ISC2

Exam Questions SSCP

System Security Certified Practitioner (SSCP)

NEW QUESTION 1
- (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 2
- (Topic 1)
The type of discretionary access control (DAC) that is based on an individual's identity is also called:

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

Answer: A

Explanation:
An identity-based access control is a type of Discretionary Access Control (DAC) that is based on an individual's identity.
DAC is good for low level security environment. The owner of the file decides who has access to the file.
If a user creates a file, he is the owner of that file. An identifier for this user is placed in the file header and/or in an access control matrix within the operating system.
Ownership might also be granted to a specific individual. For example, a manager for a certain department might be made the owner of the files and resources within her department. A system that uses discretionary access control (DAC) enables the owner of the resource to specify which subjects can access specific resources.
This model is called discretionary because the control of access is based on the discretion of the owner. Many times department managers, or business unit managers , are the owners of the data within their specific department. Being the owner, they can specify who should have access and who should not.
Reference(s) used for this question:
Harris, Shon (2012-10-18). CISSP All-in-One Exam Guide, 6th Edition (p. 220). McGraw- Hill . Kindle Edition.

NEW QUESTION 3
- (Topic 1)
Controlling access to information systems and associated networks is necessary for the preservation of their:

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

Answer: B

Explanation:
Controlling access to information systems and associated networks is necessary for the preservation of their confidentiality, integrity and availability.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 31.

NEW QUESTION 4
- (Topic 1)
Smart cards are an example of which type of control?

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

Answer: C

Explanation:
Logical or technical controls involve the restriction of access to systems and the protection of information. Smart cards and encryption are examples of these types of control.
Controls are put into place to reduce the risk an organization faces, and they come in three main flavors: administrative, technical, and physical. Administrative controls are commonly referred to as “soft controls” because they are more management-oriented. Examples of administrative controls are security documentation, risk management, personnel security, and training. Technical controls (also called logical controls) are software or hardware components, as in firewalls, IDS, encryption, identification and authentication mechanisms. And physical controls are items put into place to protect facility, personnel, and resources. Examples of physical controls are security guards, locks, fencing, and lighting.
Many types of technical controls enable a user to access a system and the resources within that system. A technical control may be a username and password combination, a Kerberos implementation, biometrics, public key infrastructure (PKI), RADIUS, TACACS +, or authentication using a smart card through a reader

connected to a system. These technologies verify the user is who he says he is by using different types of authentication methods. Once a user is properly authenticated, he can be authorized and allowed access to network resources.
Reference(s) used for this question:
Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (p. 245). McGraw- Hill. Kindle Edition.
and
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access control systems (page 32).

NEW QUESTION 5
- (Topic 1)
Which of following is not a service provided by AAA servers (Radius, TACACS and DIAMETER)?

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

Answer: B

Explanation:
Radius, TACACS and DIAMETER are classified as authentication, authorization, and accounting (AAA) servers.
Source: TIPTON, Harold F. & KRAUSE, MICKI, Information Security Management Handbook, 4th Edition, Volume 2, 2001, CRC Press, NY, Page 33.
also see:
The term "AAA" is often used, describing cornerstone concepts [of the AIC triad] Authentication, Authorization, and Accountability. Left out of the AAA acronym is Identification which is required before the three "A's" can follow. Identity is a claim, Authentication proves an identity, Authorization describes the action you can perform on a system once you have been identified and authenticated, and accountability holds users accountable for their actions.
Reference: CISSP Study Guide, Conrad Misenar, Feldman p. 10-11, (c) 2010 Elsevier.

NEW QUESTION 6
- (Topic 1)
Crime Prevention Through Environmental Design (CPTED) is a discipline that:

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

Answer: A

Explanation:
Crime Prevention Through Environmental Design (CPTED) is a discipline that outlines how the proper design of a physical environment can reduce crime by directly affecting human behavior. It provides guidance about lost and crime prevention through proper facility 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 7
- (Topic 1)
Which of the following biometric characteristics cannot be used to uniquely authenticate an individual's identity?

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

Answer: D

Explanation:
The following are typical biometric characteristics that are used to uniquely authenticate an individual's identity:
Fingerprints Retina scans Iris scans Facial scans Palm scans Hand geometry Voice
Handwritten signature dynamics
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 39.
And: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, 2002, chapter 4: Access Control (pages 127-131).

NEW QUESTION 8
- (Topic 1)
Which of the following is most affected by denial-of-service (DOS) attacks?

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

Answer: D

Explanation:
Denial of service attacks obviously affect availability of targeted systems. Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 3: Telecommunications and Network Security (page 61).

NEW QUESTION 9
- (Topic 1)
Which of the following would be used to implement Mandatory Access Control (MAC)?

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

Answer: C

Explanation:
The lattice is a mechanism use to implement Mandatory Access Control (MAC)
Under Mandatory Access Control (MAC) you have: Mandatory Access Control
Under Non Discretionary Access Control (NDAC) you have: Rule-Based Access Control
Role-Based Access Control
Under Discretionary Access Control (DAC) you have: Discretionary Access Control
The Lattice Based Access Control is a type of access control used to implement other access control method. A lattice is an ordered list of elements that has a least upper bound and a most lower bound. The lattice can be used for MAC, DAC, Integrity level, File Permission, and more
For example in the case of MAC, if we look at common government classifications, we have the following:
TOP SECRET
SECRET ----------I am the user at secret CONFIDENTIAL
SENSITIVE BUT UNCLASSIFIED UNCLASSIFIED
If you look at the diagram above where I am a user at SECRET it means that I can access document at lower classification but not document at TOP SECRET.
The lattice is a list of ORDERED ELEMENT, in this case the ordered elements are classification levels. My least upper bound is SECRET and my most lower bound is UNCLASSIFIED.
However the lattice could also be used for Integrity Levels such as: VERY HIGH
HIGH
MEDIUM ----------I am a user, process, application at the medium level LOW
VERY LOW
In the case of of Integrity levels you have to think about TRUST. Of course if I take for example the the VISTA operating system which is based on Biba then Integrity Levels would be used. As a user having access to the system I cannot tell a process running with administrative privilege what to do. Else any users on the system could take control of the system by getting highly privilege process to do things on their behalf. So no read down would be allowed in this case and this is an example of the Biba model.
Last but not least the lattice could be use for file permissions: RWX
RW ---------User at this level
R
If I am a user with READ and WRITE (RW) access privilege then I cannot execute the file
because I do not have execute permission which is the X under linux and UNIX.
Many people confuse the Lattice Model and many books says MAC = LATTICE, however the lattice can be use for other purposes.
There is also Role Based Access Control (RBAC) that exists out there. It COULD be used to simulate MAC but it is not MAC as it does not make use of Label on objects indicating sensitivity and categories. MAC also require a clearance that dominates the object.
You can get more info about RBAC at:http://csrc.nist.gov/groups/SNS/rbac/faq.html#03 Also note that many book uses the same acronym for Role Based Access Control and Rule
Based Access Control which is RBAC, this can be confusing.
The proper way of writing the acronym for Rule Based Access Control is RuBAC, unfortunately it is not commonly used.
References:
There is a great article on technet that talks about the lattice in VISTA: http://blogs.technet.com/b/steriley/archive/2006/07/21/442870.aspx
also see:
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access control systems (page 33).
and
http://www.microsoft-watch.com/content/vista/gaging_vistas_integrity.html

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 10
- (Topic 1)
Which of the following is a trusted, third party authentication protocol that was developed under Project Athena at MIT?

