ISC2

Exam Questions SSCP

System Security Certified Practitioner (SSCP)

NEW QUESTION 1
- (Topic 1)
Detective/Technical measures:

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

Answer: A

Explanation:
Detective/Technical measures include intrusion detection systems and automatically-generated violation reports from audit trail information. These reports can indicate variations from "normal" operation or detect known signatures of unauthorized access episodes. In order to limit the amount of audit information flagged and reported by automated violation analysis and reporting mechanisms, clipping levels can be set. Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 35.

NEW QUESTION 2
- (Topic 1)
Which is the last line of defense in a physical security sense?

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

Answer: A

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

NEW QUESTION 3
- (Topic 1)
Which of the following is implemented through scripts or smart agents that replays the users multiple log-ins against authentication servers to verify a user's identity which permit access to system services?

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

Answer: A

Explanation:
SSO can be implemented by using scripts that replay the users multiple log- ins against authentication servers to verify a user's identity and to permit access to system services.
Single Sign on was the best answer in this case because it would include Kerberos. When you have two good answers within the 4 choices presented you must select the
BEST one. The high level choice is always the best. When one choice would include the
other one that would be the best as well.
Reference(s) used for this question:
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 40.

NEW QUESTION 4
- (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 5
- (Topic 1)
What is called the type of access control where there are pairs of elements that have the least upper bound of values and greatest lower bound of values?

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

Answer: C

Explanation:
In a lattice model, there are pairs of elements that have the least upper bound of values and greatest lower bound of values.
Reference(s) used for this question:
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 34.

NEW QUESTION 6
- (Topic 1)
To control access by a subject (an active entity such as individual or process) to an object (a passive entity such as a file) involves setting up:

A. Access Rules
B. Access Matrix
C. Identification controls
D. Access terminal

Answer: A

Explanation:
Controlling access by a subject (an active entity such as individual or process) to an object (a passive entity such as a file) involves setting up access rules.
These rules can be classified into three access control models: Mandatory, Discretionary, and Non-Discretionary.
An access matrix is one of the means used to implement access control.
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 7
- (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 8
- (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 9
- (Topic 1)
Which of the following access control techniques best gives the security officers the ability to specify and enforce enterprise-specific security policies in a way that maps naturally to an organization's structure?

A. Access control lists
B. Discretionary access control
C. Role-based access control
D. Non-mandatory access control

Answer: C

Explanation:
Role-based access control (RBAC) gives the security officers the ability to specify and enforce enterprise-specific security policies in a way that maps naturally to an organization's structure. Each user is assigned one or more roles, and each role is assigned one or more privileges that are given to users in that role. An access control list (ACL) is a table that tells a system which access rights each user has to a particular system object. With discretionary access control, administration is decentralized and owners of resources control other users' access. Non-mandatory access control is not a defined access control technique.
Source: ANDRESS, Mandy, Exam Cram CISSP, Coriolis, 2001, Chapter 2: Access Control Systems and Methodology (page 9).

NEW QUESTION 10
- (Topic 1)
Which of the following centralized access control mechanisms is the least appropriate for mobile workers accessing the corporate network over analog lines?

A. TACACS
B. Call-back
C. CHAP
D. RADIUS

Answer: B

Explanation:
Call-back allows for a distant user connecting into a system to be called back at a number already listed in a database of trusted users. The disadvantage of this system is that the user must be at a fixed location whose phone number is known to the authentication server. Being mobile workers, users are accessing the system from multiple
locations, making call-back inappropriate for them.
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 44).

NEW QUESTION 10
- (Topic 1)
Rule-Based Access Control (RuBAC) access is determined by rules. Such rules would fit within what category of access control ?

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

Answer: C

Explanation:
Rule-based access control is a type of non-discretionary access control because this access is determined by rules and the subject does not decide what those rules will be, the rules are uniformly applied to ALL of the users or subjects.
In general, all access control policies other than DAC are grouped in the category of non- discretionary access control (NDAC). As the name implies, policies in this category have rules that are not established at the discretion of the user. Non-discretionary policies establish controls that cannot be changed by users, but only through administrative action.
Both Role Based Access Control (RBAC) and Rule Based Access Control (RuBAC) fall within Non Discretionary Access Control (NDAC). If it is not DAC or MAC then it is most likely NDAC.
IT IS NOT ALWAYS BLACK OR WHITE
The different access control models are not totally exclusive of each others. MAC is making use of Rules to be implemented. However with MAC you have requirements above and beyond having simple access rules. The subject would get formal approval from management, the subject must have the proper security clearance, objects must have labels/sensitivity levels attached to them, subjects must have the proper security clearance. If all of this is in place then you have MAC.
BELOW YOU HAVE A DESCRIPTION OF THE DIFFERENT CATEGORIES:
MAC = Mandatory Access Control
Under a mandatory access control environment, the system or security administrator will define what permissions subjects have on objects. The administrator does not dictate user's access but simply configure the proper level of access as dictated by the Data Owner.
The MAC system will look at the Security Clearance of the subject and compare it with the object sensitivity level or classification level. This is what is called the dominance relationship.
The subject must DOMINATE the object sensitivity level. Which means that the subject must have a security clearance equal or higher than the object he is attempting to access.
MAC also introduce the concept of labels. Every objects will have a label attached to them indicating the classification of the object as well as categories that are used to impose the need to know (NTK) principle. Even thou a user has a security clearance of Secret it does not mean he would be able to access any Secret documents within the system. He would be allowed to access only Secret document for which he has a Need To Know, formal approval, and object where the user belong to one of the categories attached to the object.
If there is no clearance and no labels then IT IS NOT Mandatory Access Control.
Many of the other models can mimic MAC but none of them have labels and a dominance relationship so they are NOT in the MAC category.
NISTR-7316 Says:
Usually a labeling mechanism and a set of interfaces are used to determine access based on the MAC policy; for example, a user who is running a process at the Secret classification should not be allowed to read a file with a label of Top Secret. This is known as the "simple security rule," or "no read up." Conversely, a user who is running a process with a label of Secret should not be allowed to write to a file with a label of Confidential. This rule is called the "*-property" (pronounced "star property") or "no write down." The *- property is required to maintain system security in an automated environment. A variation on this rule called the "strict *-property" requires that information can be written at, but not above, the subject's clearance level. Multilevel security models such as the Bell-La Padula Confidentiality and Biba Integrity models are used to formally specify this kind of MAC policy.
DAC = Discretionary Access Control
DAC is also known as: Identity Based access control system.
The owner of an object is define as the person who created the object. As such the owner has the discretion to grant access to other users on the network. Access will be granted based solely on the identity of those users.
Such system is good for low level of security. One of the major problem is the fact that a user who has access to someone's else file can further share the file with other users without the knowledge or permission of the owner of the file. Very quickly this could become the wild wild west as there is no control on the dissimination of the information.
RBAC = Role Based Access Control
RBAC is a form of Non-Discretionary access control.
Role Based access control usually maps directly with the different types of jobs performed by employees within a company.

