ISC2

Exam Questions SSCP

System Security Certified Practitioner (SSCP)

NEW QUESTION 1
- (Topic 1)
Which of the following pairings uses technology to enforce access control policies?

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

Answer: B

Explanation:
The preventive/technical pairing uses technology to enforce access control policies.
TECHNICAL CONTROLS
Technical security involves the use of safeguards incorporated in computer hardware, operations or applications software, communications hardware and software, and related devices. Technical controls are sometimes referred to as logical controls.
Preventive Technical Controls
Preventive technical controls are used to prevent unauthorized personnel or programs from gaining remote access to computing resources. Examples of these controls include:
Access control software. Antivirus software. Library control systems. Passwords.
Smart cards. Encryption.
Dial-up access control and callback systems.
Preventive Physical Controls
Preventive physical controls are employed to prevent unauthorized personnel from entering computing facilities (i.e., locations housing computing resources, supporting utilities, computer hard copy, and input data media) and to help protect against natural disasters. Examples of these controls include:
Backup files and documentation. Fences.
Security guards. Badge systems. Double door systems. Locks and keys. Backup power.
Biometric access controls. Site selection.
Fire extinguishers.
Preventive Administrative Controls
Preventive administrative controls are personnel-oriented techniques for controlling people's behavior to ensure the confidentiality, integrity, and availability of computing data and programs. Examples of preventive administrative controls include:
Security awareness and technical training. Separation of duties.
Procedures for recruiting and terminating employees. Security policies and procedures.
Supervision.
Disaster recovery, contingency, and emergency plans. User registration for computer access.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the
Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 34.

NEW QUESTION 2
- (Topic 1)
Which type of password token involves time synchronization?

A. Static password tokens
B. Synchronous dynamic password tokens
C. Asynchronous dynamic password tokens
D. Challenge-response tokens

Answer: B

Explanation:
Synchronous dynamic password tokens generate a new unique password value at fixed time intervals, so the server and token need to be synchronized for the password to be accepted.
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 37).
Also check out: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw- Hill/Osborne, 2002, chapter 4: Access Control (page 136).

NEW QUESTION 3
- (Topic 1)
Which access control model achieves data integrity through well-formed transactions and separation of duties?

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

Answer: A

Explanation:
The Clark-Wilson model differs from other models that are subject- and object- oriented by introducing a third access element programs resulting in what is called an access triple, which prevents unauthorized users from modifying data or programs. The Biba model uses objects and subjects and addresses integrity based on a hierarchical
lattice of integrity levels. The non-interference model is related to the information flow model with restrictions on the information flow. The Sutherland model approaches integrity by focusing on the problem of inference.
Source: ANDRESS, Mandy, Exam Cram CISSP, Coriolis, 2001, Chapter 2: Access Control Systems and Methodology (page 12).
And: KRAUSE, Micki & TIPTON, Harold F., Handbook of Information Security Management, CRC Press, 1997, Domain 1: Access Control.

NEW QUESTION 4

- (Topic 1)
Detective/Technical measures:

A. include intrusion detection systems and automatically-generated violation reports from audit trail information.
B. do not include intrusion detection systems and automatically-generated violation reports from audit trail information.
C. include intrusion detection systems but do not include automatically-generated violation reports from audit trail information.
D. include intrusion detection systems and customised-generated violation reports from audit trail information.

Answer: A

Explanation:
Detective/Technical measures include intrusion detection systems and automatically-generated violation reports from audit trail information. These reports can indicate variations from "normal" operation or detect known signatures of unauthorized access episodes. In order to limit the amount of audit information flagged and reported by automated violation analysis and reporting mechanisms, clipping levels can be set. 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 5
- (Topic 1)
Which is the last line of defense in a physical security sense?

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

Answer: A

Explanation:
"Ultimately, people are the last line of defense for your company's assets" (Pastore & Dulaney, 2006, p. 529).
Pastore, M. and Dulaney, E. (2006). CompTIA Security+ study guide: Exam SY0-101. Indianapolis, IN: Sybex.

NEW QUESTION 6
- (Topic 1)
Physical security is accomplished through proper facility construction, fire and water
protection, anti-theft mechanisms, intrusion detection systems, and security procedures that are adhered to and enforced. Which of the following is not a component that achieves this type of security?

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

Answer: B

Explanation:
Integrity Controls Mechanisms are not part of physical security. All of the other detractors were correct this one was the wrong one that does not belong to Physical Security. Below you have more details extracted from the SearchSecurity web site: Information security depends on the security and management of the physical space in which computer systems operate. Domain 9 of the CISSP exam's Common Body of Knowledge addresses the challenges of securing the physical space, its systems and the people who work within it by use of administrative, technical and physical controls. The following QUESTION NO: s are covered:
Facilities management: The administrative processes that govern the maintenance and protection of the physical operations space, from site selection through emergency response.
Risks, issues and protection strategies: Risk identification and the selection of security protection components.
Perimeter security: Typical physical protection controls.
Facilities management
Facilities management is a complex component of corporate security that ranges from the planning of a secure physical site to the management of the physical information system environment. Facilities management responsibilities include site selection and physical security planning (i.e. facility construction, design and layout, fire and water damage protection, antitheft mechanisms, intrusion detection and security procedures.) Protections must extend to both people and assets. The necessary level of protection depends on the value of the assets and data. CISSP® candidates must learn the concept of critical-path analysis as a means of determining a component's business function criticality relative to the cost of operation and replacement. Furthermore, students need to gain an understanding of the optimal location and physical attributes of a secure facility. Among the QUESTION NO: s covered in this domain are site inspection, location, accessibility and obscurity, considering the area crime rate, and the likelihood of natural hazards such as floods or earthquakes.
This domain also covers the quality of construction material, such as its protective qualities and load capabilities, as well as how to lay out the structure to minimize risk of forcible entry and accidental damage. Regulatory compliance is also touched on, as is preferred proximity to civil protection services, such as fire and police stations. Attention is given to computer and equipment rooms, including their location, configuration (entrance/egress requirements) and their proximity to wiring distribution centers at the site.
Physical risks, issues and protection strategies
An overview of physical security risks includes risk of theft, service interruption, physical damage, compromised system integrity and unauthorized disclosure of information. Interruptions to business can manifest due to loss of power, services, telecommunications connectivity and water supply. These can also seriously compromise electronic security monitoring alarm/response devices. Backup options are also covered in this domain, as is a strategy for quantifying the risk exposure by simple formula.
Investment in preventive security can be costly. Appropriate redundancy of people skills, systems and infrastructure must be based on the criticality of the data and assets to be preserved. Therefore a strategy is presented that helps determine the selection of cost appropriate controls. Among the QUESTION NO: s covered in this domain are regulatory and legal requirements, common standard security protections such as locks and fences, and the importance of establishing service level agreements for maintenance and disaster support. Rounding out the optimization approach are simple calculations for determining mean time between failure and mean time to repair (used to estimate average equipment life expectancy) — essential for estimating the cost/benefit of purchasing and maintaining redundant equipment.
As the lifeblood of computer systems, special attention is placed on adequacy, quality and protection of power supplies. CISSP candidates need to understand power supply concepts and terminology, including those for quality (i.e. transient noise vs. clean power); types of interference (EMI and RFI); and types of interruptions such as power excess by spikes and surges, power loss by fault or blackout, and power degradation from sags and brownouts. A simple formula is presented for determining the total cost per hour for backup power. Proving power reliability through testing is recommended and the advantages of three power

protection approaches are discussed (standby UPS, power line conditioners and backup sources) including minimum requirements for primary and alternate power provided.

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

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

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

Administrative controls

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

Perimeter security

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

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

Return to the CISSP Essentials Security School main page

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

NEW QUESTION 7
- (Topic 1)
A potential problem related to the physical installation of the Iris Scanner in regards to the usage of the iris pattern within a biometric system is:

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

Answer: D

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

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

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

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

Wikipedia - http://en.wikipedia.org/wiki/Iris_recognition The following answers are incorrect:

concern that the laser beam may cause eye damage. The optical readers do not use laser so, concern that the laser beam may cause eye damage is not an issue.

the iris pattern changes as a person grows older. The question asked about the physical installation of the scanner, so this was not the best answer. If the question would have been about long term problems then it could have been the best choice. Recent research has shown that Irises actually do change over time: http://www.nature.com/news/ageing- eyes-hinder-biometric-scans-1.10722

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

NEW QUESTION 8
- (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 9
- (Topic 1)
Which of the following is implemented through scripts or smart agents that replays the users multiple log-ins against authentication servers to verify a user's identity which permit access to system services?