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

Answer: A

Explanation:
Kerberos is a trusted, third party authentication protocol that was developed under Project Athena at MIT.
Kerberos is a network authentication protocol. It is designed to provide strong authentication for client/server applications by using secret-key cryptography. A free implementation of this protocol is available from the Massachusetts Institute of Technology. Kerberos is available in many commercial products as well.
The Internet is an insecure place. Many of the protocols used in the Internet do not provide any security. Tools to "sniff" passwords off of the network are in common use by systems crackers. Thus, applications which send an unencrypted password over the network are extremely vulnerable. Worse yet, other client/server applications rely on the client program to be "honest" about the identity of the user who is using it. Other applications rely on the client to restrict its activities to those which it is allowed to do, with no other enforcement by the server.
Some sites attempt to use firewalls to solve their network security problems. Unfortunately, firewalls assume that "the bad guys" are on the outside, which is often a very bad
assumption. Most of the really damaging incidents of computer crime are carried out by insiders. Firewalls also have a significant disadvantage in that they restrict how your users can use the Internet. (After all, firewalls are simply a less extreme example of the dictum that there is nothing more secure then a computer which is not connected to the network --- and powered off!) In many places, these restrictions are simply unrealistic and unacceptable.
Kerberos was created by MIT as a solution to these network security problems. The Kerberos protocol uses strong cryptography so that a client can prove its identity to a server (and vice versa) across an insecure network connection. After a client and server have used Kerberos to prove their identity, they can also encrypt all of their communications to assure privacy and data integrity as they go about their business.
Kerberos is freely available from MIT, under a copyright permission notice very similar to the one used for the BSD operating and X11 Windowing system. MIT provides Kerberos in source form, so that anyone who wishes to use it may look over the code for themselves and assure themselves that the code is trustworthy. In addition, for those who prefer to rely on a professional supported product, Kerberos is available as a product from many different vendors.
In summary, Kerberos is a solution to your network security problems. It provides the tools of authentication and strong cryptography over the network to help you secure your information systems across your entire enterprise. We hope you find Kerberos as useful as it has been to us. At MIT, Kerberos has been invaluable to our Information/Technology architecture.
KryptoKnight is a Peer to Peer authentication protocol incorporated into the NetSP product from IBM.
SESAME is an authentication and access control protocol, that also supports communication confidentiality and integrity. It provides public key based authentication along with the Kerberos style authentication, that uses symmetric key cryptography. Sesame supports the Kerberos protocol and adds some security extensions like public key based authentication and an ECMA-style Privilege Attribute Service. The complete Sesame protocol is a two step process. In the first step, the client successfully authenticates itself to the Authentication Server and obtains a ticket that can be presented to the Privilege Attribute Server. In the second step, the initiator obtains proof of his access rights in the form of Privilege Attributes Certificate (PAC). The PAC is a specific form of Access Control Certificate as defined in the ECMA-219 document. This document describes the extensions to Kerberos for public key based authentication as adopted in Sesame.
SESAME, KryptoKnight, and NetSP never took off and the protocols are no longer commonly used.
References:
http://www.cmf.nrl.navy.mil/CCS/people/kenh/kerberos-faq.html#whatis and
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 40.

NEW QUESTION 15
- (Topic 1)
Which of the following is an example of a passive attack?

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

Answer: B

Explanation:
Shoulder surfing is a form of a passive attack involving stealing passwords, personal identification numbers or other confidential information by looking over someone's shoulder. All other forms of attack are active attacks, where a threat makes a modification to the system in an attempt to take advantage of a vulnerability.
Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw- Hill/Osborne, 2002, chapter 3: Security Management Practices (page 63).

NEW QUESTION 16
- (Topic 1)
In which of the following model are Subjects and Objects identified and the permissions applied to each subject/object combination are specified. Such a model can be used to quickly summarize what permissions a subject has for various system objects.

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

Answer: A

Explanation:
An access control matrix is a table of subjects and objects indicating what actions individual subjects can take upon individual objects. Matrices are data structures that programmers implement as table lookups that will be used and enforced by the operating system.
This type of access control is usually an attribute of DAC models. The access rights can be assigned directly to the subjects (capabilities) or to the objects (ACLs).
Capability Table
A capability table specifies the access rights a certain subject possesses pertaining to specific objects. A capability table is different from an ACL because the subject is bound to the capability table, whereas the object is bound to the ACL.
Access control lists (ACLs)
ACLs are used in several operating systems, applications, and router configurations. They are lists of subjects that are authorized to access a specific object, and they define what level of authorization is granted. Authorization can be specific to an individual, group, or role. ACLs map values from the access control matrix to the object.

Whereas a capability corresponds to a row in the access control matrix, the ACL corresponds to a column of the matrix.
NOTE: Ensure you are familiar with the terms Capability and ACLs for the purpose of the exam.
Resource(s) used for this question:
Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (Kindle Locations 5264-5267). McGraw-Hill. Kindle Edition.
or
Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition, Page 229 and
Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 1923-1925). Auerbach Publications. Kindle Edition.

NEW QUESTION 19
- (Topic 1)
What is the most critical characteristic of a biometric identifying system?

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

Answer: C

Explanation:
Accuracy is the most critical characteristic of a biometric identifying verification system.
Accuracy is measured in terms of false rejection rate (FRR, or type I errors) and false acceptance rate (FAR or type II errors).
The Crossover Error Rate (CER) is the point at which the FRR equals the FAR and has become the most important measure of biometric system accuracy.
Source: TIPTON, Harold F. & KRAUSE, Micki, Information Security Management Handbook, 4th edition (volume 1), 2000, CRC Press, Chapter 1, Biometric Identification (page 9).

NEW QUESTION 23
- (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 24
- (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 25
- (Topic 1)
Which integrity model defines a constrained data item, an integrity verification procedure and a transformation procedure?

A. The Take-Grant model
B. The Biba integrity model
C. The Clark Wilson integrity model
D. The Bell-LaPadula integrity model

Answer: C

Explanation:
The Clark Wilson integrity model addresses the three following integrity goals: 1) data is protected from modification by unauthorized users; 2) data is protected from unauthorized modification by authorized users; and 3) data is internally and externally consistent. It also defines a Constrained Data Item (CDI), an Integrity Verification Procedure (IVP), a Transformation Procedure (TP) and an Unconstrained Data item. The Bell-LaPadula and Take-Grant models are not integrity models.
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 Architecture and Models (page 205).

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 32
- (Topic 1)
Which of the following can best eliminate dial-up access through a Remote Access Server as a hacking vector?

A. Using a TACACS+ server.
B. Installing the Remote Access Server outside the firewall and forcing legitimate users to authenticate to the firewall.
C. Setting modem ring count to at least 5.
D. Only attaching modems to non-networked hosts.

Answer: B

Explanation:
Containing the dial-up problem is conceptually easy: by installing the Remote Access Server outside the firewall and forcing legitimate users to authenticate to the firewall, any access to internal resources through the RAS can be filtered as would any other connection coming from the Internet.
The use of a TACACS+ Server by itself cannot eliminate hacking.
Setting a modem ring count to 5 may help in defeating war-dialing hackers who look for modem by dialing long series of numbers.
Attaching modems only to non-networked hosts is not practical and would not prevent these hosts from being hacked.
Source: STREBE, Matthew and PERKINS, Charles, Firewalls 24seven, Sybex 2000, Chapter 2: Hackers.

NEW QUESTION 36
- (Topic 1)
What does the Clark-Wilson security model focus on?

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

Answer: B

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

NEW QUESTION 41
- (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

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Aspect descriptions:

Verify	Whether or not the Biometric is capable of verification. Verification is the process where an input is compared to specific data previously recorded from the user to see if the person is who they claim to be.
ID	Whether or not the Biometric is capable of identification. Identification is the process where an input is compared to a large data set previously recorded from many peopleto 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 negtives created using this Biometric.
Errors	Typical causes of errors for this Biometric.
False Pos.	How easy it is to create a false positive reading with this biometric (someone is able to impersonate someone else).
False Neg.	How easy it is to create a false negative reading with this biometric (someone is able to avoid identification as oneself).
Security Level	The highest level of security that this Biometric is capable of working at.
Long-term Stability	How well this Biometric continues to work without data updates over long periods of time.
User Acceptance	How willing the public is to use this Biometric.
Intrusiveness	How much the Biometric is considered to invade one's privacy or require interaction by the user.
Ease of Use	How easy this Biometric is for both the user and the personnel involved.
Low Cost	Whether or not there is a low-cost option for this Biometric to be used.
Hardware	Type and cost of hardware required to use this Biometric.
Standards	Whether or not standards exist for this Biometric.

