

**KADI SARVA VISHWAVIDHYALAYA**  
**B.E. Semester VII Examination – March – 2025**  
**CT703D-N Blockchain Technology**

**DATE:** 01/04/2025

**TIME:** 12:00 pm to 03:00 pm

**TOTAL MARKS:** 70

**Instructions:**

- 1 Answer each section in separate answer sheet.
- 2 Use of scientific calculator is permitted.
- 3 All questions are **Compulsory**.
- 4 Indicate **clearly**, the options you attempt along with its respective question number.
- 5 Use the last page of main supplementary for **rough work**.

**SECTION – I**

- Q-1 A Explain Types of Blockchain. 5
- B Differences among centralized, decentralized and distributed system. 5
- C What is Merkle root. Explain concept of Merkle tree. 5

**OR**

- C Write short note on public key cryptography. 5
- Q-2 A Write short note in Bitcoin. 5
- B Explain double spending attack. 5

**OR**

- A Write short note in Bitcoin scripts. 5
- B Explain the concept of orphan block. 5

- Q-3 A Explain the features of cryptographic hash functions. 5
- B Explain Genesis block. Explain typical block structure. 5

**OR**

- A Write short note on proof of stake. 5
- B Explain block propagation. 5

**SECTION – II**

- Q-4 A Explain consensus in Blockchain technology. 5
- B Write short note on proof of work. 5
- C Explain sybil and DDOS attack. 5

**OR**

- C What is a mining pool? 5

- Q-5 A What is mining. Explain the term mining difficulty. 5  
B Write short note on RAFT consensus algorithm. 5  
OR  
A Write short note on PAXOS consensus algorithm. 5  
B Explain Three Phase Commit Protocol. 5
- Q-6A Explain Practical Byzantine Fault Tolerant model. 5  
B Explain the role of Blockchain in supply chain management. 5  
OR  
A Write short note on smart contract. 5  
B Explain the role of Blockchain in crowd funding. 5