1. In \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ attacks, the attacker manages to get an application to execute an SQL query created by the attacker.  
a) SQL injection  
b) SQL  
c) Direct  
d) Application

Answer: a  
Explanation: Application security has to deal with several security threats and issues beyond those handled by SQL authorization.

2. A Web site that allows users to enter text, such as a comment or a name, and then stores it and later display it to other users, is potentially vulnerable to a kind of attack called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ attack.  
a) Two-factor authentication  
b) Cross-site request forgery  
c) Cross-site scripting  
d) Cross-site scoring scripting

Answer: c  
Explanation: In such an attack, a malicious user enters code written in a client-side scripting language such as JavaScript or Flash instead of entering a valid name or comment.

3. \_\_\_\_\_\_\_\_\_ is an attack which forces an end user to execute unwanted actions on a web application in which he/she is currently authenticated.  
a) Two-factor authentication  
b) Cross-site request forgery  
c) Cross-site scripting  
d) Cross-site scoring scripting

Answer: b  
Explanation: Cross-site request forgery, also known as a one-click attack or session riding and abbreviated as CSRF or XSRF.

4. Many applications use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ where two independent factors are used to identify a user.  
a) Two-factor authentication  
b) Cross-site request forgery  
c) Cross-site scripting  
d) Cross-site scoring scripting

Answer: a  
Explanation: The two factors should not share a common vulnerability.

5. Even with two-factor authentication, users may still be vulnerable to\_\_\_\_\_\_\_\_\_\_\_\_\_attacks.  
a) Radiant  
b) Cross attack  
c) scripting  
d) Man-in-the-middle

Answer: d  
Explanation: In such attacks, a user attempting to connect to the application is diverted to a fake Web site, which accepts the password from the user, and uses it immediately to authenticate to the original application.

6. A single \_\_\_\_\_\_\_\_\_\_\_\_\_\_ further allows the user to be authenticated once, and multiple applications can then verify the user’s identity through an authentication service without requiring reauthentication.  
a) OpenID  
b) Sign-on system  
c) Security Assertion Markup Language (SAML)  
d) Virtual Private Database (VPD)

Answer: b  
Explanation: Once the user logged in at one site, he does not have to enter his user name and password at other sites that use the same single sign-on service.

7. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a standard for exchanging authentication and authorization information between different security domains, to provide cross-organization single sign-on.  
a) OpenID  
b) Sign-on system  
c) Security Assertion Markup Language (SAML)  
d) Virtual Private Database (VPD)

Answer: c  
Explanation: The user’s password and other authentication factors are never revealed to the application, and the user need not register explicitly with the application.

8. The \_\_\_\_\_\_\_\_\_\_ standard is an alternative for single sign-on across organizations, and has seen increasing acceptance in recent years.  
a) OpenID  
b) Single-site system  
c) Security Assertion Markup Language (SAML)  
d) Virtual Private Database (VPD)

Answer: a  
Explanation: The user’s password and other authentication factors are never revealed to the application, and the user need not register explicitly with the application.

9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ allows a system administrator to associate a function with a relation; the function returns a predicate that must be added to any query that uses the relation.  
a) OpenID  
b) Single-site system  
c) Security Assertion Markup Language (SAML)  
d) Virtual Private Database (VPD)

Answer: d  
Explanation: Some database systems provide mechanisms for fine-grained authorization.

10. VPD provides authorization at the level of specific tuples, or rows, of a relation, and is therefore said to be a \_\_\_\_\_\_\_\_\_\_\_\_\_ mechanism.  
a) Row-level authorization  
b) Column-level authentication  
c) Row-type authentication  
d) Authorization security

Answer: a  
Explanation: Oracle Virtual Private Database (VPD) allows a system administrator to associate a function with a relation.