to the Privilege Attribute Server. In the second step, the initiator obtains proof of his access rights in the form of Privilege Attributes Certificate (PAC). The PAC is a specific form of Access Control Certificate as defined in the ECMA-219 document. This document describes the extensions to Kerberos for public key based authentication as adopted in Sesame. SESAME, KryptoKnight, and NetSP never took off and the protocols are no longer commonly used.

References:

<http://www.cmf.nrl.navy.mil/CCS/people/kenh/kerberos-faq.html#whatis> and

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 40.

NEW QUESTION 25

- (Topic 1)

Which of the following is an example of a passive attack?

- A. Denying services to legitimate users
- B. Shoulder surfing
- C. Brute-force password cracking
- D. Smurfing

Answer: B

Explanation:

Shoulder surfing is a form of a passive attack involving stealing passwords, personal identification numbers or other confidential information by looking over someone's shoulder. All other forms of attack are active attacks, where a threat makes a modification to the system in an attempt to take advantage of a

vulnerability.

Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw- Hill/Osborne, 2002, chapter 3: Security Management Practices (page 63).

NEW QUESTION 27

- (Topic 1)

What does the (star) property mean in the Bell-LaPadula model?

- A. No write up
- B. No read up
- C. No write down
- D. No read down

Answer: C

Explanation:

The (star) property of the Bell-LaPadula access control model states that writing of information by a subject at a higher level of sensitivity to an object at a lower level of sensitivity is not permitted (no write down).

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 5: Security Architectures and Models (page 202).

Also check out: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw- Hill/Osborne, 2002, Chapter 5: Security Models and Architecture (page 242, 243).

NEW QUESTION 29

- (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 34

- (Topic 1)

What is the most critical characteristic of a biometric identifying system?

- A. Perceived intrusiveness
- B. Storage requirements
- C. Accuracy
- D. Scalability

Answer: C

Explanation:

Accuracy is the most critical characteristic of a biometric identifying verification system.

Accuracy is measured in terms of false rejection rate (FRR, or type I errors) and false acceptance rate (FAR or type II errors).

The Crossover Error Rate (CER) is the point at which the FRR equals the FAR and has become the most important measure of biometric system accuracy.

Source: TIPTON, Harold F. & KRAUSE, Micki, Information Security Management Handbook, 4th edition (volume 1), 2000, CRC Press, Chapter 1, Biometric Identification (page 9).

NEW QUESTION 39

- (Topic 1)

In biometrics, the "one-to-one" search used to verify claim to an identity made by a person is considered:

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

Answer: A

Explanation:

Biometric devices can be use for either IDENTIFICATION or AUTHENTICATION

ONE TO ONE is for AUTHENTICATION

This means that you as a user would provide some biometric credential such as your fingerprint. Then they will compare the template that you have provided with the one stored in the Database. If the two are exactly the same that prove that you are who you pretend to be.

ONE TO MANY is for IDENTIFICATION

A good example of this would be within airport. Many airports today have facial recognition cameras, as you walk through the airport it will take a picture of your face and then compare the template (your face) with a database full of templates and see if there is a match between your template and the ones stored in the Database. This is for IDENTIFICATION of a person.

Some additional clarification or comments that might be helpful are: Biometrics establish authentication using specific information and comparing results to

expected data. It does not perform well for identification purposes such as scanning for a person's face in a moving crowd for example. Identification methods could include: username, user ID, account number, PIN, certificate, token, smart card, biometric device or badge. Auditing is a process of logging or tracking what was done after the identity and authentication process is completed. Authorization is the rights the subject is given and is performed after the identity is established.

Reference OIG (2007) p148, 167

Authentication in biometrics is a "one-to-one" search to verify claim to an identity made by a person.

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 43

- (Topic 1)

Controls to keep password sniffing attacks from compromising computer systems include which of the following?

- A. static and recurring passwords.
- B. encryption and recurring passwords.
- C. one-time passwords and encryption.
- D. static and one-time passwords.

Answer: C

Explanation:

To minimize the chance of passwords being captured one-time passwords would prevent a password sniffing attack because once used it is no longer valid. Encryption will also minimize these types of attacks.

The following answers are correct:

static and recurring passwords. This is incorrect because if there is no encryption then someone password sniffing would be able to capture the password much easier if it never changed.

encryption and recurring passwords. This is incorrect because while encryption helps, recurring passwords do nothing to minimize the risk of passwords being captured.

static and one-time passwords. This is incorrect because while one-time passwords will prevent these types of attacks, static passwords do nothing to minimize the risk of passwords being captured.

NEW QUESTION 47

- (Topic 1)

Which of the following is NOT a type of motion detector?

- A. Photoelectric sensor
- B. Passive infrared sensors
- C. Microwave Sensor.
- D. Ultrasonic Sensor.

Answer: A

Explanation:

A photoelectric sensor does not "directly" sense motion there is a narrow beam that won't set off the sensor unless the beam is broken. Photoelectric sensors, along with dry contact switches, are a type of perimeter intrusion detector.

All of the other answers are valid types of motion detectors types.

The content below on the different types of sensors is from Wikipedia: Indoor Sensors

These types of sensors are designed for indoor use. Outdoor use would not be advised due to false alarm vulnerability and weather durability. Passive infrared detectors



C:\Users\MCS\Desktop\1.jpg Passive Infrared Sensor

The passive infrared detector (PIR) is one of the most common detectors found in household and small business environments because it offers affordable and reliable functionality. The term passive means the detector is able to function without the need to generate and radiate its own energy (unlike ultrasonic and microwave volumetric intrusion detectors that are "active" in operation). PIRs are able to distinguish if an infrared emitting object is present by first learning the ambient temperature of the monitored space and then detecting a change in the temperature caused by the presence of an object. Using the principle of differentiation, which is a check of presence or nonpresence, PIRs verify if an intruder or object is actually there. Creating individual zones of detection where each zone comprises one or more layers can achieve differentiation. Between the zones there are areas of no sensitivity (dead zones) that are used by the sensor for comparison.

Ultrasonic detectors

Using frequencies between 15 kHz and 75 kHz, these active detectors transmit ultrasonic sound waves that are inaudible to humans. The Doppler shift principle is the underlying method of operation, in which a change in frequency is detected due to object motion. This is caused when a moving object changes the frequency of sound waves around it. Two conditions must occur to successfully detect a Doppler shift event:

There must be motion of an object either towards or away from the receiver.

The motion of the object must cause a change in the ultrasonic frequency to the receiver relative to the transmitting frequency.

The ultrasonic detector operates by the transmitter emitting an ultrasonic signal into the area to be protected. The sound waves are reflected by solid objects (such as the surrounding floor, walls and ceiling) and then detected by the receiver. Because ultrasonic waves are transmitted through air, then hard-surfaced objects tend to reflect most of the ultrasonic energy, while soft surfaces tend to absorb most energy.

When the surfaces are stationary, the frequency of the waves detected by the receiver will be equal to the transmitted frequency. However, a change in frequency will occur as a result of the Doppler principle, when a person or object is moving towards or away from the detector. Such an event initiates an alarm signal. This technology is considered obsolete by many alarm professionals, and is not actively installed.

Microwave detectors

This device emits microwaves from a transmitter and detects any reflected microwaves or reduction in beam intensity using a receiver. The transmitter and receiver are usually combined inside a single housing (monostatic) for indoor applications, and separate housings (bistatic) for outdoor applications. To reduce false alarms this type of detector is usually combined with a passive infrared detector or "Dualtec" alarm.

Microwave detectors respond to a Doppler shift in the frequency of the reflected energy, by a phase shift, or by a sudden reduction of the level of received energy. Any of these effects may indicate motion of an intruder.

Photo-electric beams

Photoelectric beam systems detect the presence of an intruder by transmitting visible or infrared light beams across an area, where these beams may be obstructed. To improve the detection surface area, the beams are often employed in stacks of two or more. However, if an intruder is aware of the technology's presence, it can be avoided. The technology can be an effective long-range detection system, if installed in stacks of three or more where the transmitters and receivers are staggered to create a fence-like barrier. Systems are available for both internal and external applications. To prevent a clandestine attack using a secondary light source being used to hold the detector in a 'sealed' condition whilst an intruder passes through, most systems use and detect a modulated light source.

