R22 Regulation *Subject code: 4P7FD*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VII Semester Supplementary Examinations, May 2026

BLOCKCHAIN TECHNOLOGY

(IT)

Maximum Marks: 60 Date:13.05.2026 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
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 (10X1M=10 Marks)		Marks	CO	Bloom Tx
1.a)	List any two types of cryptocurrencies.	1M	1	4
b)	Define decentralization in the context of blockchain.	1M	1	1
c)	Define a smart contract.	1M	1	1
d)	Discuss function of oracles in smart contracts	1M	2	1
e)	List any two examples of private blockchain platforms.	1M	3	4
f)	Define consortium blockchain and mention one key characteristic.	1M	3	2
g)	Mention one scalability challenge in blockchain and its impact.	1M	4	3
h)	What is regulatory compliance in blockchain systems?	1M	4	2
i)	Name a few blockchain use cases in retail.	1M	5	1
j)	Mention one advantage of using Python for building blockchain platforms.	1M	5	1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	Bloom Tx
2.a	Describe the structure and working of a block in a blockchain with a diagram.	5	1	3
2.b	Explain how cryptocurrencies are used in online transactions.	5	1	2
	OR			
3	Propose a blockchain-based solution for data transparency in e-governance.	10	1	6
4	Design an example of a decentralized application using smart contracts.	10	2	2
	OR			
5	Compare Bitcoin and Ethereum blockchains.	10	2	2
6.a	Evaluate the risks and benefits of investing in ICOs.	5	3	2
6.b	Discuss evolution of ICO platforms	5	3	2
	OR			

7	Discuss the role of Hyperledger Fabric and Corda frameworks.	10	3	2
8.a	Explain security mechanisms in Hyperledger Fabric.	5	4	2
8.b	Discuss security and privacy challenges of Block chain	5	4	2
	OR			
9.a	Evaluate identity management and authentication techniques in blockchain.	5	4	2
9.b	Discuss Blockchain in context of IoT.	5	4	2
10	Discuss real-world case studies demonstrating blockchain effectiveness in banking and healthcare.	10	5	2
	OR			
11.a	Discuss various components of Hyper ledger Fabric Network.	5	5	2
11.b	List and discuss various python packages for Blockchain.	5	5	2