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Biometric Aspect Descriptions Reference(s) used for this question:
RHODES, Keith A., Chief Technologist, United States General Accounting Office, National Preparedness, Technologies to Secure Federal Buildings, April 2002 (page 10).

and
https://sites.google.com/site/biometricsecuritysolutions/crossover-accuracy

NEW QUESTION 46
- (Topic 1)
Which access control type has a central authority that determine to what objects the subjects have access to and it is based on role or on the organizational security policy?

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

Answer: C

Explanation:
Non Discretionary Access Control include Role Based Access Control (RBAC) and Rule Based Access Control (RBAC or RuBAC). RABC being a subset of NDAC, it was easy to eliminate RBAC as it was covered under NDAC already.
Some people think that RBAC is synonymous with NDAC but RuBAC would also fall into this category.
Discretionary Access control is for environment with very low level of security. There is no control on the dissemination of the information. A user who has access to a file can copy the file or further share it with other users.
Rule Based Access Control is when you have ONE set of rules applied uniformly to all users. A good example would be a firewall at the edge of your network. A single rule based is applied against any packets received from the internet.
Mandatory Access Control is a very rigid type of access control. The subject must dominate the object and the subject must have a Need To Know to access the information. Objects have labels that indicate the sensitivity (classification) and there is also categories to enforce the Need To Know (NTK).
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 33.

NEW QUESTION 49
- (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 53
- (Topic 1)
Which of the following would assist the most in Host Based intrusion detection?

A. audit trails.
B. access control lists.
C. security clearances.
D. host-based authentication.

Answer: A

Explanation:
To assist in Intrusion Detection you would review audit logs for access violations.
The following answers are incorrect:
access control lists. This is incorrect because access control lists determine who has access to what but do not detect intrusions.
security clearances. This is incorrect because security clearances determine who has access to what but do not detect intrusions.
host-based authentication. This is incorrect because host-based authentication determine who have been authenticated to the system but do not dectect intrusions.

NEW QUESTION 54
- (Topic 1)
What is called a password that is the same for each log-on session?

A. "one-time password"
B. "two-time password"
C. static password
D. dynamic password

Answer: C

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

NEW QUESTION 59
- (Topic 1)
Which of the following is the most reliable authentication method for remote access?

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

Answer: B

Explanation:
A Synchronous token generates a one-time password that is only valid for a short period of time. Once the password is used it is no longer valid, and it expires if not entered in the acceptable time frame.
The following answers are incorrect:
Variable callback system. Although variable callback systems are more flexible than fixed callback systems, the system assumes the identity of the individual unless two-factor authentication is also implemented. By itself, this method might allow an attacker access as a trusted user.
Fixed callback system. Authentication provides assurance that someone or something is who or what he/it is supposed to be. Callback systems authenticate a person, but anyone can pretend to be that person. They are tied to a specific place and phone number, which can be spoofed by implementing call-forwarding.
Combination of callback and Caller ID. The caller ID and callback functionality provides greater confidence and auditability of the caller's identity. By disconnecting and calling back only authorized phone numbers, the system has a greater confidence in the location of the call. However, unless combined with strong authentication, any individual at the location could obtain access.
The following reference(s) were/was used to create this question: Shon Harris AIO v3 p. 140, 548
ISC2 OIG 2007 p. 152-153, 126-127

NEW QUESTION 64
- (Topic 1)
Which of the following would constitute the best example of a password to use for access to a system by a network administrator?

A. holiday
B. Christmas12
C. Jenny
D. GyN19Za!

Answer: D

Explanation:
GyN19Za! would be the the best answer because it contains a mixture of upper and lower case characters, alphabetic and numeric characters, and a special character making it less vulnerable to password attacks.
All of the other answers are incorrect because they are vulnerable to brute force or dictionary attacks. Passwords should not be common words or names. The addition of a number to the end of a common word only marginally strengthens it because a common password attack would also check combinations of words: Christmas23 Christmas123 etc...

NEW QUESTION 66
- (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 69
- (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 74
- (Topic 1)
Which of the following control pairing places emphasis on "soft" mechanisms that support the access control objectives?

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

Answer: B

Explanation:
Soft Control is another way of referring to Administrative control.
Technical and Physical controls are NOT soft control, so any choice listing them was not the best answer.
Preventative/Technical is incorrect because although access control can be technical control, it is commonly not referred to as a "soft" control
Preventative/Administrative is correct because access controls are preventative in nature. it is always best to prevent a negative event, however there are times where controls might fail and you cannot prevent everything. Administrative controls are roles, responsibilities,
policies, etc which are usually paper based. In the administrative category you would find audit, monitoring, and security awareness as well.
Preventative/Physical pairing is incorrect because Access controls with an emphasis on "soft" mechanisms conflict with the basic concept of physical controls, physical controls are usually tangible objects such as fences, gates, door locks, sensors, etc...
Detective/Administrative Pairing is incorrect because access control is a preventative control used to control access, not to detect violations to access.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 34.

NEW QUESTION 75
- (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 77
- (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 81
- (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 84
- (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 85
- (Topic 1)
The Orange Book is founded upon which security policy model?

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

Answer: B

Explanation:
From the glossary of Computer Security Basics:
The Bell-LaPadula model is the security policy model on which the Orange Book requirements are based. From the Orange Book definition, "A formal state transition model of computer security policy that describes a set of access control rules. In this formal model, the entities in a computer system are divided into abstract sets of subjects and objects. The notion of secure state is defined and it is proven that each state transition preserves security by moving from secure state to secure state; thus, inductively proving the system is secure. A system state is defined to be 'secure' if the only permitted access modes of subjects to objects are in accordance with a specific security policy. In order to determine whether or not a specific access mode is allowed, the clearance of a subject is compared to the classification of the object and a determination is made as to whether the subject is authorized for the specific access mode."
The Biba Model is an integrity model of computer security policy that describes a set of rules. In this model, a subject may not depend on any object or other subject that is less trusted than itself.
The Clark Wilson Model is an integrity model for computer security policy designed for a commercial environment. It addresses such concepts as nondiscretionary access control, privilege separation, and least privilege. TEMPEST is a government program that prevents the compromising electrical and electromagnetic signals that emanate from computers and related equipment from being intercepted and deciphered.
Source: RUSSEL, Deborah & GANGEMI, G.T. Sr., Computer Security Basics, O'Reilly, 1991.
Also: U.S. Department of Defense, Trusted Computer System Evaluation Criteria (Orange Book), DOD 5200.28-STD. December 1985 (also available here).

NEW QUESTION 87
- (Topic 1)
Which of the following Operation Security controls is intended to prevent unauthorized intruders from internally or externally accessing the system, and to lower the amount and impact of unintentional errors that are entering the system?

A. Detective Controls
B. Preventative Controls
C. Corrective Controls
D. Directive Controls

Answer: B

Explanation:
In the Operations Security domain, Preventative Controls are designed to prevent unauthorized intruders from internally or externally accessing the system, and to lower the amount and impact of unintentional errors that are entering the system. Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 217.