A. Single Sign-On
B. Dynamic Sign-On
C. Smart cards
D. Kerberos

Answer: A

Explanation:
 SSO can be implemented by using scripts that replay the users multiple log- ins against authentication servers to verify a user's identity and to permit access to system services.
Single Sign on was the best answer in this case because it would include Kerberos. When you have two good answers within the 4 choices presented you must select the
BEST one. The high level choice is always the best. When one choice would include the
other one that would be the best as well.
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 40.

NEW QUESTION 10
- (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 contruction 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 10
- (Topic 1)
Which of the following offers advantages such as the ability to use stronger passwords, easier password administration, one set of credential, and faster resource access?

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

Answer: B

Explanation:
 The advantages of SSO include having the ability to use stronger passwords, easier administration as far as changing or deleting the passwords, minimize the risks of orphan accounts, and requiring less time to access resources.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 39.

NEW QUESTION 11
- (Topic 1)
In the Bell-LaPadula model, the Star-property is also called:

A. The simple security property
B. The confidentiality property
C. The confinement property
D. The tranquility property

Answer: B

Explanation:
 The Bell-LaPadula model focuses on data confidentiality and access to classified information, in contrast to the Biba Integrity Model which describes rules for the

protection of data integrity.

In this formal model, the entities in an information system are divided into subjects and objects.

The notion of a "secure state" is defined, and it is proven that each state transition preserves security by moving from secure state to secure state, thereby proving that the system satisfies the security objectives of the model.

The Bell-LaPadula model is built on the concept of a state machine with a set of allowable states in a system. The transition from one state to another state is defined by transition functions.

A system state is defined to be "secure" if the only permitted access modes of subjects to objects are in accordance with a security policy.

To determine whether a specific access mode is allowed, the clearance of a subject is compared to the classification of the object (more precisely, to the combination of classification and set of compartments, making up the security level) to determine if the subject is authorized for the specific access mode.

The clearance/classification scheme is expressed in terms of a lattice. The model defines two mandatory access control (MAC) rules and one discretionary access control (DAC) rule with three security properties:

The Simple Security Property - a subject at a given security level may not read an object at a higher security level (no read-up).

The property (read "star"-property) - a subject at a given security level must not write to any object at a lower security level (no write-down). The property is also known as the Confinement property.

The Discretionary Security Property - use an access control matrix to specify the discretionary access control.

The transfer of information from a high-sensitivity document to a lower-sensitivity document may happen in the Bell-LaPadula model via the concept of trusted subjects. Trusted Subjects are not restricted by the property. Untrusted subjects are.

Trusted Subjects must be shown to be trustworthy with regard to the security policy. This security model is directed toward access control and is characterized by the phrase: "no read up, no write down." Compare the Biba model, the Clark-Wilson model and the Chinese Wall.

With Bell-LaPadula, users can create content only at or above their own security level (i.e. secret researchers can create secret or top-secret files but may not create public files; no write-down). Conversely, users can view content only at or below their own security level

(i.e. secret researchers can view public or secret files, but may not view top-secret files; no read-up).

Strong Property

The Strong Property is an alternative to the Property in which subjects may write to objects with only a matching security level. Thus, the write-up operation permitted in the usual Property is not present, only a write-to-same level operation. The Strong Property is usually discussed in the context of multilevel database management systems and is motivated by integrity concerns.

Tranquility principle

The tranquility principle of the Bell-LaPadula model states that the classification of a subject or object does not change while it is being referenced. There are two forms to the tranquility principle: the "principle of strong tranquility" states that security levels do not change during the normal operation of the system and the "principle of weak tranquility" states that security levels do not change in a way that violates the rules of a given security policy.

Another interpretation of the tranquility principles is that they both apply only to the period of time during which an operation involving an object or subject is occurring. That is, the strong tranquility principle means that an object's security level/label will not change during an operation (such as read or write); the weak tranquility principle means that an object's security level/label may change in a way that does not violate the security policy during an operation.

Reference(s) used for this question: http://en.wikipedia.org/wiki/Biba_Model
http://en.wikipedia.org/wiki/Mandatory_access_control http://en.wikipedia.org/wiki/Discretionary_access_control http://en.wikipedia.org/wiki/Clark-Wilson_model http://en.wikipedia.org/wiki/Brewer_and_Nash_model

NEW QUESTION 16
- (Topic 1)
Rule-Based Access Control (RuBAC) access is determined by rules. Such rules would fit within what category of access control ?

A. Discretionary Access Control (DAC)
B. Mandatory Access control (MAC)
C. Non-Discretionary Access Control (NDAC)
D. Lattice-based Access control

Answer: C

Explanation:

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

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

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

IT IS NOT ALWAYS BLACK OR WHITE

The different access control models are not totally exclusive of each others. MAC is making use of Rules to be implemented. However with MAC you have requirements above and beyond having simple access rules. The subject would get formal approval from management, the subject must have the proper security clearance, objects must have labels/sensitivity levels attached to them, subjects must have the proper security clearance. If all of this is in place then you have MAC.

BELOW YOU HAVE A DESCRIPTION OF THE DIFFERENT CATEGORIES:

MAC = Mandatory Access Control

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

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

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

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

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

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

NISTR-7316 Says:

Usually a labeling mechanism and a set of interfaces are used to determine access based on the MAC policy; for example, a user who is running a process at the Secret classification should not be allowed to read a file with a label of Top Secret. This is known as the "simple security rule," or "no read up." Conversely, a user who is running a process with a label of Secret should not be allowed to write to a file with a label of Confidential. This rule is called the "*-property" (pronounced "star property") or "no write down." The *- property is required to maintain system security in an automated environment. A variation on this rule called the "strict *-property" requires that information can be written at, but not above, the subject's clearance level. Multilevel security models such as the Bell-La Padula Confidentiality and Biba Integrity models are used to formally specify this kind of MAC policy.

DAC = Discretionary Access Control
DAC is also known as: Identity Based access control system.
The owner of an object is define as the person who created the object. As such the owner has the discretion to grant access to other users on the network. Access will be granted based solely on the identity of those users.
Such system is good for low level of security. One of the major problem is the fact that a user who has access to someone's else file can further share the file with other users without the knowledge or permission of the owner of the file. Very quickly this could become the wild wild west as there is no control on the dissimination of the information.
RBAC = Role Based Access Control
RBAC is a form of Non-Discretionary access control.
Role Based access control usually maps directly with the different types of jobs performed by employees within a company.
For example there might be 5 security administrator within your company. Instead of creating each of their profile one by one, you would simply create a role and assign the administrators to the role. Once an administrator has been assigned to a role, he will IMPLICITLY inherit the permissions of that role.
RBAC is great tool for environment where there is a a large rotation of employees on a daily basis such as a very large help desk for example.
RBAC or RuBAC = Rule Based Access Control RuBAC is a form of Non-Discretionary access control.
A good example of a Rule Based access control device would be a Firewall. A single set of rules is imposed to all users attempting to connect through the firewall.
NOTE FROM CLEMENT:
Lot of people tend to confuse MAC and Rule Based Access Control.
Mandatory Access Control must make use of LABELS. If there is only rules and no label, it cannot be Mandatory Access Control. This is why they call it Non Discretionary Access control (NDAC).
There are even books out there that are WRONG on this subject. Books are sometimes opiniated and not strictly based on facts.
In MAC subjects must have clearance to access sensitive objects. Objects have labels that contain the classification to indicate the sensitivity of the object and the label also has categories to enforce the need to know.
Today the best example of rule based access control would be a firewall. All rules are imposed globally to any user attempting to connect through the device. This is NOT the case with MAC.
I strongly recommend you read carefully the following document:
NISTIR-7316 at http://csrc.nist.gov/publications/nistir/7316/NISTIR-7316.pdf
It is one of the best Access Control Study document to prepare for the exam. Usually I tell people not to worry about the hundreds of NIST documents and other reference. This document is an exception. Take some time to read it.
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.
and
NISTIR-7316 at http://csrc.nist.gov/publications/nistir/7316/NISTIR-7316.pdf and
Conrad, Eric; Misenar, Seth; Feldman, Joshua (2012-09-01). CISSP Study Guide (Kindle Locations 651-652). Elsevier Science (reference). Kindle Edition.

NEW QUESTION 18
- (Topic 1)
Which of the following questions is less likely to help in assessing identification and authentication controls?

