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**Presidency University**

**Bengaluru**

**School of Computer Science Engineering & Information Science**

**SUMMER TERM**

**Summer Term End Term Examinations - August 2024**

**Date**: 06-08-2024

**Time**: 09:30 am – 12.30 pm

**Max Marks**: 100

**Weightage**: 50%

**Winter Semester**: 2023 - 24

**Course Code**: CSE2019

**Course Name**: Foundations of Blockchain Technology

**Department: Computer Science and Engineering**

 **Instructions:**

1. *Read the all questions carefully and answer accordingly.*
2. *Do not write any matter on the question paper other than roll number.*

**PART - A**

**Answer any FIVE Questions. Each question carries 5 marks. (5Q x 5M = 25M)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Questions** | **Marks** | **CO** | **RBT** |
|  | Describe crypto currency? How is it different from digital currency? | **5** | **CO1** | **L2** |
|  | Explain nonce and how it is useful in blockchain? | **5** | **CO1** | **L2** |
|  | Describe the key features of blockchain and how blockchain maintain its immutability. | **5** | **CO2** | **L2** |
|  | Discuss the role of hash pointers in blockchain.  | **5** | **CO2** | **L2** |
|  | Explain the security measures of POW.  | **5** | **CO3** | **L2** |
|  | Extend the Bitcoin Innovation in our Day-to-Day Life.  | **5** | **CO3** | **L3** |
|  | Discuss and compare between Ethereum and Bitcoin  | **5** | **CO4** | **L1** |

**PART - B**

**Answer FIVE Questions. Each question carries 15 marks. (5Q x 15M = 75M)**

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| **Q. No.** | **Questions** | **Marks** | **CO** | **RBT** |
|  | List out the major advantages of blockchain in trade finance and describe the challenges of blockchain technology? | **15** | **CO1** | **L2** |
| **OR** |
|  | Explain Consensus Algorithms and discuss.  | **15** | **CO1** | **L2** |
|  | Summarize the various properties of Hash functions. | **15** | **CO2** | **L2** |
| **OR** |
|  | Write a note on i) distributed ledger ii) consensus iii) rewards (incentives) iv) miner | **15** | **CO2** | **L3** |
|  | Explain in detail the Hot and Cold storage.  | **15** | **CO3** | **L1** |
| **OR** |
|  | Describe the mining algorithm and mining difficulty in bitcoin system. | **15** | **CO3** | **L1** |
|  | Summarize the different types of nodes and states in Ethereum. | **15** | **CO4** | **L2** |
| **OR** |
|  | Differentiate any three consensus mechanisms in the blockchain technology | **15** | **CO3** | **L3** |
|  | Illustrate the different use cases of Block chain Technology in the health care. | **15** | **CO4** | **L2** |
| **OR** |
|  | Illustrate the different use cases of Block chain Technology in the manufacturing. | **15** | **CO4** | **L2** |