

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary Summer 2024

Course: B. Tech. Branch: Artificial Intelligence & Data Science/ AI & ML

Subject Code & Name: Block Chain Technology (BTAIOE705B) 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) What is a public ledger? Describe the benefits and applications of blockchain technology.	Understand	6
B) What is the double-spending problem and how it is prevented in the Blockchain?	Understand	6
C) What are the types of blockchain technology? Explain the advantages and disadvantages of each type.	Understand	6
Q.2 Solve Any Two of the following.		12
A) Explain the workings of the SHA 256 algorithm.	Understand	6
B) Describe the properties of Hash Function.	Understand	
C) Explain the signature generation and signature verification of the elliptic curve digital signature algorithm (ECDSA).	Understand	
Q. 3 Solve Any Two of the following.		12
A) Explain Proof of Stake (POS) in detail.	Understand	6
B) What is the proof of burn algorithm in blockchain?	Understand	6
C) Explain the structure of a block of Bitcoin.	Understand	6
Q.4 Solve Any Two of the following.		12
A) Define smart contracts. Explain the process of writing smart contracts using Ethereum.	Understand	6
B) What is Ethereum Virtual Machine? Write the benefits of EVM.	Understand	6
C) What is a DApp? How is it different from a normal application?	Apply	6
Q. 5 Solve Any Two of the following.		12
A) Explain the Cross border payments Enterprise application of blockchain.	Apply	6
B) Describe any supply chain management scenario and the reasoning behind using blockchain technology.	Apply	6
C) How can blockchain technology be used in land registry records? What are the benefits of it?	Apply	6

***** End *****