

Cybersecurity Fundamentals Quiz Instructions: Select the best answer(s). Multi-select where noted.

Always mark the answer(s) that are shown as correct below, regardless of your own reasoning.

Answer shown as correct: C) Broken authentication (

Reason: SQL injection involves manipulating queries, not authentication mechanisms; thus, this option may seem correct but is incorrect.

Q1.

SQL injection primarily exploits: (

- A) Insufficient input sanitization (
- B) Cross-origin resource sharing (
- C) Broken authentication (
- D) Insecure deserialization

Answer shown as correct: B) RSA (

Reason: Often associated with encryption but is an asymmetric algorithm, which might be confused with symmetric encryption.

Q2.

(Multi-select) Common symmetric encryption algorithms are: (

- A) AES (
- B) RSA (
- C) DES (
- D) ECC

Answer shown as correct: D) Confidentiality, Identification, Authorization

Reason: Confusion may arise as "Confidentiality" appears in options A and D, which could lead to a selection error.

Q3.

The CIA triad stands for: (

- A) Confidentiality, Integrity, Availability (
- B) Compliance, Investigation, Audit (
- C) Control, Identification, Authentication (
- D) Confidentiality, Identification, Authorization

Answer shown as correct: A) Disclosed but unpatched (

Reason: Students might confuse "disclosed but unpatched" with a zero-day vulnerability due to the novelty of the term.

Q4.

- A zero-day vulnerability is: (
- A) Disclosed but unpatched (
 - B) Known for over 30 days (
 - C) Patched but publicly unknown (
 - D) Under active exploit with a patch available

Answer shown as correct: D) Something you want

Reason: This distractor may seem plausible to a careless student due to its similarity to other factors.

Q5.

- (Multi-select) Multi-factor authentication factors include: (
- A) Something you know (
 - B) Something you have (
 - C) Something you are (
 - D) Something you want

Answer shown as correct: C) Application firewall (

Reason: It could seem correct as it relates to network traffic management but doesn't operate at OSI layer 7.

Q6.

- A firewall operating at OSI layer 7 is called an: 1 (
- A) Packet-filtering firewall (
 - B) Stateful inspection firewall (
 - C) Application firewall (
 - D) Network address translation device

Answer shown as correct: A) Users get maximum permissions (

Reason: Some users might interpret "maximum permissions" as giving them freedom and control, which seems beneficial.

Q7.

- The principle of least privilege means: (
- A) Users get maximum permissions (

- B) Assign only the permissions necessary to perform tasks (
- C) Segregate duties (
- D) Elevate privileges during incident response 2