COURSE CODE	NAME OF THE COURSE
CPCC37	**CRYPTOCURRENCY**

COURSE CODE

CPCC37

OFFERED BY

COMMERCE

COURSE COORDINATOR

Prof. Tom Jacob

NAME OF THE COURSE

CRYPTOCURRENCY

ABOUT COLLEGE

Chirst College (Autonomous), Irinjalakuda established in the year 1956 by CMI fathers has always been a place where young generations are moulded towards a bright future. College has excellent infrastructure, with state of the art laboratories, seminar rooms and lecture halls. The campus is Wi-Fi enabled. Presently Collge is house for 4500+ students, 200 teaching staff and 45 supporting staff. The strength of the College lies in its hardworking and tech savvy teachers who are eager to involve in all matters of students. The lush green campus with gardens and open gym is moving towards the next phase on education both offline and online.

LEARNING OUTCOMES

CO1: To understand Blockchain and its main application cryptocurrency.

CO2: To learn how this system works and how can they utilize and what application.

CO3: To be familiar with blockchain and cryptocurrency concepts.

Module I

Basics: Distributed Database, Two General Problem, Byzantine General problem and Fault Tolerance, Hadoop Distributed File System, Distributed Hash Table, ASIC resistance, Turing Complete,Cryptography: Hash function, Digital Signature - ECDSA, Memory Hard Algorithm, Zero. (10 hours).

Module 2

Knowledge Proof. Blockchain: Introduction, Advantage over conventional distributed database, Blockchain Network, Mining Mechanism, Distributed Consensus, Merkle Patricia Tree, Gas Limit, Transactions and Fee, Anonymity, Reward, Chain Policy, Life of Blockchain application, Soft & Hard Fork, Private and Public blockchain. (10 hours).

Module 3

Distributed Consensus: Nakamoto consensus, Proof of Work, Proof of Stake, Proof of Burn, Difficulty Level, Sybil Attack, Energy utilization and alternate. Cryptocurrency: History, Distributed Ledger, Bitcoin protocols - Mining strategy and rewards, Ethereum - Construction, (5 hours).

Module 4

Cryptocurrency Regulation: Stakeholders, Roots of Bitcoin, Legal Aspects - Cryptocurrency Exchange, Black Market and Global Economy. (5 hours).

REFERENCE BOOKS AND ARTICLES

Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller and Steven Goldfeder,

Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction, Princeton University Press (July 19, 2016).

• Wattenhofer, The Science of the Blockchain

• Antonopoulos, Mastering Bitcoin: Unlocking Digital Cryptocurrencies

• Satoshi Nakamoto, Bitcoin: A Peer-to-Peer Electronic Cash System

• DR. Gavin Wood, "ETHEREUM: A Secure Decentralized Transaction Ledger,"Yellow paper.2014.

• Nicola Atzei, Massimo Bartoletti, and Tiziana Cimoli, A survey of attacks on Ethereum smart contracts

CRYPTOCURRENCIES
Value Added Certificate Course
Assessment Procedure 2023-24

The Introduction to Cryptocurrency course explores the basics of cryptocurrency, its features and the different virtual currencies. By the end of the course, you will have a thorough understanding of blockchain, NFT, Solana, Shiba Inu Coin and Bitcoin. All qualification of this course are tested by multiple choice questions via computer based testing. Result are instant and displayed on screen. Some sample questions are

1. Which of the following is popularly used for storing bitcoins?

Pocket

Wallet

Box

Stack.

2. Which of these US states introduced the BitLicense regulation for cryptocurrency companies?

New York

California

Texas

Washington

3. What is the name of the famous Bitcoin exchange from Japan that collapsed in 2014?

Blockchain.info

Tradehill

Mt. Gox

Bitstamp

Crypto Currencies

(Value Added Certificate Course)

Time: 30 M   Max Marks:50

Answer all questions. Each question carries 5 marks

1. What is cryptocurrency?

Encrypted currency of a certain state
A type of digital currency
Hackers' secret money

2. Which cryptocurrency was the most expensive at the end of 2017?

Ethereum
Dash
Bitcoin

3. What technology is the cryptocurrency based on?

Blockchain
Photometrics
Cryptanalysis

4. The key feature of cryptocurrency functioning?

Reliability backed by gold
The fact that it is based on ancient knowledge
Absence of any internal or external administrator

5. Select the pseudonym of the founder of the Bitcoin payment system.

John Smith
Satoshi Nakamoto
Xiao Huawei

6. In what year does the term "cryptocurrency" first begin to be used?

The term has been known in secret societies since ancient times
B 1994
B 2009

7. In what form can cryptocurrency be stored?

As information on the user's electronic wallet and an encrypted copy on a central cryptocurrency server
In the form of gold coins
As encrypted information in a chain of computers

8. What is blockchain?

Cryptocurrency value data
A secret database by which the owners of the cryptocurrency manage it
A sequential chain of blocks containing information

9. What is the production of cryptocurrency called?

Makeup
Fabrication
Mining

10. What interesting thing happened to one of the first bitcoin miners, James Howells?

He produced several thousand bitcoins and donated them to a homeless charity.
He produced over 7,000 bitcoins, but then deemed them useless and threw his hard drive in a landfill along with his broken laptop.
He created 80,000 bitcoins in just one week and is now one of the richest people.

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