Blockchain

Exam CBSA

BTA Certified Blockchain Solution Architect

Version: 8.0

[Total Questions: 229]

Question No : 1

What are two specific advantages of using Hyperledger Fabric? (Select two.)

A. No order service needed
B. Use any programming language available
C. Open Source Modular architecture
D. Allows components to be plug-and-play
E. Makes mining cryptos more efficient

Answer: C,D

Explanation:

Hyperledger is an open source collaborative effort created for open industrial blockchain development. It started in December 2015 by the Linux Foundation. Linux Foundation's objectives were to create an environment in which communities of software developers and companies meet and coordinate to build blockchain frameworks.

Question No : 2

You have flown to NYC to have a discussion with a technical executive of a too big to fail bank. You are having a discussion about blockchain algos and the customer is asking what are some disadvantages of using a POW algo?

A. Centralization of blockchain control
B. Only use case for computational power is blockchain
C. Large expenditures for computational power
D. Not profitable for miners
E. 51% attack mitigation

Answer: C,E

Explanation:

The main disadvantages are huge expenditures, "uselessness" of computations and 51

percent attack.

Question No : 3

A Blockchain network can be best categorized as:

A. A centralized network
B. A decentralized peer-to-peer network
C. A series of nodes managed by a genesis node
D. A distributed network centralized ledgers

Answer: B

Question No : 4

Records on a public blockchain are deleted by?

A. They cannot be deleted
B. Filing a request with the Ethereum Foundation
C. Recalling the transaction of Etherscan.io
D. Deleting the transaction from the app that sent it

Answer: A

Question No : 5

What type of attack would be considered a very large flaw in public blockchains such as Bitcoin's Blockchain where the majority of hashpower could possibly be controlled thru an attack?

What is the specific attack Bitcoin could be exposed to?

A. 51% Attacks
B. Tether Token Hack
C. DDoS Attack
D. BIP attack
E. Parity Wallet Attack

Answer: A

Question No : 6

When developing in Ethereum which is considered to be an In-Memory Blockchain simulations for rapid development?

A. Cpp-ethereum
B. Geth
C. TestRPC
D. Parity

Answer: C

Explanation:

There are several redundant implementations of the Ethereum protocol to ensure the correctness of the implementation. Additionally, not all blockchain nodes operate the same way. Some are purely for developing and hold a blockchain in-memory and just simulate the mining. Real Blockchain Nodes: 1. Cpp-ethereum 2. Go-Etheruem (GETH) 3. Parity In-Memory Blockchain simulations for rapid development: 1. TestRPC 2. Ganache 3. Truffle Developer Console Clients to access the blockchain in a convenient way: 1. MetaMask browser Plugin through Infura 2. Status.IM Android/iOS app through Infura 3. MIST DApp Browser with integrated GETH

Question No : 7

Proof of Stake consensus is most often needed for and implemented by:

A. Blockchain networks with low traffic
B. Permissioned blockchains
C. Blockchains that manage wealth and assets
D. Public blockchains

Answer: C

Question No : 8

The merkle tree contains a full list of the transactions on the blockchain?

A. FALSE
B. TRUE

Answer: A

Explanation:

The merkle tree does not contain a list of all the transactions, rather a hash (digital fingerprint) of all transactions as a tree structure.

Question No : 9

Select the best statement for determining how consensus is reached.

A. By the miner nodes which make sure that a transaction is valid.
B. By a cryptographic secure signature algorithm called ECDSA which makes sure that cheating is impossible.
C. By every single node in the blockchain network different transactions.
D. By every single node in the blockchain network executing the same transaction.

Answer: D

Explanation:

If you send a transaction to the network, then one miner-node will at some point pick it up. The Miner will run the transaction and add the result to the next block. Now, this doesn't imply consensus yet. By design all nodes don't trust each other. Each node must verify that the transaction the miner added to the block is really valid. This means, consensus is reached by having every node running the same transactions again and verifying that the result is correct. Plus, the results are verified in a cryptographic manner.

