


Name:			
Enrolment No:			
<b>UPES</b> <b>End Semester Examination, May 2024</b>			
<b>Course: Industry Use Cases using Blockchain</b> <b>Program: B.Tech (CSE+AI&amp;ML-BD-BAO-DEV-CCVT-GG-CSF- H/NH)</b> <b>Course Code: CSBL4004P</b>		<b>Semester: VIII</b> <b>Time : 03 hrs.</b> <b>Max. Marks: 100</b>	
<b>Instructions:</b> Answer five questions from SECTION A, four questions from SECTION B, and two questions from SECTION C.			
<b>SECTION A</b> <b>(5Qx4M=20Marks)</b>			
S. No.		Marks	CO
Q1	Write two points describing how disadvantages of multi-signatures scripts is resolved using pay to script hash.	4	CO1
Q2	List two security concerns regarding NFTs.	4	CO2
Q3	Explain Intel SGX and describe how it is related to blockchain technology.	2+2	CO3
Q4	Explain how blockchain enables transparent and auditable tax transactions.	4	CO4
Q5	Write two aspects of blockchain that makes records tamper-proof in defense operations.	4	CO5
<b>SECTION B</b> <b>(4Qx10M= 40 Marks)</b>			
Q6	Explain three major problems in the current KYC system. Discuss how it can be resolved using blockchain. OR Explain how blockchain addresses the issue of fraud in mortgage lending. Write the benefits that blockchain offer in terms of reducing administrative costs in mortgage systems.	5+5	CO2
Q7	Explain how blockchain technology simplifies the process of collecting taxes for both taxpayers and government agencies. Privacy vs. Transparency in Tax Payments: Analysis how blockchain technology can balance the need for transparency in tax collection with individual taxpayer privacy concerns	5+5	CO3
Q8	Describe the policies and access control rules that can be implemented and enforced on a blockchain platform to ensure secure interactions. Discuss the membership models on different blockchain types (permissioned and permissionless) impact identity management and access control?	5+5	CO4

Q9	Describe the way blockchain enhances the interoperability of healthcare data systems. Explain the role of blockchain in facilitating data exchange among different healthcare providers and systems.	5+5	CO5
<b>SECTION-C</b> <b>(2Qx20M=40 Marks)</b>			
Q10	Write the traditional methods of managing supply chains limit transparency and collaboration between participants. Explain how blockchain technology creates a single source of truth for all supply chain data. Describe blockchain enable real-time tracking of individual products as they move through the supply chain. Discuss smart contracts streamline supply chain processes by automating actions based on predefined conditions.	5+5+5+5	CO3
Q11	Describe different aspects of privacy in blockchain. Describe how it can be achieved using a permissioned blockchain solution like Hyperledger Fabric. Write a short note in Zerocash. Explain ways to achieve UTXO model with privacy.  OR Explain how Fabric Channels enhance privacy in blockchain networks. Write the mechanisms that Hyperledger Fabric employs to restrict access to sensitive data within smart contracts. Discuss the importance of channel isolation in protecting data privacy within a Hyperledger Fabric network.	4+6+4+6	CO4