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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