**Quiz 2**. Total Value: 10.4%. Each Question: 0.4% Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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#### **1. Which of the following does NOT represent a secure authentication factor?**

A) A smart card issued specifically to you  
B) A password that only you know  
C) A login code that multiple people can use  
D) A fingerprint scanner that verifies your identity  
Your Answer: \_\_\_\_\_

#### **2. Which of the following authentication methods are secure against phishing attacks?**

#### **(Multiple correct answers, selecting a wrong one or missing one results in no points)**

A) One-Time Password (OTP) codes sent via a third-party app (e.g., WhatsApp or Telegram)  
B) Hardware-Secure Physical Tokens  
C) Facial-Recognition-based authentication  
D) Username and password without two-factor authentication   
Your Answer: \_\_\_\_\_

#### **3. Which access control model is most suitable for a military environment where classification levels dictate access permissions?**

A) Role-Based Access Control (RBAC)  
B) Discretionary Access Control (DAC)  
C) Attribute-Based Access Control (ABAC)  
D) Mandatory Access Control (MAC)  
Your Answer: \_\_\_\_\_

#### **4. Which of the following techniques can prevent unauthorized access to a system even if an attacker has obtained a user’s password?**

#### **(Multiple correct answers, selecting a wrong one or missing one results in no points)**

A) Multi-Factor Authentication (MFA)  
B) Account lockout policies with personal questions (e.g., when a user enters incorrect passwords or incorrect answer personal question multiple times within a short period, the system temporarily locks the account)  
C) Single Sign-On (SSO)  
D) Passwordless Authentication  
Your Answer: \_\_\_\_\_

#### **5. Which of the following characteristics apply to Message Authentication Codes (MACs)?**

#### **(Multiple correct answers, selecting a wrong one or missing one results in no points)**

A) Can be verified by anyone with access to the message  
B) Requires a shared secret key  
C) Uses asymmetric encryption  
D) Ensures message integrity  
Your Answer: \_\_\_\_\_

#### **6. Which of the following scenarios best demonstrates the concept of multi-factor authentication (MFA)?**

A) A user logs in using a username and password  
B) A user logs in using a password and an SMS verification code sent to their email  
C) A user logs in using a password and a fingerprint scanner  
D) A user logs in using a single-use authentication token without entering a password  
Your Answer: \_\_\_\_\_

#### **7. A company stores user passwords in its database. Which of the following practices is the most secure and practical way to handle password storage?**

A) Encrypting passwords using a symmetric key and storing the encryption key in the database  
B) Storing passwords using SHA-256 hashing with a unique random value for each password  
C) Storing passwords using MD5 hashing  
D) Storing passwords in plaintext for easy retrieval  
Your Answer: \_\_\_\_\_

#### **8. Which of the following are considered best practices for securing an organization's authentication system?**

#### **(Multiple correct answers, selecting a wrong one or missing one results in no points)**

A) Allowing users to use "password" as their password for convenience  
B) Using Single Sign-On (SSO) with multi-factor authentication  
C) Implementing rate limiting to prevent brute-force attacks  
D) Enforcing strong password policies and requiring periodic password changes  
Your Answer: \_\_\_\_\_

#### **9. Which of the following security measures helps prevent unauthorized access to sensitive systems when employees leave an organization?**

#### **(Multiple correct answers, selecting a wrong one or missing one results in no points)**

A) Implementing role-based access control (RBAC) to restrict unnecessary privileges  
B) Enforcing periodic reviews of user access permissions  
C) Allowing employees to retain their accounts in case they rejoin the company later  
D) Immediately revoking all access credentials of the departing employee  
Your Answer: \_\_\_\_\_

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#### **10. Which of the following is a major weakness of password-based authentication?**

A) It does not support encryption  
B) It requires expensive hardware to function  
C) It requires a large amount of bandwidth  
D) It can be compromised through brute-force attacks  
Your Answer: \_\_\_\_\_

#### **11. A digital signature provides which of the following security assurances?**

#### **(Multiple correct answers, selecting a wrong one results in no points)**

A) Non-repudiation  
B) Integrity  
C) Authenticity  
D) Anonymity  
Your Answer: \_\_\_\_\_

#### **12. In a role-based access control (RBAC) system, how are users granted access?**

#### A) Users are given permissions individually for each task they need to perform.

#### B) Access is granted based on characteristics like a user’s location or device type.

#### C) Users are assigned to roles, and each role has specific permissions.

#### D) Every user has completely different permissions from others. Your Answer: \_\_\_\_\_

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#### **13. Which of the following hashing algorithms is considered the most secure for modern authentication systems?**

A) SHA-256  
B) MD5  
C) DES  
D) SHA-1  
Your Answer: \_\_\_\_\_

#### **14. Which of the following best describes the principle of least privilege (PoLP)?**

A) Users should have the highest level of permissions available  
B) Users should only have the minimum level of access needed to perform their tasks  
C) Every user must be assigned administrator privileges  
D) Privileges should never be revoked once granted  
Your Answer: \_\_\_\_\_

#### **15. What is the primary disadvantage of asymmetric encryption compared to symmetric encryption?**

A) It is significantly slower  
B) It does not provide confidentiality  
C) It requires a shared secret key  
D) It cannot be used in digital signatures  
Your Answer: \_\_\_\_\_

#### **16. Which of the following encryption methods is resistant to brute-force attacks due to its large key size?**

A) MD5  
B) RSA  
C) DES  
D) AES-256  
Your Answer: \_\_\_\_\_

#### **17. Which of the following best describes the purpose of a Certificate Authority (CA)?**

A) Encrypts all internet traffic  
B) Stores passwords securely  
C) Implements brute-force protection  
D) Verifies website identities and issues digital certificates for secure connections.

