

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2022

Subject Code:3171618**Date:07-01-2023****Subject Name:Blockchain****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. Simple and non-programmable scientific calculators are allowed.

	MARKS
Q.1 (a) Define What is Blockchain? Why Blockchain is important?	03
(b) Explain Components of the blockchain.	04
(c) Explain How does Blockchain works?	07
Q.2 (a) List the limitations of blockchain?	03
(b) Write Application of Blockchain. Also Write Name of platform for developing blockchain application.	04
(c) Differentiate Proof-of-work v/s Proof-of-stake protocol.	07
OR	
(c) Explain in detail types of cryptocurrency.	07
Q.3 (a) Explain What is Metamask? How it is useful in Blockchain.	03
(b) Justify Is Blockchain type of database? List the technology behind Blockchain.	04
(c) Explain in detail types of Blockchain.	07
OR	
Q.3 (a) Explain What is encryption? What is its role in Blockchain?	03
(b) What is Hyperledger? Write types of Ledgers.	04
(c) Difference between Bit coin block chain and Ethereum Block chain?	07
Q.4 (a) Justify Answer Is block chain distributed or Centralized?	03
(b) What are the Merkle trees? What is its importance in blockchain?	04
(c) Explain Digital Signature in blockchain.	07
OR	
Q.4 (a) List out the real time application of Block chain.	03
(b) Justify Is Blockchain good for banks or not?.	04
(c) Discuss in detail Smart Contract in Ethereum with Example.	07
Q.5 (a) Write challenges of blockchain technology?	03
(b) Differentiate between Permissionless Blockchain and Permissioned Blockchain.	04
(c) Explain Different Algorithms of Permissioned Blockchain.	07
OR	
Q.5 (a) Briefly discuss advantage of Cryptocurrency.	03
(b) What is Consensus algorithm? What are the types of consensus algorithms?	04
(c) Discuss Key characteristics of Consortium Blockchain in detail.	07