NEW QUESTION 88
- (Topic 1)
A central authority determines what subjects can have access to certain objects based on the organizational security policy is called:

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

Answer: C

Explanation:
A central authority determines what subjects can have access to certain objects based on the organizational security policy.
The key focal point of this question is the 'central authority' that determines access rights. Cecilia one of the quiz user has sent me feedback informing me that NIST defines MAC as:
"MAC Policy means that Access Control Policy Decisions are made by a CENTRAL
AUTHORITY. Which seems to indicate there could be two good answers to this question.
However if you read the NISTR document mentioned in the references below, it is also mentioned that: MAC is the most mentioned NDAC policy. So MAC is a form of NDAC policy.
Within the same document it is also mentioned: "In general, all access control policies other than DAC are grouped in the category of non- discretionary access control (NDAC). As the name implies, policies in this category have rules that are not established at the discretion of the user. Non-discretionary policies establish controls that cannot be changed by users, but only through administrative action."
Under NDAC you have two choices:
Rule Based Access control and Role Base Access Control
MAC is implemented using RULES which makes it fall under RBAC which is a form of NDAC. It is a subset of NDAC.
This question is representative of what you can expect on the real exam where you have more than once choice that seems to be right. However, you have to look closely if one of the choices would be higher level or if one of the choice falls under one of the other choice. In this case NDAC is a better choice because MAC is falling under NDAC through the use of Rule Based Access Control.
The following are incorrect answers: MANDATORY ACCESS CONTROL
In Mandatory Access Control the labels of the object and the clearance of the subject
determines access rights, not a central authority. Although a central authority (Better known as the Data Owner) assigns the label to the object, the system does the determination of access rights automatically by comparing the Object label with the Subject clearance. The subject clearance MUST dominate (be equal or higher) than the object being accessed.
The need for a MAC mechanism arises when the security policy of a system dictates that:
* 1. Protection decisions must not be decided by the object owner.
* 2. The system must enforce the protection decisions (i.e., the system enforces the security policy over the wishes or intentions of the object owner).
Usually a labeling mechanism and a set of interfaces are used to determine access based on the MAC policy; for example, a user who is running a process at the Secret classification should not be allowed to read a file with a label of Top Secret. This is known as the “simple security rule,” or “no read up.”
Conversely, a user who is running a process with a label of Secret should not be allowed to write to a file with a label of Confidential. This rule is called the “*-property” (pronounced
“star property”) or “no write down.” The *-property is required to maintain system security in an automated environment.
DISCRETIONARY ACCESS CONTROL
In Discretionary Access Control the rights are determined by many different entities, each of the persons who have created files and they are the owner of that file, not one central authority.
DAC leaves a certain amount of access control to the discretion of the object's owner or anyone else who is authorized to control the object's access. For example, it is generally used to limit a user's access to a file; it is the owner of the file who controls other users' accesses to the file. Only those users specified by the owner may have some combination of read, write, execute, and other permissions to the file.
DAC policy tends to be very flexible and is widely used in the commercial and government sectors. However, DAC is known to be inherently weak for two reasons: First, granting read access is transitive; for example, when Ann grants Bob read access to a file, nothing stops Bob from copying the contents of Ann’s file to an object that Bob controls. Bob may now grant any other user access to the copy of Ann’s file without Ann’s knowledge.
Second, DAC policy is vulnerable to Trojan horse attacks. Because programs inherit the identity of the invoking user, Bob may, for example, write a program for Ann that, on the surface, performs some useful function, while at the same time destroys the contents of Ann’s files. When investigating the problem, the audit files would indicate that Ann destroyed her own files. Thus, formally, the drawbacks of DAC are as follows:
Discretionary Access Control (DAC) Information can be copied from one object to another; therefore, there is no real assurance on the flow of information in a system.
No restrictions apply to the usage of information when the user has received it.
The privileges for accessing objects are decided by the owner of the object, rather than through a system-wide policy that reflects the organization’s security requirements.
ACLs and owner/group/other access control mechanisms are by far the most common mechanism for implementing DAC policies. Other mechanisms, even though not designed with DAC in mind, may have the capabilities to implement a DAC policy.
RULE BASED ACCESS CONTROL
In Rule-based Access Control a central authority could in fact determine what subjects can
have access when assigning the rules for access. However, the rules actually determine the access and so this is not the most correct answer.
RuBAC (as opposed to RBAC, role-based access control) allow users to access systems and information based on pre determined and configured rules. It is important to note that there is no commonly understood definition or formally defined standard for rule-based access control as there is for DAC, MAC, and RBAC. “Rule-based access” is a generic term applied to systems that allow some form of organization-defined rules, and therefore rule-based access control encompasses a broad range of systems. RuBAC may in fact be combined with other models, particularly RBAC or DAC. A RuBAC system intercepts every access request and compares the rules with the rights of the user to make an access decision. Most of the rule-based access control relies on a security label system, which dynamically composes a set of rules defined by a security policy. Security labels are attached to all objects, including files, directories, and devices.
Sometime roles to subjects (based on their attributes) are assigned as well. RuBAC meets the business needs as well as the technical needs of controlling service

access. It allows business rules to be applied to access control—for example, customers who have overdue balances may be denied service access. As a mechanism for MAC, rules of RuBAC cannot be changed by users. The rules can be established by any attributes of a system related to the users such as domain, host, protocol, network, or IP addresses. For example, suppose that a user wants to access an object in another network on the other side of a router. The router employs RuBAC with the rule composed by the network addresses, domain, and protocol to decide whether or not the user can be granted access. If employees change their roles within the organization, their existing authentication credentials remain in effect and do not need to be re configured. Using rules in conjunction with roles adds greater flexibility because rules can be applied to people as well as to devices. Rule-based access control can be combined with role-based access control, such that the role of a user is one of the attributes in rule setting. Some provisions of access control systems have rule- based policy engines in addition to a role-based policy engine and certain implemented dynamic policies [Des03]. For example, suppose that two of the primary types of software users are product engineers and quality engineers. Both groups usually have access to the same data, but they have different roles to perform in relation to the data and the application's function. In addition, individuals within each group have different job responsibilities that may be identified using several types of attributes such as developing programs and testing areas. Thus, the access decisions can be made in real time by a scripted policy that regulates the access between the groups of product engineers and quality engineers, and each individual within these groups. Rules can either replace or complement role-based access control. However, the creation of rules and security policies is also a complex process, so each organization will need to strike the appropriate balance.
References used for this question: http://csrc.nist.gov/publications/nistir/7316/NISTIR-7316.pdf and
AIO v3 p162-167 and OIG (2007) p.186-191
also
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 33.

NEW QUESTION 89
- (Topic 1)
Which of the following questions is less likely to help in assessing physical access controls?

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

Answer: B

Explanation:
Physical security and environmental security are part of operational controls, and are measures taken to protect systems, buildings, and related supporting infrastructures against threats associated with their physical environment. All the questions above are useful in assessing physical access controls except for the one regarding operating system configuration, which is a logical access control.
Source: SWANSON, Marianne, NIST Special Publication 800-26, Security Self- Assessment Guide for Information Technology Systems, November 2001 (Pages A-21 to A-24).

NEW QUESTION 91
- (Topic 1)
What is the primary role of smartcards in a PKI?

A. Transparent renewal of user keys
B. Easy distribution of the certificates between the users
C. Fast hardware encryption of the raw data
D. Tamper resistant, mobile storage and application of private keys of the users

