



R20 Regulation

Subject code: 3E8GB

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VIII Semester Regular Examinations, April 2024

BLOCKCHAIN TECHNOLOGY

(CSE(AI&ML))

(Professional Elective)

Maximum Marks: 70

Date:22.04.2024 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)		CO	Bloom Tx
1	What is block chain primary purpose?	1	L1
2	What are the major concerns of peer-to-peer system?	1	L1
3	Is it possible to modify the data once it is written in a block? Justify	2	L1
4	What is the blockchain data-structure?	2	L1
5	What is merkle tree and merkle root?	3	L1
6	What is 51% attack in block chain?	3	L1
7	What are the non technical limitations of block chain?	4	L1
8	What are the four versions of blockchain?	4	L1
9	Define token and state different forms of token.	5	L1
10	Is it safe to invest in Bitcoin in India? Justify.	5	L1

Part-B

Answer All the following questions (5X10M=50Marks)			
11	A. Illustrates how the proof of ownership and transfer of ownership relate to the purpose and the properties of a ledger. [5] B. How to solve the double spending problem. [5]	1	L3
OR			
12	A. Discuss the major advantages of a distributed system over single computers. [5] B. Describe two major integrity threats in peer-to-peer systems. [5]	1	L3
13	A. Discuss the properties of cryptographic hash functions. [5] B. Describe the Independent hashing and Sequential hashing. [5]	2	L3
OR			
14	A. What are the steps must be performed to verifying a transaction. [5] B. Illustrates the three major elements of digital signatures. [5]	2	L3
15	A. What are the steps involved in creation of a new block. [5] B. How is the transaction history determined and maintained in a blockchain network and what factors influence the inclusion of transactions in blocks. [5]	3	L2

	OR		
16	A. Discuss validation rules for transaction data and validation rules for block headers. [5] B. Describe Reclaimed reward and A growing common trunk. [5]	3	L3
17	A. What are the most important technical limitations of the blockchain? Explain any three in detail. [5] B. Discuss the conflicting goals of a blockchain. [5]	4	L3
	OR		
18	A. Discuss generic use cases of blockchain. [5] B. What are the most important areas of conceptual evolutions of the blockchain? Explain any three in detail. [5]	4	L3
19	A. Discuss the technical challenges related to blockchain. [5] B. Explain tokenization process of blockchain technology. [5]	5	L4
	OR		
20	A. Discuss extensibility of demurrage concept and features. [5] B. What are the biggest privacy challenges when it comes to managing personal records. [5]	5	L3