

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)

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 4

- (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 5

- (Topic 1)

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

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

Answer: B

Explanation:

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

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

also see:

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

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

NEW QUESTION 6

- (Topic 1)

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

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

Answer: A

Explanation:

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

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

Reference(s) used for this question:

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

and

CPTED Guide Book

NEW QUESTION 7

- (Topic 1)

What refers to legitimate users accessing networked services that would normally be restricted to them?

- A. Spoofing
- B. Piggybacking
- C. Eavesdropping
- D. Logon abuse

Answer: D

Explanation:

Unauthorized access of restricted network services by the circumvention of security access controls is known as logon abuse. This type of abuse refers to users who may be internal to the network but access resources they would not normally be allowed. 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 74).

NEW QUESTION 8

- (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 9

- (Topic 1)

In which of the following model are Subjects and Objects identified and the permissions applied to each subject/object combination are specified. Such a model can be used to quickly summarize what permissions a subject has for various system objects.

- A. Access Control Matrix model
- B. Take-Grant model
- C. Bell-LaPadula model
- D. Biba model

Answer: A

Explanation:

An access control matrix is a table of subjects and objects indicating what actions individual subjects can take upon individual objects. Matrices are data structures that programmers implement as table lookups that will be used and enforced by the operating system.

This type of access control is usually an attribute of DAC models. The access rights can be assigned directly to the subjects (capabilities) or to the objects (ACLs).

Capability Table

A capability table specifies the access rights a certain subject possesses pertaining to specific objects. A capability table is different from an ACL because the subject is bound to the capability table, whereas the object is bound to the ACL.

Access control lists (ACLs)

ACLs are used in several operating systems, applications, and router configurations. They are lists of subjects that are authorized to access a specific object, and they define what level of authorization is granted. Authorization can be specific to an individual, group, or role. ACLs map values from the access control matrix to the object.

Whereas a capability corresponds to a row in the access control matrix, the ACL corresponds to a column of the matrix.

NOTE: Ensure you are familiar with the terms Capability and ACLs for the purpose of the exam.

Resource(s) used for this question:

Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (Kindle Locations 5264-5267). McGraw-Hill. Kindle Edition.

or

Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition, Page 229 and

Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 1923-1925). Auerbach Publications. Kindle Edition.

NEW QUESTION 10

- (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 10

- (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

Accoustical Sensor/Audio Vibration Sensor (seismic) Air Turbulence

NEW QUESTION 15

- (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 16

- (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 19

- (Topic 1)

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

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

Answer: C

Explanation:

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

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

NEW QUESTION 21

- (Topic 1)

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

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

Answer: D

Explanation:

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

The following answers are incorrect:

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

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

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

NEW QUESTION 25

- (Topic 1)

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

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

Answer: B

Explanation:

In the lattice model, users are assigned security clearances and the data is classified. Access decisions are made based on the clearance of the user and the classification of the object. Lattice-based access control is an essential ingredient of formal security models such as Bell-LaPadula, Biba, Chinese Wall, etc. The bounds concept comes from the formal definition of a lattice as a "partially ordered set for which every pair of elements has a greatest lower bound and a least upper bound." To see the application, consider a file classified as "SECRET" and a user Joe with a security clearance of "TOP SECRET." Under Bell-LaPadula, Joe's "least upper bound" access to the file is "READ" and his least lower bound is "NO WRITE" (star property).

Role-based access control is incorrect. Under RBAC, the access is controlled by the permissions assigned to a role and the specific role assigned to the user.

Biba access control is incorrect. The Biba integrity model is based on a lattice structure but the context of the question disqualifies it as the best answer.

Content-dependent access control is incorrect. In content dependent access control, the actual content of the information determines access as enforced by the arbiter.

References:

CBK, pp. 324-325.

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

NEW QUESTION 27

- (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 31

- (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 33

- (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 35

- (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 37

- (Topic 1)

What is the main objective of proper separation of duties?

- A. To prevent employees from disclosing sensitive information.
- B. To ensure access controls are in place.
- C. To ensure that no single individual can compromise a system.
- D. To ensure that audit trails are not tampered with.

Answer: C

Explanation:

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

NEW QUESTION 39

- (Topic 1)

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

- A. lighting
- B. fences
- C. training
- D. facility construction materials

Answer: C

Explanation:

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

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

NEW QUESTION 41

- (Topic 1)

The end result of implementing the principle of least privilege means which of the following?

- A. Users would get access to only the info for which they have a need to know
- B. Users can access all systems.
- C. Users get new privileges added when they change positions.
- D. Authorization creep.

Answer: A

Explanation:

The principle of least privilege refers to allowing users to have only the access they need and not anything more. Thus, certain users may have no need to access any of the files on specific systems.

The following answers are incorrect:

Users can access all systems. Although the principle of least privilege limits what access and systems users have authorization to, not all users would have a need to know to access all of the systems. The best answer is still Users would get access to only the info for which they have a need to know as some of the users may not have a need to access a system.

Users get new privileges when they change positions. Although true that a user may indeed require new privileges, this is not a given fact and in actuality a user may require less privileges for a new position. The principle of least privilege would require that the rights required for the position be closely evaluated and where possible rights revoked.

Authorization creep. Authorization creep occurs when users are given additional rights with new positions and responsibilities. The principle of least privilege should actually prevent authorization creep.

The following reference(s) were/was used to create this question: ISC2 OIG 2007 p.101,123
Shon Harris AIO v3 p148, 902-903

NEW QUESTION 45

- (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 50

- (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 53

- (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 54

- (Topic 1)

What can be defined as a list of subjects along with their access rights that are authorized to access a specific object?

