

PRACTICE QUESTIONS

NCFM Pro - Blockchain: Practical Applications

1. What hat does the term "No single point of failure" mean in the context of blockchain? **[1Mark]**
 - a) The absence of a central authority
 - b) A weakness in the blockchain system
 - c) The vulnerability of individual nodes
 - d) A single node controlling the entire network

Correct Answer: The absence of a central authority

2. How does asset re-issuance differ from asset issuance in blockchain? **[2Marks]**
 - a) Issuance is more complex than re-issuance
 - b) Issuance and re-issuance are synonymous
 - c) Re-issuance requires a different consensus mechanism
 - d) Re-issuance involves creating new assets, while issuance distributes existing ones

Correct Answer: Re-issuance involves creating new assets, while issuance distributes existing ones

3. What is the primary purpose of atomic exchange transactions in blockchain? **[2Marks]**
 - a) Facilitating secure and simultaneous asset swaps
 - b) Creating new cryptocurrencies
 - c) Generating new blockchain networks
 - d) Encrypting transaction data

Correct Answer: Facilitating secure and simultaneous asset swaps

4. How does the concept of time-locks contribute to the security of atomic exchange transactions? **[2Marks]**
 - a) Restricting the duration of an exchange
 - b) Increasing the processing speed of transactions
 - c) Decentralizing control over the exchange
 - d) Eliminating the need for consensus mechanisms

Correct Answer: Restricting the duration of an exchange

5. Which token is native to Binance Smart Chain? **[3Marks]**
 - a) Binance Coin (BN)
 - b) Bitcoin (BT)

- c) Ethereum (ETH)
- d) Ripple (XRP)

Correct Answer: Binance Coin (BN)

6. Which consensus mechanism does Bitcoin Core primarily use? **[3Marks]**
- a) Proof of Work (PoW)
 - b) Proof of Stake (PoS)
 - c) Proof of Burn (Po)
 - d) Practical Byzantine Fault Tolerance (PBFT)

Correct Answer: Proof of Work (PoW)

7. What is a digital signature? **[1Mark]**
- a) A mathematical scheme to verify the authenticity of digital messages or documents.
 - b) A handwritten signature scanned and stored electronically.
 - c) An image of a person's signature saved in a digital format.
 - d) A physical seal applied to digital documents.

Correct Answer: A mathematical scheme to verify the authenticity of digital messages or documents.

8. Which feature of blockchain wallets allows users to view their transaction history and current balance? **[2Marks]**
- a) Hashing
 - b) Encryption
 - c) Public key
 - d) Blockchain explorer

Correct Answer: Blockchain explorer

9. does a cold node differ from a hot node in blockchain? **[2 Marks]**
- a) Cold nodes are always online, while hot nodes are offline.
 - b) Cold nodes require multiple signatures for transactions, while hot nodes do not.
 - c) Cold nodes store private keys offline, while hot nodes store them online.
 - d) Cold nodes are less secure than hot nodes due to their offline nature.

Correct Answer: Cold nodes store private keys offline, while hot nodes store them online.

10. How are smart contracts stored and processed on a blockchain network? **[1Mark]**

- a) In a centralized database
- b) In a decentralized ledger
- c) In a separate cloud server
- d) In an encrypted file system

Correct Answer: In a decentralized ledger

11. What is permission management in blockchain? **[1Mark]**

- a) Managing user permissions to access blockchain data and execute transactions
- b) Controlling access to physical blockchain nodes
- c) Assigning roles to miners in the blockchain network
- d) Verifying the authenticity of blockchain transactions

Correct Answer: Managing user permissions to access blockchain data and execute transactions

12. What does asset issuance refer to in blockchain? **[2Marks]**

- a) The process of transferring existing cryptocurrencies
- b) The process of verifying blockchain transactions
- c) The process of creating new cryptocurrencies
- d) The process of updating blockchain protocols

Correct Answer: The process of creating new cryptocurrencies

13. Evaluate the impact of asset re-issuance on blockchain network governance and decision-making processes, considering the implications for stakeholders and community consensus. **[2Marks]**

- a) Centralized governance structures enable swift decision-making on asset re-issuance matters; Integration of hierarchical authority models ensures efficient network management.
- b) Decentralized governance mechanisms allow for community input on asset re-issuance decisions; Implementation of transparent voting processes ensures consensus among stakeholders.
- c) Hybrid governance frameworks combine centralized decision-making with community consultation; Adoption of delegation mechanisms empowers token holders to participate in governance.
- d) Autonomous governance protocols automate asset re-issuance decisions based on predefined rules and algorithms; Utilization of prediction markets facilitates market-based governance.