Glass break detectors

The glass break detector may be used for internal perimeter building protection. When glass breaks it generates sound in a wide band of frequencies. These can range from infrasonic, which is below 20 hertz (Hz) and can not be heard by the human ear, through the audio band from 20 Hz to 20 kHz which humans can hear, right up to ultrasonic, which is above 20 kHz and again cannot be heard. Glass break acoustic detectors are mounted in close proximity to the glass panes and listen for sound frequencies associated with glass breaking. Seismic glass break detectors are different in that they are installed on the glass pane. When glass breaks it produces specific shock frequencies which travel through the glass and often through the window frame and the surrounding walls and ceiling. Typically, the most intense frequencies generated are between 3 and 5 kHz, depending on the type of glass and the presence of a plastic interlayer. Seismic glass break detectors "feel" these shock frequencies and in turn generate an alarm condition.

The more primitive detection method involves gluing a thin strip of conducting foil on the inside of the glass and putting low-power electrical current through it.

Breaking the glass is practically guaranteed to tear the foil and break the circuit.

Smoke, heat, and carbon monoxide detectors



C:\Users\MCS\Desktop\1.jpg Heat Detection System

Most systems may also be equipped with smoke, heat, and/or carbon monoxide detectors. These are also known as 24 hour zones (which are on at all times). Smoke detectors and heat detectors protect from the risk of fire and carbon monoxide detectors protect from the risk of carbon monoxide. Although an intruder alarm panel may also have these detectors connected, it may not meet all the local fire code requirements of a fire alarm system.

Other types of volumetric sensors could be:

Active Infrared

Passive Infrared/Microwave combined Radar

Acoustical Sensor/Audio Vibration Sensor (seismic) Air Turbulence

NEW QUESTION 48

- (Topic 1)

A network-based vulnerability assessment is a type of test also referred to as:

- A. An active vulnerability assessment.
- B. A routing vulnerability assessment.
- C. A host-based vulnerability assessment.
- D. A passive vulnerability assessment.

Answer: A

Explanation:

A network-based vulnerability assessment tool/system either re-enacts system attacks, noting and recording responses to the attacks, or probes different targets to infer weaknesses from their responses.

Since the assessment is actively attacking or scanning targeted systems, network-based vulnerability assessment systems are also called active vulnerability systems.

There are mostly two main types of test:

PASSIVE: You don't send any packet or interact with the remote target. You make use of public database and other techniques to gather information about your target.

ACTIVE: You do send packets to your target, you attempt to stimulate response which will help you in gathering information about hosts that are alive, services runnings, port state, and more.

See example below of both types of attacks:

Eavesdropping and sniffing data as it passes over a network are considered passive attacks because the attacker is not affecting the protocol, algorithm, key, message, or any parts of the encryption system. Passive attacks are hard to detect, so in most cases methods are put in place to try to prevent them rather than to detect and stop them.

Altering messages , modifying system files, and masquerading as another individual are acts that are considered active attacks because the attacker is actually doing something instead of sitting back and gathering data. Passive attacks are usually used to gain information prior to carrying out an active attack.

IMPORTANT NOTE:

On the commercial vendors will sometimes use different names for different types of scans. However, the exam is product agnostic. They do not use vendor terms but general terms. Experience could trick you into selecting the wrong choice sometimes. See feedback from Jason below:

"I am a system security analyst. It is my daily duty to perform system vulnerability analysis. We use Nessus and Retina (among other tools) to perform our network based vulnerability scanning. Both commercially available tools refer to a network based vulnerability scan as a "credentialed" scan. Without credentials, the scan tool cannot login to the system being scanned, and as such will only receive a port scan to see what ports are open and exploitable"

Reference(s) used for this question:

Harris, Shon (2012-10-18). CISSP All-in-One Exam Guide, 6th Edition (p. 865). McGraw- Hill. Kindle Edition.

and
DUPUIS, Clement, Access Control Systems and Methodology CISSP Open Study Guide, version 1.0, march 2002 (page 97).

NEW QUESTION 52

- (Topic 1)

Which one of the following authentication mechanisms creates a problem for mobile users?

- A. Mechanisms based on IP addresses
- B. Mechanism with reusable passwords
- C. one-time password mechanism.
- D. challenge response mechanism.

Answer: A

Explanation:

Anything based on a fixed IP address would be a problem for mobile users because their location and its associated IP address can change from one time to the next. Many providers will assign a new IP every time the device would be restarted. For example an insurance adjuster using a laptop to file claims online. He goes to a different client each time and the address changes every time he connects to the ISP.

NOTE FROM CLEMENT:

The term MOBILE in this case is synonymous with Road Warriors where a user is constantly traveling and changing location. With smartphone today that may not be an issue but it would be an issue for laptops or WIFI tablets. Within a carrier network the IP will tend to be the same and would change rarely. So this question is more applicable to devices that are not cellular devices but in some cases this issue could affect cellular devices as well.

The following answers are incorrect:

mechanism with reusable password. This is incorrect because reusable password mechanism would not present a problem for mobile users. They are the least secure and change only at specific interval.

one-time password mechanism. This is incorrect because a one-time password mechanism would not present a problem for mobile users. Many are based on a clock and not on the IP address of the user.

challenge response mechanism. This is incorrect because challenge response mechanism would not present a problem for mobile users.

NEW QUESTION 53

- (Topic 1)

Which of the following access control models is based on sensitivity labels?

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

Answer: B

Explanation:

Access decisions are made based on the clearance of the subject and the sensitivity label of the object.

Example: Eve has a "Secret" security clearance and is able to access the "Mugwump Missile Design Profile" because its sensitivity label is "Secret." She is denied access to the "Presidential Toilet Tissue Formula" because its sensitivity label is "Top Secret."

The other answers are not correct because:

Discretionary Access Control is incorrect because in DAC access to data is determined by the data owner. For example, Joe owns the "Secret Chili Recipe" and grants read access to Charles.

Role Based Access Control is incorrect because in RBAC access decisions are made based on the role held by the user. For example, Jane has the role "Auditor" and that role includes read permission on the "System Audit Log."

Rule Based Access Control is incorrect because it is a form of MAC. A good example would be a Firewall where rules are defined and apply to anyone connecting through the firewall.

References:

All in One third edition, page 164. Official ISC2 Guide page 187.

NEW QUESTION 54

- (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, securityawareness 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 59

- (Topic 1)
What does the Clark-Wilson security model focus on?

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

Answer: B

Explanation:

The Clark-Wilson model addresses integrity. It incorporates mechanisms to enforce internal and external consistency, a separation of duty, and a mandatory integrity policy.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 5: Security Architectures and Models (page 205).

NEW QUESTION 60

- (Topic 1)
Which of the following biometric devices has the lowest user acceptance level?

- A. Retina Scan
- B. Fingerprint scan
- C. Hand geometry
- D. Signature recognition

Answer: A

Explanation:

According to the cited reference, of the given options, the Retina scan has the lowest user acceptance level as it is needed for the user to get his eye close to a device and it is not user friendly and very intrusive.
However, retina scan is the most precise with about one error per 10 millions usage. Look at the 2 tables below. If necessary right click on the image and save it on your desktop for a larger view or visit the web site directly at <https://sites.google.com/site/biometricsecuritysolutions/crossover-accuracy> . Biometric Comparison Chart

BIOMETRICS COMPARISON CHART								
Biometric	Verify	ID	Accuracy	Reliability	Error Rate	Errors	False Pos.	False Neg.
Fingerprint	Yes	Yes	Very High	High	1 in 500+	dryness, dirt, age	Ext. Diff.	Ext. Diff.
Facial Recognition	Yes	No	High	Medium	no data	lighting, age, glasses, hair	Difficult	Easy
Hand Geometry	Yes	No	High	Medium	1 in 100	hand injury, age	Very Diff.	Medium
Speaker Recognition	Yes	No	Medium	Low	1 in 50	noise, weather, colds	Medium	Easy
Iris Scan	Yes	Yes	Very High	High	1 in 131,000	poor lighting	Very Diff.	Very Diff.
Retinal Scan	Yes	Yes	Very High	High	1 in 10,000,000	glasses	Ext. Diff.	Ext. Diff.
Signature Recognition	Yes	No	Medium	Low	1 in 50	changing signatures	Medium	Easy
Keystroke Recognition	Yes	No	Low	Low	no data	hand injury, tiredness	Difficult	Easy
DNA	Yes	Yes	Very High	High	no data	none	Ext. Diff.	Ext. Diff.