For example there might be 5 security administrator within your company. Instead of creating each of their profile one by one, you would simply create a role and assign the administrators to the role. Once an administrator has been assigned to a role, he will IMPLICITLY inherit the permissions of that role.
RBAC is great tool for environment where there is a a large rotation of employees on a daily basis such as a very large help desk for example.
RBAC or RuBAC = Rule Based Access Control RuBAC is a form of Non-Discretionary access control.
A good example of a Rule Based access control device would be a Firewall. A single set of rules is imposed to all users attempting to connect through the firewall.
NOTE FROM CLEMENT:
Lot of people tend to confuse MAC and Rule Based Access Control.
Mandatory Access Control must make use of LABELS. If there is only rules and no label, it cannot be Mandatory Access Control. This is why they call it Non Discretionary Access control (NDAC).
There are even books out there that are WRONG on this subject. Books are sometimes opiniated and not strictly based on facts.
In MAC subjects must have clearance to access sensitive objects. Objects have labels that contain the classification to indicate the sensitivity of the object and the label also has categories to enforce the need to know.
Today the best example of rule based access control would be a firewall. All rules are imposed globally to any user attempting to connect through the device. This is NOT the case with MAC.
I strongly recommend you read carefully the following document:
NISTIR-7316 at http://csrc.nist.gov/publications/nistir/7316/NISTIR-7316.pdf
It is one of the best Access Control Study document to prepare for the exam. Usually I tell people not to worry about the hundreds of NIST documents and other reference. This document is an exception. Take some time to read it.
Reference(s) used for this question:
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 33.
and
NISTIR-7316 at http://csrc.nist.gov/publications/nistir/7316/NISTIR-7316.pdf and
Conrad, Eric; Misenar, Seth; Feldman, Joshua (2012-09-01). CISSP Study Guide (Kindle Locations 651-652). Elsevier Science (reference). Kindle Edition.

NEW QUESTION 15
- (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 17
- (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 19
- (Topic 1)
A network-based vulnerability assessment is a type of test also referred to as:

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

Answer: A

Explanation:
A network-based vulnerability assessment tool/system either re-enacts system attacks, noting and recording responses to the attacks, or probes different targets to infer weaknesses from their responses.
Since the assessment is actively attacking or scanning targeted systems, network-based vulnerability assessment systems are also called active vulnerability systems.

There are mostly two main types of test:
PASSIVE: You don't send any packet or interact with the remote target. You make use of public database and other techniques to gather information about your target.
ACTIVE: You do send packets to your target, you attempt to stimulate response which will help you in gathering information about hosts that are alive, services runnings, port state, and more.
See example below of both types of attacks:
Eavesdropping and sniffing data as it passes over a network are considered passive attacks because the attacker is not affecting the protocol, algorithm, key, message, or any parts of the encryption system. Passive attacks are hard to detect, so in most cases methods are put in place to try to prevent them rather than to detect and stop them.
Altering messages , modifying system files, and masquerading as another individual are acts that are considered active attacks because the attacker is actually doing something instead of sitting back and gathering data. Passive attacks are usually used to gain information prior to carrying out an active attack.
IMPORTANT NOTE:
On the commercial vendors will sometimes use different names for different types of scans. However, the exam is product agnostic. They do not use vendor terms but general terms. Experience could trick you into selecting the wrong choice sometimes. See feedback from Jason below:
"I am a system security analyst. It is my daily duty to perform system vulnerability analysis. We use Nessus and Retina (among other tools) to perform our network based vulnerability scanning. Both commercially available tools refer to a network based vulnerability scan as a "credentialed" scan. Without credentials, the scan tool cannot login to the system being scanned, and as such will only receive a port scan to see what ports are open and exploitable"
Reference(s) used for this question:
Harris, Shon (2012-10-18). CISSP All-in-One Exam Guide, 6th Edition (p. 865). McGraw- Hill. Kindle Edition.
and
DUPUIS, Clement, Access Control Systems and Methodology CISSP Open Study Guide, version 1.0, march 2002 (page 97).

NEW QUESTION 24
- (Topic 1)
Which of the following describes the major disadvantage of many Single Sign-On (SSO) implementations?

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

Answer: A

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

NEW QUESTION 28
- (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 32
- (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 35
- (Topic 1)
Pin, Password, Passphrases, Tokens, smart cards, and biometric devices are all items that can be used for Authentication. When one of these item listed above in conjunction with a second factor to validate authentication, it provides robust authentication of the individual by practicing which of the following?

A. Multi-party authentication
B. Two-factor authentication

C. Mandatory authentication
D. Discretionary authentication

Answer: B

Explanation:
Once an identity is established it must be authenticated. There exist numerous technologies and implementation of authentication methods however they almost all fall under three major areas.
There are three fundamental types of authentication: Authentication by knowledge—something a person knows
Authentication by possession—something a person has
Authentication by characteristic—something a person is Logical controls related to these types are called “factors.”
Something you know can be a password or PIN, something you have can be a token fob or smart card, and something you are is usually some form of biometrics.
Single-factor authentication is the employment of one of these factors, two-factor authentication is using two of the three factors, and three-factor authentication is the combination of all three factors.
The general term for the use of more than one factor during authentication is multifactor authentication or strong authentication.
Reference(s) used for this question:
Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 2367-2379). Auerbach Publications. Kindle Edition.

NEW QUESTION 38
- (Topic 1)
Which TCSEC class specifies discretionary protection?

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

Answer: D

Explanation:
C1 involves discretionary protection, C2 involves controlled access protection, B1 involves labeled security protection and B2 involves structured protection.
Source: TIPTON, Hal, (ISC)2, Introduction to the CISSP Exam presentation.

NEW QUESTION 40
- (Topic 1)
Which of the following statements relating to the Bell-LaPadula security model is FALSE (assuming the Strong Star property is not being used) ?

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

Answer: C

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

NEW QUESTION 43
- (Topic 1)
Which of the following was developed by the National Computer Security Center (NCSC) for the US Department of Defense ?

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

Answer: A

Explanation:
The Answer TCSEC; The TCSEC, frequently referred to as the Orange Book, is the centerpiece of the DoD Rainbow Series publications.
Initially issued by the National Computer Security Center (NCSC) an arm of the National Security Agency in 1983 and then updated in 1985, TCSEC was replaced with the development of the Common Criteria international standard originally published in 2005.
References:
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, pages 197-199.
Wikepedia http://en.wikipedia.org/wiki/TCSEC

NEW QUESTION 46
- (Topic 1)
Which of the following control pairing places emphasis on "soft" mechanisms that support the access control objectives?

A. Preventive/Technical Pairing
B. Preventive/Administrative Pairing

C. Preventive/Physical Pairing
D. Detective/Administrative Pairing

Answer: B

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

NEW QUESTION 47
- (Topic 1)
What 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 52
- (Topic 1)
In biometric identification systems, at the beginning, it was soon apparent that truly positive identification could only be based on physical attributes of a person. This raised the necessity of answering 2 questions :

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

Answer: B

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

NEW QUESTION 56
- (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 61
- (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 63
- (Topic 1)
How would nonrepudiation be best classified as?

