FAQ

Que: How many units are coming in CT-2

Ans: Unit 2, 4 & Unit 5

Que: Where we can get the notes for writing answers

Ans: Refer Book that I have already provided and you can also refer my notes

Que: How long should be the answer written

Ans: For 8 marks you should fill 3 pages, and for 4 marks 1 and a half page. Include diagram where it's necessarily.

Que: What is meant by 3 pages for answer writing

Ans:

NOTE:

- **These questions are for reference purpose**
- **The questions which are highlighted must be your top priority for preparing**
- **Don't be dependent on question bank, prepare for exam apart from given question provided in question bank, always refer syllabus**

Syllabus

UNIT-I Introduction to Blockchain: Need for Distributed Record Keeping, Blockchain architecture, block header detailed design, Abstract Models for Blockchain, Proof of Work (PoW), liveness and fairness, Proof of Stake (PoS) based Chains, Hybrid models (PoW + PoS); Types of Blockchain..

UNIT-II Blockchain Consensus Algorithm challenges and solutions, Modeling faults and adversaries, Byzantine Models of Fault tolerance;
Zero Knowledge proofs and protocols in Blockchain.

UNIT-III Introduction to cryptographic basics for cryptocurrency - a short description of Hashing, digital signature schemes, encryption schemes and elliptic curve cryptography, verifiable random functions.

UNIT-IV Blockchain 2.0: Introduction to Ethereum, Ethereum Virtual Machine (EVM), Wallets for Ethereum, Solidity, Smart Contracts, Attacks on smart contracts,
The Turing Completeness of Smart Contract Languages and verification challenges.
Blockchain 3.0: Hyperledger implementation on Ethereum,
the plug and play platform and mechanisms in permissioned blockchain.

UNIT-V Application of Blockchain: Bitcoin- Bitcoin consensus, Wallet, Bitcoin Blocks, Merkley Tree, hardness of mining, transaction verifiability, anonymity, forks,
double spending, mathematical analysis of properties of Bitcoin. Altcoins. Medical record management systems, DNS records.

UNIT 1

1. What are different type of blockchain?

2. What is the advantage of distributed record keeping?

3. Discuss Blockchain architecture and explain them also write advantage and disadvantages and benefits

4. Discuss and differentiate PoW and PoS

5. Write benefits of blockchain

6. What are the key characteristics of blockchain architecture?

7. What is distributive ledger technology, also write its feature

8. How DLT can replace traditional book-keeping method

Or

What is distributive ledger technology? also write its feature

9. Explain proof of work also write challenges with PoW

10. What is proof of stake? How does proof of stake work, also write challenges

11. Write the advantages of PoS

12. Write short note on

    Block header detailed design

13. What is blockchain technology? Why is blockchain technology important?

14. Discuss the blockchain use in different industries

15. What are decentralized application?

16. Explain in detail about blockchain platform

17. How blockchain is revolutionizing the tadeonal business system? Explain the future of blockchain with example

18. Short note on

    1. Hybrid model (PoW + PoS)

    2. types of blockchain

UNIT 2

1. Defining modelling faults
2. What are various blockchain consensus algorithm challenges and its solutions
3. Discuss Byzantine general model
4. Write short note on Zero Knowledge proofs
5. Under Consensus Algorithm: Explain the proof of elapsed time(PoET)
6. Under Consensus Algorithm: Explain proof of burn(PoB)

UNIT 3

1. What do you mean by cryptocurrency?

2. Discuss various hashing techniques in brief?

3. Write short note on digital signature

4. Explain elliptic curve cryptography with example.

5. Explain some best know cryptocurrency

6. Explain fiat currency (traditional currency) Vs crypto currency

7. How does cryptocurrency work? How to buy crypto currency also write advantage and disadvantages of crypto currency

8. How to store crypto currency

9. Short note on

    verifiable random functions.

10. Write short note on future of cryptocurrency

UNIT 4

1. What is Ethereum?
   Or
   What is Ethereum network?
2. Explain Ethereum virtual machine with block diagram
3. How Hyperledger implementation is done on Ethereum?
4. What do you mean by Smart Contract
5. Write short note on Turing complete Vs Turing incomplete
6. What is Ethereum gas?
7. What are the types of users in the Ethereum network
8. Discuss in detail the component of Ethereum
9. Describe the following
   1. Ethereum virtual machine
   2. Ether scripter
10. What are the advantage and disadvantage of Ethereum
11. Give and introductory note on Hyperledger
12. Explain the history of Hyperledger
13. Explain the component of Hyperledger
14. What are the advantage and disadvantage of Hyperledger
15. What is meant by digital token? Explain with example
16. What is initial coin offering (ICO)
17. What is mist browser also write what is Ethereum mist wallet with its feature
18. What is solidity? Give its feature
19. Write short note on smart contract
20. What is solidity interface and its characteristics, also explain abstract contract vs interface
21. What is Hyperledger fabric what are its benefits,
22. How smart contract can be attacked
23. What is mechanism in permissioned blockchain
24. What is plug and play platform

UNIT 5

1. What is AltCoins?
   Or
   Explain some best known cryptocurrency/AltCoins
2. Define Merkley tree with an example
3. Write down properties of Bitcoin
4. What do you mean by double spending? What are the methods to prevent it
5. Explain briefly structure of Blockchain block
6. What is bitcoin? Write brief history of bitcoin
7. Write several feature of bitcoin
8. How do bitcoin transaction work
9. How do bitcoins come into market
10. How does bitcoin mining work
    Or
    Explain bitcoin mining
11. What do you mean by value of bitcoin
12. Write short note on community, policy and regulation in bitcoins
13. What are the advantage and disadvantage of bitcoins
14. What is MetaMask, How to install and use MetaMask
15. Explain about the brief history of MetaMask and give its feature
16. What is MetaMask transaction? Explain the steps involved in MetaMask transactions
17. Write short note on
    1. Transaction verification
    2. Medical record management systems
    3. DNS records
    4. Mathematical analysis of bitcoin properties