- A. A capability table
- B. An access control list
- C. An access control matrix
- D. A role-based matrix

Answer: B

Explanation:

"It [ACL] specifies a list of users [subjects] who are allowed access to each object" CBK, p. 188

A capability table is incorrect. "Capability tables are used to track, manage and apply controls based on the object and rights, or capabilities of a subject. For example, a table identifies the object, specifies access rights allowed for a subject, and permits access based on the user's possession of a capability (or ticket) for the object." CBK, pp. 191-192. The distinction that makes this an incorrect choice is that access is based on possession of a capability by the subject.

To put it another way, as noted in AIO3 on p. 169, "A capability table is different from an ACL because the subject is bound to the capability table, whereas the object is bound to the ACL."

An access control matrix is incorrect. The access control matrix is a way of describing the rules for an access control strategy. The matrix lists the users, groups and roles down the left side and the resources and functions across the top. The cells of the matrix can either indicate that access is allowed or indicate the type of access. CBK pp 317 - 318.

AIO3, p. 169 describes it as a table of subjects and objects specifying the access rights a certain subject possesses pertaining to specific objects.

In either case, the matrix is a way of analyzing the access control needed by a population of subjects to a population of objects. This access control can be applied using rules, ACL's, capability tables, etc.

A role-based matrix is incorrect. Again, a matrix of roles vs objects could be used as a tool for thinking about the access control to be applied to a set of objects.

The results of the analysis could then be implemented using RBAC.

References:

CBK, Domain 2: Access Control. AIO3, Chapter 4: Access Control

NEW QUESTION 55

- (Topic 1)

Which of the following is not a security goal for remote access?

- A. Reliable authentication of users and systems
- B. Protection of confidential data
- C. Easy to manage access control to systems and network resources
- D. Automated login for remote users

Answer: D

Explanation:

An automated login function for remote users would imply a weak authentication, thus certainly not a security goal.

Source: TIPTON, Harold F. & KRAUSE, Micki, Information Security Management Handbook, 4th edition, volume 2, 2001, CRC Press, Chapter 5: An Introduction to Secure Remote Access (page 100).

NEW QUESTION 58

- (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 62

- (Topic 1)

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

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

Answer: B

Explanation:

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

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

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

NEW QUESTION 63

- (Topic 1)

In biometric identification systems, at the beginning, it was soon apparent that truly positive identification could only be based on :

- A. sex of a person
- B. physical attributes of a person
- C. age of a person
- D. voice of a person

Answer: B

Explanation:

Today implementation of fast, accurate reliable and user-acceptable biometric identification systems is already under way.

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

NEW QUESTION 64

- (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 69

- (Topic 1)

Which of the following questions is less likely to help in assessing physical access controls?

- A. Does management regularly review the list of persons with physical access to sensitive facilities?
- B. Is the operating system configured to prevent circumvention of the security software and application controls?
- C. Are keys or other access devices needed to enter the computer room and media library?
- D. Are visitors to sensitive areas signed in and escorted?

Answer: B

Explanation:

Physical security and environmental security are part of operational controls, and are measures taken to protect systems, buildings, and related supporting infrastructures against threats associated with their physical environment. All the questions above are useful in assessing physical access controls except for the one regarding operating system configuration, which is a logical access control.

Source: SWANSON, Marianne, NIST Special Publication 800-26, Security Self- Assessment Guide for Information Technology Systems, November 2001 (Pages A-21 to A-24).

NEW QUESTION 70

- (Topic 1)

Why should batch files and scripts be stored in a protected area?

- A. Because of the least privilege concept.
- B. Because they cannot be accessed by operators.
- C. Because they may contain credentials.
- D. Because of the need-to-know concept.

Answer: C

Explanation:

Because scripts contain credentials, they must be stored in a protected area and the transmission of the scripts must be dealt with carefully. Operators might need access to batch files and scripts. The least privilege concept requires that each subject in a system be granted the most restrictive set of privileges needed for the performance of authorized tasks. The need-to-know principle requires a user having necessity for access to, knowledge of, or possession of specific information required to perform official tasks or services.

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

NEW QUESTION 75

- (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 79

- (Topic 1)

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

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

Answer: B

Explanation:

C deals with discretionary protection. See matrix below:

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

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

TCSEC Matric

The following are incorrect answers:

D is incorrect. D deals with minimal security.

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

CBK, p. 329 ?C 330

and

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

NEW QUESTION 80

- (Topic 1)

This is a common security issue that is extremely hard to control in large environments. It occurs when a user has more computer rights, permissions, and access than what is required for the tasks the user needs to fulfill. What best describes this scenario?

- A. Excessive Rights
- B. Excessive Access
- C. Excessive Permissions
- D. Excessive Privileges

Answer: D

Explanation:

Even thou all 4 terms are very close to each other, the best choice is Excessive Privileges which would include the other three choices presented.

Reference(s) used for this question:

HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, 2001, Page 645.

and

NEW QUESTION 85

- (Topic 1)

Which of the following access control models requires defining classification for objects?

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

Answer: D

Explanation:

With mandatory access control (MAC), the authorization of a subject's access to an object is dependant upon labels, which indicate the subject's clearance, and classification of objects.

The Following answers were incorrect:

Identity-based Access Control is a type of Discretionary Access Control (DAC), they are synonymous.

Role Based Access Control (RBAC) and Rule Based Access Control (RuBAC or RBAC) are types of Non Discretionary Access Control (NDAC).

Tip:

When you have two answers that are synonymous they are not the right choice for sure.

There is only one access control model that makes use of Label, Clearances, and Categories, it is Mandatory Access Control, none of the other one makes use of those items.

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, Chapter 2: Access control systems (page 33).