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

Answer: D

Explanation:
Identification and authentication is a technical measure that prevents unauthorized people (or unauthorized processes) from entering an IT system. Access control usually requires that the system be able to identify and differentiate among users. Reporting incidents is more related to incident response capability (operational control) than to identification and authentication (technical control).
Source: SWANSON, Marianne, NIST Special Publication 800-26, Security Self- Assessment Guide for Information Technology Systems, November 2001 (Pages A-30 to A-32).

NEW QUESTION 20
- (Topic 1)
In discretionary access environments, which of the following entities is authorized to grant information access to other people?

A. Manager
B. Group Leader
C. Security Manager
D. Data Owner

Answer: D

Explanation:
In Discretionary Access Control (DAC) environments, the user who creates a file is also considered the owner and has full control over the file including the ability to set permissions for that file.
The following answers are incorrect:
manager. Is incorrect because in Discretionary Access Control (DAC) environments it is the owner/user that is authorized to grant information access to other people.
group leader. Is incorrect because in Discretionary Access Control (DAC) environments it is the owner/user that is authorized to grant information access to other people.
security manager. Is incorrect because in Discretionary Access Control (DAC) environments it is the owner/user that is authorized to grant information access to other people.
IMPORTANT NOTE:
The term Data Owner is also used within Classifications as well. Under the subject of classification the Data Owner is a person from management who has been entrusted with a data set that belongs to the company. For example it could be the Chief Financial Officer (CFO) who is entrusted with all of the financial data for a company. As such the CFO would determine the classification of the financial data and who can access as well. The Data Owner would then tell the Data Custodian (a technical person) what the classification and need to know is on the specific set of data.
The term Data Owner under DAC simply means whoever created the file and as the creator of the file the owner has full access and can grant access to other subjects based
on their identity.

NEW QUESTION 21
- (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 22
- (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 Wikepedia: 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
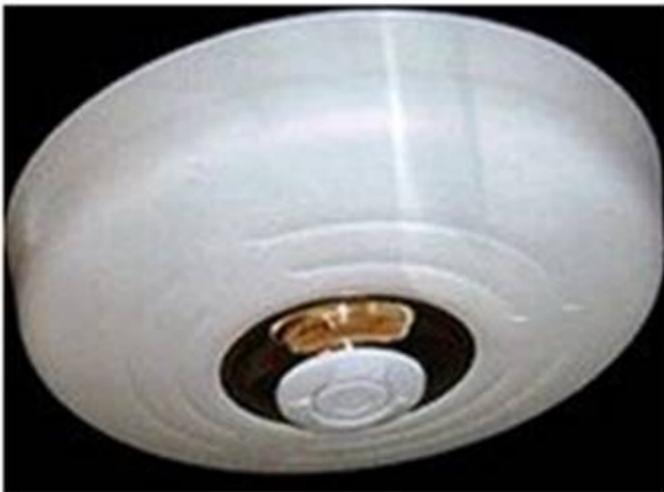
C:\Users\MCS\Desktop\1.jpg Heat Detection System

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/Microware combined Radar

Accoustical Sensor/Audio Vibration Sensor (seismic) Air Turbulence

NEW QUESTION 23
- (Topic 1)
Which of the following is NOT a system-sensing wireless proximity card?

A. magnetically striped card
B. passive device
C. field-powered device
D. transponder

Answer: A

Explanation:
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, page 342.

NEW QUESTION 25
- (Topic 1)
A network-based vulnerability assessment is a type of test also referred to as:

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

Answer: A

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

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

There are mostly two main types of test:

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

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

See example below of both types of attacks:

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

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

IMPORTANT NOTE:

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

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

Reference(s) used for this question:

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

and

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

NEW QUESTION 28

- (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 decsions 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 31

- (Topic 1)
Logical or technical controls involve the restriction of access to systems and the protection of information. Which of the following statements pertaining to these types of controls is correct?

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

Answer: C

Explanation:

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

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

NEW QUESTION 36

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

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

Answer: A

Explanation:

According to the cited reference, of the given options, the Retina scan has the lowest user acceptance level as it is needed for the user to get his eye close to a device and it is not user friendly and very intrusive.

However, retina scan is the most precise with about one error per 10 millions usage. Look at the 2 tables below. If necessary right click on the image and save it on your

desktop for a larger view or visit the web site directly at

https://sites.google.com/site/biometricsecuritysolutions/crossover-accuracy . Biometric Comparison Chart

BIOMETRICS COMPARISON CHART

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

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

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

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

C:\Users\MCS\Desktop\1.jpg
Biometric Aspect Descriptions Reference(s) used for this question:
RHODES, Keith A., Chief Technologist, United States General Accounting Office, National Preparedness, Technologies to Secure Federal Buildings, April 2002 (page 10).
and
https://sites.google.com/site/biometricsecuritysolutions/crossover-accuracy

NEW QUESTION 37
- (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 rigth 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 datbase, 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 42
- (Topic 1)
Which of the following security models does NOT concern itself with the flow of data?

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

Answer: D

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

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

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

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

References:
CBK, pp 325 - 326
AIO3, pp. 290 - 291

NEW QUESTION 47
- (Topic 1)
Single Sign-on (SSO) is characterized by which of the following advantages?

A. Convenience
B. Convenience and centralized administration
C. Convenience and centralized data administration
D. Convenience and centralized network administration

Answer: B

Explanation:
Convenience -Using single sign-on users have to type their passwords only once when they first log in to access all the network resources; and Centralized Administration as some single sign-on systems are built around a unified server administration system. This allows a single administrator to add and delete accounts across the entire network from one user interface.

The following answers are incorrect:

Convenience - alone this is not the correct answer.

Centralized Data or Network Administration - these are thrown in to mislead the student. Neither are a benefit to SSO, as these specifically should not be allowed with just an SSO.

References: TIPTON, Harold F. & KRAUSE, MICKI, Information Security Management Handbook, 4th Edition, Volume 1, page 35.

TIPTON, Harold F. & HENRY, Kevin, Official (ISC)2 Guide to the CISSP CBK, 2007, page 180.

NEW QUESTION 48
- (Topic 1)
What is the PRIMARY use of a password?

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

Answer: C

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

NEW QUESTION 50
- (Topic 1)
The control measures that are intended to reveal the violations of security policy using software and hardware are associated with:

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

Answer: B

Explanation:
The detective/technical control measures are intended to reveal the violations of security policy using technical means.
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 51
- (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 distrubuted 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 55
- (Topic 1)
Which security model is based on the military classification of data and people with clearances?

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

Answer: C

Explanation:
The Bell-LaPadula model is a confidentiality model for information security based on the military classification of data, on people with clearances and data with a classification or sensitivity model. The Biba, Clark-Wilson and Brewer-Nash models are concerned with integrity.
Source: HARE, Chris, Security Architecture and Models, Area 6 CISSP Open Study Guide, January 2002.

NEW QUESTION 59
- (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 64
- (Topic 1)
Pin, Password, Passphrases, Tokens, smart cards, and biometric devices are all items that can be used for Authentication. When one of these item listed above in conjunction with a second factor to validate authentication, it provides robust authentication of the individual by practicing which of the following?

A. Multi-party authentication
B. Two-factor authentication
C. Mandatory authentication
D. Discretionary authentication

Answer: B

Explanation:
Once an identity is established it must be authenticated. There exist numerous technologies and implementation of authentication methods however they almost all fall under three major areas.
There are three fundamental types of authentication: Authentication by knowledge—something a person knows
Authentication by possession—something a person has
Authentication by characteristic—something a person is Logical controls related to these types are called "factors."
Something you know can be a password or PIN, something you have can be a token fob or smart card, and something you are is usually some form of biometrics.
Single-factor authentication is the employment of one of these factors, two-factor authentication is using two of the three factors, and three-factor authentication is the combination of all three factors.
The general term for the use of more than one factor during authentication is multifactor authentication or strong authentication.
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 2367-2379). Auerbach Publications. Kindle Edition.

NEW QUESTION 68
- (Topic 1)
The three classic ways of authenticating yourself to the computer security software are by something you know, by something you have, and by something:

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

Answer: C

Explanation:
This is more commonly known as biometrics and is one of the most accurate ways to authenticate an individual.
The rest of the answers are incorrect because they not one of the three recognized forms for Authentication.

NEW QUESTION 71
- (Topic 1)
RADIUS incorporates which of the following services?

A. Authentication server and PIN codes.
B. Authentication of clients and static passwords generation.
C. Authentication of clients and dynamic passwords generation.
D. Authentication server as well as support for Static and Dynamic passwords.

