

14/12/2024 CSE-AIML SEM-VII C SCHEME BLOCKCHAIN TECH. QP CODE: 10066751

(Time: 3 HOURS)

(MAX. MARKS : 80)

Note:

1. Question No. 1 is compulsory.
2. Attempt any three questions out of remaining five questions.
3. Assume suitable data wherever necessary.
4. Figures to right indicate full marks.

- Q.1 Answer the following (Any four)
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| a. Define Blockchain. Explain the Data structure used in blockchain. | 05 |
| b. Explain Genesis block in detail. | 05 |
| c. Write a note on Mining Difficulty. | 05 |
| d. Explain the key characteristics of private Blockchain | 05 |
| e. Explain different types of cryptocurrency. | 05 |
| f. Explain applications of blockchain in supplychain. | 05 |
- Q.2
- | | |
|---|----|
| a. List and explain various types of consensus mechanisms in brief. | 10 |
| b. Explain various components of ethereum. | 10 |
- Q.3
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| a. What is the UTXO model? How can the double spending problem be solved in bitcoin Blockchain? | 10 |
| b. Explain Hyperledger fabric architecture in detail. | 10 |
- Q.4
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| a. Explain the ERC20, ERC721, ICO and STO in detail. | 10 |
| b. Explain Corda architecture. Compare it with quorum. | 10 |
- Q.5
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| a. Illustrate a case study on consortium blockchain. Give its architecture. | 10 |
| b. Explain merkle tree in detail. | 10 |
- Q.6
- | | |
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| a. Explain transaction lifecycle with respect to private blockchain. | 10 |
| b. Explain different types of wallets in detail. | 10 |
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