Answer: D

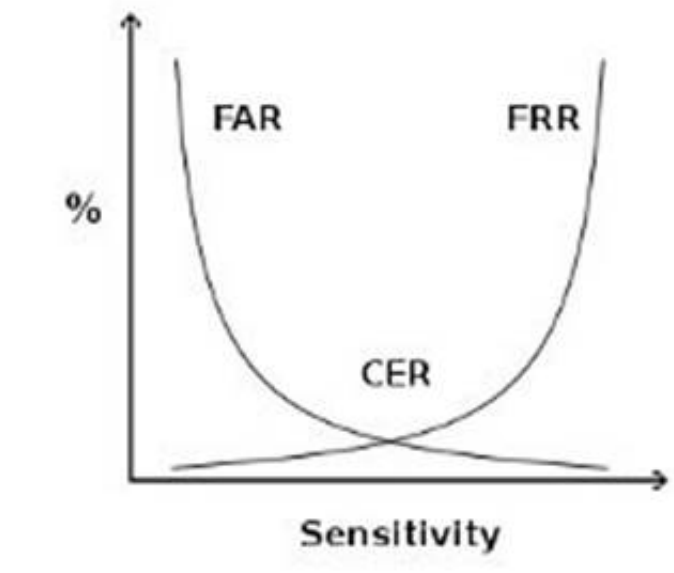
Explanation:
Reference: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, 2001, McGraw- Hill/Osborne, page 139;
SNYDER, J., What is a SMART CARD?.
Wikipedia has a nice definition at: http://en.wikipedia.org/wiki/Tamper_resistance Security
Tamper-resistant microprocessors are used to store and process private or sensitive information, such as private keys or electronic money credit. To prevent an attacker from
retrieving or modifying the information, the chips are designed so that the information is not accessible through external means and can be accessed only by the embedded software, which should contain the appropriate security measures.
Examples of tamper-resistant chips include all secure cryptoprocessors, such as the IBM 4758 and chips used in smartcards, as well as the Clipper chip.
It has been argued that it is very difficult to make simple electronic devices secure against tampering, because numerous attacks are possible, including:
physical attack of various forms (microprobing, drills, files, solvents, etc.) freezing the device
applying out-of-spec voltages or power surges applying unusual clock signals
inducing software errors using radiation
measuring the precise time and power requirements of certain operations (see power analysis)
Tamper-resistant chips may be designed to zeroise their sensitive data (especially cryptographic keys) if they detect penetration of their security encapsulation or out-of- specification environmental parameters. A chip may even be rated for "cold zeroisation", the ability to zeroise itself even after its power supply has been crippled.
Nevertheless, the fact that an attacker may have the device in his possession for as long as he likes, and perhaps obtain numerous other samples for testing and practice, means that it is practically impossible to totally eliminate tampering by a sufficiently motivated opponent. Because of this, one of the most important elements in protecting a system is overall system design. In particular, tamper-resistant systems should "fail gracefully" by ensuring that compromise of one device does not compromise the entire system. In this manner, the attacker can be practically restricted to attacks that cost less than the expected return from compromising a single device (plus, perhaps, a little more for kudos). Since the most sophisticated attacks have been estimated to cost several hundred thousand dollars to carry out, carefully designed systems may be invulnerable in practice.

NEW QUESTION 93
- (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 96
- (Topic 1)
What are the components of an object's sensitivity label?

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

Answer: D

Explanation:
Both are the components of a sensitivity label. The following are incorrect:
A Classification Set and a single Compartment. Is incorrect because the nomenclature "Classification Set" is incorrect, there only one classifcation and it is not a "single compartment" but a Compartment Set.
A single classification and a single compartment. Is incorrect because while there only is one classifcation, it is not a "single compartment" but a Compartment Set.
A Classification Set and user credentials. Is incorrect because the nomenclature "Classification Set" is incorrect, there only one classifcation and it is not "user credential" but a Compartment Set. The user would have their own sensitivity label.

NEW QUESTION 99
- (Topic 1)
Who first described the DoD multilevel military security policy in abstract, formal terms?

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

Answer: A

Explanation:
It was David Bell and Leonard LaPadula who, in 1973, first described the DoD multilevel military security policy in abstract, formal terms. The Bell-LaPadula is a Mandatory Access Control (MAC) model concerned with confidentiality. Rivest, Shamir and Adleman (RSA) developed the RSA encryption algorithm. Whitfield Diffie and Martin Hellman published the Diffie-Hellman key agreement algorithm in 1976. David Clark and David Wilson developed the Clark-Wilson integrity model, more appropriate for security in commercial activities.
Source: RUSSEL, Deborah & GANGEMI, G.T. Sr., Computer Security Basics, O'Reilly, July 1992 (pages 78,109).

NEW QUESTION 101
- (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 106
- (Topic 1)
Which type of control is concerned with avoiding occurrences of risks?

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

Answer: C

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

NEW QUESTION 107
- (Topic 1)
What is called the percentage at which the False Rejection Rate equals the False Acceptance Rate?

A. False Rejection Rate (FRR) or Type I Error
B. False Acceptance Rate (FAR) or Type II Error
C. Crossover Error Rate (CER)
D. Failure to enroll rate (FTE or FER)

Answer: C

Explanation:
The percentage at which the False Rejection Rate equals the False Acceptance Rate is called the Crossover Error Rate (CER). Another name for the CER is the Equal Error Rate (EER), any of the two terms could be used.
Equal error rate or crossover error rate (EER or CER)
It is the rate at which both accept and reject errors are equal. The EER is a quick way to compare the accuracy of devices with different ROC curves. In general, the device with the lowest EER is most accurate.
The other choices were all wrong answers:
The following are used as performance metrics for biometric systems:
false accept rate or false match rate (FAR or FMR): the probability that the system incorrectly matches the input pattern to a non-matching template in the database. It measures the percent of invalid inputs which are incorrectly accepted. This is when an impostor would be accepted by the system.
False reject rate or false non-match rate (FRR or FNMR): the probability that the system fails to detect a match between the input pattern and a matching template in the database. It measures the percent of valid inputs which are incorrectly rejected. This is when a valid company employee would be rejected by the system.
Failure to enroll rate (FTE or FER): the rate at which attempts to create a template from an input is unsuccessful. This is most commonly caused by low quality inputs.
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 38.
and https://en.wikipedia.org/wiki/Biometrics

NEW QUESTION 108
- (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 112
- (Topic 1)
Which security model ensures that actions that take place at a higher security level do not affect actions that take place at a lower level?

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

Answer: C

Explanation:
The goal of a noninterference model is to strictly separate differing security levels to assure that higher-level actions do not determine what lower-level users can see. This is in contrast to other security models that control information flows between differing levels of users, By maintaining strict separation of security levels, a noninterference model minimizes leakages that might happen through a covert channel.
The model ensures that any actions that take place at a higher security level do not affect, or interfere with, actions that take place at a lower level.
It is not concerned with the flow of data, but rather with what a subject knows about the state of the system. So if an entity at a higher security level performs an action, it can not change the state for the entity at the lower level.
The model also addresses the inference attack that occurs when some one has access to some type of information and can infer(guess) something that he does not have the clearance level or authority to know.
The following are incorrect answers:
The Bell-LaPadula model is incorrect. The Bell-LaPadula model is concerned only with confidentiality and bases access control decisions on the classfication of objects and the clearences of subjects.
The information flow model is incorrect. The information flow models have a similar framework to the Bell-LaPadula model and control how information may flow between objects based on security classes. Information will be allowed to flow only in accordance with the security policy.
The Clark-Wilson model is incorrect. The Clark-Wilson model is concerned with change control and assuring that all modifications to objects preserve integrity by means of well- formed transactions and usage of an access triple (subjet - interface - object).
References:
CBK, pp 325 - 326
AIO3, pp. 290 - 291
AIOv4 Security Architecture and Design (page 345)
AIOv5 Security Architecture and Design (pages 347 - 348)
https://en.wikibooks.org/wiki/Security_Architecture_and_Design/Security_Models#Noninterf erence_Models

NEW QUESTION 115
- (Topic 1)
What does the (star) integrity axiom mean in the Biba model?

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

Answer: D

Explanation:
The (star) integrity axiom of the Biba access control model states that an object at one level of integrity is not permitted to modify an object of a higher level of integrity (no write up).
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 117
- (Topic 1)
Which of the following is not a logical control when implementing logical access security?

A. access profiles.
B. userids.
C. employee badges.
D. passwords.

Answer: C

Explanation:
Employee badges are considered Physical so would not be a logical control. The following answers are incorrect:
userids. Is incorrect because userids are a type of logical control.
access profiles. Is incorrect because access profiles are a type of logical control. passwords. Is incorrect because passwords are a type of logical control.

NEW QUESTION 120
- (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 124
- (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 129
- (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 133
- (Topic 1)
Which of the following access control models requires defining classification for objects?