Answer: D

Explanation:
A Network Access Server (NAS) operates as a client of RADIUS. The client is responsible for passing user information to
designated RADIUS servers, and then acting on the response which is returned.
RADIUS servers are responsible for receiving user connection requests, authenticating the user, and then returning all configuration information necessary for the client to deliver service to the user.
RADIUS authentication is based on provisions of simple username/password credentials.
These credentials are encrypted
by the client using a shared secret between the client and the RADIUS server. OIG 2007, Page 513
RADIUS incorporates an authentication server and can make uses of both dynamic and static passwords.
Since it uses the PAP and CHAP protocols, it also incluses static passwords.
RADIUS is an Internet protocol. RADIUS carries authentication, authorization, and configuration information between a Network Access Server and a shared Authentication Server. RADIUS features and functions are described primarily in the IETF (International Engineering Task Force) document RFC2138.
The term " RADIUS" is an acronym which stands for Remote Authentication Dial In User Service.
The main advantage to using a RADIUS approach to authentication is that it can provide a stronger form of authentication. RADIUS is capable of using a strong, two-factor form of authentication, in which users need to possess both a user ID and a hardware or software token to gain access.
Token-based schemes use dynamic passwords. Every minute or so, the token generates a unique 4-, 6- or 8-digit access number that is synchronized with the security server. To gain entry into the system, the user must generate both this one-time number and provide his or her user ID and password.
Although protocols such as RADIUS cannot protect against theft of an authenticated session via some realtime attacks, such as wiretapping, using unique, unpredictable authentication requests can protect against a wide range of active attacks.
RADIUS: Key Features and Benefits Features Benefits
RADIUS supports dynamic passwords and challenge/response passwords. Improved system security due to the fact that passwords are not static.
It is much more difficult for a bogus host to spoof users into giving up their passwords or password-generation algorithms.
RADIUS allows the user to have a single user ID and password for all computers in a network.
Improved usability due to the fact that the user has to remember only one login combination.
RADIUS is able to:
Prevent RADIUS users from logging in via login (or ftp). Require them to log in via login (or ftp)
Require them to login to a specific network access server (NAS); Control access by time of day.
Provides very granular control over the types of logins allowed, on a per-user basis. The time-out interval for failing over from an unresponsive primary RADIUS server to a
backup RADIUS server is site-configurable.
RADIUS gives System Administrator more flexibility in managing which users can login from which hosts or devices.
Stratus Technology Product Brief http://www.stratus.com/products/vos/openvos/radius.htm
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Pages 43, 44.
Also check: MILLER, Lawrence & GREGORY, Peter, CISSP for Dummies, 2002, Wiley Publishing, Inc., pages 45-46.

NEW QUESTION 73
- (Topic 1)
Which of the following control pairings include: organizational policies and procedures, pre- employment background checks, strict hiring practices, employment agreements, employee termination procedures, vacation scheduling, labeling of sensitive materials, increased supervision, security awareness training, behavior

awareness, and sign-up procedures to obtain access to information systems and networks?

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

Answer: A

Explanation:
 The Answer: Preventive/Administrative Pairing: These mechanisms include organizational policies and procedures, pre-employment background checks, strict hiring practices, employment agreements, friendly and unfriendly employee termination procedures, vacation scheduling, labeling of sensitive materials, increased supervision, security awareness training, behavior awareness, and sign-up procedures to obtain access to information systems and networks.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 34.

NEW QUESTION 77
- (Topic 1)
Which of the following statements relating to the Bell-LaPadula security model is FALSE (assuming the Strong Star property is not being used) ?

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

Answer: C

Explanation:
 It is not a property of Bell LaPadula model. The other answers are incorrect because:
A subject is not allowed to read up is a property of the 'simple security rule' of Bell LaPadula model.
The property restriction can be escaped by temporarily downgrading a high level subject can be escaped by temporarily downgrading a high level subject or by identifying a set of trusted objects which are permitted to violate the property as long as it is not in the middle of an operation.
It is restricted to confidentiality as it is a state machine model that enforces the confidentiality aspects of access control.
Reference: Shon Harris AIO v3 , Chapter-5 : Security Models and Architecture , Page:279-
282

NEW QUESTION 78
- (Topic 1)
Which of the following statements pertaining to biometrics is false?

A. Increased system sensitivity can cause a higher false rejection rate
B. The crossover error rate is the point at which false rejection rate equals the false acceptance rate.
C. False acceptance rate is also known as Type II error.
D. Biometrics are based on the Type 2 authentication mechanism.

Answer: D

Explanation:
 Authentication is based on three factor types: type 1 is something you know, type 2 is something you have and type 3 is something you are. Biometrics are based on the Type 3 authentication mechanism.
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 37).

NEW QUESTION 79
- (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 posession 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 posession of a capability by the subject.
To put it another way, as noted in AIO3 on p. 169, "A capabiltiy 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 if 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 83
- (Topic 1)
Identification and authentication are the keystones of most access control systems. Identification establishes:

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

Answer: A

Explanation:
 Identification and authentication are the keystones of most access control systems. Identification establishes user accountability for the actions on the system. The control environment can be established to log activity regarding the identification, authentication, authorization, and use of privileges on a system. This can be used to detect the occurrence of errors, the attempts to perform an unauthorized action, or to validate when provided credentials were exercised. The logging system as a detective device provides evidence of actions (both successful and unsuccessful) and tasks that were executed by authorized users.
Once a person has been identified through the user ID or a similar value, she must be authenticated, which means she must prove she is who she says she is. Three general factors can be used for authentication: something a person knows, something a person has, and something a person is. They are also commonly called authentication by knowledge, authentication by ownership, and authentication by characteristic.
For a user to be able to access a resource, he first must prove he is who he claims to be, has the necessary credentials, and has been given the necessary rights or privileges to perform the actions he is requesting. Once these steps are completed successfully, the user can access and use network resources; however, it is necessary to track the user's activities and enforce accountability for his actions.
Identification describes a method of ensuring that a subject (user, program, or process) is the entity it claims to be. Identification can be provided with the use of a username or account number. To be properly authenticated, the subject is usually required to provide a second piece to the credential set. This piece could be a password, passphrase,
cryptographic key, personal identification number (PIN), anatomical attribute, or token.
These two credential items are compared to information that has been previously stored for this subject. If these credentials match the stored information, the subject is authenticated. But we are not done yet. Once the subject provides its credentials and is properly identified, the system it is trying to access needs to determine if this subject has been given the necessary rights and privileges to carry out the requested actions. The system will look at some type of access control matrix or compare security labels to verify that this subject may indeed access the requested resource and perform the actions it is attempting. If the system determines that the subject may access the resource, it authorizes the subject.
Although identification, authentication, authorization, and accountability have close and complementary definitions, each has distinct functions that fulfill a specific requirement in the process of access control. A user may be properly identified and authenticated to the network, but he may not have the authorization to access the files on the file server. On the other hand, a user may be authorized to access the files on the file server, but until she is properly identified and authenticated, those resources are out of reach.
Reference(s) used for this question:
Schneiter, Andrew (2013-04-15). Official (ISC)2 Guide to the CISSP CBK, Third Edition: Access Control ((ISC)2 Press) (Kindle Locations 889-892). Auerbach Publications. Kindle Edition.
and
Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (Kindle Locations 3875-3878). McGraw-Hill. Kindle Edition.
and
Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (Kindle Locations 3833-3848). McGraw-Hill. Kindle Edition.
and
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 36.

NEW QUESTION 87
- (Topic 1)
In biometric identification systems, at the beginning, it was soon apparent that truly positive identification could only be based on physical attributes of a person. This raised the necessity of answering 2 questions :

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

Answer: B

Explanation:
 Today implementation of fast, accurate reliable and user-acceptable biometric identification systems is already taking place. Unique physical attributes or behavior of a person are used for that purpose.
From: TIPTON, Harold F. & KRAUSE, MICKI, Information Security Management Handbook, 4th Edition, Volume 1, Page 7.

NEW QUESTION 91
- (Topic 1)
Which of the following statements pertaining to access control is false?

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

Answer: B

Explanation:
 Access control mechanisms should default to no access to provide the necessary level of security and ensure that no security holes go unnoticed. If access is not explicitly allowed, it should be implicitly denied.
Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw- Hill/Osborne, 2002, Chapter 4: Access Control (page 143).

NEW QUESTION 94

- (Topic 1)
Which of the following attacks could capture network user passwords?

