



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.														
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--

End - Term Examinations – MAY 2025

Date: 20-05-2025

Time: 09:30 am – 12:30 pm

School: SOCSE	Program: B.Tech-CBC	
Course Code: CSE3023	Course Name: Distributed Ledger Technology	
Semester: VI	Max Marks: 100	Weightage: 50%

CO - Levels	C01	C02	C03	C04	C05
Marks	24	24	26	26	0

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

1.	What is immutability in the context of DLT?	2 Marks	L1	C01
2.	Define the role of cryptography in securing distributed ledgers.	2 Marks	L1	C01
3.	What is chaincode instantiation?	2 Marks	L1	C02
4.	List two advantages of modular architecture in Hyperledger Fabric.	2 Marks	L1	C02
5.	Explain the importance of the endorsement policy in Hyperledger?	2 Marks	L2	C03
6.	Name any two functions from the CID library.	2 Marks	L1	C03
7.	Describe the role of the Init method in chaincode.	2 Marks	L2	C03
8.	Recall the purpose of DLT in clinical trials and pharmaceutical supply chains?	2 Marks	L1	C04
9.	List any two altcoins and their use cases.	2 Marks	L1	C04
10.	Explain the benefits of using blockchain in marketing?	2 Marks	L2	C04

Part B
Answer the Questions.

Total Marks 80M

11.	a.	Explain how transparency and decentralization are achieved in DLT.	10 Marks	L2	C01
	b.	Define Blockchain. Implement a basic blockchain model using Python.	10 Marks	L3	C01
Or					
12.	a.	Compare Bitcoin and Ripple as DLT implementations.	10 Marks	L2	C01
	b.	Define Ether and demonstrate creation and connection of Metamask accounts.	10 Marks	L3	C01

13.	a.	Describe the function and workflow of the ordering service in Hyperledger.	10 Marks	L2	C02
	b.	Implement, compile, and execute chaincode in development mode.	10 Marks	L3	C02
Or					
14.	a.	Explain the CAP theorem and how Fabric addresses it.	10 Marks	L2	C02
	b.	Apply your knowledge of Hyperledger Composer to design and implement a business network model, including defining participants, assets, transactions, and smart contracts.	10 Marks	L3	C02

15.	a.	Apply your understanding of Hyperledger Fabric to demonstrate the flow of a chaincode transaction, from the proposal stage to its commitment.	10 Marks	L3	C03
	b.	Apply Hyperledger Fabric to design and implement chaincode for defining and managing a LetterOfCredit asset on the blockchain.	10 Marks	L3	C03
Or					
16.	a.	Implement a method to retrieve user attributes using the CID library.	10 Marks	L3	C03
	b.	Apply Go and Hyperledger Fabric to write unit tests for chaincode functionality.	10 Marks	L3	C03

17.	a.	Apply DLT principles to describe contributions to cybersecurity in government systems.	10 Marks	L3	C04
	b.	Demonstrate how DNS can be implemented using blockchain technology through a conceptual simulation.	10 Marks	L3	C04
Or					
18.	a.	Apply DLT to explain improvements in DNS system resilience.	10 Marks	L3	C04
	b.	Make use of Solidity to create a smart contract for a voting system.	10 Marks	L3	C04