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

Answer: D

Explanation:
With mandatory access control (MAC), the authorization of a subject's access to an object is dependant upon labels, which indicate the subject's clearance, and classification of objects.
The Following answers were incorrect:
Identity-based Access Control is a type of Discretionary Access Control (DAC), they are synonymous.
Role Based Access Control (RBAC) and Rule Based Access Control (RuBAC or RBAC) are types of Non Discretionary Access Control (NDAC).
Tip:
When you have two answers that are synonymous they are not the right choice for sure.
There is only one access control model that makes use of Label, Clearances, and Categories, it is Mandatory Access Control, none of the other one makes use of those items.
Reference(s) used for this question:
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access control systems (page 33).

NEW QUESTION 136
- (Topic 1)
The controls that usually require a human to evaluate the input from sensors or cameras to determine if a real threat exists are associated with:

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

Answer: C

Explanation:
Detective/physical controls usually require a human to evaluate the input from sensors or cameras to determine if a real threat exists.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 36.

NEW QUESTION 137
- (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 141
- (Topic 1)
Kerberos is vulnerable to replay in which of the following circumstances?

A. When a private key is compromised within an allotted time window.
B. When a public key is compromised within an allotted time window.
C. When a ticket is compromised within an allotted time window.
D. When the KSD is compromised within an allotted time window.

Answer: C

Explanation:
Replay can be accomplished on Kerberos if the compromised tickets are
used within an allotted time window.
The security depends on careful implementation:enforcing limited lifetimes for authentication credentials minimizes the threat of of replayed credentials, the KDC must be physically secured, and it should be hardened, not permitting any non-kerberos activities.
Reference:
Official ISC2 Guide to the CISSP, 2007 Edition, page 184 also see:
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 42.

NEW QUESTION 146
- (Topic 1)
In the context of access control, locks, gates, guards are examples of which of the following?

A. Administrative controls
B. Technical controls
C. Physical controls
D. Logical controls

Answer: C

Explanation:
Administrative, technical and physical controls are categories of access control mechanisms.
Logical and Technical controls are synonymous. So both of them could be eliminated as possible choices.
Physical Controls: These are controls to protect the organization's people and physical environment, such as locks, gates, and guards. Physical controls may be called "operational controls" in some contexts.
Physical security covers a broad spectrum of controls to protect the physical assets (primarily the people) in an organization. Physical Controls are sometimes referred to as "operational" controls in some risk management frameworks. These controls range from doors, locks, and windows to environment controls, construction standards, and guards. Typically, physical security is based on the notion of establishing security zones or concentric areas within a facility that require increased security as you get closer to the
valuable assets inside the facility. Security zones are the physical representation of the defense-in-depth principle discussed earlier in this chapter. Typically, security zones are associated with rooms, offices, floors, or smaller elements, such as a cabinet or storage locker. The design of the physical security controls within the facility must take into account the protection of the asset as well as the individuals working in that area.
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 1301-1303). 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 1312-1318). Auerbach Publications. Kindle Edition.

NEW QUESTION 150
- (Topic 1)
Which of the following is not a preventive login control?

A. Last login message
B. Password aging
C. Minimum password length
D. Account expiration

Answer: A

Explanation:
The last login message displays the last login date and time, allowing a user to discover if their account was used by someone else. Hence, this is rather a detective control.
Source: RUSSEL, Deborah & GANGEMI, G.T. Sr., Computer Security Basics, O'Reilly, July 1992 (page 63).

NEW QUESTION 155
- (Topic 1)
The throughput rate is the rate at which individuals, once enrolled, can be processed and
identified or authenticated by a biometric system. Acceptable throughput rates are in the range of:

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

Answer: C

Explanation:
The throughput rate is the rate at which individuals, once enrolled, can be processed and identified or authenticated by a biometric system.
Acceptable throughput rates are in the range of 10 subjects per minute.
Things that may impact the throughput rate for some types of biometric systems may include:
A concern with retina scanning systems may be the exchange of body fluids on the eyepiece.
Another concern would be the retinal pattern that could reveal changes in a person's health, such as diabetes or high blood pressure.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 38.

NEW QUESTION 156
- (Topic 1)
Which of the following is the LEAST user accepted biometric device?

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

Answer: C

Explanation:
The biometric device that is least user accepted is the retina scan, where a system scans the blood-vessel pattern on the backside of the eyeball. When using this device, an individual has to place their eye up to a device, and may require a puff of air to be blown into the eye. The iris scan only needs for an individual to glance at a camera that could be placed above a door.
Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw- Hill/Osborne, 2002, Chapter 4: Access Control (page 131).

NEW QUESTION 161
- (Topic 1)
Controls provide accountability for individuals who are accessing sensitive information. This accountability is accomplished:

A. through access control mechanisms that require identification and authentication and through the audit function.
B. through logical or technical controls involving the restriction of access to systems and the protection of information.
C. through logical or technical controls but not involving the restriction of access to systems and the protection of information.
D. through access control mechanisms that do not require identification and authentication and do not operate through the audit function.

Answer: A

Explanation:
Controls provide accountability for individuals who are accessing sensitive information. This accountability is accomplished through access control mechanisms that require identification and authentication and through the audit function. These controls must be in accordance with and accurately represent the organization's security policy. Assurance procedures ensure that the control mechanisms correctly implement the security policy for the entire life cycle of an information system.
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 163
- (Topic 1)
What Orange Book security rating is reserved for systems that have been evaluated but fail to meet the criteria and requirements of the higher divisions?

A. A
B. D
C. E
D. F

Answer: B

Explanation:
D or "minimal protection" is reserved for systems that were evaluated under the TCSEC but did not meet the requirements for a higher trust level.
A is incorrect. A or "Verified Protectection" is the highest trust level under the TCSEC. E is incorrect. The trust levels are A - D so "E" is not a valid trust level.
F is incorrect. The trust levels are A - D so "F" is not a valid trust level.
CBK, pp. 329 - 330
AIO3, pp. 302 - 306

NEW QUESTION 166
- (Topic 1)
Which of the following models does NOT include data integrity or conflict of interest?

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

Answer: C

Explanation:
Bell LaPadula model (Bell 1975): The granularity of objects and subjects is not predefined, but the model prescribes simple access rights. Based on simple access restrictions the Bell LaPadula model enforces a discretionary access control policy enhanced with mandatory rules. Applications with rigid confidentiality requirements and without strong integrity requirements may properly be modeled.
These simple rights combined with the mandatory rules of the policy considerably restrict the spectrum of applications which can be appropriately modeled.
Source: TIPTON, Hal, (ISC)2, Introduction to the CISSP Exam presentation.
Also check:
Proceedings of the IFIP TC11 12th International Conference on Information Security, Samos (Greece), May 1996, On Security Models.

NEW QUESTION 170
- (Topic 1)
Which access control model is best suited in an environment where a high security level is required and where it is desired that only the administrator grants access control?

A. DAC
B. MAC
C. Access control matrix
D. TACACS

Answer: B

Explanation:
MAC provides high security by regulating access based on the clearance of individual users and sensitivity labels for each object. Clearance levels and sensitivity levels cannot be modified by individual users -- for example, user Joe (SECRET clearance) cannot reclassify the "Presidential Doughnut Recipe" from "SECRET" to "CONFIDENTIAL" so that his friend Jane (CONFIDENTIAL clearance) can read it. The administrator is ultimately responsible for configuring this protection in accordance with security policy and directives from the Data Owner.
DAC is incorrect. In DAC, the data owner is responsible for controlling access to the object. Access control matrix is incorrect. The access control matrix is a way of thinking about 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.
TACACS is incorrect. TACACS is a tool for performing user authentication. References:
CBK, p. 187, Domain 2: Access Control. AIO3, Chapter 4, Access Control.

NEW QUESTION 171
- (Topic 1)
What is considered the most important type of error to avoid for a biometric access control system?

