

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED– SEMESTER - VII EXAMINATION- SUMMER-2023

Subject Code: 2678605

Date: 21/06/2023

Subject Name: Block Chain Technology

Time: 02:30 PM TO 05:00 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.

- Q.1** (a) Define blockchain. Explain the characteristics of blockchain. **07**
(b) Explain the architecture of blockchain. **07**
- Q.2** (a) What is cryptography? Describe symmetric cryptography. **07**
(b) Write a short note on Ethereum. **07**
- OR**
- (b) Justify the need of smart contracts as an application of blockchain. **07**
- Q.3** (a) List and explain the characteristics of smart contracts. **07**
(b) Depict the role of proofs of origin in a blockchain. **07**
- OR**
- Q.3** (a) Discuss the structure of a bitcoin block. **07**
(b) How a bitcoin transaction do takes place? **07**
- Q.4** (a) Blockchain and IoT goes hand in hand. Justify. **07**
(b) Why blockchain can transform the face of Insurance Industry? **07**
- OR**
- Q.4** (a) Explain the role of hashing in blockchain mining. **07**
(b) What is a consensus algorithm? Explain any one consensus algorithm. **07**
- Q.5** (a) Enlist and explain the types of blockchain. **07**
(b) Discuss the role of blockchain in manufacturing industry. **07**
- OR**
- Q.5** (a) Describe an application of machine learning in blockchain. **07**
(b) How blockchain can help financial institutions in managing their assets? **07**
