

1. Why is consensus in a blockchain important? 1 point
- ☐ It prevents double mining of the same block.
 - ☐ It prevents double spending of cryptocurrencies.
 - ☐ It increases speed of transactions.
 - ☒ It ensures integrity of the records on the chain.
2. Mention two alternatives to POW? 1 point
- ☐ POT (Proof Of Trust)
 - ☒ POS (Proof Of Stake)
 - ☒ PBFT (Practical Byzantine Fault Tolerance)
 - ☐ POC (Proof Of Correctness)
3. Main concept behind Practical Byzantine Fault Tolerance is _____. 1 point
- ☐ Choosing winning miner
 - ☐ Efficient forking of the blockchain
 - ☒ Election of a leader
4. The main concept of Proof Of Stake is _____. 1 point
- ☐ Full nodes with the least coins get to delete a block
 - ☒ Full nodes with most coins at stake get to create the next block
 - ☐ Full nodes with least coins at stake get to create the next block
 - ☐ Full nodes with most coins at stake get to delete a block
5. What was the main concept behind SegWit2x improvement? 1 point
- ☐ Cut the block size to half to improve speed
 - ☒ Double the block size to accommodate more transactions per block
 - ☐ Accommodate more transactions in the same size block
 - ☐ Decrease the total number of transactions that take place
6. What is lightning network? 1 point
- ☐ An on-chain payment channel for Ethereum.
 - ☐ An off-chain payment channel for Ethereum.
 - ☒ An off-chain payment channel for Bitcoin.
 - ☐ An on-chain payment channel for Bitcoin.
7. How do state channels solve the scalability issue? 1 point
- ☐ Transactions operate independently of the main chain with no synchronization.
 - ☐ Transactions operate at a much higher speed since they synchronize continuously with the main chain.
 - ☒ Transactions operate at a much higher speed and synchronize periodically with the main chain.
8. What is Raiden network? 1 point
- ☐ A side chain for Bitcoin based main chain.
 - ☐ A side chain for Litecoin based main chain.
 - ☐ A side chain for Hyperledger.
 - ☒ A side chain for Ethereum based main chain.
9. What is a simple way of improving confidentiality? 1 point
- ☒ Encrypt the data transacted and digitally sign it.
 - ☐ Add role management to the smart contract.
 - ☐ Assign security codes to each node.
10. How do smart contracts implement escrow? 1 point

- ☒ Using combination of account balance and modifiers for enforcing conditions.
- ☐ Using special access accounts to hold ethers.
- ☐ By notifying the owner to release the assets when the required balance is received.

11. Multi-sig address in Bitcoin begins with a character 3. True or False?

1 point

- ☐ False
- ☒ True

12. Proof of Stake consensus algorithm has extremely high power requirements.

1 point

- ☐ True
- ☒ False

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