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

Answer: A

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

NEW QUESTION 68
- (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 69
- (Topic 1)
Which of the following floors would be most appropriate to locate information processing facilities in a 6-stories building?

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

Answer: C

Explanation:
You data center should be located in the middle of the facility or the core of a building to provide protection from natural disasters or bombs and provide easier access to emergency crewmembers if necessary. By being at the core of the facility the external wall would act as a secondary layer of protection as well.
Information processing facilities should not be located on the top floors of buildings in case of a fire or flooding coming from the roof. Many crimes and theft have also been conducted by simply cutting a large hole on the roof.
They should not be in the basement because of flooding where water has a natural tendancy to flow down :-) Even a little amount of water would affect your operation
considering the quantity of electrical cabling sitting directly on the cement floor under under your raise floor.
The data center should not be located on the first floor due to the presence of the main entrance where people are coming in and out. You have a lot of high traffic areas such as the elevators, the loading docks, cafeteria, coffee shopt, etc.. Really a bad location for a data center.
So it was easy to come up with the answer by using the process of elimination where the top, the bottom, and the basement are all bad choices. That left you with only one possible answer which is the third floor.
Source: HARRIS, Shon, All-In-One CISSP Certification Exam Guide, 5th Edition, Page 425.

NEW QUESTION 70
- (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 71
- (Topic 1)
Which of the following choices describe a Challenge-response tokens generation?

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

Answer: A

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

NEW QUESTION 74
- (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 78
- (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 81
- (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 84
- (Topic 1)
In an organization where there are frequent personnel changes, non-discretionary access control using Role Based Access Control (RBAC) is useful because:

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

Answer: B

Explanation:
In an organization where there are frequent personnel changes, non- discretionary access control (also called Role Based Access Control) is useful because the access controls are based on the individual's role or title within the organization. You can easily configure a new employee acces by assigning the user to a role that has been predefine. The user will implicitly inherit the permissions of the role by being a member of that role.
These access permissions defined within the role do not need to be changed whenever a new person takes over the role.
Another type of non-discretionary access control model is the Rule Based Access Control (RBAC or RuBAC) where a global set of rule is uniformly applied to all subjects accessing the resources. A good example of RuBAC would be a firewall.
This question is a sneaky one, one of the choice has only one added word to it which is often. Reading questions and their choices very carefully is a must for the real exam. Reading it twice if needed is recommended.
Shon Harris in her book list the following ways of managing RBAC: Role-based access control can be managed in the following ways:
Non-RBAC Users are mapped directly to applications and no roles are used. (No roles being used)
Limited RBAC Users are mapped to multiple roles and mapped directly to other types of
applications that do not have role-based access functionality. (A mix of roles for applications that supports roles and explicit access control would be used for applications that do not support roles)
Hybrid RBAC Users are mapped to multiapplication roles with only selected rights assigned to those roles.
Full RBAC Users are mapped to enterprise roles. (Roles are used for all access being granted)
NIST defines RBAC as:
Security administration can be costly and prone to error because administrators usually specify access control lists for each user on the system individually. With RBAC, security is managed at a level that corresponds closely to the organization's structure. Each user is assigned one or more roles, and each role is assigned one or more privileges that are permitted to users in that role. Security administration with RBAC consists of determining the operations that must be executed by persons in particular jobs, and assigning employees to the proper roles. Complexities introduced by mutually exclusive roles or role hierarchies are handled by the RBAC software, making security administration easier.
Reference(s) used for this question:
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 32.
and
Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition McGraw-Hill. and
http://csrc.nist.gov/groups/SNS/rbac/

NEW QUESTION 88
- (Topic 1)
Which access control model was proposed for enforcing access control in government and military applications?

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

Answer: A

Explanation:
The Bell-LaPadula model, mostly concerned with confidentiality, was proposed for enforcing access control in government and military applications. It supports mandatory access control by determining the access rights from the security levels associated with subjects and objects. It also supports discretionary access control by checking access rights from an access matrix. The Biba model, introduced in 1977, the Sutherland model, published in 1986, and the Brewer-Nash model, published in 1989, are concerned with integrity.
Source: ANDRESS, Mandy, Exam Cram CISSP, Coriolis, 2001, Chapter 2: Access Control Systems and Methodology (page 11).

NEW QUESTION 90
- (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 92
- (Topic 1)
Which of the following is NOT a compensating measure for access violations?

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

Answer: D

Explanation:
Security awareness is a preventive measure, not a compensating measure for access violations.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access control systems (page 50).

NEW QUESTION 96
- (Topic 1)
Which of the following statements pertaining to Kerberos is TRUE?

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

Answer: A

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

NEW QUESTION 97
- (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 100
- (Topic 1)
Which of the following is NOT part of the Kerberos authentication protocol?

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

Answer: D

Explanation:
There is no such component within kerberos environment. Kerberos uses only symmetric encryption and does not make use of any public key component.
The other answers are incorrect because :

Symmetric key cryptography is a part of Kerberos as the KDC holds all the users' and
services' secret keys.
Authentication service (AS) : KDC (Key Distribution Center) provides an authentication service
Principals : Key Distribution Center provides services to principals , which can be users , applications or network services.
References: Shon Harris , AIO v3 , Chapter - 4: Access Control , Pages : 152-155.

NEW QUESTION 101
- (Topic 1)
What security model implies a central authority that define rules and sometimes global rules, dictating what subjects can have access to what objects?

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

Answer: D

Explanation:
As a security administrator you might configure user profiles so that users cannot change the system’s time, alter system configuration files, access a command prompt, or install unapproved applications. This type of access control is referred to as nondiscretionary, meaning that access decisions are not made at the discretion of the user. Nondiscretionary access controls are put into place by an authoritative entity (usually a security administrator) with the goal of protecting the organization’s most critical assets.
Non-discretionary access control is when a central authority determines what subjects can have access to what objects based on the organizational security policy. Centralized access control is not an existing security model.
Both, Rule Based Access Control (RuBAC or RBAC) and Role Based Access Controls (RBAC) falls into this category.
Reference(s) used for this question:
Harris, Shon (2012-10-18). CISSP All-in-One Exam Guide, 6th Edition (p. 221). McGraw- Hill. Kindle Edition.
and
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access control systems (page 33).

NEW QUESTION 103
- (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 108
- (Topic 1)
Which of the following protection devices is used for spot protection within a few inches of the object, rather than for overall room security monitoring?

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

Answer: B

Explanation:
Capacitance detectors monitor an electrical field surrounding the object being monitored. They are used for spot protection within a few inches of the object, rather than for overall room security monitoring used by wave detectors. Penetration of this field changes the electrical capacitance of the field enough to generate and alarm. Wave pattern motion detectors generate a frequency wave pattern and send an alarm if the pattern is disturbed as it is reflected back to its receiver. Field-powered devices are a type of personnel access control devices. Audio detectors simply monitor a room for any abnormal sound wave generation and trigger an alarm.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 10: Physical security (page 344).