A. Type I Error
B. Type II Error
C. Combined Error Rate
D. Crossover Error Rate

Answer: B

Explanation:
When a biometric system is used for access control, the most important error is the false accept or false acceptance rate, or Type II error, where the system would accept an impostor.
A Type I error is known as the false reject or false rejection rate and is not as important in the security context as a type II error rate. A type one is when a valid company employee is rejected by the system and he cannot get access even thou it is a valid user.
The Crossover Error Rate (CER) is the point at which the false rejection rate equals the false acceptance rate if your would create a graph of Type I and Type II errors. The lower the CER the better the device would be.
The Combined Error Rate is a distracter and does not exist.
Source: TIPTON, Harold F. & KRAUSE, Micki, Information Security Management Handbook, 4th edition (volume 1), 2000, CRC Press, Chapter 1, Biometric Identification (page 10).

NEW QUESTION 173
- (Topic 1)
In Synchronous dynamic password tokens:

A. The token generates a new password value at fixed time intervals (this password could be based on the time of day encrypted with a secret key).
B. The token generates a new non-unique password value at fixed time intervals (this password could be based on the time of day encrypted with a secret key).
C. The unique password is not entered into a system or workstation along with an owner's PIN.
D. The authentication entity in a system or workstation knows an owner's secret key and PIN, and the entity verifies that the entered password is invalid and that it was entered during the invalid time window.

Answer: A

Explanation:
Synchronous dynamic password tokens:
- The token generates a new password value at fixed time intervals (this password could be the time of day encrypted with a secret key).
- the unique password is entered into a system or workstation along with an owner's PIN.
- The authentication entity in a system or workstation knows an owner's secret key and PIN, and the entity verifies that the entered password is valid and that it was entered during the valid time window.
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 176
- (Topic 1)
Which of the following statements pertaining to the Bell-LaPadula is TRUE if you are NOT making use of the strong star property?

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

Answer: D

Explanation:
Bell–LaPadula Confidentiality Model10 The Bell–LaPadula model is perhaps the most well-known and significant security model, in addition to being one of the oldest models used in the creation of modern secure computing systems. Like the Trusted Computer System Evaluation Criteria (or TCSEC), it was inspired by early U.S. Department of Defense security policies and the need to prove that confidentiality could be maintained. In other words, its primary goal is to prevent disclosure as the model system moves from one state (one point in time) to another.
When the strong star property is not being used it means that both the property and the
Simple Security Property rules would be applied.
The Star (*) property rule of the Bell-LaPadula model says that subjects cannot write down, this would compromise the confidentiality of the information if someone at the secret layer would write the object down to a confidential container for example.
The Simple Security Property rule states that the subject cannot read up which means that a subject at the secret layer would not be able to access objects at Top Secret for example.
You must remember: The model tells you about are NOT allowed to do. Anything else would be allowed. For example within the Bell LaPadula model you would be allowed to write up as it does not compromise the security of the information. In fact it would upgrade it to the point that you could lock yourself out of your own information if you have only a secret security clearance.
The following are incorrect answers because they are all FALSE:

"It allows read up" is incorrect. The "simple security" property forbids read up.
"It addresses covert channels" is incorrect. Covert channels are not addressed by the Bell- LaPadula model.
"It addresses management of access controls" is incorrect. Management of access controls are beyond the scope of the Bell-LaPadula model.
Reference(s) used for this question:
Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 17595-17600). Auerbach Publications. Kindle Edition.

NEW QUESTION 180
- (Topic 1)
How are memory cards and smart cards different?

A. Memory cards normally hold more memory than smart cards
B. Smart cards provide a two-factor authentication whereas memory cards don't
C. Memory cards have no processing power
D. Only smart cards can be used for ATM cards

Answer: C

Explanation:
The main difference between memory cards and smart cards is their capacity to process information. A memory card holds information but cannot process information. A smart card holds information and has the necessary hardware and software to actually process that information.
A memory card holds a user's authentication information, so that this user needs only type in a user ID or PIN and presents the memory card to the system. If the entered information and the stored information match and are approved by an authentication service, the user is successfully authenticated.
A common example of a memory card is a swipe card used to provide entry to a building. The user enters a PIN and swipes the memory card through a card reader. If this is the correct combination, the reader flashes green and the individual can open the door and enter the building.
Memory cards can also be used with computers, but they require a reader to process the information. The reader adds cost to the process, especially when one is needed for every computer. Additionally, the overhead of PIN and card generation adds additional overhead and complexity to the whole authentication process.
However, a memory card provides a more secure authentication method than using only a password because the attacker would need to obtain the card and know the correct PIN.
Administrators and management need to weigh the costs and benefits of a memory card implementation as well as the security needs of the organization to determine if it is the right authentication mechanism for their environment.
One of the most prevalent weaknesses of memory cards is that data stored on the card are not protected. Unencrypted data on the card (or stored on the magnetic strip) can be extracted or copied. Unlike a smart card, where security controls and logic are embedded in the integrated circuit, memory cards do not employ an inherent mechanism to protect the data from exposure.
Very little trust can be associated with confidentiality and integrity of information on the memory cards.
The following answers are incorrect:
"Smart cards provide two-factor authentication whereas memory cards don't" is incorrect. This is not necessarily true. A memory card can be combined with a pin or password to offer two factors authentication where something you have and something you know are
used for factors.
"Memory cards normally hold more memory than smart cards" is incorrect. While a memory card may or may not have more memory than a smart card, this is certainly not the best answer to the question.
"Only smart cards can be used for ATM cards" is incorrect. This depends on the decisions made by the particular institution and is not the best answer to the question.
Reference(s) used for this question:
Shon Harris, CISSP All In One, 6th edition , Access Control, Page 199 and also for people using the Kindle edition of the book you can look at Locations 4647-4650.
Schneiter, Andrew (2013-04-15). Official (ISC)2 Guide to the CISSP CBK, Third Edition : Access Control ((ISC)2 Press) (Kindle Locations 2124-2139). Auerbach Publications. Kindle Edition.

NEW QUESTION 184
- (Topic 1)
Which access control model is also called Non Discretionary Access Control (NDAC)?

A. Lattice based access control
B. Mandatory access control
C. Role-based access control
D. Label-based access control

Answer: C

Explanation:
RBAC is sometimes also called non-discretionary access control (NDAC) (as Ferraiolo says "to distinguish it from the policy-based specifics of MAC"). Another model that fits within the NDAC category is Rule-Based Access Control (RuBAC or RBAC). Most of the CISSP books use the same acronym for both models but NIST tend to use a lowercase "u" in between R and B to differentiate the two models.
You can certainly mimic MAC using RBAC but true MAC makes use of Labels which contains the sensitivity of the objects and the categories they belong to. No labels means MAC is not being used.
One of the most fundamental data access control decisions an organization must make is the amount of control it will give system and data owners to specify the level of access users of that data will have. In every organization there is a balancing point between the access controls enforced by organization and system policy and the ability for information owners to determine who can have access based on specific business requirements. The process of translating that balance into a workable access control model can be defined by three general access frameworks:
Discretionary access control Mandatory access control Nondiscretionary access control
A role-based access control (RBAC) model bases the access control authorizations on the roles (or functions) that the user is assigned within an organization. The determination of what roles have access to a resource can be governed by the owner of the data, as with DACs, or applied based on policy, as with MACs.
Access control decisions are based on job function, previously defined and governed by policy, and each role (job function) will have its own access capabilities.
Objects associated with a role will inherit privileges assigned to that role. This is also true for groups of users, allowing administrators to simplify access control strategies by assigning users to groups and groups to roles.
There are several approaches to RBAC. As with many system controls, there are variations on how they can be applied within a computer system.
There are four basic RBAC architectures:
* 1. Non-RBAC: Non-RBAC is simply a user-granted access to data or an application by traditional mapping, such as with ACLs. There are no formal "roles" associated with the mappings, other than any identified by the particular user.
* 2. Limited RBAC: Limited RBAC is achieved when users are mapped to roles within a single application rather than through an organization-wide role structure.

