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Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech. CSE (Internet of Things and Cyber Security including Block
Chain Technology) (Sem.-7)**

BLOCKCHAIN & CRYPTOCURRENCY

Subject Code : BTITCS-701-20

M.Code : 93971

Date of Examination: 21-11-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A

1. Write briefly :

- a) Define block in blockchain.
- b) Difference between public and private blockchain.
- c) Difference between hashing and encryption.
- d) Define the term immutable ledger
- e) What is bitcoin mining?
- f) Define smart contract.
- g) What is non-fungible token?
- h) Define Hyperledger.
- i) What is the purpose of using gas in Blockchain?
- j) Name a programming language commonly used for developing smart contracts on the Ethereum blockchain.

SECTION-B

2. What is the role of consensus mechanisms in blockchain technology and why are they essential for maintaining the integrity of the ledger?
3. Explain the term "double-spending" problem in digital currency systems. How does blockchain technology solve this problem?
4. Briefly describe the cryptographic primitives commonly used in blockchain systems, such as hashing and digital signatures.
5. What are the key steps involved in the development of a blockchain application?
6. Explain the concept of Blockchain as Service Concept.

SECTION-C

7. In what ways can blockchain be used to improve supply chain management? Provide examples of its applications.
8. What is Hyperledger fabric? How does Hyperledger fabric works? Discuss with the help of example.
9. Write short note on :
 - a) Block Mining
 - b) Permissioned Model of block chain

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.