NEW QUESTION 110
- (Topic 1)
Which of the following biometric devices offers the LOWEST CER?

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

Answer: C

Explanation:
From most effective (lowest CER) to least effective (highest CER) are: Iris scan, fingerprint, voice verification, keystroke dynamics.
Reference : Shon Harris Aio v3 , Chapter-4 : Access Control , Page : 131
Also see: http://www.sans.org/reading_room/whitepapers/authentication/biometric-selection-body-parts-online_139

NEW QUESTION 113
- (Topic 1)
A confidential number used as an authentication factor to verify a user's identity is called a:

A. PIN
B. User ID
C. Password
D. Challenge

Answer: A

Explanation:
PIN Stands for Personal Identification Number, as the name states it is a combination of numbers.
The following answers are incorrect:
User ID This is incorrect because a Userid is not required to be a number and a Userid is only used to establish identity not verify it.
Password. This is incorrect because a password is not required to be a number, it could be any combination of characters.
Challenge. This is incorrect because a challenge is not defined as a number, it could be anything.

NEW QUESTION 116
- (Topic 1)
Which authentication technique best protects against hijacking?

A. Static authentication
B. Continuous authentication
C. Robust authentication
D. Strong authentication

Answer: B

Explanation:
A continuous authentication provides protection against impostors who can see, alter, and insert information passed between the claimant and verifier even after the claimant/verifier authentication is complete. This is the best protection against hijacking. Static authentication is the type of authentication provided by traditional password schemes and the strength of the authentication is highly dependent on the difficulty of guessing passwords. The robust authentication mechanism relies on dynamic authentication data that changes with each authenticated session between a claimant and a verifier, and it does not protect against hijacking. Strong authentication refers to a two-factor authentication (like something a user knows and something a user is).
Source: TIPTON, Harold F. & KRAUSE, Micki, Information Security Management Handbook, 4th edition (volume 1), 2000, CRC Press, Chapter 3: Secured Connections to External Networks (page 51).

NEW QUESTION 120
- (Topic 1)
Controls like guards and general steps to maintain building security, securing of server rooms or laptops, the protection of cables, and usage of magnetic switches on doors and windows are some of the examples of:

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

Answer: D

Explanation:
Controls like guards and general steps to maintain building security, securing of server rooms or laptops, the protection of cables, and usage of magnetic switches on doors and windows are all examples of Physical Security.
Reference(s) used for this question:
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 33.

NEW QUESTION 122
- (Topic 1)
Which of the following Kerberos components holds all users' and services' cryptographic keys?

A. The Key Distribution Service
B. The Authentication Service

C. The Key Distribution Center
D. The Key Granting Service

Answer: C

Explanation:
The Key Distribution Center (KDC) holds all users' and services' cryptographic keys. It provides authentication services, as well as key distribution functionality. The Authentication Service is the part of the KDC that authenticates a principal. The Key Distribution Service and Key Granting Service are distracters and are not defined Kerberos components.
Source: WALLHOFF, John, CISSP Summary 2002, April 2002, CBK#1 Access Control System & Methodology (page 3)

NEW QUESTION 124
- (Topic 1)
Which type of attack involves impersonating a user or a system?

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

Answer: B

Explanation:
A spoofing attack is when an attempt is made to gain access to a computer system by posing as an authorized user or system. Spamming refers to sending out or posting junk advertising and unsolicited mail. A smurf attack is a type of denial-of-service attack using PING and a spoofed address. Sniffing refers to observing packets passing on a network.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the
Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 3: Telecommunications and Network Security (page 77).

NEW QUESTION 125
- (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 126
- (Topic 1)
Which of the following best ensures accountability of users for the actions taken within a system or domain?

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

Answer: B

Explanation:
Details:
The only way to ensure accountability is if the subject is uniquely identified and authenticated. Identification alone does not provide proof the user is who they claim to be. After showing proper credentials, a user is authorized access to resources.
References:
HARRIS, Shon, All-In-One CISSP Certification Exam Guide, McGraw-Hill/Osborne, 2002, Chapter 4: Access Control (page 126).

NEW QUESTION 131
- (Topic 1)
Which of the following would be an example of the best password?

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

Answer: C

Explanation:
The best passwords are those that are both easy to remember and hard to crack using a dictionary attack. The best way to create passwords that fulfil both criteria is to use two small unrelated words or phonemes, ideally with upper and lower case characters, a special character, and/or a number. Shouldn't be used: common names, DOB, spouse, phone numbers, words found in dictionaries or system defaults.
Source: ROTHKE, Ben, CISSP CBK Review presentation on domain 1.

NEW QUESTION 132
- (Topic 1)
What is called the act of a user professing an identity to a system, usually in the form of a log-on ID?

A. Authentication
B. Identification
C. Authorization
D. Confidentiality

Answer: B

Explanation:
Identification is the act of a user professing an identity to a system, usually in the form of a log-on ID to the system.
Identification is nothing more than claiming you are somebody. You identify yourself when you speak to someone on the phone that you don’t know, and they ask you who they’re speaking to. When you say, “I’m Jason.”, you’ve just identified yourself.
In the information security world, this is analogous to entering a username. It’s not analogous to entering a password. Entering a password is a method for verifying that you are who you identified yourself as.
NOTE: The word "professing" used above means: "to say that you are, do, or feel something when other people doubt what you say". This is exactly what happen when you provide your identifier (identification), you claim to be someone but the system cannot take your word for it, you must further Authenticate to the system to prove who you claim to be.
The following are incorrect answers:
Authentication: is how one proves that they are who they say they are. When you claim to be Jane Smith by logging into a computer system as “jsmith”, it’s most likely going to ask you for a password. You’ve claimed to be that person by entering the name into the username field (that’s the identification part), but now you have to prove that you are really that person.
Many systems use a password for this, which is based on “something you know”, i.e. a secret between you and the system.
Another form of authentication is presenting something you have, such as a driver’s license, an RSA token, or a smart card.
You can also authenticate via something you are. This is the foundation for biometrics. When you do this, you first identify yourself and then submit a thumb print, a retina scan, or another form of bio-based authentication.
Once you’ve successfully authenticated, you have now done two things: you’ve claimed to be someone, and you’ve proven that you are that person. The only thing that’s left is for the
system to determine what you’re allowed to do.
Authorization: is what takes place after a person has been both identified and authenticated; it’s the step determines what a person can then do on the system.
An example in people terms would be someone knocking on your door at night. You say, “Who is it?”, and wait for a response. They say, “It’s John.” in order to identify themselves. You ask them to back up into the light so you can see them through the peephole. They do so, and you authenticate them based on what they look like (biometric). At that point you decide they can come inside the house.
If they had said they were someone you didn’t want in your house (identification), and you then verified that it was that person (authentication), the authorization phase would not include access to the inside of the house.
Confidentiality: Is one part of the CIA triad. It prevents sensitive information from reaching the wrong people, while making sure that the right people can in fact get it. A good example is a credit card number while shopping online, the merchant needs it to clear the transaction but you do not want your informaiton exposed over the network, you would use a secure link such as SSL, TLS, or some tunneling tool to protect the information from prying eyes between point A and point B. Data encryption is a common method of ensuring confidentiality.
The other parts of the CIA triad are listed below:
Integrity involves maintaining the consistency, accuracy, and trustworthiness of data over its entire life cycle. Data must not be changed in transit, and steps must be taken to ensure that data cannot be altered by unauthorized people (for example, in a breach of confidentiality). In addition, some means must be in place to detect any changes in data that might occur as a result of non-human-caused events such as an electromagnetic pulse (EMP) or server crash. If an unexpected change occurs, a backup copy must be available to restore the affected data to its correct state.
Availability is best ensured by rigorously maintaining all hardware, performing hardware repairs immediately when needed, providing a certain measure of redundancy and failover, providing adequate communications bandwidth and preventing the occurrence of bottlenecks, implementing emergency backup power systems, keeping current with all necessary system upgrades, and guarding against malicious actions such as denial-of- service (DoS) attacks.
Reference used for this question:
http://whatis.techtarget.com/definition/Confidentiality-integrity-and-availability-CIA http://www.danielmiessler.com/blog/security-identification-authentication-and-authorization http://www.merriam-webster.com/dictionary/profess
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 133
- (Topic 1)
Access Control techniques do not include which of the following choices?

