23-S2-Q4

Q (a)(i) B_c ⟷ traditional

(ii) SC

(iii) POW vs POS

(b)(i) cryptocurrency

(ii) DeFi

(iii) future

Solution (a) (i)

① Distributed ledger is a form of digital database that is update and held by every member indeponden tly in a large network space

② Tradition ledger is a logical connection between all the entries. Every item on the centralized ledger would have a debit and credit entry

(ii) ① Smart contracts are self - executing programs stored on the blockchain that excuted predefined rules automatically.

② Example

(1) Finance (DeFi) : Automated lending, borrowing, insurance

(2) Real Estate : Property transfer

(3) Supply chain : Tracking goods.

(iii) ① POW : Solve a complex mathematical puzzle to validate the block, which requires a lot of computational power and the node who solves the puzzle first gets to add the next block

② PoS : validators invest in the coins of the system and validate blocks by placing a bet on a bolck they think can be added to the chain

(b)(i)

① concept : A digital currency in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds operating independently of a central bank.

② Advantages

(1) more effective and efficienc.

(2) convenience

(3) expenses control

③ Disadvantage

(1) Fraud

(2) lay of anonymity

(3) need for internet access.

(ii) ① Definition: De Fi refer to the use of decentralized technology, such as blockchain to offer finance services or products

② Ad.
(1) Decentralization
(2) Accessability
(3) Transparency
(4) Security

③ Disad.
(1) Volatility
(2) Immature Technology
(3) Scaling Risk

(iii) bright as we can see