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PRESIDENCY UNIVERSITY

Presidency University Act, 2013 of the Karnataka Act No. 41 of 2013 | Established under Section 2(f) of UGC Act, 1956
Approved by AICTE, New Delhi | Approved By BCI
Bengaluru

Even Semester Mid Term, March 2026

Date: 11/03/2026

Time: 09:30 AM - 11:00 AM

Course Code: MBA3119

Course Name: Blockchain and Cryptocurrency

Semester: Fourth Semester

Max. Marks: 50

Weightage: 50%

CO - Levels	CO1	CO2	CO3
Marks	29	26	15

Part A: Answer Following Questions. 15 M

Qn.No	Questions	M	CO	BT
1	Define blockchain technology and list its core features.	3	CO1	BT2
2	Explain the role of nodes in maintaining a blockchain network.	3	CO1	BT2
3	Compare Bitcoin and Ethereum in terms of purpose and functionality.	3	CO1	BT2
4	Illustrate how smart contracts automate agreements using a simple IF-THEN example.	3	CO2	BT3
5	Analyze the environmental impacts of Proof-of-Work consensus in Bitcoin mining and apply sustainable alternatives like Proof-of-Stake.	3	CO2	BT3

Part B: Answer Any 1 Following Questions. 10 M

Qn.No	Questions	M	CO	BT
6	Explain the evolution of money from barter systems to cryptocurrencies, highlighting key milestones.	10	CO1	BT2
7	Describe Ethereum's architecture, including EVM, nodes, and consensus mechanisms.	10	CO1	BT2

Part C: Answer Any 1 Following Questions. 10 M

Qn.No	Questions	M	CO	BT
8	Evaluate the benefits and challenges of using smart contracts	10	CO2	BT3

	in supply chain management			
9	Explain step-by-step design for a smart contract handling peer-to-peer lending with collateral liquidation	10	CO2	BT3

Part D: Answer Following Questions. 15 M

Qn.No	Questions	M	CO	BT
10	<p>Case Study: Walmart's Food Traceability Blockchain Implementation</p> <p>Walmart faced challenges with food safety, such as E. coli outbreaks requiring days to trace contaminated products. Using IBM's Hyperledger Fabric (a private blockchain), Walmart implemented a system where suppliers log produce data (e.g., farm origin, harvest date) via QR codes. In tests, tracing mangoes from farm to store dropped from 7 days to 2.2 seconds, reducing waste and enhancing consumer trust.</p> <p>a. Describe how Walmart's blockchain solves traditional siloed data issues in supply chains. (5 Marks)</p> <p>b. Apply the core components (blocks, nodes, consensus) to explain the tracing process. (5 Marks)</p> <p>c. Evaluate the scalability and adoption challenges for global food networks. (5 Marks)</p>	15	CO3	BT4