A. Relevant Access Controls
B. Discretionary Access Control
C. Mandatory Access Control
D. Lattice Based Access Control

Answer: A

Explanation:
Access Control Techniques Discretionary Access Control
Mandatory Access Control Lattice Based Access Control Rule-Based Access Control Role-Based Access Control
Source: DUPUIS, Clement, Access Control Systems and Methodology, Version 1, May 2002, CISSP Open Study Group Study Guide for Domain 1, Page 13.

NEW QUESTION 135
- (Topic 1)
In Mandatory Access Control, sensitivity labels attached to object contain what information?

A. The item's classification
B. The item's classification and category set
C. The item's category
D. The items's need to know

Answer: B

Explanation:
A Sensitivity label must contain at least one classification and one category set.
Category set and Compartment set are synonyms, they mean the same thing. The sensitivity label must contain at least one Classification and at least one Category. It is common in some environments for a single item to belong to multiple categories. The list of all the categories to which an item belongs is called a compartment set or category set.
The following answers are incorrect:
the item's classification. Is incorrect because you need a category set as well.
the item's category. Is incorrect because category set and classification would be both be required.
The item's need to know. Is incorrect because there is no such thing. The need to know is indicated by the catergories the object belongs to. This is NOT the best answer.
Reference(s) used for this question:
OIG CBK, Access Control (pages 186 - 188)
AIO, 3rd Edition, Access Control (pages 162 - 163) AIO, 4th Edittion, Access Control, pp 212-214.
Wikipedia - http://en.wikipedia.org/wiki/Mandatory_Access_Control

NEW QUESTION 136
- (Topic 1)
There are parallels between the trust models in Kerberos and Public Key Infrastructure (PKI). When we compare them side by side, Kerberos tickets correspond most closely to which of the following?

A. public keys
B. private keys
C. public-key certificates
D. private-key certificates

Answer: C

Explanation:
A Kerberos ticket is issued by a trusted third party. It is an encrypted data structure that includes the service encryption key. In that sense it is similar to a public-key certificate. However, the ticket is not the key.
The following answers are incorrect:
public keys. Kerberos tickets are not shared out publicly, so they are not like a PKI public key.
private keys. Although a Kerberos ticket is not shared publicly, it is not a private key. Private keys are associated with Asymmetric crypto system which is not used by Kerberos. Kerberos uses only the Symmetric crypto system.
private key certificates. This is a detractor. There is no such thing as a private key certificate.

NEW QUESTION 140
- (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 145
- (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 147
- (Topic 1)
In biometric identification systems, the parts of the body conveniently available for identification are:

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

Answer: B

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

NEW QUESTION 152
- (Topic 1)
Which access control model would a lattice-based access control model be an example of?

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

Answer: A

Explanation:
In a lattice model, there are pairs of elements that have the least upper bound of values and greatest lower bound of values. In a Mandatory Access Control (MAC) model, users and data owners do not have as much freedom to determine who can access
files.
TIPS FROM CLEMENT
Mandatory Access Control is in place whenever you have permissions that are being imposed on the subject and the subject cannot arbitrarily change them. When the subject/owner of the file can change permissions at will, it is discretionary access control.
Here is a breakdown largely based on explanations provided by Doug Landoll. I am reproducing below using my own word and not exactly how Doug explained it:
FIRST: The Lattice
A lattice is simply an access control tool usually used to implement Mandatory Access Control (MAC) and it could also be used to implement RBAC but this is not as common. The lattice model can be used for Integrity level or file permissions as well. The lattice has a least upper bound and greatest lower bound. It makes use of pair of elements such as the subject security clearance pairing with the object sensitivity label.
SECOND: DAC (Discretionary Access Control)
Let's get into Discretionary Access Control: It is an access control method where the owner (read the creator of the object) will decide who has access at his own discretion. As we all know, users are sometimes insane. They will share their files with other users based on their identity but nothing prevent the user from further

sharing it with other users on the network. Very quickly you loose control on the flow of information and who has access to what. It is used in small and friendly environment where a low level of security is all that is required.
THIRD: MAC (Mandatory Access Control)
All of the following are forms of Mandatory Access Control: Mandatory Access control (MAC) (Implemented using the lattice)
You must remember that MAC makes use of Security Clearance for the subject and also Labels will be assigned to the objects. The clearance of the Subject must dominate (be equal or higher) the clearance of the Object being accessed. The label attached to the object will indicate the sensitivity leval and the categories the object belongs to. The categories are used to implement the Need to Know.
All of the following are forms of Non Discretionary Access Control:
Role Based Access Control (RBAC)
Rule Based Access Control (Think Firewall in this case)
The official ISC2 book says that RBAC (synonymous with Non Discretionary Access Control) is a form of DAC but they are simply wrong. RBAC is a form of Non Discretionary Access Control. Non Discretionary DOES NOT equal mandatory access control as there is no labels and clearance involved.
I hope this clarifies the whole drama related to what is what in the world of access control. In the same line of taught, you should be familiar with the difference between Explicit
permission (the user has his own profile) versus Implicit (the user inherit permissions by
being a member of a role for example).
The following answers are incorrect:
Discretionary access control. Is incorrect because in a Discretionary Access Control (DAC) model, access is restricted based on the authorization granted to the users. It is identity based access control only. It does not make use of a lattice.
Non-discretionary access control. Is incorrect because Non-discretionary Access Control (NDAC) uses the role-based access control method to determine access rights and permissions. It is often times used as a synonym to RBAC which is Role Based Access Control. The user inherit permission from the role when they are assigned into the role. This type of access could make use of a lattice but could also be implemented without the use of a lattice in some case. Mandatory Access Control was a better choice than this one, but RBAC could also make use of a lattice. The BEST answer was MAC.
Rule-based access control. Is incorrect because it is an example of a Non-discretionary Access Control (NDAC) access control mode. You have rules that are globally applied to all users. There is no such thing as a lattice being use in Rule-Based Access Control.
References:
AIOv3 Access Control (pages 161 - 168)
AIOv3 Security Models and Architecture (pages 291 - 293)

NEW QUESTION 156
- (Topic 1)
Which security model introduces access to objects only through programs?

