



RAN-2511000608044001

M. Sc. IT (Sem.-VIII) Examination April - 2026

Blockchain Computing

Time: 3 Hours]

[Total Marks: 70

સૂચના : / Instructions (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book.	Seat No.: <table border="1" style="width: 100%;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> Student's Signature						

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| Q. 1. | Answer the following. (Any Seven) | 14 |
| | 1. What is a public blockchain? | 02 |
| | 2. What are gas fees in Ethereum? | 02 |
| | 3. What does staking mean in blockchain? | 02 |
| | 4. What do validators do in Proof of Stake (PoS)? | 02 |
| | 5. Write solidity contract to store and retrieve boolean values. | 02 |
| | 6. What is the difference between NFTs and cryptocurrencies? | 02 |
| | 7. How are DApps different from normal apps? | 02 |
| | 8. What is double-spending in blockchain? | 02 |
| | 9. What is a Genesis Block? | 02 |
| Q. 2. | Answer the following. (Any Two) | 14 |
| | 1. What is a block? Explain its basic structure. | 07 |
| | 2. Justify the statement "Blockchain provides transparency." | 07 |
| | 3. Explain blockchain wallets and types. | 07 |
| Q. 3. | Answer the following. (Any Two) | 14 |
| | 1. What are blockchain forks? Explain their types. | 07 |
| | 2. Describe blockchain-based land registry systems. | 07 |
| | 3. Explain the concept of blockchain mining rewards. | 07 |
| Q. 4. | Answer the following. (Any Two) | 14 |
| | 1. Explain AES in detail. | 07 |
| | 2. Explain DAO attack in Ethereum History. | 07 |
| | 3. Explain Merkle Tree in detail. | 07 |
| Q. 5. | Answer the following. (Any Two) | 14 |
| | 1. Write solidity contract for basic voting facility where votes for two candidates are counted. | 07 |
| | 2. What is Blockchain? Differentiate Web 2.0 V/S Web 3.0 | 07 |
| | 3. What is Consensus? Justify "PoS is better than PoW". | 07 |