School: ..... Campus: .....

Academic Year: ..... Subject Name: ..... Subject Code: .....

Semester: ..... Program: ..... Branch: ..... Specialization: .....

Date: .....

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiement : Tokenomics 101 – Analyzing Crypto Economics

Objective/Aim:

To study and analyze the economic design of a cryptocurrency token by understanding key concepts such as token supply, distribution, utility, governance, and incentives, and how these affect a blockchain ecosystem's sustainability and value.

Apparatus/Software Used:

- Laptop
- MetaMask
- Vs code
- **Etherscan** → For Ethereum-based tokens (ERC-20, ERC-721)
- CoinMarketCap

Theory/Concept:

Tokenomics (Token + Economics) refers to the study of how cryptocurrencies or blockchain tokens are structured, distributed, and used within a blockchain ecosystem.

It determines how a token gains and maintains value, influencing user participation and project sustainability.

Formulae Used:

Market Cap = Token Price × Circulating Supply

Inflation Rate = (New Tokens / Total Supply) × 100

Procedure:

- Select a Token:
  Choose a cryptocurrency project (e.g., Ethereum, Solana, or a sample ERC-20 token).
- Collect Token Data: Note total supply, circulating supply, price, and distribution details using Etherscan or CoinMarketCap.
- Analyze Token Distribution:
- Observe token allocations (team, investors, public).
- Study vesting schedules and lock-up periods.
- Evaluate Token Utility:
  Identify how the token is used: governance, transaction fees, staking, or rewards.
- Calculate Market Metrics:
- Compute Market Cap using supply and price.
- Estimate inflation or deflation based on issuance/burn rate.
- Simulate Token Growth:
  Using Python or Excel, simulate token supply and price over time based on growth assumptions.
- Visualize the Data:
- Plot graphs showing supply vs time and market cap trends.
- Interpret how token distribution affects market stability.

Observation Table:

Year	Total Supply	Token Price (USD)	Market Cap (USD)	Inflation Rate
1	1,000,000	2	2,000,000	0
2	1,050,000	2	2,100,000	5
3	1,102,500	2	2,205,000	5
4	1,157,625	2	2,315,250	5

ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10		
Planning and Execution/ Practical Simulation/ Programming	10		
Result and Interpretation	10		
Record of Applied and Action Learning	10		
Viva	10		
Total	**50**		

Signature of the Student:
Name :
Regn.No.

Signature of the Faculty: