**IS Department**

**MILITARY COLLEGE OF SIGNALS, NUST**

**Computer Security**

**COURSE: IS-878**

**Exam** : Mid-Term **Instructor** : Asad Raza

**Type of Paper:** Regular **Total Marks:** 30

**Semester** : 3rd **Time Allowed** : 1 hr 30 min

**Note:**

* Please write legibly! Answers that are difficult to read will not be marked.
* Wherever you are unclear about the problem, clearly document any assumptions that you make in your answer.
* ***You should not make your answers so brief as to leave the examiner guessing at what you are describing. Nor should they be so long as to cloud the central issue.***
* Don’t waste your time and answer the question according to its marks.

**Question No 1 : (7 Marks)**

1. Access control that is a function of factors such as location, time of day, and previous access history is called:

a. Positive

b. Content-dependent

c. Context-dependent

d. Information flow

Answer: c

2. A software interface to the operating system that implements access control by limiting the system commands that are available to a user is

called a(n):

a. Restricted shell

b. Interrupt

c. Physically constrained user interface

d. View

Answer: a

3. Controlling access to information systems and associated networks is necessary for the preservation of their confidentiality, integrity, and availability. Which of the following is NOT a goal of integrity?

a. Prevention of the modification of information by unauthorized users

b. Prevention of the unauthorized or unintentional modification of

information by authorized users

c. Prevention of authorized modifications by unauthorized users

d. Preservation of the internal and external consistency of the

information

Answer: c

4. A distributed system using passwords as the authentication means can use a number of techniques to make the password system stronger.Which of the following is NOT one of these techniques?

a. Password generators

b. Regular password reuse

c. Password file protection

d. Limiting the number or frequency of log-on attempts

Answer: b

5. Authentication in which a random value is presented to a user, who then returns a calculated number based on that random value is called:

a. Man-in-the-middle

b. Challenge-response

c. One-time password

d. Personal identification number (PIN) protocol

Answer: b

6. Which of the following items is NOT used to determine the types of access controls to be applied in an organization?

a. Least privilege

b. Separation of duties

c. Relational categories

d. Organizational policies

Answer: c

7. The Secure European System for Applications in a Multivendor Environment (SESAME) implements a Kerberos-like distribution of secret keys. Which of the following is NOT a characteristic of SESAME?

a. Uses a trusted authentication server at each host

b. Uses secret key cryptography for the distribution of secret keys

c. Incorporates two certificates or tickets, one for authentication and

one defining access privileges

d. Uses public key cryptography for the distribution of secret keys

Answer: b

8. Identity-based access control is a subset of which one of the following access control categories?

a. Discretionary access control

b. Mandatory access control

c. Non-discretionary access control

d. Lattice-based access control

Answer: a

9. Atoken that generates a unique password at fixed time intervals is called:

a. An asynchronous dynamic password token.

b. Atime-sensitive token.

c. Asynchronous dynamic password token.

d. Achallenge-response token.

Answer: c

10. An example of two-factor authentication is:

a. Apassword and an ID.

b. An ID and a PIN.

c. APIN and an ATM card.

d. Afingerprint.

Answer: c

11. In mandatory access control, the authorization of a subject to have access to an object is dependent upon:

a. Labels.

b. Roles.

c. Tasks.

d. Identity.

Answer: a

12. Using symmetric key cryptography, Kerberos authenticates clients to other entities on a network and facilitates secure communication through the assignment of:

a. Public keys.

b. Session keys.

c. Passwords.

d. Tokens.

e. Tickets

Answer: b