



RAN-2111040102040003

MCA (Sem.-II) Examination April - 2026

Blockchain Technology (Paper - 204)

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"> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table> Student's Signature						

- Q. 1. Answer the following (Any Two) 14**
1. Explain the block structure in POW.
 2. Write a note on Web 3.0.
 3. How does gas work in Solidity, and what is its importance in executing transactions and smart contracts on Ethereum?
- Q. 2. Answer the following (Any Two) 14**
1. How is information hiding and message commitment achieved through Hashing?
 2. Explain the Byzantine general's problem.
 3. Write a note on POS.
- Q. 3. Answer the following (Any Two) 14**
1. What is Smart Contract? Explain.
 2. What are the types of forks? Explain.
 3. Discuss how Blockchain helps in non-repudiation.
- Q. 4. Answer the following: 14**
1. List out a few use cases of Blockchain and explain any one of them in detail.
 2. What are mapping in Solidity? How can it be used in Solidity programs?
- Q. 5. Answer the following: 14**
1. What is a modifier in Solidity, and how can it be used to control access and enforce rules in smart contracts?
 2. Explain the Hyperledger Fabric workflow.
- OR**
2. What is a fallback function? Explain its practical use.