O.P.Code: 23CS0925	R23	H.T.No.									

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech. III Year II Semester Regular Examinations April-2026

BLOCKCHAIN FOR AI

(Common to CSM & CAI)

Time: 3 Hours **Max. Marks: 70**

PART-A

(Answer all the Questions **10 x 2 = 20** Marks)

1	a	Define Blockchain Technology.	CO1	L1	2M
	b	What is the function of "mining" and how is it categorised?	CO1	L1	2M
	c	Describe Ether and Gwei.	CO2	L1	2M
	d	List the types of Chaincode in Hyperledger Fabric.	CO2	L1	2M
	e	How does blockchain improve the reliability of AI models?	CO3	L1	2M
	f	What is Homomorphic Encryption algorithm?	CO3	L1	2M
	g	What is Non Fungible Tokens?	CO5	L1	2M
	h	Discuss Anomaly detection in Trusted AI.	CO5	L1	2M
	i	List the major challenge in integrating blockchain with AI.	CO6	L1	2M
	j	What is Sybil attack? Define it's types.	CO6	L1	2M

PART-B

(Answer all Five Units **5 x 10 = 50** Marks)

UNIT-I

2		Illustrate how blockchain technology works with the help of an example.	CO1	L3	10M

OR

3	a	List and explain the advantages and disadvantages of Distributed Ledger Technology in Blockchain.	CO1	L2	5M
	b	Describe the Blockchain structure with a neat diagram.	CO1	L2	5M

UNIT-II

4	a	Explain the advantages and disadvantages of the smart contract.	CO2	L2	5M
	b	Discuss the applications of smart contracts with example.	CO2	L2	5M

OR

5		State and Analyze the different types of consensus algorithms based on their working principles, advantages and disadvantages.	CO2	L4	10M

UNIT-III

6		Why Blockchain is Used for Secure AI Model Sharing? Illustrate secure data exchange process in Blockchain.	CO3	L3	10M

OR

7	a	Discuss security and design considerations for ensuring data integrity in blockchain-based AI systems.	CO4	L2	5M
	b	Explain AI for Blockchain and its role in optimizing consensus, scalability, security, and smart contracts.	CO4	L2	5M

UNIT-IV

8	a	Explain the role of Blockchain in Autonomous Vehicles.	CO5	L2	5M
	b	Discuss the Role of Blockchain in IOT systems.	CO5	L2	5M

OR

9		Explain in detail Financial AI systems with smart contracts describing a real time scenario.	CO5	L2	10M

UNIT-V

10	a	Explain the Blockchain security for the enterprises along with its challenges and examples.	CO6	L2	5M
	b	Describe the evolution and working of Sybil attacks.	CO6	L1	5M

OR

11		Explain in detail about zero knowledge proofs, it's types, properties and how are they used in blockchain with an example.	CO6	L2	10M

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