NEW QUESTION 90

- (Topic 1)

The controls that usually require a human to evaluate the input from sensors or cameras to determine if a real threat exists are associated with:

- A. Preventive/physical
- B. Detective/technical
- C. Detective/physical
- D. Detective/administrative

Answer: C

Explanation:

Detective/physical controls usually require a human to evaluate the input from sensors or cameras to determine if a real threat exists.

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 93

- (Topic 1)

Because all the secret keys are held and authentication is performed on the Kerberos TGS and the authentication servers, these servers are vulnerable to:

- A. neither physical attacks nor attacks from malicious code.
- B. physical attacks only
- C. both physical attacks and attacks from malicious code.
- D. physical attacks but not attacks from malicious code.

Answer: C

Explanation:

Since all the secret keys are held and authentication is performed on the Kerberos TGS and the authentication servers, these servers are vulnerable to both physical attacks and attacks from malicious code.

Because a client's password is used in the initiation of the Kerberos request for the service protocol, password guessing can be used to impersonate a client.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 42.

NEW QUESTION 98

- (Topic 1)

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

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

Answer: D

Explanation:

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

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

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

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

Shon Harris AIO v.3 p.129

ISC2 OIG, 2007 p. 126

NEW QUESTION 101

- (Topic 1)

What does it mean to say that sensitivity labels are "incomparable"?

- A. The number of classification in the two labels is different.
- B. Neither label contains all the classifications of the other.
- C. the number of categories in the two labels are different.
- D. Neither label contains all the categories of the other.

Answer: D

Explanation:

If a category does not exist then you cannot compare it. Incomparable is when you have two disjointed sensitivity labels, that is a category in one of the labels is not in the other label. "Because neither label contains all the categories of the other, the labels can't be compared. They're said to be incomparable"

COMPARABILITY:

The label:

TOP SECRET [VENUS ALPHA]

is "higher" than either of the labels:

SECRET [VENUS ALPHA] TOP SECRET [VENUS]

But you can't really say that the label:

TOP SECRET [VENUS]

is higher than the label:

SECRET [ALPHA]

Because neither label contains all the categories of the other, the labels can't be compared. They're said to be incomparable. In a mandatory access control system, you won't be allowed access to a file whose label is incomparable to your clearance.

The Multilevel Security policy uses an ordering relationship between labels known as the dominance relationship. Intuitively, we think of a label that dominates

another as being "higher" than the other. Similarly, we think of a label that is dominated by another as being "lower" than the other. The dominance relationship is used to determine permitted operations and information flows.

DOMINANCE

The dominance relationship is determined by the ordering of the Sensitivity/Clearance component of the label and the intersection of the set of Compartments.

Sample Sensitivity/Clearance ordering are:

Top Secret > Secret > Confidential > Unclassified s3 > s2 > s1 > s0

Formally, for label one to dominate label 2 both of the following must be true: The sensitivity/clearance of label one must be greater than or equal to the sensitivity/clearance of label two.

The intersection of the compartments of label one and label two must equal the compartments of label two.

Additionally:

Two labels are said to be equal if their sensitivity/clearance and set of compartments are exactly equal. Note that dominance includes equality.

One label is said to strictly dominate the other if it dominates the other but is not equal to the other.

Two labels are said to be incomparable if each label has at least one compartment that is not included in the other's set of compartments.

The dominance relationship will produce a partial ordering over all possible MLS labels, resulting in what is known as the MLS Security Lattice.

The following answers are incorrect:

The number of classification in the two labels is different. Is incorrect because the categories are what is being compared, not the classifications.

Neither label contains all the classifications of the other. Is incorrect because the categories are what is being compared, not the classifications.

the number of categories in the two labels is different. Is incorrect because it is possible a category exists more than once in one sensitivity label and does exist in the other so they would be comparable.

Reference(s) used for this question:

O'Reilly - Computer Systems and Access Control (Chapter 3) <http://www.oreilly.com/catalog/csb/chapter/ch03.html>

and http://rubix.com/cms/mls_dom

NEW QUESTION 102

- (Topic 1)

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

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

Answer: A

Explanation:

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

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

NEW QUESTION 106

- (Topic 1)

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

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

Answer: B

Explanation:

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

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

NEW QUESTION 111

- (Topic 1)

What mechanism automatically causes an alarm originating in a data center to be transmitted over the local municipal fire or police alarm circuits for relaying to both the local police/fire station and the appropriate headquarters?

- A. Central station alarm
- B. Proprietary alarm
- C. A remote station alarm
- D. An auxiliary station alarm

Answer: D

Explanation:

Auxiliary station alarms automatically cause an alarm originating in a data center to be transmitted over the local municipal fire or police alarm circuits for relaying to both the local police/fire station and the appropriate headquarters. They are usually Municipal Fire Alarm Boxes are installed at your business or building, they are wired directly into the fire station.

Central station alarms are operated by private security organizations. It is very similar to a proprietary alarm system (see below). However, the biggest difference is the monitoring and receiving of alarm is done off site at a central location manned by non staff members. It is a third party.

Proprietary alarms are similar to central stations alarms except that monitoring is performed directly on the protected property. This type of alarm is usually use to protect large industrials or commercial buildings. Each of the buildings in the same vicinity has their own alarm system, they are all wired together at a central location within one of the building acting as a common receiving point. This point is usually far away from the other building so it is not under the same danger. It is usually man 24 hours a day by a trained team who knows how to react under different conditions.

A remote station alarm is a direct connection between the signal-initiating device at the protected property and the signal-receiving device located at a remote station, such as the fire station or usually a monitoring service. This is the most popular type of implementation and the owner of the premise must pay a monthly monitoring fee. This is what most people use in their home where they get a company like ADT to receive the alarms on their behalf.

