Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations – October 2025

Date: 07-10-2025 **Time:** 02.00pm to 03.30pm

School: SOCSE	**Program:** B.Tech	
Course Code: CBC2000	**Course Name:** Foundations of Blockchain Technology	
Semester: V	**Max Marks:** 50	**Weightage:** 25%

CO - Levels	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Marks	**24**	**26**	**-**	**-**	**-**

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks. **5Q x 2M=10M**

1	Compare blockchain and traditional DBMS.	**2 Marks**	**L2**	**CO1**
2	What do you mean by Genesis Block? Who is the creator of Genesis block in a blockchain?	**2 Marks**	**L1**	**CO1**
3	Recall the three main properties of a cryptographic hash function.	**2 Marks**	**L1**	**CO2**
4	What is called as Vanity addresses?	**2 Marks**	**L1**	**CO2**
5	How does Proof-of-membership work?	**2 Marks**	**L1**	**CO2**

Part B

Answer the Questions. **Total Marks 40M**

6.	**a.**	Summarize the evolution of blockchain technology from early concepts to recent advancements.	**10 Marks**	**L2**	**CO 1**
		Or			
7.	**a.**	What is blockchain? Explain the key properties of blockchain technology in detail.	**10 Marks**	**L2**	**CO 1**

8.	**a.**	Illustrate the structure of blockchain with a neat diagram and also explain the steps involved in blockchain operations.	**10 Marks**	**L2**	**CO 1**
		Or			
9.	**a.**	Analyze how the blockchain technology is integrated into supply chain industry.	**10 Marks**	**L4**	**CO 1**

10.	**a.**	With the help of a neat diagram, explain how digital signatures work in blockchain, highlighting both the signing and verification processes.	**10 Marks**	**L2**	**CO 2**
		Or			
11.	**a.**	Compare private key and public key in blockchain in terms of size, role, representation, functions, and security.	**10 Marks**	**L2**	**CO 2**

12.	**a.**	Demonstrate the architecture of SHA-256 and explain how SHA-256 ensures immutability in blockchain.	**10 Marks**	**L2**	**CO 2**
		Or			
13.	**a.**	What is the role of a wallet in blockchain? Explain the different types of wallets.	**10 Marks**	**L2**	**CO 2**