Biometric	Security Level	Long-term Stability	User Acceptance	Intrusive	Ease of Use	Low Cost	Hardware	Standards
Fingerprint	High	High	Medium	Somewhat	High	Yes	Special, cheap	Yes
Facial Recognition	Medium	Medium	Medium	Non	Medium	Yes	Common, cheap	?
Hand Geometry	Medium	Medium	Medium	Non	High	No	Special, mid-price	?
Speaker Recognition	Medium	Medium	High	Non	High	Yes	Common, cheap	?
Iris Scan	High	High	Medium	Non	Medium	No	Special, expensive	?
Retinal Scan	High	High	Medium	Very	Low	No	Special, expensive	?
Signature Recognition	Medium	Medium	Medium	Non	High	Yes	Special, mid-price	?
Keystroke Recognition	Medium	Low	High	Non	High	Yes	Common, cheap	?
DNA	High	High	Low	Extremely	Low	No	Special, expensive	Yes

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Aspect descriptions:	
Verify	Whether or not the Biometric is capable of verification. Verification is the process where an input is compared to specific data previously recorded from the user to see if the person is who they claim to be.
ID	Whether or not the Biometric is capable of identification. Identification is the process where an input is compared to a large data set previously recorded from many people to see which person the user is.
Accuracy	How well the Biometric is able to tell individuals apart. This is partially determined by the amount of information gathered as well as the number of possible different data results.
Reliability	How dependable the Biometric is for recognition purposes.
Error Rate	This is calculated as the crossing point when graphed of false positives and false negatives created using this Biometric.
Errors	Typical causes of errors for this Biometric.
False Pos.	How easy it is to create a false positive reading with this biometric (someone is able to impersonate someone else).
False Neg.	How easy it is to create a false negative reading with this biometric (someone is able to avoid identification as oneself).
Security Level	The highest level of security that this Biometric is capable of working at.
Long-term Stability	How well this Biometric continues to work without data updates over long periods of time.
User Acceptance	How willing the public is to use this Biometric.
Intrusiveness	How much the Biometric is considered to invade one's privacy or require interaction by the user.
Ease of Use	How easy this Biometric is for both the user and the personnel involved.
Low Cost	Whether or not there is a low-cost option for this Biometric to be used.
Hardware	Type and cost of hardware required to use this Biometric.
Standards	Whether or not standards exist for this Biometric.

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Biometric Aspect Descriptions Reference(s) used for this question:
RHODES, Keith A., Chief Technologist, United States General Accounting Office, National Preparedness, Technologies to Secure Federal Buildings, April 2002 (page 10).
and
<https://sites.google.com/site/biometricsecuritysolutions/crossover-accuracy>

NEW QUESTION 65

- (Topic 1)

Which of the following statements pertaining to biometrics is FALSE?

- A. User can be authenticated based on behavior.
- B. User can be authenticated based on unique physical attributes.
- C. User can be authenticated by what he knows.
- D. A biometric system's accuracy is determined by its crossover error rate (CER).

Answer: C

Explanation:

As this is not a characteristic of Biometrics this is the right choice for this question. This is one of the three basic way authentication can be performed and it is not related to Biometrics. Example of something you know would be a password or PIN for example.

Please make a note of the negative 'FALSE' within the question. This question may seem tricky to some of you but you would be amazed at how many people cannot deal with negative questions. There will be a few negative questions within the real exam, just like this one the keyword NOT or FALSE will be in Uppercase to clearly indicate that it is negative.

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 performing authentication (one to one matching) or identification (a one to many matching).

A biometric system scans an attribute or behavior of a person and compares it to a template store within an authentication server database, such template would be created in an earlier enrollment process. Because this system inspects the grooves of a person's fingerprint, the pattern of someone's retina, or the pitches of someone's voice, it has to be extremely sensitive.

The system must perform accurate and repeatable measurements of anatomical or physiological characteristics. This type of sensitivity can easily cause false positives or false negatives. The system must be calibrated so that these false positives and false negatives occur infrequently and the results are as accurate as possible.

There are two types of failures in biometric identification:

False Rejection also called False Rejection Rate (FRR) — The system fail to recognize a legitimate user. While it could be argued that this has the effect of keeping the protected area extra secure, it is an intolerable frustration to legitimate users who are refused access because the scanner does not recognize them.

False Acceptance or False Acceptance Rate (FAR) — This is an erroneous recognition, either by confusing one user with another or by accepting an imposter as a legitimate user.

Physiological Examples:

Unique Physical Attributes:

Fingerprint (Most commonly accepted) Hand Geometry

Retina Scan (Most accurate but most intrusive) Iris Scan

Vascular Scan Behavioral Examples:

Repeated Actions Keystroke Dynamics

(Dwell time (the time a key is pressed) and Flight time (the time between "key up" and the next "key down").

Signature Dynamics

(Stroke and pressure points)

EXAM TIP:

Retina scan devices are the most accurate but also the most invasive biometrics system available today. The continuity of the retinal pattern throughout life and the difficulty in fooling such a device also make it a great long-term, high-security option. Unfortunately, the cost of the proprietary hardware as well the stigma of users thinking it is potentially harmful to the eye makes retinal scanning a bad fit for most situations.

Remember for the exam that fingerprints are the most commonly accepted type of biometrics system.

The other answers are incorrect:

'Users can be authenticated based on behavior.' is incorrect as this choice is TRUE as it pertains to BIOMETRICS.

Biometrics systems makes use of unique physical characteristics or behavior of users.

'User can be authenticated based on unique physical attributes.' is also incorrect as this choice is also TRUE as it pertains to BIOMETRICS. Biometrics systems makes use of unique physical characteristics or behavior of users.

'A biometric system's accuracy is determined by its crossover error rate (CER)' is also incorrect as this is TRUE as it also pertains to BIOMETRICS. The CER is the point at which the false rejection rates and the false acceptance rates are equal. The smaller the value of the CER, the more accurate 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 25353-25356). Auerbach Publications. Kindle Edition.

and

Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 25297-25303). Auerbach Publications. Kindle Edition.

NEW QUESTION 70

- (Topic 1)

Which of the following protocol was used by the INITIAL version of the Terminal Access Controller Access Control System TACACS for communication between clients and servers?

- A. TCP
- B. SSL
- C. UDP
- D. SSH

Answer: C

Explanation:

The original TACACS, developed in the early ARPANet days, had very limited functionality and used the UDP transport. In the early 1990s, the protocol was extended to include additional functionality and the transport changed to TCP.

TACACS is defined in RFC 1492, and uses (either TCP or UDP) port 49 by default. TACACS allows a client to accept a username and password and send a query to a TACACS authentication server, sometimes called a TACACS daemon or simply TACACSD. TACACSD uses TCP and usually runs on port 49. It would determine whether to accept or deny the authentication request and send a response back.

TACACS+

TACACS+ and RADIUS have generally replaced TACACS and XTACACS in more recently built or updated networks. TACACS+ is an entirely new protocol and is not compatible with TACACS or XTACACS. TACACS+ uses the Transmission Control Protocol (TCP) and RADIUS uses the User Datagram Protocol (UDP).

Since TCP is connection oriented

protocol, TACACS+ does not have to implement transmission control. RADIUS, however, does have to detect and correct transmission errors like packet loss, timeout etc. since it rides on UDP which is connectionless.

