Question Bank of Blockchain – SEM VII

Module 1

1. Describe five core components of blockchain technology – 5M
2. Blockchain is a distributed database. How does it differ from traditional databases?
3. Briefly discuss what are the different types of Block chains? 05M
4. What is a ledger? Is Blockchain an incorruptible ledger?-3M
5. Define a Merkle hash tree, describe its role in blockchain, and explain the meaning of a Merkle root in the block header.
6. Explain Tracing Blockchain's Origin?
7. Discuss the shortcomings of current transaction systems?
8. Explain the structure of block in blockchain.
9. Discuss the pros and cons of blockchain technology.
10. What is hash and how it provides security in blockchain? Explain.
11. Explain blockchain ecosystem in detail.

Module 2

1. **List some of the popular consensus algorithms? Why we need different consensus mechanisms?**

   Ans : Some of the popular consensus algorithms are:

- Proof-of-work
- Proof-of-stake
- proof-of-stake
- Proof-of-elapsed time
- Proof-of-Burn
- PBFT (Practical Byzantine Fault Tolerance)
- RAFT

Now, the possible reasons why we need consensus mechanism more than "proof-of-work" are"

- Different business needs
- Different use cases

2. Explain in detail types of cryptocurrency – 05 M
3. Explain different kinds of bitcoin wallets along with their merits and demerits. Also illustrate the factors that decide the type of wallet for an application.-5M
4. What is mean by mining difficulty? Explain.
5. Explain hardware mining in bitcoin blockchain.
6. Explain software mining in bitcoin blockchain.

7. What is UTXO? Explain how it prevents double spending.
8. Explain the structure of transaction in short.
9. What is Airdrop? Explain its advantages and disadvantages.
10. Differentiate between Hot wallets and cold wallets.
11. Explain Proof-of-Work (PoW)/Proof-of-Burn (PoB)/Proof-of-Stake (PoS)/Proof-of-Elapsed Time (PoET) consensus algorithm with its advantages and disadvantages.
12. Explain the types of mining with examples.
13. Enlist the safety measures for the cryptocurrency.
14. Explain the role of coordinator in mining pools and their methods.