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

Answer: B

Explanation:
A network sniffer captures a copy every packet that traverses the network segment the sniffer is connect to.
Sniffers are typically devices that can collect information from a communication medium, such as a network. These devices can range from specialized equipment to basic workstations with customized software.
A sniffer can collect information about most, if not all, attributes of the communication. The most common method of sniffing is to plug a sniffer into an existing network device like a hub or switch. A hub (which is designed to relay all traffic passing through it to all of its ports) will automatically begin sending all the traffic on that network segment to the sniffing device. On the other hand, a switch (which is designed to limit what traffic gets sent to which port) will have to be specially configured to send all traffic to the port where the sniffer is plugged in.
Another method for sniffing is to use a network tap—a device that literally splits a network transmission into two identical streams; one going to the original network destination and the other going to the sniffing device. Each of these methods has its advantages and disadvantages, including cost, feasibility, and the desire to maintain the secrecy of the sniffing activity.
The packets captured by sniffer are decoded and then displayed by the sniffer. Therfore, if the username/password are contained in a packet or packets traversing the segment the sniffer is connected to, it will capture and display that information (and any other information on that segment it can see).
Of course, if the information is encrypted via a VPN, SSL, TLS, or similar technology, the information is still captured and displayed, but it is in an unreadable format.
The following answers are incorrect:
Data diddling involves changing data before, as it is enterred into a computer, or after it is extracted.
Spoofing is forging an address and inserting it into a packet to disguise the origin of the communication - or causing a system to respond to the wrong address.
Smurfing would refer to the smurf attack, where an attacker sends spoofed packets to the broadcast address on a gateway in order to cause a denial of service.
The following reference(s) were/was used to create this question: CISA Review manual 2014 Page number 321
Official ISC2 Guide to the CISSP 3rd edition Page Number 153

NEW QUESTION 98
- (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 102
- (Topic 1)
How would nonrepudiation be best classified as?

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

Answer: A

Explanation:
Systems accountability depends on the ability to ensure that senders cannot deny sending information and that receivers cannot deny receiving it. Because the mechanisms implemented in nonrepudiation prevent the ability to successfully repudiate an action, it can be considered as a preventive control.
Source: STONEBURNER, Gary, NIST Special Publication 800-33: Underlying Technical Models for Information Technology Security, National Institute of Standards and Technology, December 2001, page 7.

NEW QUESTION 103
- (Topic 1)
Which of the following floors would be most appropriate to locate information processing facilities in a 6-stories building?

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

Answer: C

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

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

considering the quantity of electrical cabling sitting directly on the cement floor under under your raise floor.

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

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

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

NEW QUESTION 104
- (Topic 1)
Which of the following choices describe a Challenge-response tokens generation?

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

Answer: A

Explanation:
 Challenge-response tokens are:
- A workstation or system generates a random challenge string and the owner enters the string into the token along with the proper PIN.
- The token generates a response that is then entered into the workstation or system.
- The authentication mechanism in the workstation or system then determines if the owner should be authenticated.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 37.
Also: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, 2002, chapter 4: Access Control (pages 136-137).

NEW QUESTION 109
- (Topic 1)
This baseline sets certain thresholds for specific errors or mistakes allowed and the amount of these occurrences that can take place before it is considered suspicious?

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

Answer: C

Explanation:
 Organizations usually forgive a particular type, number, or pattern of violations, thus permitting a predetermined number of user errors before gathering this data for analysis. An organization attempting to track all violations, without sophisticated statistical computing ability, would be unable to manage the sheer quantity of such data. To make a violation listing effective, a clipping level must be established.
The clipping level establishes a baseline for violation activities that may be normal user errors. Only after this baseline is exceeded is a violation record produced. This solution is particularly effective for small- to medium-sized installations. Organizations with large-scale computing facilities often track all violations and use statistical routines to cull out the minor infractions (e.g., forgetting a password or mistyping it several times).
If the number of violations being tracked becomes unmanageable, the first step in correcting the problems should be to analyze why the condition has occurred.
Do users understand how they are to interact with the computer resource? Are the rules too difficult to follow? Violation tracking and analysis can be valuable tools in assisting an organization to develop thorough but useable controls. Once these are in place and records are produced that accurately reflect serious violations, tracking and analysis become the first line of defense. With this procedure, intrusions are discovered before major damage occurs and sometimes early enough to catch the perpetrator. In addition, business protection and preservation are strengthened.
The following answers are incorrect:
All of the other choices presented were simply detractors. The following reference(s) were used for this question:
Handbook of Information Security Management

NEW QUESTION 113
- (Topic 1)
In addition to the accuracy of the biometric systems, there are other factors that must also be considered:

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

Answer: C

Explanation:
 In addition to the accuracy of the biometric systems, there are other factors that must also be considered.
These factors include the enrollment time, the throughput rate, and acceptability. Enrollment time is the time it takes to initially "register" with a system by providing samples
of the biometric characteristic to be evaluated. An acceptable enrollment time is around two
minutes.
For example, in fingerprint systems, the actual fingerprint is stored and requires approximately 250kb per finger for a high quality image. This level of information is required for one-to-many searches in forensics applications on very large databases.
In finger-scan technology, a full fingerprint is not stored-the features extracted from this fingerprint are stored using a small template that requires approximately 500 to 1000 bytes of storage. The original fingerprint cannot be reconstructed from this template.
Updates of the enrollment information may be required because some biometric characteristics, such as voice and signature, may change with time.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 37 &
38.

NEW QUESTION 115
- (Topic 1)
Which of the following is an example of discretionary access control?

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

Answer: A

Explanation:
An identity-based access control is an example of discretionary access control that is based on an individual's identity. Identity-based access control (IBAC) is access control based on the identity of the user (typically relayed as a characteristic of the process acting on behalf of that user) where access authorizations to specific objects are assigned based on user identity.
Rule Based Access Control (RuBAC) and Role Based Access Control (RBAC) are
examples of non-discretionary access controls.
Rule-based access control is a type of non-discretionary access control because this access is determined by rules and the subject does not decide what those rules will be, the rules are uniformly applied to ALL of the users or subjects.
In general, all access control policies other than DAC are grouped in the category of non- discretionary access control (NDAC). As the name implies, policies in this category have rules that are not established at the discretion of the user. Non-discretionary policies establish controls that cannot be changed by users, but only through administrative action.
Both Role Based Access Control (RBAC) and Rule Based Access Control (RuBAC) fall within Non Discretionary Access Control (NDAC). If it is not DAC or MAC then it is most likely NDAC.
BELOW YOU HAVE A DESCRIPTION OF THE DIFFERENT CATEGORIES:
MAC = Mandatory Access Control
Under a mandatory access control environment, the system or security administrator will define what permissions subjects have on objects. The administrator does not dictate user's access but simply configure the proper level of access as dictated by the Data Owner.
The MAC system will look at the Security Clearance of the subject and compare it with the object sensitivity level or classification level. This is what is called the dominance relationship.
The subject must DOMINATE the object sensitivity level. Which means that the subject must have a security clearance equal or higher than the object he is attempting to access.
MAC also introduce the concept of labels. Every objects will have a label attached to them indicating the classification of the object as well as categories that are used to impose the need to know (NTK) principle. Even thou a user has a security clearance of Secret it does not mean he would be able to access any Secret documents within the system. He would be allowed to access only Secret document for which he has a Need To Know, formal approval, and object where the user belong to one of the categories attached to the object.
If there is no clearance and no labels then IT IS NOT Mandatory Access Control.
Many of the other models can mimic MAC but none of them have labels and a dominance relationship so they are NOT in the MAC category.
DAC = Discretionary Access Control
DAC is also known as: Identity Based access control system.
The owner of an object is define as the person who created the object. As such the owner has the discretion to grant access to other users on the network. Access will be granted based solely on the identity of those users.
Such system is good for low level of security. One of the major problem is the fact that a user who has access to someone's else file can further share the file with other users without the knowledge or permission of the owner of the file. Very quickly this could become the wild wild west as there is no control on the dissimination of the information.
RBAC = Role Based Access Control
RBAC is a form of Non-Discretionary access control.
Role Based access control usually maps directly with the different types of jobs performed by employees within a company.
For example there might be 5 security administrator within your company. Instead of creating each of their profile one by one, you would simply create a role and assign the administrators to the role. Once an administrator has been assigned to a role, he will IMPLICITLY inherit the permissions of that role.
RBAC is great tool for environment where there is a a large rotation of employees on a daily basis such as a very large help desk for example.
RBAC or RuBAC = Rule Based Access Control RuBAC is a form of Non-Discretionary access control.
A good example of a Rule Based access control device would be a Firewall. A single set of rules is imposed to all users attempting to connect through the firewall.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the
Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 33. and
NISTIR-7316 at http://csrc.nist.gov/publications/nistir/7316/NISTIR-7316.pdf and
http://itlaw.wikia.com/wiki/Identity-based_access_control

NEW QUESTION 118
- (Topic 1)
Which of the following biometric parameters are better suited for authentication use over a long period of time?