RADIUS encrypts only the users' password as it travels from the RADIUS client to RADIUS server. All other information such as the username, authorization, accounting are transmitted in clear text. Therefore it is vulnerable to different types of attacks. TACACS+ encrypts all the information mentioned above and therefore does not have the vulnerabilities present in the RADIUS protocol.

RADIUS and TACACS + are client/ server protocols, which means the server portion cannot send unsolicited commands to the client portion. The server portion can only speak when spoken to. Diameter is a peer-based protocol that allows either end to initiate communication. This functionality allows the Diameter server to send a message to the access server to request the user to provide another authentication credential if she is attempting to access a secure resource.

Reference(s) used for this question: <http://en.wikipedia.org/wiki/TACACS>

and

Harris, Shon (2012-10-18). CISSP All-in-One Exam Guide, 6th Edition (p. 239). McGraw- Hill. Kindle Edition.

NEW QUESTION 74

- (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). RABC 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 79

- (Topic 1)

Which of the following is used by RADIUS for communication between clients and servers?

- A. TCP
- B. SSL
- C. UDP
- D. SSH

Answer: C

Explanation:

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

NEW QUESTION 83

- (Topic 1)

Which of the following describes the major disadvantage of many Single Sign-On (SSO) implementations?

- A. Once an individual obtains access to the system through the initial log-on, they have access to all resources within the environment that the account has access to.
- B. The initial logon process is cumbersome to discourage potential intruders.
- C. Once a user obtains access to the system through the initial log-on, they only need to logon to some applications.
- D. Once a user obtains access to the system through the initial log-on, he has to logout from all other systems

Answer: A

Explanation:

Single Sign-On is a distributed Access Control methodology where an individual only has to authenticate once and would have access to all primary and secondary network domains. The individual would not be required to re-authenticate when they needed additional resources. The security issue that this creates is if a fraudster is able to compromise those credential they too would have access to all the resources that account has access to.

All the other answers are incorrect as they are distractors.

NEW QUESTION 88

- (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 93

- (Topic 1)

Which of the following is the most reliable authentication method for remote access?

- A. Variable callback system
- B. Synchronous token
- C. Fixed callback system
- D. Combination of callback and caller ID

Answer: B

Explanation:

A Synchronous token generates a one-time password that is only valid for a short period of time. Once the password is used it is no longer valid, and it expires if not entered in the acceptable time frame.

The following answers are incorrect:

Variable callback system. Although variable callback systems are more flexible than fixed callback systems, the system assumes the identity of the individual unless two-factor authentication is also implemented. By itself, this method might allow an attacker access as a trusted user.

Fixed callback system. Authentication provides assurance that someone or something is who or what he/it is supposed to be. Callback systems authenticate a person, but anyone can pretend to be that person. They are tied to a specific place and phone number, which can be spoofed by implementing call-forwarding.

Combination of callback and Caller ID. The caller ID and callback functionality provides greater confidence and auditability of the caller's identity. By disconnecting and calling back only authorized phone numbers, the system has a greater confidence in the location of the call. However, unless combined with strong authentication, any individual at the location could obtain access.

The following reference(s) were/was used to create this question: Shon Harris AIO v3 p. 140, 548

ISC2 OIG 2007 p. 152-153, 126-127

NEW QUESTION 96

- (Topic 1)

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

- A. you need.
- B. non-trivial
- C. you are.
- D. you can get.

Answer: C

Explanation:

This is more commonly known as biometrics and is one of the most accurate ways to authenticate an individual.

The rest of the answers are incorrect because they not one of the three recognized forms for Authentication.

NEW QUESTION 99

- (Topic 1)

Which TCSEC class specifies discretionary protection?

- A. B2
- B. B1
- C. C2
- D. C1

Answer: D

Explanation:

C1 involves discretionary protection, C2 involves controlled access protection, B1 involves labeled security protection and B2 involves structured protection.

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

NEW QUESTION 102

- (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:279-282

NEW QUESTION 107

- (Topic 1)

Which of the following was developed by the National Computer Security Center (NCSC) for the US Department of Defense ?

- A. TCSEC
- B. ITSEC
- C. DIACAP
- D. NIACAP

Answer: A

Explanation:

The Answer TCSEC; The TCSEC, frequently referred to as the Orange Book, is the centerpiece of the DoD Rainbow Series publications.

Initially issued by the National Computer Security Center (NCSC) an arm of the National Security Agency in 1983 and then updated in 1985, TCSEC was replaced with the development of the Common Criteria international standard originally published in 2005.

References:

KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, pages 197-199.

Wikipedia <http://en.wikipedia.org/wiki/TCSEC>

NEW QUESTION 112

- (Topic 1)

For maximum security design, what type of fence is most effective and cost-effective method (Foot are being used as measurement unit below)?

- A. 3' to 4' high
- B. 6' to 7' high
- C. 8' high and above with strands of barbed wire
- D. Double fencing

Answer: D

Explanation:

The most commonly used fence is the chain linked fence and it is the most affordable. The standard is a six-foot high fence with two-inch mesh square openings. The material should consist of nine-gauge vinyl or galvanized metal. Nine-gauge is a typical fence material installed in residential areas.

Additionally, it is recommended to place barbed wire strands angled out from the top of the fence at a 45° angle and away from the protected area with three strands running across the top. This will provide for a seven-foot fence. There are several variations of the use of “top guards” using V-shaped barbed wire or the use of concertina wire as an enhancement, which has been a replacement for more traditional three strand barbed wire “top guards.”

The fence should be fastened to ridged metal posts set in concrete every six feet with additional bracing at the corners and gate openings. The bottom of the fence should be stabilized against intruders crawling under by attaching posts along the bottom to keep the fence from being pushed or pulled up from the bottom. If the soil is sandy, the bottom edge of the fence should be installed below ground level.

For maximum security design, the use of double fencing with rolls of concertina wire positioned between the two fences is the most effective deterrent and cost-efficient method. In this design, an intruder is required to use an extensive array of ladders and equipment to breach the fences.

Most fencing is largely a psychological deterrent and a boundary marker rather than a barrier, because in most cases such fences can be rather easily penetrated unless added security measures are taken to enhance the security of the fence. Sensors attached to the fence to provide electronic monitoring of cutting or scaling the fence can be used.

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 24416-24431). Auerbach Publications. Kindle Edition.

NEW QUESTION 113

- (Topic 1)

In regards to information classification what is the main responsibility of information (data) owner?

- A. determining the data sensitivity or classification level
- B. running regular data backups
- C. audit the data users
- D. periodically check the validity and accuracy of the data

Answer: A

Explanation:

Making the determination to decide what level of classification the information requires is the main responsibility of the data owner.

The data owner within classification is a person from Management who has been entrusted with a data set that belong to the company. It could be for example the Chief Financial Officer (CFO) who has been entrusted with all financial data or it could be the Human Resource Director who has been entrusted with all Human Resource data. The information owner will decide what classification will be applied to the data based on Confidentiality, Integrity, Availability, Criticality, and Sensitivity of the data.

The Custodian is the technical person who will implement the proper classification on objects in accordance with the Data Owner. The custodian DOES NOT decide what classification to apply, it is the Data Owner who will dictate to the Custodian what is the classification to apply.

NOTE:

The term Data Owner is also used within Discretionary Access Control (DAC). Within DAC it means the person who has created an object. For example, if I create a file on my system then I am the owner of the file and I can decide who else could get access to the file. It is left to my discretion. Within DAC access is granted based solely on the Identity of the subject, this is why sometimes DAC is referred to as Identity Based Access Control.

The other choices were not the best answer

Running regular backups is the responsibility of custodian. Audit the data users is the responsibility of the auditors

Periodically check the validity and accuracy of the data is not one of the data owner responsibility

Reference(s) used for this question:

KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Page 14, Chapter 1: Security Management Practices.

NEW QUESTION 114

- (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 118

- (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 122

- (Topic 1)

Identification and authentication are the keystones of most access control systems. Identification establishes:

- A. User accountability for the actions on the system.
- B. Top management accountability for the actions on the system.
- C. EDP department accountability for the actions of users on the system.
- D. Authentication for actions on the system

Answer: A

Explanation:

Identification and authentication are the keystones of most access control systems. Identification establishes user accountability for the actions on the system.

