

Time: 3 Hours

Marks: 80

- N.B.:** (1) Question number 1 is **compulsory**.
(2) Attempt any **three** out of the remaining five.
(3) Figures to the right indicate full marks.

- Q1. A What are various types of account in Ethereum? (05)
B Explain uses of Blockchain. (05)
C Explain bitcoin scripting language. (05)
D What is importance of hash functions and digital signatures in Blockchain? (05)
- Q2. A What are differences between Permissioned Blockchain and Permissionless Blockchain? (10)
B Explain Smart Contracts with suitable example. (10)
- Q3. A Differentiate between Proof of Work and Proof of Stake. (10)
B What is Double Spending problem? Explain in detail. (10)
- Q4. A What are three important properties of cryptographic hash function? Explain in detail. (10)
B Explain Merkle Tree in detail. (10)
- Q5. A Explain Ethereum Virtual Machine in detail. (10)
B Explain Hyperledger Fabric in detail. (10)
- Q6 Write short notes on (**Any Four**) (20)
1 Byzantine Fault Tolerance
2 Proof of Elapsed Time
3 Gossip Protocol
4 Blockchain in Supply Chain Management
5 Types of Blockchain