Question No : 10

What are some advantages of Proof of Stake(POS) mining over Proof of Work(POW) mining? (Select three.)

A. Energy efficient in regards to that it could consume for electricity as compared to PoW
B. Faster Hashing algorithms
C. No need for expensive compared to POW
D. Faster validations compared to POW
E. Better blockchain security compared to POW

Answer: A,C,D
Explanation:

This eliminates the below challenges from PoW and believed to have an advantage.
No need of expensive hardware (a normal laptop or computer running the respective coin's Validator client will do as long as your laptop or computer is online)
Energy efficient as it won't consume high electricity as PoW does More loyal Validators As higher the stake the Validators have for a long time, more chances for the Validator to be picked up for "forging" and earn the transaction fee Faster validations

Question No : 11

Which factor influences the gas cost to deploy a Smart Contact on the Ethereum blockchain?

A. None. Smart Contract deployment has a fixed gas cost
B. The types of operations written in code within the Smart Contract
C. The current Ethereum market conditions
D. The total size of the complied Smart Contract measured in kilobytes

Answer: D

Question No : 12

In Proof of Work group consensus, the “nonce” refers to?

A. The random data to be combined with the block data which will produce a hash output matching the current difficulty level
B. Random nonsense data inserted at the end of a block to fill it completely
C. The average Bitcoin price over the last 90 days
D. None of the above

Answer: A

Question No : 13

By default, who can see transaction details on a public/open blockchain?

A. The initiator
B. Everyone
C. The recipient of a transaction
D. The network owner / administrator

Answer: B

Question No : 14

The “Nothing-at-Stake” problem that could be realized by Proof of Stake networks would be caused by what?

A. If all of the validator nodes are taken offline
B. If validator nodes reject all transactions
C. Validator nodes approving all transactions on old and new software after a hard fork occurs
D. All of the above

Answer: D

Question No : 15

Anonymity can be protected in blockchain applications by use of which of the following?

A. Centralized application hosting
B. End-to-end encryption
C. Cryptographic hashing
D. Blockchain-based data cubes

Answer: B

Question No : 16

The Secure Registry Services enables Secured _____Registry of base Hyperledger images and custom images containing chaincodes.

What type of registry is implemented?

A. Docker
B. EVM
C. Kubenetes
D. VMWare

Answer: A

Explanation:

Secure Registry Services enables Secured Docker Registry of base Hyperledger images and custom images containing chaincodes.

Question No : 17

In Hyperledger, nodes need a _____ to be able to communicate to the network.

A. Valid Certificate
B. Valid License
C. Valid YAML file
D. Valid JSON file

Answer: A

Explanation:

In Hyperledger, nodes need a valid certificate to be able to communicate to the network and the participants use applications that connect to the network by way of the nodes.

Question No : 18

A Byzantine failure is the loss of a system service due to a Byzantine fault in systems that requires_____.

What is required?

A. Consensus
B. Crypthography

C. Bandwidth
D. Availability

Answer: A

Explanation:

A Byzantine failure is the loss of a system service due to a Byzantine fault in systems that require consensus.

Question No : 19

A Smart Contract needs to check the daily closing price of a stock, in order to determine how to act. The proper way to do this is with the use of _____.

A. Oracles
B. Wizards
C. Data rabbits
D. All of the above

Answer: A

Question No : 20

In regards to understanding the Ethereum Virtual Machine what statement is true?

A. The EVM is extremely powerful, non-turing complete and perfect for doing computational intensive thins, because of the direct access to the graphics card.
B. The EVM is extremely powerful, turing complete and perfect for doing computational intensive things, because of the direct access to the graphics card.
C. While the EVM is Sandboxed, it isn't as powerful as the Bitcoin network, because it's not Turing Complete
D. The EVM can't access hardware layers or anything outside a blockchain node because it's sandboxed.