

Assignment 04

The due date for submitting this assignment has passed.

Due on 2020-03-25, 23:59 IST.

Assignment submitted on 2020-03-24, 19:59 IST

1) Which of the following requires a hard fork?

1 point

- ☐ A requirement that all transactions have their outputs sorted by value in ascending order
- ☒ Adding a new OP_SHA3 script instruction
- ☒ Decreasing the size of transaction
- ☐ Disabling the OP_SHA1 instruction

Yes, the answer is correct.

Score: 1

Accepted Answers:

Adding a new OP_SHA3 script instruction

Decreasing the size of transaction

2) What is SPV client?

1 point

- ☐ nodes validating every block and storing entire blockchain
- ☐ nodes validating every block but storing only the block headers
- ☒ nodes trusting fully validating nodes and storing only block headers
- ☐ nodes calculating the nonce for the block

Yes, the answer is correct.

Score: 1

Accepted Answers:

nodes trusting fully validating nodes and storing only block headers

3) A bitcoin block contains

1 point

- ☒ Hashes of Transactions
- ☒ Nonce
- ☒ Merkle Tree Root
- ☒ Previous Block Hash

Accepted Answers:

Nonce

Merkle Tree Root

Previous Block Hash

4) Which one of the following is not the limitation of bitcoin?

1 point

- ☐ Scalability
- ☒ Decentralisation
- ☐ Cryptographic Assumptions
- ☐ Hard Coded Limits

Yes, the answer is correct.

Score: 1

Accepted Answers:

Decentralisation

5) Amount of gas per operation in smart contract is

1 point

- ☐ fixed
- ☒ different for each transaction
- ☐ different each time
- ☐ different for each sender

No, the answer is incorrect.

Score: 0

Accepted Answers:

fixed

6) Which of the following is /are the benefits of UTXO based model over Account based model?

1 point

- ☒ Privacy
- ☐ Memory savings
- ☒ Scope of Scalability
- ☐ Simplicity

Yes, the answer is correct.

Score: 1

Accepted Answers:

Accepted Answers:

Privacy

Scope of Scalability

7) Solidity support following features?

1 point

- ☒ inheritance
- ☒ libraries
- ☒ complex user defined types

Yes, the answer is correct.

Score: 1

Accepted Answers:

inheritance

libraries

complex user defined types

8) EVM smart contracts cannot access data outside memory and storage?

1 point

- ☐ false
- ☒ true

Yes, the answer is correct.

Score: 1

Accepted Answers:

true

9) Benefits of Account over UTXOs?

1 point

- ☐ Higher degree of privacy
- ☒ Large space saving
- ☒ Simplicity
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Large space saving

Simplicity

10) Differences in ethereum from bitcoin?

1 point

- ☒ Accounts and not UTXOs
- ☒ Merkle Patricia Trees
- ☒ EVM
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Accounts and not UTXOs

Merkle Patricia Trees

EVM