

CBCS SCHEME - Make-Up Exam

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BCS613A/BIS613A

Sixth Semester B.E./B.Tech. Degree Examination, June/July 2025

Block Chain Technology

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks, L: Bloom's level, C: Course outcomes.*

Module – 1			M	L	C
Q.1	a.	Explain CAP theorem in block chain.	10	L2	CO1
	b.	With neat diagram, explain generic elements of block chain.	10	L2	CO1
OR					
Q.2	a.	Define Block Chain. Explain different types of block chain.	10	L1 L2	CO1
	b.	Illustrate benefits, features and limitations of block chain.	10	L2	CO1
Module – 2					
Q.3	a.	Explain block chain and full ecosystem decentralization.	10	L2	CO2
	b.	Describe the working of the SHA-256 hashing algorithm.	10	L2	CO2
OR					
Q.4	a.	What is cryptography? Illustrate RSA digital signature algorithm.	10	L1 L2	CO2
	b.	Illustrate decentralized applications in detail.	10	L2	CO2
Module – 3					
Q.5	a.	What is Bit Coin? Explain the structure of the block chain and its header.	10	L1 L2	CO3
	b.	Define transaction. Explain the transaction life cycle in detail.	10	L2	CO3
OR					
Q.6	a.	Write a short note on following : (i) Smart Contracts (ii) Ricardian Contracts	10	L1	CO3
	b.	Define Wallets. Illustrate the different types of wallets.	10	L1 L2	CO3
Module – 4					
Q.7	a.	Explain the Ethereum network and its application.	10	L2	CO4
	b.	Demonstrate working concept of Ethereum Virtual Machine (EVM).	10	L2	CO4
OR					
Q.8	a.	Define Ethereum. List the elements of the Ethereum Block Chain and illustrate any two.	10	L2	CO4
	b.	What is the role of gas in Ethereum? How is it calculated?	10	L1 L2	CO4

Module – 5

Q.9	a.	What is Hyperledger? Illustrate Hyperledger reference architecture.	10	L1 L2	CO5
	b.	Describe the transaction life cycle in Hyperledger Fabric.	10	L2	CO5
OR					
Q.10	a.	Illustrate the Sawtooth transaction lifecycle.	10	L2	CO5
	b.	Explain Corda high-level network architecture.	10	L2	CO5