A. Iris pattern
B. Voice pattern
C. Signature dynamics
D. Retina pattern

Answer: A

Explanation:
The iris pattern is considered lifelong. Unique features of the iris are: freckles, rings, rifts, pits, striations, fibers, filaments, furrows, vasculature and coronas. Voice, signature and retina patterns are more likely to change over time, thus are not as suitable for authentication over a long period of time without needing re-enrollment. Source: FERREL, Robert G, Questions and Answers for the CISSP Exam, domain 1 (derived from the Information Security Management Handbook, 4th Ed., by Tipton & Krause).

NEW QUESTION 121
- (Topic 1)
Almost all types of detection permit a system's sensitivity to be increased or decreased during an inspection process. If the system's sensitivity is increased, such as in a biometric authentication system, the system becomes increasingly selective and has the possibility of generating:

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

Answer: B

Explanation:
Almost all types of detection permit a system's sensitivity to be increased or decreased during an inspection process. If the system's sensitivity is increased, such as in a biometric authentication system, the system becomes increasingly selective and has a higher False Rejection Rate (FRR).
Conversely, if the sensitivity is decreased, the False Acceptance Rate (FRR) will increase. Thus, to have a valid measure of the system performance, the Cross Over Error (CER) rate is used. The Crossover Error Rate (CER) is the point at which the false rejection rates and the false acceptance rates are equal. The lower the value of the CER, the more accurate the system.
There are three categories of biometric accuracy measurement (all represented as percentages):
False Reject Rate (a Type I Error): When authorized users are falsely rejected as unidentified or unverified.
False Accept Rate (a Type II Error): When unauthorized persons or imposters are falsely accepted as authentic.
Crossover Error Rate (CER): The point at which the false rejection rates and the false acceptance rates are equal. The smaller the value of the CER, the more accurate the system.
NOTE:
Within the ISC2 book they make use of the term Accept or Acceptance and also Reject or Rejection when referring to the type of errors within biometrics. Below we make use of Acceptance and Rejection throughout the text for conistency. However, on the real exam you could see either of the terms.
Performance of biometrics
Different metrics can be used to rate the performance of a biometric factor, solution or application. The most common performance metrics are the False Acceptance Rate FAR and the False Rejection Rate FRR.
When using a biometric application for the first time the user needs to enroll to the system. The system requests fingerprints, a voice recording or another biometric factor from the
operator, this input is registered in the database as a template which is linked internally to a user ID. The next time when the user wants to authenticate or identify himself, the biometric input provided by the user is compared to the template(s) in the database by a matching algorithm which responds with acceptance (match) or rejection (no match).
FAR and FRR
The FAR or False Acceptance rate is the probability that the system incorrectly authorizes a non-authorized person, due to incorrectly matching the biometric input with a valid template. The FAR is normally expressed as a percentage, following the FAR definition this is the percentage of invalid inputs which are incorrectly accepted.
The FRR or False Rejection Rate is the probability that the system incorrectly rejects access to an authorized person, due to failing to match the biometric input provided by the user with a stored template. The FRR is normally expressed as a percentage, following the FRR definition this is the percentage of valid inputs which are incorrectly rejected.
FAR and FRR are very much dependent on the biometric factor that is used and on the technical implementation of the biometric solution. Furthermore the FRR is strongly person dependent, a personal FRR can be determined for each individual.
Take this into account when determining the FRR of a biometric solution, one person is insufficient to establish an overall FRR for a solution. Also FRR might increase due to environmental conditions or incorrect use, for example when using dirty fingers on a fingerprint reader. Mostly the FRR lowers when a user gains more experience in how to use the biometric device or software.
FAR and FRR are key metrics for biometric solutions, some biometric devices or software even allow to tune them so that the system more quickly matches or rejects. Both FRR and FAR are important, but for most applications one of them is considered most important. Two examples to illustrate this:
When biometrics are used for logical or physical access control, the objective of the application is to disallow access to unauthorized individuals under all circumstances. It is clear that a very low FAR is needed for such an application, even if it comes at the price of a higher FRR.
When surveillance cameras are used to screen a crowd of people for missing children, the objective of the application is to identify any missing children that come up on the screen. When the identification of those children is automated using a face recognition software, this software has to be set up with a low FRR. As such a higher number of matches will be false positives, but these can be reviewed quickly by surveillance personnel.
False Acceptance Rate is also called False Match Rate, and False Rejection Rate is sometimes referred to as False Non-Match Rate.
crossover error rate
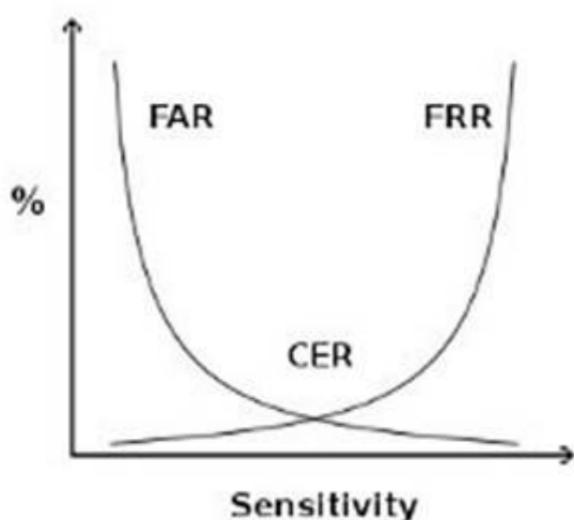
crossover error rate
Above see a graphical representation of FAR and FRR errors on a graph, indicating the CER
CER
The Crossover Error Rate or CER is illustrated on the graph above. It is the rate where both FAR and FRR are equal.
The matching algorithm in a biometric software or device uses a (configurable) threshold which determines how close to a template the input must be for it to be considered a match. This threshold value is in some cases referred to as sensitivity, it is marked on the X axis of the plot. When you reduce this threshold there will be more false acceptance errors (higher FAR) and less false rejection errors (lower FRR), a higher threshold will lead to lower FAR and higher FRR.
Speed
Most manufacturers of biometric devices and softwares can give clear numbers on the time it takes to enroll as well on the time for an individual to be authenticated or identified using their application. If speed is important then take your time to consider this, 5 seconds might seem a short time on paper or when testing a device but if hundreds of people will use the device multiple times a day the cumulative loss of time might be significant.
Reference(s) used for this question:
Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third
Edition ((ISC)2 Press) (Kindle Locations 2723-2731). Auerbach Publications. Kindle Edition.
and

KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 37.
and
http://www.biometric-solutions.com/index.php?story=performance_biometrics

NEW QUESTION 122
- (Topic 1)
What is the name of the first mathematical model of a multi-level security policy used to define the concept of a secure state, the modes of access, and rules for granting access?

A. Clark and Wilson Model
B. Harrison-Ruzzo-Ullman Model
C. Rivest and Shamir Model
D. Bell-LaPadula Model

Answer: D

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

NEW QUESTION 125
- (Topic 1)
Which of the following remote access authentication systems is the most robust?

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

Answer: A

Explanation:
 TACACS+ is a proprietary Cisco enhancement to TACACS and is more robust than RADIUS. PAP is not a remote access authentication system but a remote node security protocol.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 3: Telecommunications and Network Security (page 122).

NEW QUESTION 126
- (Topic 1)
Which of the following is not a two-factor authentication mechanism?

A. Something you have and something you know.
B. Something you do and a password.
C. A smartcard and something you are.
D. Something you know and a password.