The control environment can be established to log activity regarding the identification, authentication, authorization, and use of privileges on a system. This can be used to detect the occurrence of errors, the attempts to perform an unauthorized action, or to validate when provided credentials were exercised. The logging system as a detective device provides evidence of actions (both successful and unsuccessful) and tasks that were executed by authorized users.

Once a person has been identified through the user ID or a similar value, she must be authenticated, which means she must prove she is who she says she is.

Three general factors can be used for authentication: something a person knows, something a person has, and something a person is. They are also commonly called authentication by knowledge, authentication by ownership, and authentication by characteristic.

For a user to be able to access a resource, he first must prove he is who he claims to be, has the necessary credentials, and has been given the necessary rights or privileges to perform the actions he is requesting. Once these steps are completed successfully, the user can access and use network resources; however, it is necessary to track the user's activities and enforce accountability for his actions.

Identification describes a method of ensuring that a subject (user, program, or process) is the entity it claims to be. Identification can be provided with the use of a username or account number. To be properly authenticated, the subject is usually required to provide a second piece to the credential set. This piece could be a password, passphrase,

cryptographic key, personal identification number (PIN), anatomical attribute, or token.

These two credential items are compared to information that has been previously stored for this subject. If these credentials match the stored information, the subject is authenticated. But we are not done yet. Once the subject provides its credentials and is properly identified, the system it is trying to access needs to determine if this subject has been given the necessary rights and privileges to carry out the requested actions. The system will look at some type of access control matrix or compare security labels to verify that this subject may indeed access the requested resource and perform the actions it is attempting. If the system determines that the subject may access the resource, it authorizes the subject.

Although identification, authentication, authorization, and accountability have close and complementary definitions, each has distinct functions that fulfill a specific requirement in the process of access control. A user may be properly identified and authenticated to the network, but he may not have the authorization to access the files on the file server. On the other hand, a user may be authorized to access the files on the file server, but until she is properly identified and authenticated, those resources are out of reach.

Reference(s) used for this question:

Schneiter, Andrew (2013-04-15). Official (ISC)2 Guide to the CISSP CBK, Third Edition: Access Control ((ISC)2 Press) (Kindle Locations 889-892). Auerbach Publications. Kindle Edition.

and
Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (Kindle Locations 3875-3878). McGraw-Hill. Kindle Edition.

and
Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (Kindle Locations 3833-3848). McGraw-Hill. Kindle Edition.

and

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 127

- (Topic 1)

When submitting a passphrase for authentication, the passphrase is converted into ...

- A. a virtual password by the system
- B. a new passphrase by the system
- C. a new passphrase by the encryption technology
- D. a real password by the system which can be used forever

Answer: A

Explanation:

Passwords can be compromised and must be protected. In the ideal case, a password should only be used once. The changing of passwords can also fall between these two extremes.

Passwords can be required to change monthly, quarterly, or at other intervals, depending on the criticality of the information needing protection and the password's frequency of use.

Obviously, the more times a password is used, the more chance there is of it being compromised.

It is recommended to use a passphrase instead of a password. A passphrase is more resistant to attacks. The passphrase is converted into a virtual password by the system. Often time the passphrase will exceed the maximum length supported by the system and it must be truncated into a Virtual Password.

Reference(s) used for this question: <http://www.itl.nist.gov/fipspubs/fip112.htm>

and

KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 36 & 37.

NEW QUESTION 130

- (Topic 1)

What is called the use of technologies such as fingerprint, retina, and iris scans to authenticate the individuals requesting access to resources?

- A. Micrometrics
- B. Macrometrics
- C. Biometrics
- D. MicroBiometrics

Answer: C

Explanation:

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 35.

NEW QUESTION 135

- (Topic 1)

In biometric identification systems, at the beginning, it was soon apparent that truly positive identification could only be based on physical attributes of a person.

This raised the necessity of answering 2 questions :

- A. what was the sex of a person and his age
- B. what part of body to be used and how to accomplish identification that is viable
- C. what was the age of a person and his income level
- D. what was the tone of the voice of a person and his habits

Answer: B

Explanation:

Today implementation of fast, accurate reliable and user-acceptable biometric identification systems is already taking place. Unique physical attributes or behavior of a person are used for that purpose.

From: TIPTON, Harold F. & KRAUSE, MICKI, Information Security Management Handbook, 4th Edition, Volume 1, Page 7.

NEW QUESTION 139

- (Topic 1)

Which of the following statements pertaining to access control is false?

- A. Users should only access data on a need-to-know basis.
- B. If access is not explicitly denied, it should be implicitly allowed.
- C. Access rights should be granted based on the level of trust a company has on a subject.
- D. Roles can be an efficient way to assign rights to a type of user who performs certain tasks.

Answer: B

Explanation:

Access control mechanisms should default to no access to provide the necessary level of security and ensure that no security holes go unnoticed. If access is not explicitly allowed, it should be implicitly denied.

Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw- Hill/Osborne, 2002, Chapter 4: Access Control (page 143).

NEW QUESTION 141

- (Topic 1)

A department manager has read access to the salaries of the employees in his/her department but not to the salaries of employees in other departments. A database security mechanism that enforces this policy would typically be said to provide which of the following?

- A. Content-dependent access control
- B. Context-dependent access control
- C. Least privileges access control
- D. Ownership-based access control

Answer: A

Explanation:

When access control is based on the content of an object, it is considered to be content dependent access control.

Content-dependent access control is based on the content itself. The following answers are incorrect:

context-dependent access control. Is incorrect because this type of control is based on what the context is, facts about the data rather than what the object contains.

least privileges access control. Is incorrect because this is based on the least amount of rights needed to perform their jobs and not based on what is contained in the database. ownership-based access control. Is incorrect because this is based on the owner of the data and and not based on what is contained in the database.

References:

OIG CBK Access Control (page 191)

NEW QUESTION 145

- (Topic 1)

Which of the following attacks could capture network user passwords?

- A. Data diddling
- B. Sniffing
- C. IP Spoofing
- D. Smurfing

Answer: B

Explanation:

A network sniffer captures a copy every packet that traverses the network segment the sniffer is connect to.

Sniffers are typically devices that can collect information from a communication medium, such as a network. These devices can range from specialized equipment to basic workstations with customized software.

A sniffer can collect information about most, if not all, attributes of the communication. The most common method of sniffing is to plug a sniffer into an existing network device like a hub or switch. A hub (which is designed to relay all traffic passing through it to all of its ports) will automatically begin sending all the traffic on that network segment to the sniffing device. On the other hand, a switch (which is designed to limit what traffic gets sent to which port) will have to be specially configured to send all traffic to the port where the sniffer is plugged in.

Another method for sniffing is to use a network tap—a device that literally splits a network transmission into two identical streams; one going to the original network destination and the other going to the sniffing device. Each of these methods has its advantages and disadvantages, including cost, feasibility, and the desire to maintain the secrecy of the sniffing activity.

The packets captured by sniffer are decoded and then displayed by the sniffer. Therefore, if the username/password are contained in a packet or packets traversing the segment the sniffer is connected to, it will capture and display that information (and any other information on that segment it can see).

Of course, if the information is encrypted via a VPN, SSL, TLS, or similar technology, the information is still captured and displayed, but it is in an unreadable format.

The following answers are incorrect:

Data diddling involves changing data before, as it is entered into a computer, or after it is extracted.

Spoofing is forging an address and inserting it into a packet to disguise the origin of the communication - or causing a system to respond to the wrong address.

Smurfing would refer to the smurf attack, where an attacker sends spoofed packets to the broadcast address on a gateway in order to cause a denial of service.

The following reference(s) were/was used to create this question: CISA Review manual 2014 Page number 321

Official ISC2 Guide to the CISSP 3rd edition Page Number 153

NEW QUESTION 149

- (Topic 1)

The Orange Book is founded upon which security policy model?

