



RAN - 2111040102040003

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**MCA (Sem. II) Examination May - 2023**

**Blockchain Technology : Paper 204**

**Time: 3 Hours ]**

**[ Total Marks: 70**

**સૂચના : / Instructions**

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નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
**Fill up strictly the details of signs on your answer book**

Name of the Examination:

**MCA (Sem. II)**

Name of the Subject :

**Blockchain Technology : Paper 204**

Subject Code No.: **2111040102040003**

Seat No.:

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Student's Signature

**Q. 1 A Explain hyper ledger fabric workflow. 7**

**OR**

**Q. 1 A What is genesis block? Why is it needed? Explain in detail.**

**Q. 1 B Discuss the characteristics of blockchain? 5**

**Q. 1 C Why do we need to store the root of the Merkel tree in the Block? 2**

**Q. 2 A What is Symmetric and Asymmetric cryptography? 7**

**Q. 2 B Explain SHA-256 in detail. 5**

**OR**

**Q. 2 B Explain cryptographic hash function.**

**Q. 2 C What is a digital signature? 2**

**Q. 3 A What is double spending and how to prevent it? 7**

**OR**

**Q. 3 A Differentiate POW and POS.**

**Q. 3 B Discuss Byzantine Fault in detail. 5**

**Q. 3 C What is nonce in blockchain? 2**

- Q. 4 A** What are the steps in creating blockchain. Explain each in brief. **7**
- Q. 4 B** Explain architecture of blockchain. **5**
- OR**
- Q. 4 B** What is Hash Pointer? Also explain Hash chain.
- Q. 4 C** List any two global variables in solidity. **2**
- Q. 5 A** What is a fallback function. Explain its practical use. **7**
- Q. 5 B** What is distributed ledger? Explain in detail. **5**
- OR**
- Q. 5 B** What are mapping in solidity? How can it be used in solidity programs?
- Q. 5 C** List advantages of using hyper ledger fabric. **2**
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