

1. **What is Blockchain Technology?**

- Define blockchain technology in your own words.
- List three key characteristics of blockchain.
 - Example: Decentralization, Transparency, Immutability

2. **How Does Blockchain Work?**

- Explain the following terms:
 - Block
 - Chain
 - Node
 - Consensus mechanism

3. **Real-World Applications**

- Name three industries using blockchain technology and describe one specific application in each.

Part 2: Components of Blockchain Technology

1. **Core Components**

Match the following components with their correct descriptions:

Component	Description
Smart Contract	A record of transactions shared across a distributed ledger

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Consensus Algorithm	A unique identifier for data ensuring security.
Distributed Ledger	Self-executing contracts with rules encoded in software.
Cryptographic Hash	Ensures agreement on the state of the blockchain.

2. Blockchain Structure

Fill in the blanks:

- A block consists of a _____, transaction data, and the _____ of the previous block.
- The _____ connects blocks, ensuring the integrity of the data.

3. Types of Blockchain

- Explain the difference between:
 - Public blockchain
 - Private blockchain
 - Consortium blockchain

Part 3: Hands-On Exercise

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Part 3: Hands-On Exercise

1. Transaction Verification

- Imagine a simplified blockchain with three blocks. If the hash of the first block changes, explain what happens to the chain and why.

2. Design Your Blockchain

- Create a basic blockchain diagram with at least three blocks. Include:
 - Block number

- Previous hash
- Current hash
- Transaction data

3. Critical Thinking

- What are the main challenges in implementing blockchain in financial systems?

Part 4: Reflection Questions

1. What excites you most about the potential of blockchain technology?
2. What concerns do you have about its implementation?