

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2024****Subject Code: 3171618****Date:30-05-2024****Subject Name: Blockchain****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. Simple and non-programmable scientific calculators are allowed.

	Marks
Q.1 (a) Define (1) Blockchain (2) Cryptocurrency (3) Token	03
(b) Explain Consensus Protocol	04
(c) Discuss blockchain's working process with its architecture	07
Q.2 (a) Discuss importance of Merkle trees in blockchain	03
(b) Elaborate features of Smart Contract with example	04
(c) Explain bitcoin with its characteristics	07
OR	
(c) Explain Ethereum with its characteristics	07
Q.3 (a) Write short note on : digital signature	03
(b) Describe key characteristics of Public Blockchain	04
(c) Discuss different types of Cryptocurrencies with its real time usage	07
OR	
Q.3 (a) Write short note on : Byzantine Fault	03
(b) Analyze smart contract for education sector	04
(c) Explain various types of blockchain in detail	07
Q.4 (a) Describe Ripple blockchain with its important use cases.	03
(b) Write short note on : Hyperledger platform	04
(c) Explain different algorithms of Permissioned Blockchain	07
OR	
Q.4 (a) Give brief overview of Corda	03
(b) Describe key characteristics of Consortium Blockchain	04
(c) Explain following protocols: (1) Proof-of-work (2) Proof-of-stake	07
Q.5 (a) Analyze blockchain implementation in the context of data security	03
(b) Describe the challenges of blockchain implementation	04
(c) Discuss various applications of blockchain in education sector	07
OR	
Q.5 (a) Identity scope of blockchain technology in three business domains	03
(b) Describe the limitations of blockchain implementation	04
(c) Discuss various applications of blockchain in healthcare sector	07
