

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED - SEMESTER - VII EXAMINATION - WINTER 2025

Subject Code: 2678605

Date: 19-11-2025

Subject Name: Block Chain Technology

Time: 10:30 AM TO 01:00 PM

Total Marks: 70

Instructions

- 1. Attempt all questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**
- 4. Use of simple calculators and non-programmable scientific calculators are permitted.**

	Marks
Q.1 (a) Define blockchain. Explain the characteristics of blockchain.	07
(b) How does block chain work? Explain with example.	07
Q.2 (a) Explain consensus mechanism in detail.	07
(b) Discuss the role of block chain in supply chain management.	07
OR	
(b) What do you mean by Hashing? Enlist types of Hashing Techniques and explain any one.	07
Q.3 (a) Write a short note on distributed ledger technologies (DLT).	07
(b) Explain smart contract with an appropriate example.	07
OR	
(a) Define Bitcoin. Explain bitcoin block structure along with its attributes	07
(b) Explain the role of block chain in Government's Revenue Department.	07
Q.4 (a) Discuss symmetric and asymmetric cryptography.	07
(b) Compare centralized and decentralized smart contracts.	07
OR	
(a) Write a short note on Merkle trees.	07
(b) Brief about Byzantine Agreement Algorithm Method	07
Q.5 (a) What is Robotics process automation? How block chain improve in the RPA technology	07
(b) Blockchain and IoT goes hand in hand. Justify	07
OR	
(a) Describe an application of machine learning in blockchain.	07
(b) What is a Message Authentication Code (MAC), and how does it differ from hash functions?	07
