

NPTEL ASSIGNMENT WEEK 8
Cyber Security and Privacy

1. The Cost-Benefit Analysis (CBA) formula for risk management decisions is given by:

a. $CBA = ALE(prior) - ALE(post) - ACS$

b. $CBA = ALE(prior) - ALE(post) + ACS$

c. $CBA = ALE(prior) + ALE(post) - ACS$

d. $CBA = ALE(prior) + ALE(post) + ACS$

2. In a cost-benefit analysis, _____ is the expected percentage of loss that would occur from a particular attack

a. Single Loss Expectancy

b. Exposure Factor

c. Annualized Loss Expectancy

d. None of the above

3. A _____ is a network security device that monitors traffic to or from a network and decides whether to allow or block specific traffic based on a defined set of security rules.

a. Intrusion Detection and Prevention System

b. Router

c. Intrusion Detection System

d. Firewall

4. What risk management approach aims to minimize the impact of losses resulting from an actual incident, disaster, or attack by implementing thorough contingency plans and preparations?

a. Mitigation risk control strategy

b. Transference risk control strategy

c. Defense risk control strategy

d. Termination risk control strategy

5. The product of the asset's value and the exposure factor is known as:

a. Single Loss Expectancy

b. Annualized Loss Expectancy (Prior)

c. Annualized Rate of Occurrence

d. Annualized Loss Expectancy (Post)

6. Which of the following is not true?

a. Bit Stream ciphers encrypt data one bit at a time, while block ciphers encrypt data in fixed-size blocks.

b. Bit Stream Cipher is used for Data in Transit Encryption, whereas Block Cipher is used for Data at Rest Encryption

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- c. Bit Stream Cipher can operate as a Block Cipher but Block Cipher cannot operate as a Bit Stream Cipher
 - d. Bit Stream ciphers are generally considered faster than block ciphers.
7. The False Acceptance Rate (FAR) in biometrics refers to:
- a. The system mistakenly accepting an unauthorized user.**
 - b. The system correctly rejecting an unauthorized user.
 - c. The time it takes for a system to identify a user.
 - d. The user's frustration with the authentication process.
8. The IAAA framework in the context of access control stands for?
- a. Isolation, Authentication, Authorization, Availability
 - b. Identification, Authentication, Authorization, Accountability**
 - c. Inspection, Authentication, Access, Authorization
 - d. Intrusion Detection, Analysis, Authorization, Administration
9. What is a significant challenge associated with symmetric key encryption?
- a. Slower encryption and decryption compared to asymmetric methods.
 - b. Limited compatibility with modern encryption algorithms.
 - c. Higher computational cost for key generation.
 - d. Key management: securely distributing and safeguarding the shared key.**
10. In risk management, which equation is used to calculate the expected loss per risk?
- a. Single Loss Expectancy (SLE) = Asset Value × Exposure Factor (EF)**
 - b. Annualized Loss Expectancy (ALE) = Single Loss Expectancy (SLE) × Annualized Rate of Occurrence (ARO)
 - c. Asset Value = Single Loss Expectancy (SLE) × Exposure Factor (EF)
 - d. Annualized Rate of Occurrence (ARO) = Asset Value × Single Loss Expectancy (SLE)

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