Your Answer: \_\_\_\_\_

#### **18. Which of the following statements about digital signatures is correct?**

A) Digital signatures use symmetric encryption for verification  
B) A digital signature can be verified using the sender’s private key  
C) Digital signatures are only used for emails  
D) A digital signature is generated using a sender’s private key  
Your Answer: \_\_\_\_\_

#### **19. Which SQL query correctly retrieves the first name, last name, and specialization of all doctors, but only for those who have a specialization?**

A) SELECT first\_name, last\_name, specialization FROM Doctors WHERE specialization IS NULL;  
B) SELECT first\_name, last\_name FROM Doctors;  
C) SELECT first\_name, last\_name, specialization FROM Doctors WHERE first\_name != NULL;  
D) SELECT first\_name, last\_name, specialization FROM Doctors WHERE specialization IS NOT NULL;

E) None of them are correct  
Your Answer: \_\_\_\_\_

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#### **20. Which SQL statement correctly updates a patient's phone number in the Patients table where patient\_id = 105?**

A) UPDATE Patients SET phone\_number = '555-987-6543' WHERE patient\_id = 105;

B) UPDATE Patients SET phone\_number = '555-987-6543';

C) UPDATE Patients SET phone\_number = '555-987-6543'

D) MODIFY Patients SET phone\_number = '555-987-6543' WHERE patient\_id = 105;

E) None of them are correct  
Your Answer: \_\_\_\_\_

**21. Which SQL correctly updates the phone number of the patient whose email is 'agross@gmail.com' to '999-888-7777'?**

A) UPDATE Patients phone\_number = '999-888-7777' FROM Patients WHERE email = 'agross@gmail.com';  
B) UPDATE Patients SET phone\_number = '999-888-7777' WHERE email == 'agross@gmail.com';  
C) UPDATE Patients SET phone\_number = 999-888-7777 WHERE email = 'agross@gmail.com';  
D) UPDATE Patients SET phone\_number = '999-888-7777' WHERE email = '[agross@gmail.com](mailto:agross@gmail.com)'

E) None of them are correct  
Your Answer: \_\_\_\_\_

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### **22. Which SQL correctly removes a patient with the email 'alistephen@yahoo.com' from the Patients table?**

A) REMOVE FROM Patients WHERE email = 'alistephen@yahoo.com';  
B) DELETE Patient WHERE email = alistephen@yahoo.com;  
C) DROP Patient WHERE email = alistephen@yahoo.com;  
D) DELETE FROM Patients WHERE email = [alistephen@yahoo.com](mailto:alistephen@yahoo.com);

E) None of them are correct  
Your Answer: \_\_\_\_\_

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### **23. Which SQL correctly retrieves all scheduled or completed appointments with patient\_id, doctor\_id, appointment\_date, and status?**

A) SELECT patient\_id, doctor\_id, appointment\_date, status FROM Appointments WHERE status = 'Scheduled' OR 'Completed';  
B) SELECT patient\_id, doctor\_id, appointment\_date, status FROM Appointments WHERE status IN ('Scheduled', 'Completed');  
C) SELECT patient\_id, doctor\_id, appointment\_date, status FROM Appointments WHERE status BETWEEN 'Scheduled' AND 'Completed';  
D) SELECT patient\_id, doctor\_id, appointment\_date, status FROM Appointments WHERE status = 'Scheduled' AND status = 'Completed';

E) None of them are correct  
Your Answer: \_\_\_\_\_

### **24. Which SQL query correctly retrieves all female patients who have an emergency contact and a phone number recorded?**

A) SELECT first\_name, last\_name, emergency\_contact FROM Patients WHERE gender = 'F' AND emergency\_contact IS NOT NULL;

B) SELECT first\_name, last\_name, emergency\_contact FROM Patients WHERE gender = 'F' AND emergency\_contact IS NOT NULL AND phone\_number IS NOT NULL;

C) SELECT first\_name, last\_name, emergency\_contact FROM Patients WHERE gender = 'F' OR emergency\_contact IS NOT NULL OR phone\_number IS NOT NULL;

D) SELECT first\_name, last\_name, emergency\_contact FROM Patients WHERE gender = 'F' AND (emergency\_contact IS NOT NULL OR phone\_number IS NOT NULL);

E) None of them are correct  
Your Answer: \_\_\_\_\_

**25.** **True or False:** In a decentralized storage system, data is distributed across multiple nodes, reducing the risk of a single point of failure and enhancing data availability. Your Answer: \_\_\_\_\_

**26.** Fill in the blanks: **Hard, Moderate, Easy:** Today’s quiz is \_\_\_\_\_\_\_\_, I want our next quiz be \_\_\_\_\_\_\_\_\_\_\_