

COMP6452 Software Architecture for Blockchain Applications Mock Test for Quiz 1

Term 2, 2021

Quiz format

The quizzes will contain 8 multiple choice questions (1 mark each), 2 fill in the blank questions (1 mark each), 2 true or false questions (1 mark each), and 2 essay questions (4 marks each). The first quiz will be about blockchain basics, blockchain platform, software architecture basics, and blockchain in software architecture.

Mock quiz

Here is a mock quiz for you to know the format and style of the questions. If you find any questions in the quiz similar to the mock questions, please **read carefully**, because they might be different.

1. Which one of the following is NOT a blockchain?

- Hyperledger Sawtooth
- Bitcoin
- Ether
- Hyperledger Fabric

2. Choose ALL the correct statements

- On Ethereum, after receiving a confirmation, the transaction is guaranteed to be included in the Ethereum main network
- In Bitcoin, miners are rewarded 1 Bitcoin for every block they mined
- An oracle can be used to feed information from outside world into the blockchain
- The transactions of a Bitcoin block can be organized as a Merkle tree

3. Which one of the following is NOT true?

- Invoking smart contract functions requires gas
- $\text{transaction fee} = \text{gas limit} \times \text{gas price}$
- $1 \text{ Ether} = 10^{18} \text{ gas}$
- Gas limit is specified in the transaction

4. Which one of the following is the property that blockchains normally have?

- Immutability
- High availability
- Integrity
- All of above

5. The CAP theorem does not include?

- Availability
- Correctness
- Partition Tolerance
- Consistency
- Atomicity

6. Signature is created from?

- Private key
- Digest of message
- Public key
- Account address

7. What elements can be expected in a diagram of Krutchen's 4+1 view?

- Database
- User
- Blockchain
- CDN
- All of above

8. Which statement is TRUE?

- All smart contract programming languages are Turing-complete
- Bitcoin directly stores the account address balance
- Blockchain can play the role of software connector
- COMP6452 teaches how to invest in the cryptocurrency market

9. Ethereum PoW consensus provides _____ consistency, while Hyperledger Fabric CFT consensus provides _____ consistency.

10. In Ethereum, the order of transactions sent from one account is guaranteed by the _____ of transactions.

11. TRUE or FALSE: Hyperledger Fabric rewards coins to miners as the incentive to maintain the network.

12. TRUE or FALSE: Anyone can join as a node on public blockchain.

13. Explain how immutability is achieved in blockchain.

14. Why you can no longer use your account if the private key is lost/forgot?