A remote system differs from an auxiliary system in that it does not use the municipal fire or police alarm circuits.

Reference(s) used for this question:

ANDRESS, Mandy, Exam Cram CISSP, Coriolis, 2001, Chapter 11: Physical Security (page 211).

and

Great presentation J.T.A. Stone on SlideShare

NEW QUESTION 113

- (Topic 1)

Which of the following biometric devices offers the LOWEST CER?

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

Answer: C

Explanation:

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

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

Also see: http://www.sans.org/reading_room/whitepapers/authentication/biometric-selection-body-parts-online_139

NEW QUESTION 116

- (Topic 1)

In non-discretionary access control using Role Based Access Control (RBAC), a central authority determines what subjects can have access to certain objects based on the organizational security policy. The access controls may be based on:

- A. The societies role in the organization
- B. The individual's role in the organization
- C. The group-dynamics as they relate to the individual's role in the organization
- D. The group-dynamics as they relate to the master-slave role in the organization

Answer: B

Explanation:

In Non-Discretionary Access Control, when Role Based Access Control is being used, a central authority determines what subjects can have access to certain objects based on the organizational security policy. The access controls may be based on the individual's role in the organization.

Reference(S) used for this question:

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

NEW QUESTION 118

- (Topic 1)

The throughput rate is the rate at which individuals, once enrolled, can be processed and identified or authenticated by a biometric system. Acceptable throughput rates are in the range of:

- A. 100 subjects per minute.
- B. 25 subjects per minute.
- C. 10 subjects per minute.
- D. 50 subjects per minute.

Answer: C

Explanation:

The throughput rate is the rate at which individuals, once enrolled, can be processed and identified or authenticated by a biometric system.

Acceptable throughput rates are in the range of 10 subjects per minute.

Things that may impact the throughput rate for some types of biometric systems may include:

A concern with retina scanning systems may be the exchange of body fluids on the eyepiece.

Another concern would be the retinal pattern that could reveal changes in a person's health, such as diabetes or high blood pressure.

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 119

- (Topic 1)

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

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

Answer: D

Explanation:

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

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

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

A UserId only provides for identification.

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

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

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

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

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

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

NOTE FROM CLEMENT:

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

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

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

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

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

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

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

Something you have (Type 2)

Something you are (Type 3)

Reference(s) used for this question:

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

and

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

NEW QUESTION 120

- (Topic 1)

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

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

Answer: D

Explanation:

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

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

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

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

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

NEW QUESTION 124

- (Topic 1)

What is Kerberos?

- A. A three-headed dog from the egyptian mythology.
- B. A trusted third-party authentication protocol.
- C. A security model.
- D. A remote authentication dial in user server.

Answer: B

Explanation:

Is correct because that is exactly what Kerberos is. The following answers are incorrect:

A three-headed dog from Egyptian mythology. Is incorrect because we are dealing with Information Security and not the Egyptian mythology but the Greek Mythology.

A security model. Is incorrect because Kerberos is an authentication protocol and not just a security model.

A remote authentication dial in user server. Is incorrect because Kerberos is not a remote authentication dial in user server that would be called RADIUS.

NEW QUESTION 129

- (Topic 1)

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

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

Answer: A

Explanation:

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

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

The other answers are not correct because:

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

Reference:

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

All in One Third Edition page: 136 - 137

NEW QUESTION 133

- (Topic 1)

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

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

Answer: D

Explanation:

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

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

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

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

References used for this question:

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

and

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

NEW QUESTION 136

- (Topic 1)

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

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

Answer: D

Explanation:

Authentication is based on the following three factor types:

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

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

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

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

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

NEW QUESTION 141

- (Topic 1)

Which of the following statements pertaining to using Kerberos without any extension is false?

- A. A client can be impersonated by password-guessing.
- B. Kerberos is mostly a third-party authentication protocol.
- C. Kerberos uses public key cryptography.
- D. Kerberos provides robust authentication.

Answer: C

Explanation:

Kerberos is a trusted, credential-based, third-party authentication protocol that uses symmetric (secret) key cryptography to provide robust authentication to clients accessing services on a network.

Because a client's password is used in the initiation of the Kerberos request for the service protocol, password guessing can be used to impersonate a client. Here is a nice overview of HOW Kerberos is implement as described in RFC 4556:

1. Introduction

The Kerberos V5 protocol [RFC4120] involves use of a trusted third party known as the Key Distribution Center (KDC) to negotiate shared session keys between clients and services and provide mutual authentication between them.

The corner-stones of Kerberos V5 are the Ticket and the Authenticator. A Ticket encapsulates a symmetric key (the ticket session key) in an envelope (a public message) intended for a specific service. The contents of the Ticket are encrypted with a symmetric key shared between the service principal and the issuing KDC. The encrypted part of the Ticket contains the client principal name, among other items. An Authenticator is a record that can be shown to have been recently generated using the ticket session key in the associated Ticket. The ticket session key is known by the client who requested the ticket. The contents of the Authenticator are encrypted with the associated ticket session key. The encrypted part of an Authenticator contains a timestamp and the client principal name, among other items.

As shown in Figure 1, below, the Kerberos V5 protocol consists of the following message exchanges between the client and the KDC, and the client and the application service:

The Authentication Service (AS) Exchange

The client obtains an "initial" ticket from the Kerberos authentication server (AS), typically a Ticket Granting Ticket (TGT). The AS-REQ message and the AS-REP message are the request and the reply message, respectively, between the client and the AS.

The Ticket Granting Service (TGS) Exchange

The client subsequently uses the TGT to authenticate and request a service ticket for a particular service, from the Kerberos ticket-granting server (TGS). The TGS-REQ message and the TGS-REP message are the request and the reply message respectively between the client and the TGS.

