

B.E Sem III C-scheme Summer 2025

CMPN  
10/6/25  
(Total Marks: 80)

- N.B.:**
1. Question No. 1 is compulsory.
  2. Answer any three out of the remaining questions.
  3. Assume suitable data if necessary.
  4. Figures to the right indicate full marks.

- Q1. Attempt the following (any 4):** (20)
- a. Explain the concept of an orphaned block.
  - b. Write a program in solidity to check whether the number is prime or not.
  - c. Explain the concept of double spending with a suitable example.
  - d. Differentiate between hot wallet and cold wallet.
  - e. Explain mining pool and its difficulty.
- Q2. Attempt the following:**
- a. State and explain different types of cryptocurrencies. (10)
  - b. Explain Hyperledger Fabric v1 Architecture. (10)
- Q3. Attempt the following:**
- a. Write a program in solidity to implement multi-level inheritance. (10)
  - b. Describe the architecture of Ethereum. (10)
- Q4. Attempt the following:**
- a. Differentiate between PoW, PoS, PoB & PoET. (10)
  - b. Explain Fallback function in Solidity with an example. (10)
- Q5. Attempt the following:**
- a. Differentiate between public, private and consortium blockchain. (10)
  - b. Explain types of test network (10)
- Q6. Write short notes on (any 2):** (20)
- a. Ethereum Virtual Machine
  - b. RAFT consensus algorithm
  - c. Ripple
  - d. UTXO model of Bitcoin

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