

# CBCS SCHEME

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18AI733

## Seventh Semester B.E. Degree Examination, Jan./Feb. 2023 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. What are the limitations of blockchain. (10 Marks)  
b. With a neat diagram, explain the generic structure of a block. (10 Marks)

OR

- 2 a. Discuss Byzantine General's problems. (10 Marks)  
b. Explain any two types of Blockchain. (10 Marks)

### Module-2

- 3 a. Distinguish between the different types of Cryptographic primitives. (10 Marks)  
b. Define and distinguish DAPP and a Normal App. Illustrate using two examples. (10 Marks)

OR

- 4 a. Discuss the requirements and operations of a Decentralized application. (10 Marks)  
b. Explain the steps involved in RSA key generation. (10 Marks)

### Module-3

- 5 a. How merged mining can be performed in Namecoin? Illustrate with a diagram. (10 Marks)  
b. Illustrate scrypt algorithm with a neat diagram defining all the parameters to generate a derived key in a litecoin. (10 Marks)

OR

- 6 a. List and the different types of transaction MP. (10 Marks)  
b. Explain the limitations of Bitcoin. (10 Marks)

### Module-4

- 7 a. What are the two types of accounts that exist in Ethereum. Explain each. (10 Marks)  
b. Explain Ricardian contracts with a bowtie diagram. (10 Marks)

OR

- 8 a. With a neat diagram, explain Ethereum state transition blockchain. (10 Marks)  
b. Explain the key parameters of ethereum execution environment. (10 Marks)

### Module-5

- 9 a. Explain Consensus mechanism in Kadena. (10 Marks)  
b. Explain Ripple consensus protocol phases. (10 Marks)

OR

- 10 a. Discuss any two application of blockchain in Government sector. (10 Marks)  
b. Discuss Blockchain based IoT model. (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.