

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**

**Supplementary Semester Examination – Summer 2022**

**Course: B. Tech.**

**Branch : CE / CSE / CS**

**Semester : VII**

**Subject Code & Name: Blockchain Technology [BTCOE704A]**

**Max Marks: 60**

**Date: 24/08/2022**

**Duration: 3.45 Hrs.**

**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
<b>Q. 1 Solve Any Two of the following.</b>		<b>[12]</b>
A) What is the definition of Blockchain? Describe the characteristics of blockchain technology.	Understand	
B) Define the Merkle Tree and discuss the working of Merkle Trees. Also, Explain the benefits of Merkle tree in blockchain technology.	Understand	
C) Explain in details the various usage of cryptography preferred in the blockchain.	Understand	
<b>Q.2 Attempt the following questions.</b>		<b>[12]</b>
A) Describe in brief the block structure of bitcoin blockchain.	Understand	
B) Differentiate between Proof of Work (PoW) and Proof of Stake (PoS) protocol in blockchain.	Analyze	
<b>Q. 3 Solve Any Two of the following.</b>		<b>[12]</b>
A) Discuss the several challenges faced while designing an application using permissioned blockchain frameworks.	Understand	
B) Explain in detail working of the Practical Byzantine Fault Tolerance System.	Understand	
C) Enlist the several design goals to choose the right blockchain consensus protocol.	Remember	
<b>Q.4 Solve the following questions.</b>		<b>[12]</b>
A) Explain any two blockchain-based applications can be preferred in the domain of finance for trading.	Understand	
B) Explain any two blockchain-based applications can be preferred in the domain of supply chain management.	Understand	
<b>Q. 5 Solve Any Two of the following.</b>		<b>[12]</b>
A) Differentiate between Permissioned and Permissionless Blockchain.	Analyze	
B) Enlist and explain the major components of Hyperledger Fabric.	Understand	
C) Describe the core components of Ripple ecosystem.	Understand	

**\*\*\* End \*\*\***