The Client/Server Authentication Protocol (AP) Exchange

The client then makes a request with an AP-REQ message, consisting of a service ticket and an authenticator that certifies the client's possession of the ticket session key. The server may optionally reply with an AP-REP message. AP exchanges typically negotiate session-specific symmetric keys.

Usually, the AS and TGS are integrated in a single device also known as the KDC.

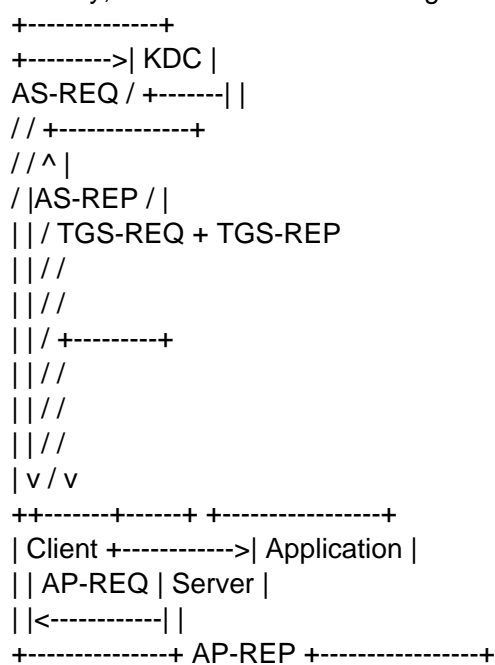


Figure 1: The Message Exchanges in the Kerberos V5 Protocol

In the AS exchange, the KDC reply contains the ticket session key, among other items, that is encrypted using a key (the AS reply key) shared between the client and the KDC. The AS reply key is typically derived from the client's password for human users. Therefore, for human users, the attack resistance strength of the Kerberos protocol is no stronger than the strength of their passwords.

Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access control systems (page 40).

And

HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, 2002, chapter 4: Access Control (pages 147-151).

and <http://www.ietf.org/rfc/rfc4556.txt>

NEW QUESTION 146

- (Topic 1)

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

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

Answer: C

Explanation:

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

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

NEW QUESTION 151

- (Topic 1)

What is the Biba security model concerned with?

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

Answer: D

Explanation:

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

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

NEW QUESTION 155

- (Topic 1)

Which of the following logical access exposures INVOLVES CHANGING data before, or as it is entered into the computer?

- A. Data diddling
- B. Salami techniques
- C. Trojan horses
- D. Viruses

Answer: A

Explanation:

It involves changing data before , or as it is entered into the computer or in

other words , it refers to the alteration of the existing data. The other answers are incorrect because :

Salami techniques : A salami attack is the one in which an attacker commits several small crimes with the hope that the overall larger crime will go unnoticed.

Trojan horses: A Trojan Horse is a program that is disguised as another program. Viruses: A Virus is a small application , or a string of code , that infects applications.

Reference: Shon Harris , AIO v3

Chapter - 11: Application and System Development, Page : 875-880 Chapter - 10: Law, Investigation and Ethics , Page : 758-759

NEW QUESTION 157

- (Topic 1)

Which of the following was developed to address some of the weaknesses in Kerberos and uses public key cryptography for the distribution of secret keys and provides additional access control support?

- A. SESAME
- B. RADIUS
- C. KryptoKnight
- D. TACACS+

Answer: A

Explanation:

Secure European System for Applications in a Multi-vendor Environment (SESAME) was developed to address some of the weaknesses in Kerberos and uses public key cryptography for the distribution of secret keys and provides additional access control support.

Reference:

TIPTON, Harold, Official (ISC)2 Guide to the CISSP CBK (2007), page 184. ISC OIG Second Edition, Access Controls, Page 111

NEW QUESTION 162

- (Topic 1)

In which of the following security models is the subject's clearance compared to the object's classification such that specific rules can be applied to control how the subject-to-object interactions take place?

- A. Bell-LaPadula model
- B. Biba model
- C. Access Matrix model
- D. Take-Grant model

Answer: A

Explanation:

The Bell-LAPadula model is also called a multilevel security system because users with different clearances use the system and the system processes data with different classifications. Developed by the US Military in the 1970s.

A security model maps the abstract goals of the policy to information system terms by specifying explicit data structures and techniques necessary to enforce the security policy. A security model is usually represented in mathematics and analytical ideas, which are mapped to system specifications and then developed by programmers through programming code. So we have a policy that encompasses security goals, such as ??each subject must be authenticated and authorized before accessing an object.?? The security model takes this requirement and provides the necessary mathematical formulas, relationships, and logic structure to be followed to accomplish this goal.

A system that employs the Bell-LaPadula model is called a multilevel security system because users with different clearances use the system, and the system processes data at different classification levels. The level at which information is classified determines the handling procedures that should be used. The Bell-LaPadula model is a state machine model that enforces the confidentiality aspects of access control. A matrix and security levels are used to determine if subjects can access different objects. The subject??s clearance is compared to the object??s classification and then specific rules are applied to control how subject-to-object subject-to-object interactions can take place.

Reference(s) used for this question:

Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (p. 369). McGraw- Hill. Kindle Edition.

NEW QUESTION 164

- (Topic 1)

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

- A. active attack

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

Answer: C

Explanation:

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

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

NEW QUESTION 166

- (Topic 1)

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

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

Answer: A

Explanation:

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

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

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

On an ATM machine, if a user does not have a checking account with the bank he or she will not be shown the ??Withdraw money from checking?? option.

