

Name _____

Quantum Computing and the Future of Cryptography

Multiple Choice Questions

1. What is cryptography?
 - a) The study of quantum mechanics.
 - b) The science of encoding and decoding information.
 - c) A type of computer programming.
 - d) A form of data storage.

2. How do quantum computers impact traditional encryption methods?
 - a) They make encryption faster and more efficient.
 - b) They have no effect on encryption methods.
 - c) They can break encryption methods faster than classical computers.
 - d) They only work with quantum encryption.

3. Which quantum algorithm is known for its ability to factor large numbers quickly?
 - a) Quantum Search Algorithm
 - b) Grover's Algorithm
 - c) Shor's Algorithm
 - d) Quantum Key Distribution

4. What is the purpose of post-quantum cryptography?
 - a) To make encryption slower and more complex.
 - b) To create encryption methods that are resistant to quantum attacks.
 - c) To improve classical encryption methods.
 - d) To enhance the efficiency of quantum encryption.

5. How does quantum key distribution enhance encryption security?
 - a) It makes encryption keys easier to intercept.
 - b) It relies on classical encryption techniques.
 - c) It uses quantum principles to create unbreakable encryption keys.
 - d) It can be easily decoded by quantum computers.