- A. The Biba Model
- B. The Bell LaPadula Model
- C. Clark-Wilson Model
- D. TEMPEST

Answer: B

Explanation:

From the glossary of Computer Security Basics:

The Bell-LaPadula model is the security policy model on which the Orange Book requirements are based. From the Orange Book definition, "A formal state transition model of computer security policy that describes a set of access control rules. In this formal model, the entities in a computer system are divided into abstract sets of subjects and objects. The notion of secure state is defined and it is proven that each state transition preserves security by moving from secure state to secure state; thus, inductively proving the system is secure. A system state is defined to be 'secure' if the only permitted access modes of subjects to objects are in accordance with a specific security policy. In order to determine whether or not a specific access mode is allowed, the clearance of a subject is compared to the classification of the object and a determination is made as to whether the subject is authorized for the specific access mode."

The Biba Model is an integrity model of computer security policy that describes a set of rules. In this model, a subject may not depend on any object or other subject that is less trusted than itself.

The Clark Wilson Model is an integrity model for computer security policy designed for a commercial environment. It addresses such concepts as nondiscretionary access control, privilege separation, and least privilege. TEMPEST is a government program that prevents the compromising electrical and electromagnetic signals that emanate from computers and related equipment from being intercepted and deciphered.

Source: RUSSEL, Deborah & GANGEMI, G.T. Sr., Computer Security Basics, O'Reilly, 1991.

Also: U.S. Department of Defense, Trusted Computer System Evaluation Criteria (Orange Book), DOD 5200.28-STD. December 1985 (also available here).

NEW QUESTION 151

- (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 153

- (Topic 1)

Which of the following floors would be most appropriate to locate information processing facilities in a 6-stories building?

- A. Basement
- B. Ground floor
- C. Third floor
- D. Sixth floor

Answer: C

Explanation:

Your data center should be located in the middle of the facility or the core of a building to provide protection from natural disasters or bombs and provide easier access to emergency crewmembers if necessary. By being at the core of the facility the external wall would act as a secondary layer of protection as well. Information processing facilities should not be located on the top floors of buildings in case of a fire or flooding coming from the roof. Many crimes and theft have also been conducted by simply cutting a large hole on the roof.

They should not be in the basement because of flooding where water has a natural tendency to flow down :-). Even a little amount of water would affect your operation.

Considering the quantity of electrical cabling sitting directly on the cement floor under your raised floor.

The data center should not be located on the first floor due to the presence of the main entrance where people are coming in and out. You have a lot of high traffic areas such as the elevators, the loading docks, cafeteria, coffee shop, etc.. Really a bad location for a data center.

So it was easy to come up with the answer by using the process of elimination where the top, the bottom, and the basement are all bad choices. That left you with only one possible answer which is the third floor.

Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, 5th Edition, Page 425.

NEW QUESTION 157

- (Topic 1)

A central authority determines what subjects can have access to certain objects based on the organizational security policy is called:

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

Answer: C

Explanation:

A central authority determines what subjects can have access to certain objects based on the organizational security policy.

The key focal point of this question is the 'central authority' that determines access rights. Cecilia, one of the quiz users, has sent me feedback informing me that NIST defines MAC as:

"MAC Policy means that Access Control Policy Decisions are made by a CENTRAL AUTHORITY. Which seems to indicate there could be two good answers to this question.

However, if you read the NIST document mentioned in the references below, it is also mentioned that: MAC is the most mentioned NDAC policy. So MAC is a form of NDAC policy.

Within the same document it is also mentioned: "In general, all access control policies other than DAC are grouped in the category of non-discretionary access control (NDAC). As the name implies, policies in this category have rules that are not established at the discretion of the user. Non-discretionary policies establish controls that cannot be changed by users, but only through administrative action."

Under NDAC you have two choices:

Rule Based Access control and Role Based Access Control

MAC is implemented using RULES which makes it fall under RBAC which is a form of NDAC. It is a subset of NDAC.

This question is representative of what you can expect on the real exam where you have more than one choice that seems to be right. However, you have to look closely if one of the choices would be a higher level or if one of the choices falls under one of the other choices. In this case, NDAC is a better choice because MAC is falling under NDAC through the use of Rule Based Access Control.

The following are incorrect answers: MANDATORY ACCESS CONTROL

In Mandatory Access Control, the labels of the object and the clearance of the subject

determine access rights, not a central authority. Although a central authority (better known as the Data Owner) assigns the label to the object, the system does the determination of access rights automatically by comparing the Object label with the Subject clearance. The subject clearance MUST dominate (be equal or higher) than the object being accessed.

The need for a MAC mechanism arises when the security policy of a system dictates that:

* 1. Protection decisions must not be decided by the object owner.

* 2. The system must enforce the protection decisions (i.e., the system enforces the security policy over the wishes or intentions of the object owner).

Usually, a labeling mechanism and a set of interfaces are used to determine access based on the MAC policy; for example, a user who is running a process at the Secret classification should not be allowed to read a file with a label of Top Secret. This is known as the "simple security rule," or "no read up."

Conversely, a user who is running a process with a label of Secret should not be allowed to write to a file with a label of Confidential. This rule is called the "-property" (pronounced

"star property") or "no write down." The *-property is required to maintain system security in an automated environment.

DISCRETIONARY ACCESS CONTROL

In Discretionary Access Control the rights are determined by many different entities, each of the persons who have created files and they are the owner of that file, not one central authority.

DAC leaves a certain amount of access control to the discretion of the object's owner or anyone else who is authorized to control the object's access. For example, it is generally used to limit a user's access to a file; it is the owner of the file who controls other users' accesses to the file. Only those users specified by the owner may have some combination of read, write, execute, and other permissions to the file.

DAC policy tends to be very flexible and is widely used in the commercial and government sectors. However, DAC is known to be inherently weak for two reasons: First, granting read access is transitive; for example, when Ann grants Bob read access to a file, nothing stops Bob from copying the contents of Ann's file to an object that Bob controls. Bob may now grant any other user access to the copy of Ann's file without Ann's knowledge.

Second, DAC policy is vulnerable to Trojan horse attacks. Because programs inherit the identity of the invoking user, Bob may, for example, write a program for Ann that, on the surface, performs some useful function, while at the same time destroys the contents of Ann's files. When investigating the problem, the audit files would indicate that Ann destroyed her own files. Thus, formally, the drawbacks of DAC are as follows:

Discretionary Access Control (DAC) Information can be copied from one object to another; therefore, there is no real assurance on the flow of information in a system.

No restrictions apply to the usage of information when the user has received it.

The privileges for accessing objects are decided by the owner of the object, rather than through a system-wide policy that reflects the organization's security requirements.

ACLs and owner/group/other access control mechanisms are by far the most common mechanism for implementing DAC policies. Other mechanisms, even though not designed with DAC in mind, may have the capabilities to implement a DAC policy.

RULE BASED ACCESS CONTROL

In Rule-based Access Control a central authority could in fact determine what subjects can

have access when assigning the rules for access. However, the rules actually determine the access and so this is not the most correct answer.

RuBAC (as opposed to RBAC, role-based access control) allow users to access systems and information based on pre determined and configured rules. It is important to note that there is no commonly understood definition or formally defined standard for rule-based access control as there is for DAC, MAC, and RBAC.

"Rule-based access" is a generic term applied to systems that allow some form of organization-defined rules, and therefore rule-based access control encompasses a broad range of systems. RuBAC may in fact be combined with other models, particularly RBAC or DAC. A RuBAC system intercepts every access request and compares the rules with the rights of the user to make an access decision. Most of the rule-based access control relies on a security label system, which dynamically composes a set of rules defined by a security policy. Security labels are attached to all objects, including files, directories, and devices.