Answer: D

Explanation:
 Something you know and a password fits within only one of the three ways authentication could be done. A password is an example of something you know, thereby something you know and a password does not constitute a two-factor authentication as both are in the same category of factors.
A two-factor (strong) authentication relies on two different kinds of authentication factors out of a list of three possible choice:
something you know (e.g. a PIN or password),
something you have (e.g. a smart card, token, magnetic card),
something you are is mostly Biometrics (e.g. a fingerprint) or something you do (e.g. signature dynamics).
TIP FROM CLEMENT:
On the real exam you can expect to see synonyms and sometimes sub-categories under the main categories. People are familiar with Pin, Passphrase, Password as subset of Something you know.
However, when people see choices such as Something you do or Something you are they immediately get confused and they do not think of them as subset of Biometrics where you have Biometric implementation based on behavior and physilogical attributes. So something you do falls under the Something you are category as a subset.
Something your do would be signing your name or typing text on your keyboard for example.
Strong authentication is simply when you make use of two factors that are within two different categories.
Reference(s) used for this question:
Shon Harris, CISSP All In One, Fifth Edition, pages 158-159

NEW QUESTION 129
- (Topic 1)
In an organization where there are frequent personnel changes, non-discretionary access control using Role Based Access Control (RBAC) is useful because:

A. people need not use discretion
B. the access controls are based on the individual's role or title within the organization.
C. the access controls are not based on the individual's role or title within the organization
D. the access controls are often based on the individual's role or title within the organization

Answer: B

Explanation:
 In an organization where there are frequent personnel changes, non- discretionary access control (also called Role Based Access Control) is useful because the access controls are based on the individual's role or title within the organization. You can easily configure a new employee acces by assigning the user to a role

that has been predefine. The user will implicitly inherit the permissions of the role by being a member of that role.

These access permissions defined within the role do not need to be changed whenever a new person takes over the role.

Another type of non-discretionary access control model is the Rule Based Access Control (RBAC or RuBAC) where a global set of rule is uniformly applied to all subjects accessing the resources. A good example of RuBAC would be a firewall.

This question is a sneaky one, one of the choice has only one added word to it which is often. Reading questions and their choices very carefully is a must for the real exam. Reading it twice if needed is recommended.

Shon Harris in her book list the following ways of managing RBAC: Role-based access control can be managed in the following ways:

Non-RBAC Users are mapped directly to applications and no roles are used. (No roles being used)

Limited RBAC Users are mapped to multiple roles and mapped directly to other types of

applications that do not have role-based access functionality. (A mix of roles for applications that supports roles and explicit access control would be used for applications that do not support roles)

Hybrid RBAC Users are mapped to multiapplication roles with only selected rights assigned to those roles.

Full RBAC Users are mapped to enterprise roles. (Roles are used for all access being granted)

NIST defines RBAC as:

Security administration can be costly and prone to error because administrators usually specify access control lists for each user on the system individually. With RBAC, security is managed at a level that corresponds closely to the organization's structure. Each user is assigned one or more roles, and each role is assigned one or more privileges that are permitted to users in that role. Security administration with RBAC consists of determining the operations that must be executed by persons in particular jobs, and assigning employees to the proper roles. Complexities introduced by mutually exclusive roles or role hierarchies are handled by the RBAC software, making security administration easier.

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 32.

and

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

http://csrc.nist.gov/groups/SNS/rbac/

NEW QUESTION 130

- (Topic 1)

What is called a sequence of characters that is usually longer than the allotted number for a password?

A. passphrase
B. cognitive phrase
C. anticipated phrase
D. Real phrase

Answer: A

Explanation:

A passphrase is a sequence of characters that is usually longer than the allotted number for a password.

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

NEW QUESTION 134

- (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 matric below:

TNI/TCSEC MATRIX

	A1	B3	B2	B1	C2	C1
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 – 330
and
Shon Harris, CISSP All In One (AIO), 6th Edition , page 392-393

NEW QUESTION 138
- (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 140
- (Topic 1)
What does the simple integrity axiom mean in the Biba model?

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

Answer: B

Explanation:
The simple integrity axiom of the Biba access control model states that a subject at one level of integrity is not permitted to observe an object of a lower integrity (no read down).
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 5: Security Architectures and Models (page 205).

NEW QUESTION 141
- (Topic 1)
What is called an automated means of identifying or authenticating the identity of a living person based on physiological or behavioral characteristics?

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

Answer: A

Explanation:
The Answer Biometrics; Biometrics are defined as an automated means of identifying or authenticating the identity of a living person based on physiological or behavioral characteristics.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Pages 37,38.

NEW QUESTION 145
- (Topic 1)
Which of the following can be defined as a framework that supports multiple, optional authentication mechanisms for PPP, including cleartext passwords, challenge-response, and arbitrary dialog sequences?

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

Answer: A

Explanation:
RFC 2828 (Internet Security Glossary) defines the Extensible Authentication Protocol as a framework that supports multiple, optional authentication mechanisms for PPP, including cleartext passwords, challenge-response, and arbitrary dialog sequences. It is intended for use primarily by a host or router that connects to a PPP network server via switched circuits or dial-up lines. The Remote Authentication Dial-In User Service (RADIUS) is defined as an Internet protocol for carrying dial-in user's authentication information and configuration information between a shared, centralized authentication server and a network access server that needs to authenticate the users of its network access ports. The other option is a distracter.
Source: SHIREY, Robert W., RFC2828: Internet Security Glossary, may 2000.

NEW QUESTION 148
- (Topic 1)
Which of the following statements pertaining to Kerberos is TRUE?

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

Answer: A

Explanation:
The question was asking for a TRUE statement and the only correct statement is "Kerberos does not address availability".
Kerberos addresses the confidentiality and integrity of information. It does not directly address availability.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access control
systems (page 42).

NEW QUESTION 151
- (Topic 1)
Which of the following is NOT part of the Kerberos authentication protocol?

A. Symmetric key cryptography
B. Authentication service (AS)
C. Principals
D. Public Key

Answer: D

Explanation:
There is no such component within kerberos environment. Kerberos uses only symmetric encryption and does not make use of any public key component.
The other answers are incorrect because :
Symmetric key cryptography is a part of Kerberos as the KDC holds all the users' and
services' secret keys.
Authentication service (AS) : KDC (Key Distribution Center) provides an authentication service
Principals : Key Distribution Center provides services to principals , which can be users , applications or network services.
References: Shon Harris , AIO v3 , Chapter - 4: Access Control , Pages : 152-155.

NEW QUESTION 156
- (Topic 1)
What is one disadvantage of content-dependent protection of information?

A. It increases processing overhead.
B. It requires additional password entry.
C. It exposes the system to data locking.
D. It limits the user's individual address space.

Answer: A

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

NEW QUESTION 159
- (Topic 1)
The following is NOT a security characteristic we need to consider while choosing a biometric identification systems:

A. data acquisition process
B. cost
C. enrollment process
D. speed and user interface

Answer: B

Explanation:
Cost is a factor when considering Biometrics but it is not a security characteristic.
All the other answers are incorrect because they are security characteristics related to Biometrics.
data acquisition process can cause a security concern because if the process is not fast and efficient it can discourage individuals from using the process.
enrollment process can cause a security concern because the enrollment process has to be quick and efficient. This process captures data for authentication.
speed and user interface can cause a security concern because this also impacts the users acceptance rate of biometrics. If they are not comfortable with the interface and speed they might sabotage the devices or otherwise attempt to circumvent them.
References:
OIG Access Control (Biometrics) (pgs 165-167)
From: TIPTON, Harold F. & KRAUSE, MICKI, Information Security Management Handbook, 4th Edition, Volume 1, Pages 5-6.
in process of correction

NEW QUESTION 161
- (Topic 1)
The National Institute of Standards and Technology (NIST) standard pertaining to perimeter protection states that critical areas should be illuminated up to?

