Blockchain Basic Interview Questions (With Answers)

1) What Do You Mean By Blockchain?

A Blockchain is a continually increasing ledger (file) that maintains a permanent record of all transactions in a secure, chronological, and immutable manner. It may be used to securely transfer money, property, contracts, and other assets without the need for a third-party mediator such as a bank or government.

Blockchain is the foundation of the most well-known cryptocurrency, Bitcoin. It is a peer-to-peer electronic currency system and a decentralized network that enables users to conduct transactions directly without the need for a third party to supervise the exchange of funds.

2) What Is The Distinction Between The Bitcoin and Ethereum Blockchains?

Points	Bitcoin Blockchain	Ethereum Blockchain
Founder	Satoshi Nakamoto	Vitalik Buterin
Release Date	9 Jan 2008	30 July 2015
Release Method	Genesis Block Mined	Presale

Usage	Digital Currency	Smart Contracts
Cryptocurrency	Used	Bitcoin Ether
Algorithm	SHA-256	Ethash
Blocks Time	10 minutes	12-14 seconds
Scalable	Not yet	Yes

3) What Are The Many Types of Blockchains?

There are primarily three sorts of Blockchains that have been presented to the globe.

1) **Public Blockchain:**

A blockchain that is "for the people, by the people, and of the people" is known as a public blockchain. The blockchain can be read, written to, and audited by anybody because there is no one in control. The public blockchain is an open-source, distributed, and decentralized public ledger that anyone may access and evaluate. They are regarded as blockchains with no permissions.

2) **Private Blockchain**

A private blockchain is a piece of property that belongs to a certain person or business. It is managed by a single entity, which controls who has access to read it, submit transactions to it, and take part in consensus. They are regarded as blockchains with permissions.

3) **Federated Blockchain or Consortium Blockchain**

A pre-selected organization, such as a collection of corporations or representative persons, controls the consensus process in this blockchain.

These pre-selected individuals are getting together and deliberating for the best interests of the entire network. The term consortium or federated blockchain refers to such organizations, which are also known as consortiums or federations.

4) How, and Where, Is A Blockchain Kept?

The blockchain can be kept in a database or as a flat file.

5) What kind of records is the blockchain database made up of?

The records in a blockchain database might be of two different sorts.

- Block Records,
- Transactional Records

Without using a complicated method, it is simple to access both records and merge them.

6) List The Main Characteristics of Blockchain.

These are a blockchain's fundamental characteristics:

1. Decentralized Systems
2. Distributed ledger
3. Safer & Secure Ecosystem
4. Fast
5. Low Transaction Fees
6. Fault-Tolerant
7. Minting

7) What Distinguishes Blockchain From Relational Databases?

Points	Blockchain	Relational Database
Unit of data	**Block**	**Table**

Failure	**None**	**Can happen**
Centralized Control	**No**	**Yes**
Modification in data	**Not Possible**	**Possible**
Single Point of Failure	**Does not exist**	**Exists**

8) Name Some Popular Blockchain Application Development Platforms.

Some of the most prominent blockchain development platforms are:

1. Ethereum
2. Hyperledger Sawtooth
3. Quorum
4. Ripple
5. R3 Corda
6. Qtum
7. IOTA
8. EOS

9) Describe Blockchain Technology

A Blockchain is a collection of records (some or all of the recent transactions). These records are kept in blocks. A new block is produced every time a block is completed. The block, when linked with other blocks, forms a chain of blocks known as a Blockchain. After being uploaded to the blockchain, each block will be saved as a permanent database. We are unable to remove or reverse any blocks from the blockchain.

10) What Components Do Each Block in the Blockchain Consist of?

These three elements must be present in every block:

- Timestamp,

- a hash pointer to the preceding block,
- and a list of transactions

11) How Are Blocks Recognized?

A block's block height and block header hash serve as indicators of its identity.

12) Is It Possible To Edit The Data in a Block?

You cannot change the data within a block, sorry. You must also remove the data from any other related blocks if any update is necessary.

13. Can You Remove an Entire Network Block?

Yes, it is possible to remove an entire network block. There are times when only a subset of this online ledger must be considered. There are default options and filters that can assist us in accomplishing this without much effort.

14. What Kinds of Records Can be Stored in the Blockchain? Is There Any Limitation on This?

No, it is not possible to impose restrictions on record keeping in the blockchain approach. We can store any type of data on a blockchain, including bank records, medical records, images, Facebook messages, and so on.

The following are some examples of common types of records that can be stored in the blockchain:

- Medical transaction records
- processing transactions
- management of identities
- Organizational and management-related events
- Documentation

15. What Cryptographic Algorithm does Blockchain Employ?

The SHA-256 Hashing algorithm is used in blockchain. The SHA-256 Hashing algorithm was created by the National Security Agency (NSA) in the USA.

16. What Sequence does The Blockchain's Chain of Blocks Follow?

Each block in a blockchain is always connected in reverse order. In other words, a blockchain connects every block to the one before it.

17. What Advantages does Blockchain Offer?

Several significant advantages of blockchain include:

Real-time settlement: Blockchain technology can speed up trade settlement in the financial sector. Since all stack holders have access to the same version of the data that has been agreed upon, the verification, settlement, and clearance processes do not require much time.

Cost-saving: Blockchain eliminates the need for a third party, like a bank, in peer-to-peer transactions, lowering the overhead costs associated with exchanging assets.

Security and Resilience: Blockchain uses highly sophisticated cryptography to protect the data that will be locked inside the blockchain from fraud and hacking attacks. With the help of distributed ledger technology, which allows each party to hold a copy of the initial chain, the system can continue to function even when many other nodes are lost.

Immutability: A blockchain keeps track of transactions chronologically, meaning that each transaction comes after the one before it. The blockchain's operations cannot be changed because of the chronological order. It denotes that once a block is included in the network of ledgers, it cannot be altered or removed.

User pseudonymity: This is a situation in which a user uses an identifiable identifier consistently but does not use their real name. Only administrators have access to real identities. Users are able to converse with others in a largely anonymous manner. It supports user privacy maintenance and

permits cost-free transactions without any security concerns. Your Bitcoin receiving address is your pseudonym on the blockchain.

Each and every transaction involving that address is recorded in the blockchain over time. Every transaction will be connected to you if your address and identity are linked. It is always advisable to use a different address for every transaction to prevent the transactions from being connected to a single owner.

18. Double Spending: what is it? In a blockchain system, is it possible to double spend?

Double spending refers to making multiple purchases with the same funds. The issue of double spending is impossible with physical money. However, the double-spending issue can occur with digital currency like bitcoin. As a result, there is a chance that Bitcoin transactions will be copied and broadcast again. It makes it possible for the owner of a bitcoin to spend it twice. One of the main goals of blockchain technology is to eliminate this strategy as much as is practical.

By requesting multiple parties to confirm a transaction before it is added to the ledger, the blockchain eliminates the issue of double spending.

19. Describe a Ledger. What are Some Common Types of Ledgers That Users of Blockchain Can Take Into Account?

A ledger is a continuously expanding file. All the exchanges between two parties on the blockchain network are permanently recorded by it.

Users of the blockchain can take into account one of three popular types of ledgers:

- Network in Centralization
- Distributed Network
- Various Networks

20) Why Is The Blockchain A Reliable Method?

Due to the following factors, blockchain is a trusted strategy:

- Due to its open-source nature, it is easily compatible with other business applications.
- It is secure, unhackable, and encrypted.
- It is not governed by a single entity.
- Each participant accepted the method for inserting a transaction into the blockchain.
- The fact that a transaction is immutable means that once it has been added to the blockchain, it cannot be changed.