Sometime roles to subjects (based on their attributes) are assigned as well. RuBAC meets the business needs as well as the technical needs of controlling service access. It allows business rules to be applied to access control—for example, customers who have overdue balances may be denied service access. As a mechanism for MAC, rules of RuBAC cannot be changed by users. The rules can be established by any attributes of a system related to the users such as domain, host, protocol, network, or IP addresses. For example, suppose that a user wants to access an object in another network on the other side of a router. The router employs RuBAC with the rule composed by the network addresses, domain, and protocol to decide whether or not the user can be granted access. If employees change their roles within the organization, their existing authentication credentials remain in effect and do not need to be re configured. Using rules in conjunction with roles adds greater flexibility because rules can be applied to people as well as to devices. Rule-based access control can be combined with role-based access control, such that the role of a user is one of the attributes in rule setting. Some provisions of access control systems have rule-based policy engines in addition to a role-based policy engine and certain implemented dynamic policies [Des03]. For example, suppose that two of the primary types of software users are product engineers and quality engineers. Both groups usually have access to the same data, but they have different roles to perform in relation to the data and the application's function. In addition, individuals within each group have different job responsibilities that may be identified using several types of attributes such as developing programs and testing areas. Thus, the access decisions can be made in real time by a scripted policy that regulates the access between the groups of product engineers and quality engineers, and each individual within these groups. Rules can either replace or complement role-based access control. However, the creation of rules and security policies is also a complex process, so each organization will need to strike the appropriate balance.

References used for this question: <http://csrc.nist.gov/publications/nistir/7316/NISTIR-7316.pdf> and

AIO v3 p162-167 and OIG (2007) p.186-191

also

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 159

- (Topic 1)

Which of the following choices describe a Challenge-response tokens generation?

- A. A workstation or system that generates a random challenge string that the user enters into the token when prompted along with the proper PIN.
- B. A workstation or system that generates a random login id that the user enters when prompted along with the proper PIN.
- C. A special hardware device that is used to generate random text in a cryptography system.
- D. The authentication mechanism in the workstation or system does not determine if the owner should be authenticated.

Answer: A

Explanation:

Challenge-response tokens are:

- A workstation or system generates a random challenge string and the owner enters the string into the token along with the proper PIN.
- The token generates a response that is then entered into the workstation or system.
- The authentication mechanism in the workstation or system then determines if the owner should be authenticated.

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

Also: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, 2002, chapter 4: Access Control (pages 136-137).

NEW QUESTION 163

- (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 168

- (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 173

- (Topic 1)

Which of the following is an example of discretionary access control?

- A. Identity-based access control
- B. Task-based access control
- C. Role-based access control
- D. Rule-based access control

Answer: A

Explanation:

An identity-based access control is an example of discretionary access control that is based on an individual's identity. Identity-based access control (IBAC) is access control based on the identity of the user (typically relayed as a characteristic of the process acting on behalf of that user) where access authorizations to specific objects are assigned based on user identity.

Rule Based Access Control (RuBAC) and Role Based Access Control (RBAC) are examples of non-discretionary access controls.

Rule-based access control is a type of non-discretionary access control because this access is determined by rules and the subject does not decide what those rules will be, the rules are uniformly applied to ALL of the users or subjects.

In general, all access control policies other than DAC are grouped in the category of non-discretionary access control (NDAC). As the name implies, policies in this category have rules that are not established at the discretion of the user. Non-discretionary policies establish controls that cannot be changed by users, but only through administrative action.

Both Role Based Access Control (RBAC) and Rule Based Access Control (RuBAC) fall within Non Discretionary Access Control (NDAC). If it is not DAC or MAC then it is most likely NDAC.

BELOW YOU HAVE A DESCRIPTION OF THE DIFFERENT CATEGORIES:

MAC = Mandatory Access Control

Under a mandatory access control environment, the system or security administrator will define what permissions subjects have on objects. The administrator does not dictate user's access but simply configure the proper level of access as dictated by the Data Owner.

The MAC system will look at the Security Clearance of the subject and compare it with the object sensitivity level or classification level. This is what is called the dominance relationship.

The subject must DOMINATE the object sensitivity level. Which means that the subject must have a security clearance equal or higher than the object he is attempting to access.

MAC also introduces the concept of labels. Every object will have a label attached to them indicating the classification of the object as well as categories that are used to impose the need to know (NTK) principle. Even though a user has a security clearance of Secret it does not mean he would be able to access any Secret documents within the system. He would be allowed to access only Secret documents for which he has a Need To Know, formal approval, and object where the user belongs to one of the categories attached to the object.

If there is no clearance and no labels then IT IS NOT Mandatory Access Control.

Many of the other models can mimic MAC but none of them have labels and a dominance relationship so they are NOT in the MAC category.

DAC = Discretionary Access Control

DAC is also known as: Identity Based access control system.

The owner of an object is defined as the person who created the object. As such the owner has the discretion to grant access to other users on the network. Access will be granted based solely on the identity of those users.

Such system is good for low level of security. One of the major problems is the fact that a user who has access to someone's else file can further share the file with other users without the knowledge or permission of the owner of the file. Very quickly this could become the wild wild west as there is no control on the dissemination of the information.

RBAC = Role Based Access Control

RBAC is a form of Non-Discretionary access control.

Role Based access control usually maps directly with the different types of jobs performed by employees within a company.

For example there might be 5 security administrators within your company. Instead of creating each of their profiles one by one, you would simply create a role and assign the administrators to the role. Once an administrator has been assigned to a role, he will IMPLICITLY inherit the permissions of that role.

RBAC is a great tool for environment where there is a large rotation of employees on a daily basis such as a very large help desk for example.

RBAC or RuBAC = Rule Based Access Control RuBAC is a form of Non-Discretionary access control.

A good example of a Rule Based access control device would be a Firewall. A single set of rules is imposed to all users attempting to connect through the firewall.

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

Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 33. and

NISTIR-7316 at <http://csrc.nist.gov/publications/nistir/7316/NISTIR-7316.pdf> and

http://itlaw.wikia.com/wiki/Identity-based_access_control

NEW QUESTION 178

- (Topic 1)

Almost all types of detection permit a system's sensitivity to be increased or decreased during an inspection process. If the system's sensitivity is increased, such as in a biometric authentication system, the system becomes increasingly selective and has the possibility of generating:

- A. Lower False Rejection Rate (FRR)
- B. Higher False Rejection Rate (FRR)
- C. Higher False Acceptance Rate (FAR)
- D. It will not affect either FAR or FRR

Answer: B

Explanation:

Almost all types of detection permit a system's sensitivity to be increased or decreased during an inspection process. If the system's sensitivity is increased, such as in a biometric authentication system, the system becomes increasingly selective and has a higher False Rejection Rate (FRR).

Conversely, if the sensitivity is decreased, the False Acceptance Rate (FAR) will increase. Thus, to have a valid measure of the system performance, the Cross Over Error (CER) rate is used. The Crossover Error Rate (CER) is the point at which the false rejection rates and the false acceptance rates are equal. The lower the value of the CER, the more accurate the system.

There are three categories of biometric accuracy measurement (all represented as percentages):

False Reject Rate (a Type I Error): When authorized users are falsely rejected as unidentified or unverified.

False Accept Rate (a Type II Error): When unauthorized persons or imposters are falsely accepted as authentic.

Crossover Error Rate (CER): The point at which the false rejection rates and the false acceptance rates are equal. The smaller the value of the CER, the more accurate the system.

NOTE:

Within the ISC2 book they make use of the term Accept or Acceptance and also Reject or Rejection when referring to the type of errors within biometrics. Below we make use of Acceptance and Rejection throughout the text for consistency. However, on the real exam you could see either of the terms.

Performance of biometrics

Different metrics can be used to rate the performance of a biometric factor, solution or application. The most common performance metrics are the False Acceptance Rate FAR and the False Rejection Rate FRR.

When using a biometric application for the first time the user needs to enroll to the system. The system requests fingerprints, a voice recording or another biometric factor from the

operator, this input is registered in the database as a template which is linked internally to a user ID. The next time when the user wants to authenticate or identify himself, the biometric input provided by the user is compared to the template(s) in the database by a matching algorithm which responds with acceptance (match) or rejection (no match).

