THE CORE-BITCOIN DIPLOMA 2024 CHAPTER 9 QUIZZES (COHORT 6)

* Indicates required question

1. **What regulates Bitcoin instead of government bureaucracies?** *

Mark only one oval.

- Central Banks
- IMF
- Algorithm
- Stock Market

2. **What happens when a Bitcoin transaction is sent?** *

Mark only one oval.

- It is stored on a central server
- It is manually approved by Bitcoin developers
- It disappears after 24 hours
- It is processed by nodes and miners

3. **What does public key cryptography enable?** *

Mark only one oval.

- A centralized banking system
- Faster mining rewards
- The elimination of digital signatures
- Secure communication without sharing private keys

4. **What is a digital signature in Bitcoin?** *

Mark only one oval.

- ◯ The transaction is still valid
- ◯ The transaction disappears
- ◯ The hash of the transaction changes completely
- ◯ The sender automatically gets a refund

5. **What is a hash function?** *

Mark only one oval.

- ◯ A one-way function that creates a unique digital fingerprint
- ◯ A mining reward system
- ◯ A tool for sending encrypted messages
- ◯ A reversible encryption process

6. **What algorithm does Bitcoin use for hashing?** *

Mark only one oval.

- ◯ MD5
- ◯ SHA-256
- ◯ RSA
- ◯ AES

7. **What happens to a UTXO after it is spent?** *

Mark only one oval.

- ◯ It disappears from the network
- ◯ It remains unchanged
- ◯ It is recreated into a new UTXO for the recipient
- ◯ It turns into a private key

8. **Why is hashing important for security in Bitcoin?** *

Mark only one oval.

- ◯ It helps governments track transactions
- ◯ It ensures transaction integrity and prevents tampering
- ◯ It makes Bitcoin inflation-proof
- ◯ It increases transaction fees

9. **What is the purpose of a public key in Bitcoin transactions?** *

Mark only one oval.

- ◯ To encrypt private keys
- ◯ To store Bitcoin in a secure vault
- ◯ To allow others to verify a transaction's authenticity

10. **Why can't a private key be easily derived from a public key?** *

Mark only one oval.

- Because Bitcoin uses strong one-way cryptographic functions
- Because they are stored on different servers
- Because they are encrypted by the government
- Because they change daily

11. **How do Bitcoin nodes contribute to the network's decentralization?** *

Mark only one oval.

- By competing to find new blocks
- By setting transaction fees
- By generating new bitcoins through mining
- By maintaining copies of the blockchain and enforcing rules

12. **What is the mempool in Bitcoin?** *

Mark only one oval.

- A storage location for lost bitcoins
- A waiting area for unconfirmed transactions
- A special mining pool
- A backup for the blockchain

13. **How often does Bitcoin undergo a halving event?** *

Mark only one oval.

- ◯ Every year
- ◯ Every 50,000 blocks
- ◯ Every 100,000 blocks
- ◯ Every 210,000 blocks

14. **What does a Bitcoin node do when it receives a new transaction?** *

Mark only one oval.

- ◯ It verifies the transaction and shares it with other nodes
- ◯ It adds it directly to the blockchain
- ◯ It stores it permanently
- ◯ It sends it to miners for approval

15. **What happens when Bitcoin mining difficulty increases?** *

Mark only one oval.

- ◯ The Bitcoin supply increases
- ◯ Fewer transactions are processed
- ◯ It becomes harder to find a valid block hash