


Name:			
Enrolment No:			
UPES End Semester Examination, May 2024			
Course: Blockchain Applications for Cognitive Program: B-TECH-CSE-BT-H/NH Course Code: CSBL3006		Semester : VI Time : 03 hrs. Max. Marks: 100	
Instructions: Please provide succinct responses and include a clearly labeled diagram where necessary.			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q1	Sharded blockchain are equally secure to an un-sharded blockchain. -- Yes/No -- Justify your answer.	1+3	CO1
Q2	Write down the 4-key benefits of decentralized trust using blockchain other than decentralized and immutable.	1*4	CO4
Q3	<p>Which of the following statements is NOT true about ERC-20 tokens?</p> <p>(a) ERC-20 is a standard for creating tokens on the Ethereum blockchain.</p> <p>(b) ERC-20 tokens are fungible, meaning each token is identical to another.</p> <p>(c) ERC-20 tokens allow for the creation of custom functionalities beyond simple transfers.</p> <p>(d) ERC-20 tokens require their own blockchain to operate.</p> <p>Which of the following statements is MOST ACCURATE about Decentralized Autonomous Organizations (DAOs)?</p> <p>(a) DAOs rely on a central authority figure to make decisions.</p> <p>(b) DAOs require all members to have equal voting power.</p> <p>(c) DAOs can only operate with cryptocurrencies like Bitcoin.</p> <p>(d) DAOs are governed by smart contracts that dictate their operations.</p>	2+2	CO2
Q4	<p>(a) Voting rights in a DAC are automatically proportional to the number of tokens a member holds. True/False</p> <p>(b) Anyone can join a DAO without any restrictions. True/False</p>	2+2	CO3
Q5	Draw the working model of DAO.	4	CO3
SECTION B (4Qx10M= 40 Marks)			
Q6	With a diagram, describe “decentralized trust” – with and without blockchain.	4+6	CO4

Q7	Draw the framework of blockchain based cloud computing applications.	10	CO5
Q8	Clearly state component of a company and then justify why blockchain qualifies as a DAC.	10	CO2
Q9	Draw the DAS process management with the help of an example of storing medical records. OR Use of distributed ledger technology for large scale secure databanks.	10	CO5
SECTION-C (2Qx20M=40 Marks)			
Q10	(a) With a clear diagram and example describe the BFT protocol and show how consensus can be achieved even if less than 1/3 of nodes are dishonest. (b) Describe how one can securely do regular monthly transactions with a grocery shop in cryptocurrency, without paying a significant transaction fee. i. Lock an amount of money. ii. Do transaction. iii. Early withdrawal. iv. Time lock. v. Security.	10+10	CO1
Q11	Describe how blockchain and AI technology can help grow each other. OR Describe the DC/OS architecture, with a clear diagram, and the advantages of layered architecture.`	20 OR 20	CO6