R20 Regulation *Subject code: 3E8GB*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VIII Semester Supplementary Examinations, November 2025

BLOCKCHAIN TECHNOLOGY

(CSE(AI&ML))

Maximum Marks: 70 Date: 25.11.2025 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

	Part-A			
All the following questions carry equal marks (10X2M=20 Marks)		Marks	CO	Bloom Tx
1	Define blockchain and describe the concept of 'thinking in layers'.	2M	1	Remember
2	What is the core problem that blockchain aims to solve?	2M	1	Understand
3	Give the importance of hashing in blockchain.	2M	2	Understand
4	What is the role of user accounts in authorizing blockchain transactions?	2M	2	Understand
5	What are the methods used for protecting the data store in a blockchain?	2M	3	Understand
6	Describe the concept of paying for integrity in blockchain.	2M	3	Understand
7	State any two limitations of blockchain technology.	2M	4	Remember
8	Summarize how the blockchain can be reinvented to overcome its limitations.	2M	4	Analyze
9	Define tokenizing and mention its applications.	2M	5	Remember
10	What are demurrage currencies and what purpose do they serve?	2M	5	Understand
	Part-B			
Answer All the following questions. (5X10M=50Marks)		Marks	CO	Bloom Tx
11	a) Explain the concept of ownership in blockchain. b) Analyze the issue of double-spending and how blockchain resolves it.	5M 5M	1	Understand Analyze
	OR			
12	Describe the layers and aspects in blockchain architecture with an illustrative diagram.	10M	1	Understand
13	a) Describe the steps in planning the blockchain construction. b) Explain with example how transaction data is stored and protected.	5M 5M	2	Understand Apply
	OR			
14	Illustrate the process of identifying users and securing accounts in blockchain networks.	10M	2	Apply
15	a)Explain the method of verifying and adding transactions in blockchain.	5M	3	Understand

	b) Discuss the significance of transaction history in maintaining blockchain integrity.	5M		Analyze
	OR			
16	Analyze the role of peer-to-peer distribution in blockchain with relevant use cases.	10M	3	Analyze
17	a) List and explain common limitations in blockchain. b) Describe innovative ways to overcome blockchain limitations.	5M 5M	4	Understand Create
	OR			
18	Summarize the use of blockchain across industries and potential for future development.	10M	4	Evaluate
19	a) Explain monetary and non-monetary currencies with examples. b) Discuss government regulation and privacy concerns in blockchain technology.	5M 5M	5	Understand Evaluate
	OR			
20	Design a blockchain-based application for secure record keeping and discuss its advantages.	10M	5	Create