

## IMSc ITFIN Sem.-7 Examination

FITMSC-04

## Block Chain &amp; Cryptocurrency

December-2025

Time : 2.30 Hours]

[Max.Marks : 70

**Instructions:**

- Figures to the right indicate Full Marks.
- Do not write anything on the question paper.
- Simple calculator is allowed. Do not use a scientific calculator.

**Question:1**

- [A] What is Blockchain? List and explain different areas of application of Blockchain technology. [7]
- [B] Discuss the different fields and their importance in a Block of Blockchain. [7]
- OR
- [A] Discuss the evolution of blockchain technology with its different generations.
- [B] Why is Blockchain called Immutable? How is Immutability achieved in the Blockchain? Justify your answer.

**Question:2**

- [A] What is Bitcoin? Discuss the mining process of Bitcoin. [7]
- [B] Elaborate on the monetary policy of Bitcoin in detail. [7]
- OR
- [A] What is cryptocurrency? Discuss different types of cryptocurrencies and list their characteristics
- [B] What is the timestamp field in the Block of Blockchain? Explain the requirement of a timestamp field in the Mining process.

**Question:3**

- [A] What is a smart contract? Discuss the characteristics of it. [7]
- [B] What are UTXOs? Discuss transactions and UTXOs with examples. [7]
- OR
- [A] Discuss the concept of HD Wallet for cryptocurrencies. Also, briefly discuss the different types of wallets.
- [B] What is GAS? Discuss the concept of GAS in the Ethereum Blockchain.

**Question:4**

- [A] List and explain the features of the Solidity language. [7]
- [B] Discuss the difference between MainNet and TestNet. [7]
- OR
- [A] Discuss any two loops you know in the Solidity language with an example of each.
- [B] Discuss setter and getter functions in the solidity programming language.

**Question 5: Attempt any SEVEN out of TWELVE:**

[14]

**Define the following Terms:**

1. Airdrop
2. SEGWIT
3. Genesis Block

N978.2

4. Uint
5. Pure
6. Hot wallet
7. Nonce
8. Dapps
9. Smart Contract
10. Remix
11. Constructor
12. Metamask

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