included in the other's set of compartments.

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

The following answers are incorrect:

The number of classification in the two labels is different. Is incorrect because the categories are what is being compared, not the classifications.
Neither label contains all the classifications of the other. Is incorrect because the categories are what is being compared, not the classifications.
The number of categories in the two labels is different. Is incorrect because it is possibe a category exists more than once in one sensitivity label and does exist in the other so they would be comparable.

Reference(s) used for this question:

OReilly - Computer Systems and Access Control (Chapter 3)
http://www.oreilly.com/catalog/csb/chapter/ch03.html
http://rubix.com/cms/mls_dom

QUESTION 167
Which of the following logical access exposures INVOLVES CHANGING data before, or as it is entered into the computer?

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

Correct Answer: A
Explanation:
It involves changing data before , or as it is entered into the computer or in other words , it refers to the alteration of the existing data.

The other answers are incorrect because:

Salami techniques: A salami attack is the one in which an attacker commits several small crimes with the hope that the overall larger crime will go unnoticed.
Trojan horses: A Trojan Horse is a program that is disguised as another program. Viruses:A Virus is a small application , or a string of code , that infects applications.

Reference:
Shon Harris , AIO v3
Chapter - 11: Application and System Development, Page : 875-880
Chapter - 10: Law, Investigation and Ethics , Page : 758-759

QUESTION 168
Which of the following is not a physical control for physical security?

A. lighting
B. fences

C. training
D. facility construction materials

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

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

QUESTION 169
In biometrics, "one-to-many" search against database of stored biometric images is done in:

A. Authentication
B. Identification
C. Identities
D. Identity-based access control

Correct Answer: B
Explanation:
In biometrics, identification is a "one-to-many" search of an individual's characteristics from a database of stored images.
Source: KRUTZ, Ronald L.& VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 38.

QUESTION 170
What is called the percentage of valid subjects that are falsely rejected by a Biometric Authentication system?

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

Correct Answer: A
Explanation:
The percentage of valid subjects that are falsely rejected is called the False Rejection Rate (FRR) or Type I Error.
Source: KRUTZ, Ronald L.& VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 38.

QUESTION 171
Which of the following protocol was used by the INITIAL version of the Terminal Access Controller Access Control System TACACS for communication between clients and servers?

A. TCP
B. SSL

C. UDP
D. SSH

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

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

TACACS+
TACACS+ and RADIUS have generally replaced TACACS and XTACACS in more recently built or updated networks. TACACS+ is an entirely new protocol and is not compatible with TACACS or XTACACS. TACACS+ uses the Transmission Control Protocol (TCP) and RADIUS uses the User Datagram Protocol (UDP). Since TCP is connection oriented protocol, TACACS+ does not have to implement transmission control. RADIUS, however, does have to detect and correct transmission errors like packet loss, timeout etc. since it rides on UDP which is connectionless.

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

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

Reference(s) used for this question:

http://en.wikipedia.org/wiki/TACACS
Harris, Shon (2012-10-18). CISSP All-in-One Exam Guide, 6th Edition (p. 239). McGraw- Hill. Kindle Edition.

QUESTION 172
Which of the following is not a logical control when implementing logical access security?

A. access profiles.
B. userids.
C. employee badges.
D. passwords.
Correct Answer: C
Explanation:
Employee badges are considered Physical so would not be a logical control.

The following answers are incorrect:

userids. Is incorrect because userids are a type of logical control.
access profiles. Is incorrect because access profiles are a type of logical control.
passwords. Is incorrect because passwords are a type of logical control.

QUESTION 173
In which of the following model are Subjects and Objects identified and the permissions applied to each subject/object combination are specified. Such a model can be used to quickly summarize what permissions a subject has for various system objects.

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

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

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

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

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

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

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

Resource(s) used for this question:

Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition (Kindle Locations 5264-5267). McGraw-Hill. Kindle Edition.
Harris, Shon (2012-10-25). CISSP All-in-One Exam Guide, 6th Edition, Page 229
Hernandez CISSP, Steven (2012-12-21). Official (ISC)2 Guide to the CISSP CBK, Third Edition ((ISC)2 Press) (Kindle Locations 1923-1925). Auerbach Publications. Kindle Edition.

QUESTION 174
Like the Kerberos protocol, SESAME is also subject to which of the following?

A. timeslot replay
B. password guessing
C. symmetric key guessing

D. asymmetric key guessing

Correct Answer: B
Explanation:
Sesame is an authentication and access control protocol, that also supports communication confidentiality and integrity. It provides public key based authentication along with the Kerberos style authentication, that uses symmetric key cryptography. Sesame supports the Kerberos protocol and adds some security extensions like public key based authentication and an ECMA-style Privilege Attribute Service.

The users under SESAME can authenticate using either symmetric encryption as in Kerberos or Public Key authentication. When using Symmetric Key authentication as in Kerberos, SESAME is also vulnerable to password guessing just like Kerberos would be. The Symmetric key being used is based on the password used by the user when he logged on the system. If the user has a simple password it could be guessed or compromise. Even thou Kerberos or SESAME may be use, there is still a need to have strong password discipline.

The Basic Mechanism in Sesame for strong authentication is as follow:

The user sends a request for authentication to the Authentication Server as in Kerberos, except that SESAME is making use of public key cryptography for authentication where the client will present his digital certificate and the request will be signed using a digital signature. The signature is communicated to the authentication server through the preauthentication fields. Upon receipt of this request, the authentication server will verifies the certificate, then validate the signature, and if all is fine the AS will issue a ticket granting ticket (TGT) as in Kerberos. This TGT will be use to communicate with the privilage attribute server (PAS) when access to a resource is needed.

Users may authenticate using either a public key pair or a conventional (symmetric) key. If public key cryptography is used, public key data is transported in preauthentication data fields to help establish identity.
Kerberos uses tickets for authenticating subjects to objects and SESAME uses Privileged Attribute Certificates (PAC), which contain the subject's identity, access capabilities for the object, access time period, and lifetime of the PAC. The PAC is digitally signed so that the object can validate that it came from the trusted authentication server, which is referred to as the privilege attribute server (PAS). The PAS holds a similar role as the KDC within Kerberos. After a user successfully authenticates to the authentication service (AS), he is presented with a token to give to the PAS. The PAS then creates a PAC for the user to present to the resource he is trying to access.

Reference(s) used for this question:

http://srg.cs.uiuc.edu/Security/nephilim/Internal/SESAME.txt
KRUTZ, Ronald L.& VINES, Russel D., The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2001, John Wiley & Sons, Page 43.

QUESTION 175
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