A. Illuminated at nine feet high with at least three foot-candles
B. Illuminated at eight feet high with at least three foot-candles
C. Illuminated at eight feet high with at least two foot-candles
D. Illuminated at nine feet high with at least two foot-candles

Answer: B

Explanation:
The National Institute of Standards and Technology (NIST) standard pertaining to perimeter protection states that critical areas should be illuminated eight feet high with at least two foot-candles.
It can also be referred to as illuminating to a height of eight feet, with a BRIGHTNESS of two foot-candles.
One footcandle 10.764 lux. The footcandle (or lumen per square foot) is a non-SI unit of illuminance. Like the BTU, it is obsolete but it is still in fairly common use in the United States, particularly in construction-related engineering and in building codes. Because lux and footcandles are different units of the same quantity, it is perfectly valid to convert footcandles to lux and vice versa.
The name "footcandle" conveys "the illuminance cast on a surface by a one-candela source one foot away." As natural as this sounds, this style of name is now frowned upon, because the dimensional formula for the unit is not foot • candela, but lumens per square foot.
Some sources do however note that the "lux" can be thought of as a "metre-candle" (i.e. the illuminance cast on a surface by a one-candela source one meter away). A source that is farther away casts less illumination than one that is close, so one lux is less illuminance than one footcandle. Since illuminance follows the inverse-square law, and since one foot = 0.3048 m, one lux = 0.30482 footcandle 1/10.764 footcandle.
TIPS FROM CLEMENT:
Illuminance (light level) – The amount of light, measured in foot-candles (US unit), that falls n a surface, either horizontal or vertical.
Parking lots lighting needs to be an average of 2 foot candles; uniformity of not more than 3:1, no area less than 1 fc.
All illuminance measurements are to be made on the horizontal plane with a certified light meter calibrated to NIST standards using traceable light sources.
The CISSP Exam Cram 2 from Michael Gregg says: Lighting is a commonly used form of perimeter protection.
Some studies have found that up to 80% of criminal acts at businesses and shopping centers happen in adjacent parking lots. Therefore, it's easy to see why lighting can be such an important concern.
Outside lighting discourages prowlers and thieves.
The National Institute of Standards and Technologies (NIST) states that, for effective perimeter control, buildings should be illuminated 8 feet high, with 2-foot candle power.
Reference used for this question:
HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, 2001, Page 325.
and
Shon's AIO v5 pg 459 and
http://en.wikipedia.org/wiki/Foot-candle

NEW QUESTION 165
- (Topic 1)
When a biometric system is used, which error type deals with the possibility of GRANTING access to impostors who should be REJECTED?

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

Answer: B

Explanation:
When the biometric system accepts impostors who should have been rejected , it is called a Type II error or False Acceptance Rate or False Accept Rate.
Biometrics verifies an individual's identity by analyzing a unique personal attribute or behavior, which is one of the most effective and accurate methods of verifying identification.
Biometrics is a very sophisticated technology; thus, it is much more expensive and complex than the other types of identity verification processes. A biometric system can make authentication decisions based on an individual's behavior, as in signature dynamics, but these can change over time and possibly be forged. Biometric systems that base authentication decisions on physical attributes (iris, retina, fingerprint) provide more accuracy, because physical attributes typically don't change much, absent some disfiguring injury, and are harder to impersonate.
When a biometric system rejects an authorized individual, it is called a Type I error (False Rejection Rate (FRR) or False Reject Rate (FRR)).
When the system accepts impostors who should be rejected, it is called a Type II error (False Acceptance Rate (FAR) or False Accept Rate (FAR)). Type II errors are the most dangerous and thus the most important to avoid.
The goal is to obtain low numbers for each type of error, but When comparing different biometric systems, many different variables are used, but one of the most important metrics is the crossover error rate (CER).
The accuracy of any biometric method is measured in terms of Failed Acceptance Rate (FAR) and Failed Rejection Rate (FRR). Both are expressed as percentages. The FAR is the rate at which attempts by unauthorized users are incorrectly accepted as valid. The FRR is just the opposite. It measures the rate at which authorized users are denied access.
The relationship between FRR (Type I) and FAR (Type II) is depicted in the graphic below . As one rate increases, the other decreases. The Cross-over Error Rate (CER) is sometimes considered a good indicator of the overall accuracy of a biometric system. This
is the point at which the FRR and the FAR have the same value. Solutions with a lower CER are typically more accurate.
See graphic below from Biometria showing this relationship. The Cross-over Error Rate (CER) is also called the Equal Error Rate (EER), the two are synonymous.
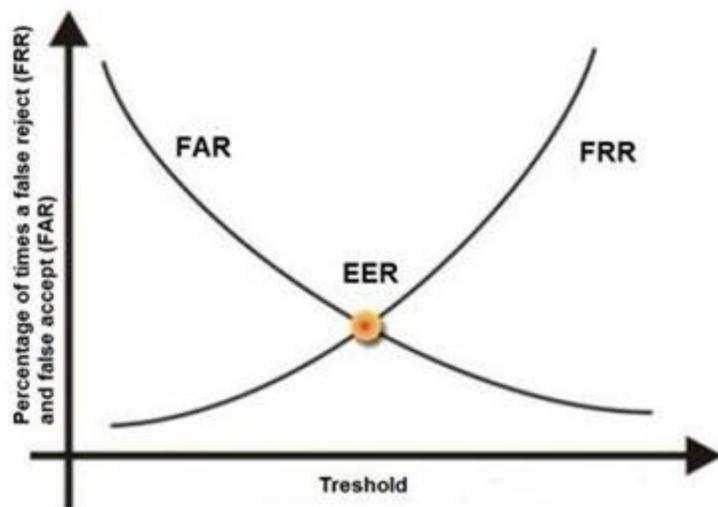
C:\Users\MCS\Desktop\1.jpg Cross Over Error Rate
The other answers are incorrect:
Type I error is also called as False Rejection Rate where a valid user is rejected by the system.
Type III error : there is no such error type in biometric system.
Crossover error rate stated in percentage , represents the point at which false rejection equals the false acceptance rate.
Reference(s) used for this question: http://www.biometria.sk/en/principles-of-biometrics.html
and
Shon Harris, CISSP All In One (AIO), 6th Edition , Chapter 3, Access Control, Page 188- 189
and
Tech Republic, Reduce Multi_Factor Authentication Cost

NEW QUESTION 169
- (Topic 1)
What is the main focus of the Bell-LaPadula security model?

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

Answer: C

Explanation:
The Bell-LaPadula model is a formal model dealing with confidentiality.
The Bell–LaPadula Model (abbreviated BLP) is a state machine model used for enforcing access control in government and military applications. It was developed by David Elliott Bell and Leonard J. LaPadula, subsequent to strong guidance from Roger R. Schell to formalize the U.S. Department of Defense (DoD) multilevel security (MLS) policy. The model is a formal state transition model of computer security policy that describes a set of access control rules which use security labels on objects and clearances for subjects. Security labels range from the most sensitive (e.g."Top Secret"), down to the least sensitive (e.g., "Unclassified" or "Public").
The Bell–LaPadula model focuses on data confidentiality and controlled access to classified information, in contrast to the Biba Integrity Model which describes rules for the protection of data integrity. In this formal model, the entities in an information system are divided into subjects and objects.
The notion of a "secure state" is defined, and it is proven that each state transition preserves security by moving from secure state to secure state, thereby inductively proving that the system satisfies the security objectives of the model. The Bell–LaPadula model is built on the concept of a state machine with a set of allowable states in a computer network system. The transition from one state to another state is defined by transition functions.
A system state is defined to be "secure" if the only permitted access modes of subjects to objects are in accordance with a security policy. To determine whether a specific access mode is allowed, the clearance of a subject is compared to the classification of the object (more precisely, to the combination of classification and set of compartments, making up the security level) to determine if the subject is authorized for the specific access mode.
The clearance/classification scheme is expressed in terms of a lattice. The model defines two mandatory access control (MAC) rules and one discretionary access control (DAC) rule with three security properties:
The Simple Security Property - a subject at a given security level may not read an object at
a higher security level (no read-up).
The -property (read "star"-property) - a subject at a given security level must not write to any object at a lower security level (no write-down). The -property is also known as the Confinement property.

The Discretionary Security Property - use of an access matrix to specify the discretionary access control.
The following are incorrect answers:
Accountability is incorrect. Accountability requires that actions be traceable to the user that performed them and is not addressed by the Bell-LaPadula model.
Integrity is incorrect. Integrity is addressed in the Biba model rather than Bell-Lapadula. Availability is incorrect. Availability is concerned with assuring that data/services are available to authorized users as specified in service level objectives and is not addressed by the Bell-Lapadula model.
References: CBK, pp. 325-326
AIO3, pp. 279 - 284
AIOv4 Security Architecture and Design (pages 333 - 336) AIOv5 Security Architecture and Design (pages 336 - 338)
Wikipedia at https://en.wikipedia.org/wiki/Bell-La_Padula_model

NEW QUESTION 172
......

Thank You for Trying Our Product

We offer two products:

1st - We have Practice Tests Software with Actual Exam Questions

2nd - Questons and Answers in PDF Format

SSCP Practice Exam Features:

* SSCP Questions and Answers Updated Frequently

* SSCP Practice Questions Verified by Expert Senior Certified Staff

* SSCP Most Realistic Questions that Guarantee you a Pass on Your FirstTry

* SSCP Practice Test Questions in Multiple Choice Formats and Updatesfor 1 Year

100% Actual & Verified — Instant Download, Please Click
Order The SSCP Practice Test Here