

* Ethereum & Bitcoin Block * [Unit-2]

* Bitcoin Block *

- * A block is a place in blockchain where information is stored and encrypted.
- * Blocks are identified by long numbers that include encrypted transaction information.
- * Block and its information must be verified by the network before new block can be created.
- * Bitcoin per Block :-
 - ↳ 144 blocks per day are mined on average.

* Bitcoin block Creation *

- * To create a new block, miners must go through a process to solve a math problem.
- * After finding a solution, a bitcoin can be added to blockchain by consensus.
- * Miner who will find the solution will be rewarded for new block.

* Bitcoin Block Structure *

- * Block is made of Header containing meta data.
- * It also contains long list of transactions.
- * Header is 80 byte.
- * Average transaction is 250 bytes.

Block

Header

Hash of previous Block

Timestamp

Difficulty target

Nonce

Merkle root

Transaction a

Transaction b

Transaction x

Transaction y

* Ethereum Block $\frac{0}{0} \rightarrow A$

↳ Block are a batch of transaction with hash of previous block

→ These links block together in chain.

⇒ Ethereum Block Use 1A

* Ethereum Blockchain is powered by its native Cryptocurrency - Ether (ETH).

* The most common ETH-based Cryptocurrencies are built on ERC-20 token standards

* Working :-

* Both in Ethereum blockchain and bitcoin block chain, there is expected block time and average block time.

* In bitcoin expected time is 10 min, while in Ethereum it is 10 to 14 second.

* New Ethereum block is created every 14 second.

* Ethereum is more future proof than any protocol.

* Block and its role :-

* Each block stores previous hash, so it's impossible to reverse and tamper data.

* Ethereum uses proof-of-work as consensus algorithm.

* Ethereum stores several important data.