CBCS SCHEME

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BCS613A

# Sixth Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026
## Blockchain Technology

Time: 3 hrs. Max. Marks: 100

***Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.***
***2. M : Marks , L: Bloom's level , C: Course outcomes.***

| | | Module – 1 | M | L | C |
|---|---|---|---|---|---|
| Q.1 | a. | Explain Accumulation (generating) of blocks in Blockchain. | 10 | L2 | CO1 |
| | b. | List the benefits and limitations of block chain technology. | 10 | L1 | CO1 |
| | | **OR** | | | |
| Q.2 | a. | With neat diagram explain generic structure of blockchain network. | 10 | L2 | CO1 |
| | b. | List any five types of blockchain and explain in brief. | 10 | L1 | CO1 |
| | | **Module – 2** | | | |
| Q.3 | a. | Explain in detail cryptographic primitives with diagram. | 10 | L2 | CO2 |
| | b. | List the categories of decentralized application and explain in brief. | 10 | L1 | CO2 |
| | | **OR** | | | |
| Q.4 | a. | Explain the process of Patricia tree with neat diagram. | 10 | L2 | CO2 |
| | b. | List the features of DAU and DAS. | 10 | L1 | CO2 |
| | | **Module – 3** | | | |
| Q.5 | a. | Identify the development platforms of smart contracts and explain the steps used in deploying smart contracts. | 10 | L3 | CO3 |
| | b. | Using neat diagram explain the structure of block. | 10 | L3 | CO3 |
| | | **OR** | | | |
| Q.6 | a. | Identity the components of block header and explain the same in detail. | 10 | L3 | CO3 |
| | b. | Using neat diagram explain the oracle working and define the same. | 10 | L3 | CO3 |
| | | **Module – 4** | | | |
| Q.7 | a. | Compare PoS wth PoW and justify the usage of PoS in Ethereum. | 10 | L4 | CO4 |
| | b. | Identify different types of Ethereum clients and explain how they work. | 10 | L3 | CO4 |
| | | **OR** | | | |
| Q.8 | a. | Compare types accounts used in Ethereum. | 10 | L4 | CO4 |
| | b. | Make use of neat diagram of EVM operation and explain the operation of EVM. | 10 | L3 | CO4 |
| | | **Module – 5** | | | |
| Q.9 | a. | Identify and explain the core features of Sawtooth. | 10 | L3 | CO5 |
| | b. | Examine the function of Transaction life cycle in hyper ledger fabric. | 10 | L4 | CO5 |
| | | **OR** | | | |
| Q.10 | a. | Identify Hyperledger fabric blockchain components and explain each. | 10 | L3 | CO5 |
| | b. | Examine the Architecture of Corda platform and explain. | 10 | L4 | CO5 |

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