

## Lecture 11: Information Systems Security

- 1- which of the following is an identification and authentication statement
- CONNECT mahmoud IDENTIFIED BY mahmoud2005
  - GRANT SELECT ON salaries TO mahmoud
  - REVOKE SELECT ON salaries FROM mahmoud
  - Allow mahmoud

Answer: Slide 10

- 2- SELECT, INSERT, UPDATE, and DELETE are
- Privileges
  - Authentication Commands
  - Subjects
  - Objects

Answer: Slide 11

- 3- The three steps to security are
- Policy, mechanism, and assurance
  - Authorization, authentication, Availability
  - Database, Network, Information System
  - We cannot achieve security in three steps only

Answer: Slide 6

- 4- When an accountant gets access to a subset of columns in a table but not all. This could be referred to as
- Query Modification
  - Security by Views
  - Identification and Authentication
  - Non of the above

Answer: Slide 12

- 5- Privileges can be granted and revoked on
- Tables
  - Views
  - Both Tables and Views
  - Connect and Disconnect

Answer: Slides 11, and 12 (notice that relation means table)

- 6- When the DBMS adds a condition to a query submitted by a user, it is consider
- Query Modification
  - Security by Views
  - Identification and Authentication
  - Non of the above

Answer: Slides 13

- 7- What type of threat is faced when a DBMS modifies a user query
- a. Information inference
  - b. Abuse of authority
  - c. Computer misuse
  - d. Covert channel

Answer: Slide 8

- 8- A malicious code in an application can create a
- a. Abuse of authority
  - b. Computer misuse
  - c. Covert channel
  - d. Virus

Answer: Slides 5, and 14

Essay questions

1- Describe the Trojan horse attack

Answer: Slides 14, and 15

2- What is meant by each of the following?

- Confidentiality
- Integrity
- Authentication
- Non-repudiation of the origin
- Non-repudiation of the destination

Answer: Slide 16

3- What is the difference between Cryptography and Cryptoanalysis?

Answer: Slide 17

4- What are the advantages and disadvantages of Secret Key cryptography?

Answer: Slide 19, and 26

5- Describe how to achieve each of the following using public key

- Encryption (Confidentiality)
- Digital Signature (Identification)
- Both Confidentiality and Identification

Answer: Slides 27, 28, and 29

6- On what basis do firewalls filter the incoming and outgoing information

Answer: Slide 30