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

Answer: C

Explanation:
In the Clark-Wilson model, the subject no longer has direct access to objects but instead must access them through programs (well -formed transactions).
The Clark–Wilson integrity model provides a foundation for specifying and analyzing an integrity policy for a computing system.
The model is primarily concerned with formalizing the notion of information integrity. Information integrity is maintained by preventing corruption of data items in a system due to either error or malicious intent. An integrity policy describes how the data items in the system should be kept valid from one state of the system to the next and specifies the capabilities of various principals in the system. The model defines enforcement rules and certification rules.
Clark–Wilson is more clearly applicable to business and industry processes in which the integrity of the information content is paramount at any level of classification.
Integrity goals of Clark–Wilson model:
Prevent unauthorized users from making modification (Only this one is addressed by the Biba model).
Separation of duties prevents authorized users from making improper modifications. Well formed transactions: maintain internal and external consistency i.e. it is a series of operations that are carried out to transfer the data from one consistent state to the other.
The following are incorrect answers:
The Biba model is incorrect. The Biba model is concerned with integrity and controls access to objects based on a comparison of the security level of the subject to that of the object.
The Bell-LaPdaula model is incorrect. The Bell-LaPaula model is concerned with confidentiality and controls access to objects based on a comparison of the clearence level of the subject to the classification level of the object.
The information flow model is incorrect. The information flow model uses a lattice where objects are labelled with security classes and information can flow either upward or at the
same level. It is similar in framework to the Bell-LaPadula model. References:
ISC2 Official Study Guide, Pages 325 - 327 AIO3, pp. 284 - 287
AIOv4 Security Architecture and Design (pages 338 - 342) AIOv5 Security Architecture and Design (pages 341 - 344) Wikipedia at: https://en.wikipedia.org/wiki/Clark-Wilson_model

NEW QUESTION 159
- (Topic 1)
An access system that grants users only those rights necessary for them to perform their work is operating on which security principle?

A. Discretionary Access
B. Least Privilege
C. Mandatory Access
D. Separation of Duties

Answer: B

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

NEW QUESTION 164
- (Topic 1)

Which type of control is concerned with restoring controls?

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

Answer: B

Explanation:
Corrective controls are concerned with remedying circumstances and restoring controls.
Detective controls are concerned with investigating what happen after the fact such as logs and video surveillance tapes for example.
Compensating controls are alternative controls, used to compensate weaknesses in other controls.
Preventive controls are concerned with avoiding occurrences of risks. Source: TIPTON, Hal, (ISC)2, Introduction to the CISSP Exam presentation.

NEW QUESTION 165
- (Topic 1)
Which of the following is NOT a technique used to perform a penetration test?

A. traffic padding
B. scanning and probing
C. war dialing
D. sniffing

Answer: A

Explanation:
Traffic padding is a countermeasure to traffic analysis.
Even if perfect cryptographic routines are used, the attacker can gain knowledge of the amount of traffic that was generated. The attacker might not know what Alice and Bob were talking about, but can know that they were talking and how much they talked. In certain circumstances this can be very bad. Consider for example when a military is organising a secret attack against another nation: it may suffice to alert the other nation for them to know merely that there is a lot of secret activity going on.
As another example, when encrypting Voice Over IP streams that use variable bit rate encoding, the number of bits per unit of time is not obscured, and this can be exploited to guess spoken phrases.
Padding messages is a way to make it harder to do traffic analysis. Normally, a number of random bits are appended to the end of the message with an indication at the end how much this random data is. The randomness should have a minimum value of 0, a maximum number of N and an even distribution between the two extremes. Note, that increasing 0 does not help, only increasing N helps, though that also means that a lower percentage of the channel will be used to transmit real data. Also note, that since the cryptographic routine is assumed to be uncrackable (otherwise the padding length itself is crackable), it does not help to put the padding anywhere else, e.g. at the beginning, in the middle, or in a sporadic manner.
The other answers are all techniques used to do Penetration Testing. References:
KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, pages 233, 238.
and https://secure.wikimedia.org/wikipedia/en/wiki/Padding_%28cryptography%29#Traffic_anal ysis

NEW QUESTION 168
- (Topic 1)
Which of the following access control models requires security clearance for subjects?

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

Answer: D

Explanation:
With mandatory access control (MAC), the authorization of a subject's access to an object is dependant upon labels, which indicate the subject's clearance.
Identity-based access control is a type of discretionary access control. A role-based access control is a type of non-discretionary access control.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 2: Access control systems (page 33).

NEW QUESTION 172
- (Topic 1)
Which of the following is NOT a form of detective administrative control?

A. Rotation of duties
B. Required vacations
C. Separation of duties
D. Security reviews and audits

Answer: C

Explanation:
Detective administrative controls warn of administrative control violations. Rotation of duties, required vacations and security reviews and audits are forms of detective administrative controls. Separation of duties is the practice of dividing the steps in a system function among different individuals, so as to keep a single individual from subverting the process, thus a preventive control rather than a detective control.
Source: DUPUIS, Cl?ment, Access Control Systems and Methodology CISSP Open Study Guide, version 1.0 (march 2002).

NEW QUESTION 177
- (Topic 1)

Which of the following statements pertaining to RADIUS is incorrect:

A. A RADIUS server can act as a proxy server, forwarding client requests to other authentication domains.
B. Most of RADIUS clients have a capability to query secondary RADIUS servers for redundancy.
C. Most RADIUS servers have built-in database connectivity for billing and reportingpurposes.
D. Most RADIUS servers can work with DIAMETER servers.

