

# CBCS SCHEME

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## Seventh Semester B.E. Degree Examination, Dec.2023/Jan.2024 Blockchain Technology

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. Explain the benefits of Blockchain. (10 Marks)  
b. Explain how blockchain accumulates blocks. (10 Marks)

OR

- 2 a. Discuss distributed ledgers type of blockchain. (10 Marks)  
b. Explain distributed database Byzantine General's problem. (10 Marks)

### Module-2

- 3 a. With a neat diagram, explain stream ciphers. (10 Marks)  
b. With a neat diagram, explain block ciphers. (10 Marks)

OR

- 4 a. How is RSA key pair generated? (10 Marks)  
b. With a neat diagram, explain point addition in ECC. (10 Marks)

### Module-3

- 5 a. What are the three services provided by name coin and explain merged mining in name coin. (10 Marks)  
b. What are the parameters used by the scrypt to generate derived key in Litecoin. (10 Marks)

OR

- 6 a. Explain the steps that describe the transaction life cycle. (10 Marks)  
b. How is the transaction fee calculated? Explain. (10 Marks)

### Module-4

- 7 a. Explain Ricardian contract with its properties. (10 Marks)  
b. Explain Ethereum blockchain. (10 Marks)

OR

- 8 a. Explain Externally Owned Accounts (EOAs) and Contract Account (CAs) types of accounts in Ethereum. (10 Marks)  
b. With a neat diagram, explain execution environment in ethereum. (10 Marks)

### Module-5

- 9 a. Explain consensus protocol process in ripple. (10 Marks)  
b. Discuss Kadena's consensus mechanism. (10 Marks)

OR

- 10 a. Explain the application of blockchain in border control by government. (10 Marks)  
b. With a neat diagram, explain layered model of IOT. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.