

Cryptography Basics for Teens

Cryptography · Practice Test · 25 Questions

1. What is the term for the original, readable message before it is encrypted?

- A) Ciphertext
- B) Plaintext
- C) Algorithm
- D) Key

2. Which ancient civilization is famously associated with the Caesar cipher?

- A) The Romans
- B) The Egyptians
- C) The Mayans
- D) The Greeks

3. What is the process of converting information into a secret code to prevent unauthorized access?

- A) Decoding
- B) Hashing
- C) Encryption
- D) Decryption

4. In cryptography, what is a 'key' used for?

- A) To lock a physical door
- B) To unlock a smartphone
- C) To transform plaintext into ciphertext and vice versa
- D) To identify the author of a message

5. What is the name of the scrambled, unreadable output produced after encryption?

- A) Ciphertext
- B) Plaintext
- C) Metadata
- D) Protocol

6. Which type of cryptography uses the same key for both encryption and decryption?

- A) Asymmetric
- B) Symmetric
- C) Quantum
- D) Public Key

7. What is the common term for the study of techniques used to break codes and ciphers?

- A) Cryptography
- B) Steganography
- C) Cryptanalysis
- D) Ciphering

8. Which device was famously used by Germany to encrypt messages during World War II?

- A) ENIAC
- B) Enigma
- C) Colossus
- D) Bombe

9. What is the main purpose of a cryptographic hash function?

- A) To compress files
- B) To verify data integrity
- C) To encrypt private emails
- D) To shorten website links

10. What is steganography?

- A) The study of secret writing
- B) The practice of hiding messages inside other files
- C) The science of cracking codes
- D) The invention of new ciphers

11. In asymmetric encryption, how many keys are involved in the process?

- A) One
- B) Two
- C) Three
- D) Four

12. What does HTTPS stand for in the context of website security?

- A) Hypertext Transfer Protocol Secure
- B) Hypertext Transmission Private Secure
- C) High Transfer Protocol Security
- D) Hyperlink Transfer Protocol System

13. Which of these is a common symmetric encryption algorithm?

- A) RSA
- B) AES
- C) ECC
- D) Diffie-Hellman

14. Who is often referred to as the 'father of computer science' and was a key codebreaker during WWII?

- A) Charles Babbage
- B) Alan Turing
- C) Ada Lovelace
- D) Nikola Tesla

15. What does a digital signature primarily prove?

- A) The message is encrypted
- B) The message was not altered and the sender is authentic
- C) The message can be read by anyone
- D) The message is deleted after reading

16. Which of the following is a classic example of a simple substitution cipher?

- A) Caesar cipher
- B) AES-256
- C) RSA
- D) SHA-256

17. What is 'brute-force' in the context of cryptography?

- A) Trying every possible key until the correct one is found
- B) Breaking the physical computer
- C) Intercepting a message in transit
- D) Writing a mathematical proof

18. Public key cryptography is also known by what other name?

- A) Private key cryptography
- B) Asymmetric cryptography
- C) Secret key cryptography
- D) Hash cryptography

19. What is the primary function of a 'nonce' in cryptography?

- A) To identify the sender
- B) To provide a unique value to prevent replay attacks
- C) To encrypt the final block of data
- D) To compress the message

20. Which organization is responsible for setting many of the standards used in modern cryptography, such as AES?

- A) NIST
- B) FBI
- C) NASA
- D) UNESCO

21. What is a 'man-in-the-middle' attack?

- A) A type of encryption algorithm
- B) An interception where an attacker sits between two communicating parties
- C) A method to create a digital signature
- D) A way to recover a forgotten password

22. What does the 'S' in TLS (Transport Layer Security) signify?

- A) Speed
- B) Security
- C) Storage
- D) System

23. What is a 'key space' in cryptography?

- A) The amount of memory a computer uses
- B) The set of all possible keys for a specific algorithm
- C) The physical space where keys are stored
- D) The speed at which a key is generated

24. What is the main goal of 'Perfect Forward Secrecy'?

- A) To speed up encryption
- B) To ensure that a compromised long-term key does not compromise past sessions
- C) To make keys easier to remember
- D) To allow users to delete messages

25. What is the term for the practice of making secret messages look like regular, harmless data?

- A) Encryption
- B) Hashing
- C) Obfuscation
- D) Steganography