



India's First All-in-One Web3 Academy

(Blockchain | Crypto | NFT | DeFi | Web3 Development)

PG MASTER BLOCKCHAIN CERTIFICATION COURSE

Subject Code: **MB-101**

Subject Name: **Bitcoin & Blockchain Fundamentals**



Academic Year: 2026



Duration: 3 Hours

Month: 1



Total Marks: 150



Mode: Written + Practical + Transformation

MASTER BLOCKCHAIN COURSE



Month 1 Examination – Bitcoin & Blockchain Fundamentals



Total Duration: 3 Hours



Total Marks: 150

MARK DISTRIBUTION SUMMARY

Section	Marks
Part A – 1 Mark	40
Part B – 5 Marks	40
Part C – 10 Marks	40
Part D – Practical	20
Transformation	10
TOTAL	150
	Marks

PART A – One Mark Questions ($40 \times 1 = 40$ Marks)

1. Who created Bitcoin?
 2. In which year was Bitcoin launched?
 3. What is blockchain?
 4. What is a block?
 5. What is a hash?
 6. What algorithm does Bitcoin use?
 7. What is Proof of Work?
 8. What is Proof of Stake?
 9. What is a nonce?
 10. What is mining?
 11. What is a node?
 12. What is a full node?
 13. What is a light node?
 14. What is UTXO?
 15. What is a wallet?
 16. What is a public key?
 17. What is a private key?
 18. What is a digital signature?
 19. What is block reward?
 20. What is halving?
 21. What is consensus?
 22. What is distributed ledger?
 23. What is Testnet?
 24. What is Regtest?
 25. What is Mainnet?
 26. What is mempool?
 27. What is block time in Bitcoin?
 28. What is double spending?
 29. What is Merkle Root?
 30. What is block header?
 31. What is genesis block?
 32. What is decentralization?
 33. What is peer-to-peer network?
 34. What is difficulty adjustment?
 35. What is smart contract?
 36. What is gas (basic definition)?
 37. What is SHA-256?
 38. What is cryptography?
 39. What is blockchain explorer?
 40. What is mining pool?
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PART B – 5 Mark Questions (*Answer Any 8*) ($8 \times 5 = 40$ Marks)

1. Explain Proof of Work (PoW) in detail.
 2. Explain Proof of Stake (PoS) and compare it with PoW.
 3. Explain how a Bitcoin transaction works step by step.
 4. Explain UTXO model with diagram.
 5. Explain Full Node vs Light Node.
 6. Explain Mining Process in Bitcoin.
 7. Explain Merkle Tree.
 8. Difference between Cryptocurrency, CBDC, Stable coin.
 9. Explain Hashing and its importance in blockchain.
 10. Explain Public Key & Private Key cryptography.
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● PART C – 10 Mark Questions (*Answer Any 4*) ($4 \times 10 = 40$ Marks)

1. Explain complete Bitcoin block structure with diagram.
 2. Explain how consensus secures blockchain networks.
 3. Discuss advantages and limitations of Bitcoin.
 4. Explain Distributed Systems and their role in blockchain.
 5. Case Study:
A startup wants to accept Bitcoin payments.
Explain technical, financial, and risk considerations.
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● PART D – Practical & Lab Understanding ($2 \times 10 = 20$ Marks)

1. Explain the step-by-step process on how cryptography act as a strong pillar of Blockchain Technology.
 2. Explain how Bitcoin Transaction of 1BTC from Cutiee to Beauty is transferred, explain in deep technical aspect .
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● TRANSFORMATION ASSESSMENT – 10 Marks

Students must complete all:

1. Write a short LinkedIn blog (5 Marks)
Topic: “What I Learned from Bitcoin Blockchain”
2. Record a 1-minute educational video (5 Marks)
Topic: Consensus / Mining / UTXO

Evaluation:

- Technical clarity
- Confidence
- Industry relevance
