

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

Subject Code:2678605**Date: 11/12/2023****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.

- Q.1 (a)** Define Terms (ANY FOUR) : **08**
 i) Ethereum, ii) Darknet iii) Cryptocurrency
 iv) Merkle Trees v) Hash Function vi) Digital Signature
- (b)** i) Difference between Block chain and Cloud. **03**
 ii) Will Blockchain replace cloud computing? **03**
- Q.2 (a)** What is Blockchain? Discuss various characteristics of Block chain. **07**
(b) What is consensus mechanism? Why we need it? How does consensus algorithm works? **07**
- OR**
- (b)** Explain the role of block chain in digital currency. **07**
- Q.3 (a)** Explain the structure and function of Ethereum wallet. **07**
(b) Compare symmetric and asymmetric cryptography. **07**
- OR**
- Q.3 (a)** Explain in brief components of block chain. **07**
(b) What is cryptography? Explain in brief authentication and nonrepudiation primitives of cryptography. **07**
- Q.4 (a)** Discuss similarity and dissimilarity of centralized and decentralized smart contracts. **07**
(b) Explain how blockchain technology can be used to help customers of Insurance company. **07**
- OR**
- Q.4 (a)** What is smart contract? Discuss Advantages of Smart contracts. **07**
(b) Explain how blockchain technology can be used effectively in Healthcare system. **07**
- Q.5 (a)** What is bit coin? Explain in brief the purpose and working of bitcoin. **07**
(b) Discuss the complete cycle of Bitcoin payment. **07**
- OR**
- Q.5 (a)** List advantages and disadvantages of bit coin. How long does it take to mine one Bitcoin? **07**
(b) Write short Note: Bit coin Block Structure **07**
