

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary Summer 2024

Course: B. Tech. Branch: Computer Science and Engineering (Artificial Intelligence)

Subject Code & Name: BlockChain Technology (BTAHIOE705B)

Semester :VII

Max Marks: 60

Date: 10 /07/2024

Duration: 3 Hr.

Instructions to the Students:

- 1. All the questions are compulsory.*
- 2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question.*
- 3. Use of non-programmable scientific calculators is allowed.*
- 4. Assume suitable data wherever necessary and mention it clearly.*

	(Level/CO)	Marks
Q. 1 Solve Any Two of the following.		12
A) Define blockchain technology. Explain the benefits of blockchain technology.	Understand	6
B) What is a merkle tree in blockchain? How does a merkle tree work?	Understand	6
C) What is Zero Knowledge Proof and its role in blockchain?	Understand	6
Q.2 Solve Any Two of the following.		12
A) Difference between Proof of Work (PoW) and Proof of Stake (PoS) in blockchain.	Understand	6
B) Explain the block propagation and block relay.	Understand	6
C) What are the different types of attacks on PoW? Explain.	Understand	6
Q. 3 Solve Any Two of the following.		12
A) Write a difference between permissioned and permission less blockchain with example.	Understand	6
B) Explain the Byzantine general problem and how it can be overcome.	Apply	6
C) Explain the Lamport-Shostak-Pease BFT Algorithm.	Understand	6
Q.4 Solve Any Two of the following.		12
A) How can Blockchain help KYC?	Apply	6
B) Explain any supply chain financing application where blockchain technology can be applied and why.	Apply	6
C) Give the benefits blockchain enabled trade.	Apply	6
Q. 5 Solve Any Two of the following.		12
A) How does transaction validation take place in Hyperledger Fabric?	Understand	6
B) What is membership and identity management in Hyperledger Fabric?	Understand	6
C) What are the benefits of using smart contracts on Ethereum?	Apply	6

***** End *****