Likewise, an information system might have an ??Add/Remove Users?? menu option for administrators, but if a normal, non-administrative user logs in he or she will not even see that menu option. By not even identifying potential options for non-qualifying users, the system limits the potentially harmful execution of unauthorized system or application commands.

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

The following were incorrect answers:

All of the other choices presented were bogus answers.

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

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

NEW QUESTION 169

- (Topic 1)

The primary service provided by Kerberos is which of the following?

- A. non-repudiation
- B. confidentiality
- C. authentication
- D. authorization

Answer: C

Explanation:

The Answer authentication. Kerberos is an authentication service. It can use single-factor or multi-factor authentication methods.

The following answers are incorrect:

non-repudiation. Since Kerberos deals primarily with symmetric cryptography, it does not help with non-repudiation.

confidentiality. Once the client is authenticated by Kerberos and obtains its session key and ticket, it may use them to assure confidentiality of its communication with a server; however, that is not a Kerberos service as such.

authorization. Although Kerberos tickets may include some authorization information, the meaning of the authorization fields is not standardized in the Kerberos specifications, and authorization is not a primary Kerberos service.

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

ISC2 OIG,2007 p. 179-184

Shon Harris AIO v.3 152-155

NEW QUESTION 172

- (Topic 1)

Which type of control is concerned with restoring controls?

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

Answer: B

Explanation:

Corrective controls are concerned with remedying circumstances and restoring controls.

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

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

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

NEW QUESTION 177

- (Topic 1)

What would be the name of a Logical or Virtual Table dynamically generated to restrict the information a user can access in a database?

- A. Database Management system
- B. Database views
- C. Database security
- D. Database shadowing

Answer: B

Explanation:

The Answer Database views; Database views are mechanisms that restrict access to the information that a user can access in a database. Source: KRUTZ, Ronald L.

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

Wikipedia has a detailed explanation as well:

In database theory, a view is a virtual or logical table composed of the result set of a query. Unlike ordinary tables (base tables) in a relational database, a view is not part of the physical schema: it is a dynamic, virtual table computed or collated from data in the database. Changing the data in a table alters the data shown in the view.

Views can provide advantages over tables; They can subset the data contained in a table

They can join and simplify multiple tables into a single virtual table

Views can act as aggregated tables, where aggregated data (sum, average etc.) are calculated and presented as part of the data

Views can hide the complexity of data, for example a view could appear as Sales2000 or Sales2001, transparently partitioning the actual underlying table

Views do not incur any extra storage overhead

Depending on the SQL engine used, views can provide extra security.

Limit the exposure to which a table or tables are exposed to outer world

Just like functions (in programming) provide abstraction, views can be used to create abstraction. Also, just like functions, views can be nested, thus one view can aggregate data from other views. Without the use of views it would be much harder to normalise databases above second normal form. Views can make it easier to create lossless join decomposition.

NEW QUESTION 178

- (Topic 1)

Which of the following access control models requires security clearance for subjects?

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

Answer: D

Explanation:

With mandatory access control (MAC), the authorization of a subject's access to an object is dependant upon labels, which indicate the subject's clearance.

Identity-based access control is a type of discretionary access control. A role-based access control is a type of non-discretionary access control.

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

NEW QUESTION 180

- (Topic 1)

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

- A. but he is not permitted to specify what objects can be accessible and so we need to get an independent third party to specify what objects can be accessible.
- B. to specify what objects can be accessible.
- C. to specify on a aggregate basis without understanding what objects can be accessible.
- D. to specify in full detail what objects can be accessible.

Answer: B

Explanation:

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

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

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

References:

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

and

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

NEW QUESTION 185

- (Topic 1)

Which of the following questions is less likely to help in assessing physical and environmental protection?

- A. Are entry codes changed periodically?
- B. Are appropriate fire suppression and prevention devices installed and working?
- C. Are there processes to ensure that unauthorized individuals cannot read, copy, alter, or steal printed or electronic information?

D. Is physical access to data transmission lines controlled?

Answer: C

Explanation:

Physical security and environmental security are part of operational controls, and are measures taken to protect systems, buildings, and related supporting infrastructures against threats associated with their physical environment. All the questions above are useful in assessing physical and environmental protection except for the one regarding processes that ensuring that unauthorized individuals cannot access information, which is more a production control.
Source: SWANSON, Marianne, NIST Special Publication 800-26, Security Self- Assessment Guide for Information Technology Systems, November 2001 (Pages A-21 to A-24).

NEW QUESTION 190

- (Topic 1)

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

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

Answer: B

Explanation:

Access controls are meant to protect facilities and computers as well as people.
In some situations, the objectives of physical access controls and the protection of people's lives may come into conflict. In these situations, a person's life always takes precedence.
Many physical security controls make entry into and out of a facility hard, if not impossible. However, special consideration needs to be taken when this could affect lives. In an information processing facility, different types of locks can be used and piggybacking should be prevented, but the issue here with automatic locks is that they can either be configured as fail-safe or fail-secure.
Since there should only be one access door to an information processing facility, the automatic lock to the only door to a man-operated room must be configured to allow people out in case of emergency, hence to be fail-safe (sometimes called fail-open), meaning that upon fire alarm activation or electric power failure, the locking device unlocks. This is because the solenoid that maintains power to the lock to keep it in a locked state fails and thus opens or unlocks the electronic lock.
Fail Secure works just the other way. The lock device is in a locked or secure state with no power applied. Upon authorized entry, a solenoid unlocks the lock temporarily. Thus in a Fail Secure lock, loss of power or fire alarm activation causes the lock to remain in a secure mode.
Reference(s) used for this question:
Harris, Shon (2012-10-18). CISSP All-in-One Exam Guide, 6th Edition (p. 451). McGraw- Hill. Kindle Edition.
and
Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 20249-20251). Auerbach Publications. Kindle Edition.