Answer: D

Explanation:
This is the correct answer because it is FALSE.
Diameter is an AAA protocol, AAA stands for authentication, authorization and accounting protocol for computer networks, and it is a successor to RADIUS.
The name is a pun on the RADIUS protocol, which is the predecessor (a diameter is twice the radius).
The main differences are as follows:
Reliable transport protocols (TCP or SCTP, not UDP)
The IETF is in the process of standardizing TCP Transport for RADIUS Network or transport layer security (IPsec or TLS)
The IETF is in the process of standardizing Transport Layer Security for RADIUS Transition support for RADIUS, although Diameter is not fully compatible with RADIUS Larger address space for attribute-value pairs (AVPs) and identifiers (32 bits instead of 8 bits)
Client–server protocol, with exception of supporting some server-initiated messages as well Both stateful and stateless models can be used
Dynamic discovery of peers (using DNS SRV and NAPTR) Capability negotiation
Supports application layer acknowledgements, defines failover methods and state machines (RFC 3539)
Error notification Better roaming support
More easily extended; new commands and attributes can be defined Aligned on 32-bit boundaries
Basic support for user-sessions and accounting
A Diameter Application is not a software application, but a protocol based on the Diameter base protocol (defined in RFC 3588). Each application is defined by an application identifier and can add new command codes and/or new mandatory AVPs. Adding a new optional AVP does not require a new application.
Examples of Diameter applications:
Diameter Mobile IPv4 Application (MobileIP, RFC 4004)
Diameter Network Access Server Application (NASREQ, RFC 4005) Diameter Extensible Authentication Protocol (EAP) Application (RFC 4072) Diameter Credit-Control Application (DCCA, RFC 4006)
Diameter Session Initiation Protocol Application (RFC 4740) Various applications in the 3GPP IP Multimedia Subsystem
All of the other choices presented are true. So Diameter is backwork compatible with Radius (to some extent) but the opposite is false.
Reference(s) used for this question:
TIPTON, Harold F. & KRAUSE, MICKI, Information Security Management Handbook, 4th Edition, Volume 2, 2001, CRC Press, NY, Page 38.
and https://secure.wikimedia.org/wikipedia/en/wiki/Diameter_%28protocol%29

NEW QUESTION 178
- (Topic 2)
The control of communications test equipment should be clearly addressed by security policy for which of the following reasons?

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

Answer: B

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

NEW QUESTION 183
- (Topic 2)
Which of the following is BEST defined as a physical control?

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

Answer: B

Explanation:
Physical controls are items put into place to protect facility, personnel, and resources. Examples of physical controls are security guards, locks, fencing, and lighting.
The following answers are incorrect answers:
Monitoring of system activity is considered to be administrative control.
Identification and authentication methods are considered to be a technical control. Logical access control mechanisms is also considered to be a technical control.
Reference(s) used for this question:
Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (Kindle Locations 1280-1282). McGraw-Hill. Kindle Edition.

NEW QUESTION 187

- (Topic 2)
Which of the following is an advantage in using a bottom-up versus a top-down approach to software testing?

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

Answer: B

Explanation:
The bottom-up approach to software testing begins with the testing of atomic units, such as programs and modules, and work upwards until a complete system testing has taken place. The advantages of using a bottom-up approach to software testing are the fact that there is no need for stubs or drivers and errors in critical modules are found earlier. The other choices refer to advantages of a top down approach which follows the opposite path.
Source: Information Systems Audit and Control Association, Certified Information Systems Auditor 2002 review manual, chapter 6: Business Application System Development, Acquisition, Implementation and Maintenance (page 299).

NEW QUESTION 190
- (Topic 2)
Which of the following is less likely to be included in the change control sub-phase of the maintenance phase of a software product?

A. Estimating the cost of the changes requested
B. Recreating and analyzing the problem
C. Determining the interface that is presented to the user
D. Establishing the priorities of requests

Answer: D

Explanation:
Change control sub-phase includes Recreating and analyzing the problem, Determining the interface that is presented to the user, and Establishing the priorities of requests.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, John Wiley & Sons, 2001, Chapter 7: Applications and Systems Development (page 252).

NEW QUESTION 195
- (Topic 2)
Which of the following statements pertaining to the security kernel is incorrect?

A. The security kernel is made up of mechanisms that fall under the TCB and implements and enforces the reference monitor concept.
B. The security kernel must provide isolation for the processes carrying out the reference monitor concept and they must be tamperproof.
C. The security kernel must be small enough to be able to be tested and verified in a complete and comprehensive manner.
D. The security kernel is an access control concept, not an actual physical component.

Answer: D

Explanation:
The reference monitor, not the security kernel is an access control concept.
The security kernel is made up of software, and firmware components that fall within the TCB and implements and enforces the reference monitor concept. The security kernel mediates all access and functions between subjects and objects. The security kernel is the core of the TCB and is the most commonly used approach to building trusted computing systems.
There are three main requirements of the security kernel:
- It must provide isolation for the processes carrying out the reference monitor concept, and the processes must be tamperproof.
- It must be invoked for every access attempt and must be impossible to circumvent. Thus, the security kernel must be implemented in a complete and foolproof way.
- It must be small enough to be able to be tested and verified in a complete and comprehensive manner.

The following answers are incorrect:
The security kernel is made up of mechanisms that fall under the TCB and implements and enforces the reference monitor concept. Is incorrect because this is the definition of the security kernel.
The security kernel must provide isolation for the processes carrying out the reference monitor concept and they must be tamperproof. Is incorrect because this is one of the three requirements that make up the security kernel.
The security kernel must be small enough to be able to be tested and verified in a complete and comprehensive manner. Is incorrect because this is one of the three requirements that make up the security kernel.

NEW QUESTION 200
- (Topic 2)
Related to information security, integrity is the opposite of which of the following?

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

Answer: B

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

NEW QUESTION 205

- (Topic 2)
Which of the following is used to interrupt the opportunity to use or perform collusion to subvert operation for fraudulent purposes?

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

Answer: B

Explanation:
Job rotations reduce the risk of collusion of activities between individuals. Companies with individuals working with sensitive information or systems where there might be the opportunity for personal gain through collusion can benefit by integrating job rotation with segregation of duties. Rotating the position may uncover activities that the individual is performing outside of the normal operating procedures, highlighting errors or fraudulent behavior.
Rotation of duties is a method of reducing the risk associated with a subject performing a
(sensitive) task by limiting the amount of time the subject is assigned to perform the task before being moved to a different task.
The following are incorrect answers:
Key escrow is related to the protection of keys in storage by splitting the key in pieces that will be controlled by different departments. Key escrow is the process of ensuring a third party maintains a copy of a private key or key needed to decrypt information. Key escrow also should be considered mandatory for most organization’s use of cryptography as encrypted information belongs to the organization and not the individual; however often an individual’s key is used to encrypt the information.
Separation of duties is a basic control that prevents or detects errors and irregularities by assigning responsibility for different parts of critical tasks to separate individuals, thus limiting the effect a single person can have on a system. One individual should not have the capability to execute all of the steps of a particular process. This is especially important in critical business areas, where individuals may have greater access and capability to modify, delete, or add data to the system. Failure to separate duties could result in individuals embezzling money from the company without the involvement of others.
The need-to-know principle specifies that a person must not only be cleared to access classified or other sensitive information, but have requirement for such information to carry out assigned job duties. Ordinary or limited user accounts are what most users are assigned. They should be restricted only to those privileges that are strictly required, following the principle of least privilege. Access should be limited to specific objects following the principle of need-to-know.
The principle of least privilege requires that each subject in a system be granted the most restrictive set of privileges (or lowest clearance) needed for the performance of authorized tasks. Least privilege refers to granting users only the accesses that are required to perform their job functions. Some employees will require greater access than others based upon their job functions. For example, an individual performing data entry on a mainframe system may have no need for Internet access or the ability to run reports regarding the information that they are entering into the system. Conversely, a supervisor may have the need to run reports, but should not be provided the capability to change information in the database.
Reference(s) used for this question:
Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 10628-10631). Auerbach Publications. Kindle
Edition. and
Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 10635-10638). Auerbach Publications. Kindle Edition.
and
Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 10693-10697). Auerbach Publications. Kindle Edition.
and
Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 16338-16341). Auerbach Publications. Kindle Edition.

