Code: 20CS4601C

III B.Tech - II Semester – Regular Examinations – JUNE 2023

BLOCKCHAIN TECHNOLOGY
(COMPUTER SCIENCE & ENGINEERING)

Duration: 3 hours　　　　　　　　　　Max. Marks: 70

Note:　1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
　　　　2. All parts of Question must be answered in one place.

BL – Blooms Level　　　　　　　　　　CO – Course Outcome

			BL	CO	Max. Marks
		UNIT-I			
1	a)	Demonstrate the structure of a blockchain network with a diagram.	L2	CO1	7 M
	b)	Explain Tiers and types of blockchain.	L2	CO1	7 M
		OR			
2	a)	Discuss the benefits and limitations of blockchain technology.	L2	CO1	7 M
	b)	Illustrate Types of consensus mechanisms.	L2	CO1	7 M
		UNIT-II			
3	a)	Explain Routes to decentralization.	L2	CO1	7 M
	b)	Discuss about how data is stored in a blockchain.	L2	CO1	7 M
		OR			
4	a)	Write short notes on the terms smart contracts and Decentralized autonomous organizations.	L2	CO1	7 M

	b)	What is the impact of blockchain in communication?	L2	CO1	7 M

UNIT-III

5	a)	Explain the measures need for Bitcoin Improvement.	L3	CO2	7 M
	b)	Why digital signatures are essential for blockchains?	L3	CO2	7 M

OR

6	a)	Design a public key cryptography signature scheme for digital currency transactions.	L3	CO2	7 M
	b)	Explain advanced protocols used in blockchain.	L3	CO2	7 M

UNIT-IV

7	a)	Demonstrate Components of the Ethereum ecosystem.	L3	CO3	7 M
	b)	Explain why an attacker could try creating contracts including lots of computationally expensive operation to slow down the network.	L3	CO3	7 M

OR

8	a)	Demonstrate a smart contract to insert value into Ethereum blockchain using metamask.	L3	CO3	7 M
	b)	What is Ethereum Virtual Machine and How it Works?	L3	CO3	7 M

		UNIT-V			
9	a)	Illustrate the Benefits of IoT in convergence with blockchain.	L4	CO4	7 M
	b)	What is the use of BigchainDB?	L4	CO4	7 M
		OR			
10	a)	Draw flowchart to demonstrate workflow of Hyperledger Fabric.	L3	CO3	7 M
	b)	What are the issues with blockchain in agriculture?	L4	CO4	7 M