Users in a limited RBAC system are also able to access non-RBAC-based applications or data. For example, a user may be assigned to multiple roles within several applications and, in addition, have direct access to another application or system independent of his or her assigned role. The key attribute of limited RBAC is that the role for that user is defined within an application and not necessarily based on the user's organizational job function.
* 3. Hybrid RBAC: Hybrid RBAC introduces the use of a role that is applied to multiple
applications or systems based on a user's specific role within the organization. That role is then applied to applications or systems that subscribe to the organization's role-based model. However, as the term "hybrid" suggests, there are instances where the subject may also be assigned to roles defined solely within specific applications, complimenting (or, perhaps, contradicting) the larger, more encompassing organizational role used by other systems.
* 4. Full RBAC: Full RBAC systems are controlled by roles defined by the organization's policy and access control infrastructure and then applied to applications and systems across the enterprise. The applications, systems, and associated data apply permissions based on that enterprise definition, and not one defined by a specific application or system. Be careful not to try to make MAC and DAC opposites of each other -- they are two different access control strategies with RBAC being a third strategy that was defined later to address some of the limitations of MAC and DAC.
The other answers are not correct because:
Mandatory access control is incorrect because though it is by definition not discretionary, it is not called "non-discretionary access control." MAC makes use of label to indicate the sensitivity of the object and it also makes use of categories to implement the need to know.
Label-based access control is incorrect because this is not a name for a type of access control but simply a bogus detractor.
Lattice based access control is not adequate either. A lattice is a series of levels and a subject will be granted an upper and lower bound within the series of levels. These levels could be sensitivity levels or they could be confidentiality levels or they could be integrity levels.
Reference(s) used for this question: All in One, third edition, page 165.
Ferraiolo, D., Kuhn, D. & Chandramouli, R. (2003). Role-Based Access Control, p. 18.
Ferraiolo, D., Kuhn, D. (1992). Role-Based Access Controls. http://csrc.nist.gov/rbac/Role_Based_Access_Control-1992.html
Schneiter, Andrew (2013-04-15). Official (ISC)2 Guide to the CISSP CBK, Third Edition : Access Control ((ISC)2 Press) (Kindle Locations 1557-1584). Auerbach Publications. Kindle Edition.
Schneiter, Andrew (2013-04-15). Official (ISC)2 Guide to the CISSP CBK, Third Edition : Access Control ((ISC)2 Press) (Kindle Locations 1474-1477). Auerbach Publications. Kindle Edition.

NEW QUESTION 186
- (Topic 1)
Which of the following logical access exposures INVOLVES CHANGING data before, or as it is entered into the computer?

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

Answer: A

Explanation:
It involves changing data before , or as it is entered into the computer or in
other words , it refers to the alteration of the existing data. The other answers are incorrect because :
Salami techniques : A salami attack is the one in which an attacker commits several small crimes with the hope that the overall larger crime will go unnoticed.
Trojan horses: A Trojan Horse is a program that is disguised as another program. Viruses:A Virus is a small application , or a string of code , that infects applications.
Reference: Shon Harris , AIO v3
Chapter - 11: Application and System Development, Page : 875-880 Chapter - 10: Law, Investigation and Ethics , Page : 758-759

NEW QUESTION 189
- (Topic 1)
Which of the following protects a password from eavesdroppers and supports the encryption of communication?

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

Answer: A

Explanation:
CHAP: A protocol that uses a three way hanbdshake The server sends the client a challenge which includes a random value(a nonce) to thwart replay attacks.
The client responds with the MD5 hash of the nonce and the password.
The authentication is successful if the client's response is the one that the server expected. Reference: Page 450, OIG 2007.
CHAP protects the password from eavesdroppers and supports the encryption of communication.
Reference: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 44.

NEW QUESTION 190
- (Topic 1)
The three classic ways of authenticating yourself to the computer security software are: something you know, something you have, and something:

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

Answer: C

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

NEW QUESTION 191

- (Topic 1)
Which security model uses division of operations into different parts and requires different users to perform each part?

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

Answer: C

Explanation:
The Clark-Wilson model uses separation of duties, which divides an operation into different parts and requires different users to perform each part. This prevents authorized users from making unauthorized modifications to data, thereby protecting its integrity.
The Clark-Wilson integrity model provides a foundation for specifying and analyzing an integrity policy for a computing system.
The model is primarily concerned with formalizing the notion of information integrity. Information integrity is maintained by preventing corruption of data items in a system due to either error or malicious intent. An integrity policy describes how the data items in the system should be kept valid from one state of the system to the next and specifies the capabilities of various principals in the system. The model defines enforcement rules and certification rules.
The model's enforcement and certification rules define data items and processes that provide the basis for an integrity policy. The core of the model is based on the notion of a transaction.
A well-formed transaction is a series of operations that transition a system from one consistent state to another consistent state.
In this model the integrity policy addresses the integrity of the transactions.
The principle of separation of duty requires that the certifier of a transaction and the implementer be different entities.
The model contains a number of basic constructs that represent both data items and processes that operate on those data items. The key data type in the Clark-Wilson model is a Constrained Data Item (CDI). An Integrity Verification Procedure (IVP) ensures that all CDIs in the system are valid at a certain state.
Transactions that enforce the integrity policy are represented by Transformation Procedures (TPs). A TP takes as input a CDI or Unconstrained Data Item (UDI) and produces a CDI. A TP must transition the system from one valid state to another valid state. UDIs represent system input (such as that provided by a user or adversary). A TP must guarantee (via certification) that it transforms all possible values of a UDI to a "safe" CDI.
In general, preservation of data integrity has three goals: Prevent data modification by unauthorized parties
Prevent unauthorized data modification by authorized parties
Maintain internal and external consistency (i.e. data reflects the real world)
Clark-Wilson addresses all three rules but BIBA addresses only the first rule of intergrity. References:
HARRIS, Shon, All-In-One CISSP Certification Fifth Edition, McGraw-Hill/Osborne, Chapter 5: Security Architecture and Design (Page 341-344).
and
http://en.wikipedia.org/wiki/Clark-Wilson_model

NEW QUESTION 192
- (Topic 1)
In which of the following security models is the subject's clearance compared to the object's classification such that specific rules can be applied to control how the subject-to-object interactions take place?

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

Answer: A

Explanation:
The Bell-LAPadula model is also called a multilevel security system because users with different clearances use the system and the system processes data with different classifications. Developed by the US Military in the 1970s.
A security model maps the abstract goals of the policy to information system terms by specifying explicit data structures and techniques necessary to enforce the security policy. A security model is usually represented in mathematics and analytical ideas, which are mapped to system specifications and then developed by programmers through programming code. So we have a policy that encompasses security goals, such as "each subject must be authenticated and authorized before accessing an object." The security model takes this requirement and provides the necessary mathematical formulas, relationships, and logic structure to be followed to accomplish this goal.
A system that employs the Bell-LaPadula model is called a multilevel security system because users with different clearances use the system, and the system processes data at different classification levels. The level at which information is classified determines the handling procedures that should be used. The Bell-LaPadula model is a state machine model that enforces the confidentiality aspects of access control. A matrix and security levels are used to determine if subjects can access different objects. The subject's clearance is compared to the object's classification and then specific rules are applied to control how subject-to-object subject-to-object interactions can take place.
Reference(s) used for this question:
Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (p. 369). McGraw- Hill. Kindle Edition.

NEW QUESTION 197
- (Topic 1)
The Computer Security Policy Model the Orange Book is based on is which of the following?

A. Bell-LaPadula
B. Data Encryption Standard
C. Kerberos
D. Tempest

Answer: A

Explanation:
The Computer Security Policy Model Orange Book is based is the Bell- LaPadula Model. Orange Book Glossary.
The Data Encryption Standard (DES) is a cryptographic algorithm. National Information Security Glossary.
TEMPEST is related to limiting the electromagnetic emanations from electronic equipment. Reference: U.S. Department of Defense, Trusted Computer System Evaluation Criteria (Orange Book), DOD 5200.28-STD. December 1985 (also available here).

NEW QUESTION 198

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