

22-S2-Q4

Q(a) components

(b) cryptocurrency

(i) Bitcoin vs Ethereum

(ii) how

(iii) DeFi

Solution (a)(i) Transactions

The record of an event, cryptographically secured with a digital signature, that is verified, ordered, and bundled together into blocks, form the transactions in the Block chain.

(ii) Immutable ledgers

un changing over time

(iii) Decentralized peers

each NODE has a copy of the ledger

(iv) Consensus algorithm

all the peers reach a common agreement about the present state of the distributed ledger

(v) Smart Contracts

Are simply computer programs that execute predefined actions when certain conditions within the system are met.

(b)(i) ① Bitcoin is cryptocurrency

② Bitcoin use Proof of Work (PoW) Consensus Algorithm

③ Ethereum is a public blockchain platform with its own cryptocurrency, called Ether (ETH)

④ Ethereum use Proof of Stake (PoS) as Consensus Algorithm

(ii) This can provide trust into business and increase the speed and efficiency of transactions, eliminate intermediaries, which will result in the improvement of overall business performance.

(iii) ① Def: use decentralized technology to offer financial services and products
e.g. lending and borrowing, trading, insurance, etc.

② Benefit

(1) Decentralization

(2) Accessibility

(3) Transparency

(4) Security

③ Risk

(1) Volatility

(2) Immature Technology

(3) Scaling Risk