PRN:		Course Code:	CST27074

Final Year **B. Tech** End Semester Examination Winter 2023

Blockchain Technologies

Day and Date: Tuesday, 05/12/2023 Max Marks: **100**

Time: 2.00 to 5.00 pm Duration: **03** hrs

Instructions: All questions are compulsory.

			Marks	Bloom's Level	CO
Q.1		**Attempt the following**			
	a)	Categorize the blockchain based on transfer capabilities and access capabilities? Explain with example.	08	4	CO3
	b)	Explain digital signature with example.	08	5	CO4
		OR			
	b)	What is merkle tree? Explain with neat diagram.	08	1	CO3 CO2
Q.2		**Attempt the following**			
	a)	How are blocks added to the blockchain?	08	1	
	b)	What is consensus? Explain PoS consensus algorithm.	08	2	CO3
		OR			
	b)	How does the difficulty control time between blocks?	08	1	CO3
Q.3		**Attempt any two from the following**			
	a)	Explain bitcoin wallet mining steps in detail.	08	5	CO1
	b)	What is double spending in Bitcoin explain with diagram.	08	5	CO1
	c)	What is peer to peer payment gateway?	08	1	CO1
Q.4		**Attempt any two from the following**			
	a)	What is truffle suit? Explain sub folders in it.	08	2	CO3
	b)	Explain Ethereum Network and smart contract life cycle with neat diagram.	08	5	CO3
	c)	Explain EVM and its architecture with neat labeled diagram.	08	5	CO3
Q.5		**Attempt any Two of the following**			
	a)	Explain Ledger in Hyperledger fabric.	09	2	CO3
	b)	Explain Fabric chaincode lifecycle.	09	5	CO4
	c)	List and explain the key design features of Hyperledger fabric.	09	2	CO3
Q.6		**Attempt any Two of the following**			
	a)	Exlain hyperledger explorer and its key features.	09	2	CO2
	b)	Draw and explain the high-level architecture of Hyperledger Explorer.	09	5	CO4
	c)	Explain different navigation tabs of Dashboard of Hyperledger explorer.	09	2	CO3

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