NEW QUESTION 192

- (Topic 2)

The control of communications test equipment should be clearly addressed by security policy for which of the following reasons?

- A. Test equipment is easily damaged.
- B. Test equipment can be used to browse information passing on a network.
- C. Test equipment is difficult to replace if lost or stolen.
- D. Test equipment must always be available for the maintenance personnel.

Answer: B

Explanation:

Test equipment must be secured. There are equipment and other tools that if in the wrong hands could be used to "sniff" network traffic and also be used to commit fraud. The storage and use of this equipment should be detailed in the security policy for this reason.
The following answers are incorrect:
Test equipment is easily damaged. Is incorrect because it is not the best answer, and from a security point of view not relevant.
Test equipment is difficult to replace if lost or stolen. Is incorrect because it is not the best answer, and from a security point of view not relevant.
Test equipment must always be available for the maintenance personnel. Is incorrect because it is not the best answer, and from a security point of view not relevant.
References:
OIG CBK Operations Security (pages 642 - 643)

NEW QUESTION 197

- (Topic 2)

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

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

Answer: C

Explanation:

Under the principle of separation of duties, an operator should not be performing data entry. This should be left to data entry personnel.
System operators represent a class of users typically found in data center environments where mainframe systems are used. They provide day-to-day operations of the mainframe environment, ensuring that scheduled jobs are running effectively and troubleshooting problems that may arise. They also act as the arms and legs of the mainframe environment, load and unloading tape and results of job print runs. Operators have elevated privileges, but less than those of system

administrators. If misused, these privileges may be used to circumvent the system's security policy. As such, use of these privileges should be monitored through audit logs.

Some of the privileges and responsibilities assigned to operators include:

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

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

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

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

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

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

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

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

Reference(s) used for this question:

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

NEW QUESTION 201

- (Topic 2)

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

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

Answer: B

Explanation:

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

The following answers are incorrect:

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

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

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

NEW QUESTION 205

- (Topic 2)

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

- A. abstraction
- B. alteration
- C. accreditation
- D. application

Answer: B

Explanation:

Integrity is the opposite of "alteration."

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

NEW QUESTION 206

- (Topic 2)

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

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

Answer: C

Explanation:

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

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

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

- Conduct the risk assessment and use the results to supplement the baseline security controls;
- Analyze security requirements;
- Perform functional and security testing;

- Prepare initial documents for system certification and accreditation; and
- Design security architecture.

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

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

Project initiation

Functional design analysis and planning System design specifications

Software development Installation Maintenance support

Revision and replacement

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

SDLC POSITIONING FROM NIST 800-64

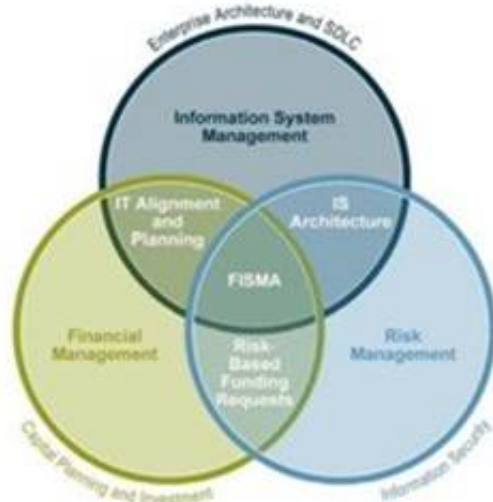


FIGURE 2-1. POSITIONING SECURITY CONSIDERATIONS

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SDLC Positioning in the enterprise

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

SDLC OVERVIEW FROM NIST 800-64

SDLC Overview from NIST 800-64 Revision 2



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

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

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

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

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

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

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

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

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

NIST says:

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

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

References:

HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, Fifth Edition, Page 956
and
NIST S-64 Revision 2 at <http://csrc.nist.gov/publications/nistpubs/800-64-Rev2/SP800-64-Revision2.pdf> and
<http://www.mks.com/resources/resource-pages/software-development-life-cycle-sdlc-system-development>

NEW QUESTION 211

- (Topic 2)

Which of the following is used to interrupt the opportunity to use or perform collusion to subvert operation for fraudulent purposes?

- A. Key escrow
- B. Rotation of duties
- C. Principle of need-to-know
- D. Principle of least privilege

Answer: B

Explanation:

Job rotations reduce the risk of collusion of activities between individuals. Companies with individuals working with sensitive information or systems where there might be the opportunity for personal gain through collusion can benefit by integrating job rotation with segregation of duties. Rotating the position may uncover activities that the individual is performing outside of the normal operating procedures, highlighting errors or fraudulent behavior.

Rotation of duties is a method of reducing the risk associated with a subject performing a (sensitive) task by limiting the amount of time the subject is assigned to perform the task before being moved to a different task.

The following are incorrect answers:

Key escrow is related to the protection of keys in storage by splitting the key in pieces that will be controlled by different departments. Key escrow is the process of ensuring a third party maintains a copy of a private key or key needed to decrypt information. Key escrow also should be considered mandatory for most organization's use of cryptography as encrypted information belongs to the organization and not the individual; however often an individual's key is used to encrypt the information.

Separation of duties is a basic control that prevents or detects errors and irregularities by assigning responsibility for different parts of critical tasks to separate individuals, thus limiting the effect a single person can have on a system. One individual should not have the capability to execute all of the steps of a particular process. This is especially important in critical business areas, where individuals may have greater access and capability to modify, delete, or add data to the system. Failure to separate duties could result in individuals embezzling money from the company without the involvement of others.