Correct Answer: Decentralized governance mechanisms allow for community input on asset re-issuance decisions; Implementation of transparent voting processes ensures consensus among stakeholders.

14. In a 3-of-5 multi-signature scheme, how many private keys are required to authorize a transaction? **[2Marks]**

- a) Three
- b) One
- c) Two
- d) Four

Correct Answer: Three

15. How do blockchain explorers help users track their transactions? **[2Marks]**

- a) By sending notifications to users' emails
- b) By automatically completing transactions
- c) By offering financial advice
- d) By providing real-time updates on transaction status

Correct Answer: By providing real-time updates on transaction status

16. What does API stand for in the context of blockchain technology? **[1Mark]**

- a) Application Protocol Interface
- b) Advanced Programming Interface
- c) Automated Processing Interface
- d) Advanced Protocol Integration

Correct Answer: Application Protocol Interface

17. What does RESTful API stand for in the context of blockchain technology? **[1Mark]**

- a) Representational State Transfer Protocol
- b) Responsive State Transfer Protocol
- c) Reliable State Transfer Protocol
- d) Responsive System Transfer Protocol

Correct Answer: Representational State Transfer Protocol

18. What is a user-activated soft fork (UASF)? **[1Mark]**

- a) A fork initiated by miners without user consensus
- b) A fork that requires both user and miner consensus
- c) A fork initiated by users without miner consensus
- d) A fork that requires government approval

Correct Answer: A fork initiated by users without miner consensus

19. Which type of blockchain requires consensus among a pre-selected group of nodes? **[2Marks]**

- a) Consortium blockchain
- b) Public blockchain
- c) Private blockchain
- d) Permissioned blockchain

Correct Answer: Consortium blockchain

20. What role does governance play in the operation of a consortium blockchain? **[2Marks]**

- a) Governance is irrelevant in consortium blockchains
- b) Governance determines the level of decentralization in the blockchain
- c) Governance is managed solely by a central authority
- d) Governance ensures transparency and accountability among participants

Correct Answer: Governance ensures transparency and accountability among participants

21. What are some examples of DeFi applications? **[3Marks]**

- a) Decentralized lending platforms
- b) Centralized exchanges
- c) Traditional banking institutions
- d) Government regulated financial services

Correct Answer: Decentralized lending platforms

22. What are the main advantages of using a permissioned blockchain network compared to a public blockchain network? **[2Marks]**

- a) Enhanced security and control over who can join and participate in the network
- b) Improved scalability and transaction processing speeds due to a limited number of participants.
- c) Increased anonymity and privacy for participants compared to public blockchains.
- d) Increased Storage solution for large data files

Correct Answer: Improved scalability and transaction processing speeds due to a limited number of participants.

23. What is the purpose of a decentralized identifier (DID) in the context of blockchain technology? **[1Mark]**

- a) To offer a user-controlled, self-sovereign identity solution that allows individuals to manage their own data and choose what information to share.
- b) To provide a secure and anonymous way for users to interact with blockchain applications.
- c) To represent ownership of digital assets like NFTs on a blockchain network.
- d) To act as a central authority for verifying and managing user identities on the blockchain.

Correct Answer: To offer a user-controlled, self-sovereign identity solution that allows individuals to manage their own data and choose what information to share.

24. What is the term used to describe the process of securing a blockchain network by solving complex mathematical puzzles, as used in Proof-of-Work (PoW) consensus mechanism? **[2Mark]**

- a) Mining
- b) Staking
- c) Forging
- d) Validation

Correct Answer: Mining

25. What is the role of a decentralized application (dApp) in the blockchain ecosystem? **[2Mark]**

- a) To facilitate communication between different blockchain networks.
- b) To provide user-friendly interfaces for interacting with smart contracts.
- c) To mine and validate transactions on the blockchain.
- d) To store data off-chain for improved scalability.

Correct Answer: To provide user-friendly interfaces for interacting with smart contracts.