NEW QUESTION 207
- (Topic 2)
What can best be described as an abstract machine which must mediate all access to subjects to objects?

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

Answer: B

Explanation:
The reference monitor is an abstract machine which must mediate all access to subjects to objects, be protected from modification, be verifiable as correct, and is always invoked. The security kernel is the hardware, firmware and software elements of a trusted computing base that implement the reference monitor concept. The security perimeter includes the security kernel as well as other security-related system functions that are within the boundary of the trusted computing base. System elements that are outside of the security perimeter need not be trusted. A security domain is a domain of trust that shares a single security policy and single management.
Source: TIPTON, Hal, (ISC)2, Introduction to the CISSP Exam presentation.

NEW QUESTION 208
- (Topic 2)
Which of the following embodies all the detailed actions that personnel are required to follow?

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

Answer: C

Explanation:
Procedures are step-by-step instructions in support of of the policies, standards, guidelines and baselines. The procedure indicates how the policy will be implemented and who does what to accomplish the tasks."
Standards is incorrect. Standards are a "Mandatory statement of minimum requirements that support some part of a policy, the standards in this case is your own company standards and not standards such as the ISO standards"

Guidelines is incorrect. "Guidelines are discretionary or optional controls used to enable individuals to make judgments with respect to security actions."
Baselines is incorrect. Baselines "are a minimum acceptable level of security. This minimum is implemented using specific rules necessary to implement the security controls in support of the policy and standards." For example, requiring a password of at leat 8 character would be an example. Requiring all users to have a minimun of an antivirus, a personal firewall, and an anti spyware tool could be another example.
References:
CBK, pp. 12 - 16. Note especially the discussion of the "hammer policy" on pp. 16-17 for the differences between policy, standard, guideline and procedure.
AIO3, pp. 88-93.

NEW QUESTION 210
- (Topic 2)
An area of the Telecommunications and Network Security domain that directly affects the Information Systems Security tenet of Availability can be defined as:

A. Netware availability
B. Network availability
C. Network acceptability
D. Network accountability

Answer: B

Explanation:
Network availability can be defined as an area of the Telecommunications and Network Security domain that directly affects the Information Systems Security tenet of Availability.
Source: KRUTZ, Ronald L. & VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 64.

NEW QUESTION 213
- (Topic 2)
Risk analysis is MOST useful when applied during which phase of the system development process?

A. Project initiation and Planning
B. Functional Requirements definition
C. System Design Specification
D. Development and Implementation

Answer: A

Explanation:
In most projects the conditions for failure are established at the beginning of the project. Thus risk management should be established at the commencement of the project with a risk assessment during project initiation.
As it is clearly stated in the ISC2 book: Security should be included at the first phase of development and throughout all of the phases of the system development life cycle. This is a key concept to understand for the purpose for the exam.
The most useful time is to undertake it at project initiation, although it is often valuable to update the current risk analysis at later stages.
Attempting to retrofit security after the SDLC is completed would cost a lot more money and might be impossible in some cases. Look at the family of browsers we use today, for the past 8 years they always claim that it is the most secure version that has been released and within days vulnerabilities will be found.
Risks should be monitored throughout the SDLC of the project and reassessed when appropriate.
The phases of the SDLC can very from one source to another one. It could be as simple as Concept, Design, and Implementation. It could also be expanded to include more phases such as this list proposed within the ISC2 Official Study book:
Project Initiation and Planning Functional Requirements Definition System Design Specification Development and Implementation
Documentations and Common Program Controls
Testing and Evaluation Control, certification and accreditation (C&A) Transition to production (Implementation)
And there are two phases that will extend beyond the SDLC, they are: Operation and Maintenance Support (O&M)
Revisions and System Replacement (Disposal)
Source: Information Systems Audit and Control Association, Certified Information Systems Auditor 2002 review manual, chapter 6: Business Application System Development, Acquisition, Implementation and Maintenance (page 291).
and
The Official ISC2 Guide to the CISSP CBK , Second Edition, Page 182-185

NEW QUESTION 215
- (Topic 2)
Step-by-step instructions used to satisfy control requirements is called a:

A. policy
B. standard
C. guideline
D. procedure

Answer: D

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

NEW QUESTION 217
- (Topic 2)
External consistency ensures that the data stored in the database is:

A. in-consistent with the real world.
B. remains consistant when sent from one system to another.
C. consistent with the logical world.
D. consistent with the real world.

Answer: D

Explanation:
External consistency ensures that the data stored in the database is consistent with the real world.
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 221
- (Topic 2)
Which of the following refers to the data left on the media after the media has been erased?

A. remanence
B. recovery
C. sticky bits
D. semi-hidden

Answer: A

Explanation:
Actually the term "remanence" comes from electromagnetism, the study of the electromagnetics. Originally referred to (and still does in that field of study) the magnetic flux that remains in a magnetic circuit after an applied magnetomotive force has been removed. Absolutely no way a candidate will see anywhere near that much detail on any similar CISSP question, but having read this, a candidate won't be likely to forget it either.
It is becoming increasingly commonplace for people to buy used computer equipment, such as a hard drive, or router, and find information on the device left there by the previous owner; information they thought had been deleted. This is a classic example of data remanence: the remains of partial or even the entire data set of digital information. Normally, this refers to the data that remain on media after they are written over or degaussed. Data remanence is most common in storage systems but can also occur in memory.
Specialized hardware devices known as degaussers can be used to erase data saved to magnetic media. The measure of the amount of energy needed to reduce the magnetic field on the media to zero is known as coercivity.
It is important to make sure that the coercivity of the degausser is of sufficient strength to meet object reuse requirements when erasing data. If a degausser is used with insufficient coercivity, then a remanence of the data will exist. Remanence is the measure of the existing magnetic field on the media; it is the residue that remains after an object is degaussed or written over.
Data is still recoverable even when the remanence is small. While data remanence exists, there is no assurance of safe object reuse.
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 4207-4210). 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 19694-19699). Auerbach Publications. Kindle Edition.

NEW QUESTION 222
- (Topic 2)
Which of the following security modes of operation involves the highest risk?

A. Compartmented Security Mode
B. Multilevel Security Mode
C. System-High Security Mode
D. Dedicated Security Mode

Answer: B

Explanation:
In multilevel mode, two or more classification levels of data exist, some people are not cleared for all the data on the system.
Risk is higher because sensitive data could be made available to someone not validated as being capable of maintaining secrecy of that data (i.e., not cleared for it).
In other security modes, all users have the necessary clearance for all data on the system. Source: LaROSA, Jeanette (domain leader), Application and System Development Security CISSP Open Study Guide, version 3.0, January 2002.

NEW QUESTION 227
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