The need-to-know principle specifies that a person must not only be cleared to access classified or other sensitive information, but have requirement for such information to carry out assigned job duties. Ordinary or limited user accounts are what most users are assigned. They should be restricted only to those privileges that are strictly required, following the principle of least privilege. Access should be limited to specific objects following the principle of need-to-know.

The principle of least privilege requires that each subject in a system be granted the most restrictive set of privileges (or lowest clearance) needed for the performance of authorized tasks. Least privilege refers to granting users only the accesses that are required to perform their job functions. Some employees will require greater access than others based upon their job functions. For example, an individual performing data entry on a mainframe system may have no need for Internet access or the ability to run reports regarding the information that they are entering into the system. Conversely, a supervisor may have the need to run reports, but should not be provided the capability to change information in the database.

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 10628-10631). Auerbach Publications. Kindle Edition.

Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 10635-10638). Auerbach Publications. Kindle Edition.

Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 10693-10697). Auerbach Publications. Kindle Edition.

Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 16338-16341). Auerbach Publications. Kindle Edition.

NEW QUESTION 215

- (Topic 2)

If an operating system permits shared resources such as memory to be used sequentially by multiple users/application or subjects without a refresh of the objects/memory area, what security problem is MOST likely to exist?

- A. Disclosure of residual data.
- B. Unauthorized obtaining of a privileged execution state.
- C. Data leakage through covert channels.
- D. Denial of service through a deadly embrace.

Answer: A

Explanation:

Allowing objects to be used sequentially by multiple users without a refresh of the objects can lead to disclosure of residual data. It is important that steps be taken to eliminate the chance for the disclosure of residual data.

Object reuse refers to the allocation or reallocation of system resources to a user or, more appropriately, to an application or process. Applications and services on a computer system may create or use objects in memory and in storage to perform programmatic functions. In some cases, it is necessary to share these resources between various system applications. However, some objects may be employed by an application to perform privileged tasks on behalf of an authorized user or upstream application. If object usage is not controlled or the data in those objects is not erased after use, they may become available to unauthorized users or processes.

Disclosure of residual data and Unauthorized obtaining of a privileged execution state are both a problem with shared memory and resources. Not clearing the heap/stack can result in residual data and may also allow the user to step on somebody's session if the security token/identify was maintained in that space. This is generally more malicious and intentional than accidental though. The MOST common issue would be Disclosure of residual data.

The following answers are incorrect:

Unauthorized obtaining of a privileged execution state. Is incorrect because this is not a problem with Object Reuse.

Data leakage through covert channels. Is incorrect because it is not the best answer. A covert channel is a communication path. Data leakage would not be a problem created by Object Reuse. In computer security, a covert channel is a type of computer security attack that creates a capability to transfer information

objects between processes that are not supposed to be allowed to communicate by the computer security policy. The term, originated in 1973 by Lampson is defined as "(channels) not intended for information transfer at all, such as the service program's effect on system load." to distinguish it from Legitimate channels that are subjected to access controls by COMPUSEC.

Denial of service through a deadly embrace. Is incorrect because it is only a detractor. References:

Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 4174-4179). Auerbach Publications. Kindle Edition.

and <https://www.fas.org/irp/nsa/rainbow/tg018.htm> and http://en.wikipedia.org/wiki/Covert_channel

NEW QUESTION 220

- (Topic 2)

What can best be described as an abstract machine which must mediate all access to subjects to objects?

- A. A security domain
- B. The reference monitor
- C. The security kernel
- D. The security perimeter

Answer: B

Explanation:

The reference monitor is an abstract machine which must mediate all access to subjects to objects, be protected from modification, be verifiable as correct, and is always invoked. The security kernel is the hardware, firmware and software elements of a trusted computing base that implement the reference monitor concept. The security perimeter includes the security kernel as well as other security-related system functions that are within the boundary of the trusted computing base. System elements that are outside of the security perimeter need not be trusted. A security domain is a domain of trust that shares a single security policy and single management.

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

NEW QUESTION 222

- (Topic 2)

Which of the following embodies all the detailed actions that personnel are required to follow?

- A. Standards
- B. Guidelines
- C. Procedures
- D. Baselines

Answer: C

Explanation:

Procedures are step-by-step instructions in support of of the policies, standards, guidelines and baselines. The procedure indicates how the policy will be implemented and who does what to accomplish the tasks."

Standards is incorrect. Standards are a "Mandatory statement of minimum requirements that support some part of a policy, the standards in this case is your own company standards and not standards such as the ISO standards"

Guidelines is incorrect. "Guidelines are discretionary or optional controls used to enable individuals to make judgments with respect to security actions."

Baselines is incorrect. Baselines "are a minimum acceptable level of security. This minimum is implemented using specific rules necessary to implement the security controls in support of the policy and standards." For example, requiring a password of at least 8 character would be an example. Requiring all users to have a minimum of an antivirus, a personal firewall, and an anti spyware tool could be another example.

References:

CBK, pp. 12 - 16. Note especially the discussion of the "hammer policy" on pp. 16-17 for the differences between policy, standard, guideline and procedure.

AIO3, pp. 88-93.

NEW QUESTION 226

- (Topic 2)

Within the context of the CBK, which of the following provides a MINIMUM level of security ACCEPTABLE for an environment ?

- A. A baseline
- B. A standard
- C. A procedure
- D. A guideline

Answer: A

Explanation:

Baselines provide the minimum level of security necessary throughout the organization.

Standards specify how hardware and software products should be used throughout the organization.

Procedures are detailed step-by-step instruction on how to achieve certain tasks. Guidelines are recommendation actions and operational guides to personnel when a

specific standard does not apply.

Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw- Hill/Osborne, 2002, chapter 3: Security Management Practices (page 94).

NEW QUESTION 227

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