FAR and FRR

The FAR or False Acceptance rate is the probability that the system incorrectly authorizes a non-authorized person, due to incorrectly matching the biometric input with a valid template. The FAR is normally expressed as a percentage, following the FAR definition this is the percentage of invalid inputs which are incorrectly accepted.

The FRR or False Rejection Rate is the probability that the system incorrectly rejects access to an authorized person, due to failing to match the biometric input provided by the user with a stored template. The FRR is normally expressed as a percentage, following the FRR definition this is the percentage of valid inputs which are incorrectly rejected.

FAR and FRR are very much dependent on the biometric factor that is used and on the technical implementation of the biometric solution. Furthermore the FRR is strongly person dependent, a personal FRR can be determined for each individual.

Take this into account when determining the FRR of a biometric solution, one person is insufficient to establish an overall FRR for a solution. Also FRR might increase due to environmental conditions or incorrect use, for example when using dirty fingers on a fingerprint reader. Mostly the FRR lowers when a user gains more experience in how to use the biometric device or software.

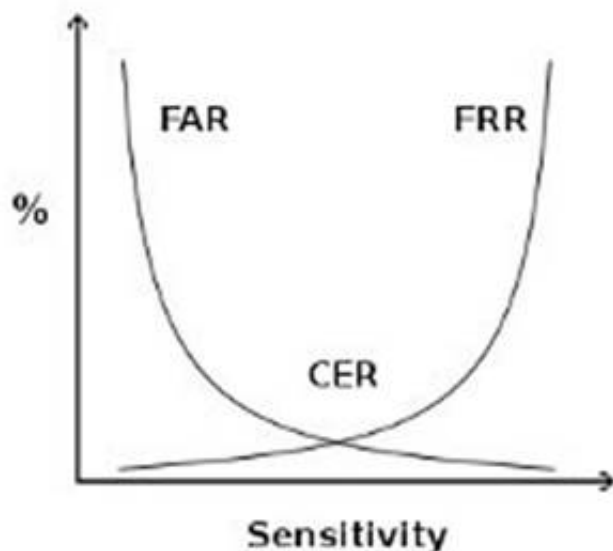
FAR and FRR are key metrics for biometric solutions, some biometric devices or software even allow to tune them so that the system more quickly matches or rejects. Both FRR and FAR are important, but for most applications one of them is considered most important. Two examples to illustrate this:

When biometrics are used for logical or physical access control, the objective of the application is to disallow access to unauthorized individuals under all circumstances. It is clear that a very low FAR is needed for such an application, even if it comes at the price of a higher FRR.

When surveillance cameras are used to screen a crowd of people for missing children, the objective of the application is to identify any missing children that come up on the screen. When the identification of those children is automated using a face recognition software, this software has to be set up with a low FRR. As such a higher number of matches will be false positives, but these can be reviewed quickly by surveillance personnel.

False Acceptance Rate is also called False Match Rate, and False Rejection Rate is sometimes referred to as False Non-Match Rate.

crossover error rate



crossover error rate

Above see a graphical representation of FAR and FRR errors on a graph, indicating the CER

CER

The Crossover Error Rate or CER is illustrated on the graph above. It is the rate where both FAR and FRR are equal.

The matching algorithm in a biometric software or device uses a (configurable) threshold which determines how close to a template the input must be for it to be considered a match. This threshold value is in some cases referred to as sensitivity, it is marked on the X axis of the plot. When you reduce this threshold there will be more false acceptance errors (higher FAR) and less false rejection errors (lower FRR), a higher threshold will lead to lower FAR and higher FRR.

Speed

Most manufacturers of biometric devices and softwares can give clear numbers on the time it takes to enroll as well on the time for an individual to be authenticated or identified using their application. If speed is important then take your time to consider this, 5 seconds might seem a short time on paper or when

testing a device but if hundreds of people will use the device multiple times a day the cumulative loss of time might be significant.

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 2723-2731). Auerbach Publications. Kindle Edition.

and

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

and

http://www.biometric-solutions.com/index.php?story=performance_biometrics

NEW QUESTION 182

- (Topic 1)

What are the components of an object's sensitivity label?

- A. A Classification Set and a single Compartment.
- B. A single classification and a single compartment.
- C. A Classification Set and user credentials.
- D. A single classification and a Compartment Set.

Answer: D

Explanation:

Both are the components of a sensitivity label. The following are incorrect:

A Classification Set and a single Compartment. Is incorrect because the nomenclature "Classification Set" is incorrect, there only one classification and it is not a "single compartment" but a Compartment Set.

A single classification and a single compartment. Is incorrect because while there only is one classification, it is not a "single compartment" but a Compartment Set.

A Classification Set and user credentials. Is incorrect because the nomenclature "Classification Set" is incorrect, there only one classification and it is not "user credential" but a Compartment Set. The user would have their own sensitivity label.

NEW QUESTION 185

- (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

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

NEW QUESTION 190

- (Topic 1)

Which type of control is concerned with avoiding occurrences of risks?

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

Answer: C

Explanation:

Preventive controls are concerned with avoiding occurrences of risks while deterrent controls are concerned with discouraging violations. Detecting controls identify occurrences and compensating controls are alternative controls, used to compensate weaknesses in other controls. Supervision is an example of compensating control. Source: TIPTON, Hal, (ISC)2, Introduction to the CISSP Exam presentation.

NEW QUESTION 195

- (Topic 1)

Which of the following remote access authentication systems is the most robust?

- A. TACACS+
- B. RADIUS
- C. PAP
- D. TACACS

Answer: A

Explanation:

TACACS+ is a proprietary Cisco enhancement to TACACS and is more robust than RADIUS. PAP is not a remote access authentication system but a remote node security protocol.

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 122).

NEW QUESTION 200

- (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 202

- (Topic 1)

Which security model ensures that actions that take place at a higher security level do not affect actions that take place at a lower level?

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

Answer: C

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 model ensures that any actions that take place at a higher security level do not affect, or interfere with, actions that take place at a lower level.

It is not concerned with the flow of data, but rather with what a subject knows about the state of the system. So if an entity at a higher security level performs an action, it can not change the state for the entity at the lower level.

The model also addresses the inference attack that occurs when some one has access to some type of information and can infer(guess) something that he does not have the clearance level or authority to know.

The following are incorrect answers:

The Bell-LaPadula model is incorrect. The Bell-LaPadula model is concerned only 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. Information will be allowed to flow only in accordance with the security policy.

The Clark-Wilson model is incorrect. The Clark-Wilson model is concerned with change control and assuring that all modifications to objects preserve integrity by means of well- formed transactions and usage of an access triple (subject - interface - object).

References:

CBK, pp 325 - 326

AIO3, pp. 290 - 291

AIOv4 Security Architecture and Design (page 345)

AIOv5 Security Architecture and Design (pages 347 - 348)

https://en.wikibooks.org/wiki/Security_Architecture_and_Design/Security_Models#Noninterference_Models

NEW QUESTION 204

- (Topic 1)

Kerberos can prevent which one of the following attacks?

- A. tunneling attack.
- B. playback (replay) attack.
- C. destructive attack.
- D. process attack.

Answer: B

Explanation:

Each ticket in Kerberos has a timestamp and are subject to time expiration to

help prevent these types of attacks. The following answers are incorrect:

tunneling attack. This is incorrect because a tunneling attack is an attempt to bypass security and access low-level systems. Kerberos cannot totally prevent these types of attacks.

destructive attack. This is incorrect because depending on the type of destructive attack, Kerberos cannot prevent someone from physically destroying a server.

process attack. This is incorrect because with Kerberos cannot prevent an authorized individuals from running processes.

NEW QUESTION 205

- (Topic 1)

What is called an automated means of identifying or authenticating the identity of a living person based on physiological or behavioral characteristics?

- A. Biometrics
- B. Micrometrics
- C. Macrometrics
- D. MicroBiometrics

Answer: A

Explanation:

The Answer Biometrics; Biometrics are defined as an automated means of identifying or authenticating the identity of a living person based on physiological or behavioral characteristics.

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

NEW QUESTION 207

- (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 distracter.

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

NEW QUESTION 210

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