

KADI SARVA VISHWAVIDHYALAYA
B.E. Semester VII Examination – March – 2023
CT703D-N Blockchain Technology

DATE: 28/03/2023

TIME: 10:00 am to 1:00 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 the types of Blockchain. 5
B Compare Centralized, Decentralized and Distributed systems. 5
C What are the characteristics of cryptographic hash function. 5
OR
C Explain Merkle tree. 5
- Q-2 A Write short note on digital signature. 5
B Explain double spending with an example. 5
OR
A Write short note on Bitcoin. 5
B What are the features of Bitcoin script. 5
- Q-3 A Explain Genesis block and list the various components of a Block in a Blockchain. 5
B Explain Avalanche effect. 5
OR
A Explain distributed ledger in brief. 5
B Explain Block propagation. 5

SECTION – II

- Q-4 A Explain the term consensus in blockchain. 5
B Write short note on mining. 5
C Explain the term orphan block. 5
OR
C Explain the concept of mining pool. 5

Q-5 A Write short note on proof of work mechanism.

5

B Explain sybil and DDOS attack.

5

OR

A Write short note on proof of stake mechanism.

5

B Explain the benefits and challenges of a miner.

5

Q-6A Write short note on PAXOS algorithm.

5

B Write short note on smart contract.

5

OR

A Explain proof of burn mechanism.

5

B Explain Byzantine General problem.

5