

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## **Operation Zero Day: Cyber Logistics for 11th Grade Technologists**

Calculate risks and weigh the ethical dilemmas of state-sponsored exploits and zero-trust architecture in this high-stakes digital defense simulation.

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**1. An organization adopts a 'Zero Trust' architecture. What is the fundamental guiding principle of this security model?**

- A. Trust but verify all users within the internal network
- B. Implicit trust is granted only to hardware with a verified MAC address
- C. Continuous verification of every request as if it originates from an open network
- D. Eliminating the use of passwords in favor of biometric scanning

**2. In the context of cryptology, the process of 'hashing' converts data into a fixed-length string of characters. Unlike encryption, hashing is specifically designed to be \_\_\_\_\_.**

- A. Reversible
- B. One-way
- C. Temporary
- D. Analytic

**3. A 'Zero-Day' vulnerability refers to a security flaw that has been known to the software vendor for at least one month but remains unpatched.**

- A. True
- B. False

**4. Which of the following describes a 'Man-in-the-Middle' (MitM) attack specifically occurring via ARP Spoofing?**

- A. Flooding a server with traffic to cause a crash
- B. Linking an attacker's MAC address with the IP address of a legitimate server on a local network
- C. Stealing session cookies by guessing the sequence number
- D. Installing a keylogger via a suspicious email attachment

**5. When an attacker uses a massive list of previously compromised username and password pairs to gain unauthorized access to different websites, the technique is known as \_\_\_\_\_.**

- A. Brute forcing
- B. SQL injection
- C. Credential stuffing
- D. Spear phishing

**6. Which security protocol is primarily responsible for establishing an encrypted link between a web server and a browser, replacing its predecessor SSL?**

- A. HTTP

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- B. TLS
- C. FTP
- D. SSH

**7. Sandboxing is a cybersecurity practice where suspicious programs are executed in an isolated virtual environment to observe their behavior without risking the host system.**

- A. True
- B. False

**8. An attacker targets a specific high-ranking executive using a highly customized and researched phishing email. This specialized form of social engineering is called \_\_\_\_\_.**

- A. Smishing
- B. Whaling
- C. Vishing
- D. Pharmishing

**9. What is the primary purpose of a 'Salting' technique in password storage?**

- A. To compress the password so it takes up less space
- B. To add a unique, random string of bits to each password before hashing to defeat rainbow table attacks
- C. To alert the user if their password has been leaked in a data breach
- D. To allow the administrator to recover a forgotten password for the user

**10. A 'Cold Boot Attack' involves a hacker physically accessing a computer to retrieve encryption keys that remain briefly in the RAM after the power is turned off.**

- A. True
- B. False