(32/40)²·

14/5/25

PRN: 1032210588

Term End Examination

May/June 2025

CET4007B - Blockchain Technology

Question Paper ID: 054964

Faculty/School	School of Computer Science and Engineering	Term	Semester VIII
Program	Final Year B.Tech CSF/AIDS	Duration	1 hour 30 minutes
Specialization	-	Max. Marks	40

Section - 1 (8 X 5 Marks)
Answer any 8 questions

1	What is the primary difference between traditional financial arrangements and cryptocurrency-based system	5 marks	CO1	Remembering
2	Describe the process of a Bitcoin transaction, including the roles of the sender, receiver, and miners. What are the key components of a Bitcoin transaction, and how is it verified and confirmed on the blockchain?	5 marks	CO2	Understanding
3	Explain the difference between Block Header Hash and Block Height. How are these identifiers used to reference specific blocks in the blockchain?	5 marks	CO3	Understanding
4	What is the purpose of the Block Identifier, and how is it used to reference specific blocks in the blockchain?	5 marks	CO3	Applying
5	What is the Ethereum Virtual Machine (EVM), and what role does it play in executing smart contracts on the Ethereum network?	5 marks	CO4	Understanding
6	Explain the concept of smart contracts on Ethereum. How do they differ from traditional contracts, and what benefits do they provide?	5 marks	CO3	Remembering
7	Compare and contrast different types of wallets for Ethereum, including desktop, mobile, and hardware wallets. What are the advantages and disadvantages of each type?	5 marks	CO4	Analysing
8	How do Merkle Trees enable Simplified Payment Verification (SPV) in the blockchain? What benefits does SPV provide?	5 marks	CO4	Applying
9	Describe the architecture of Hyperledger. What are the key components, and how do they interact with each other?	5 marks	CO4	Applying
10	What is a Sybil attack, and how can it be launched against a blockchain network? What are the consequences of a successful Sybil attack, and how can it be prevented?	5 marks	CO4	Understanding