Roll No. | | | | | | | | | | |

Total No. of Questions : 09

Total No. of Pages : 02

B.Tech. (Computer Science & Engineering/Cyber Security/(Internet of Things and Cyber Security including Block Chain Technology)(Sem.–7,8)

BLOCKCHAIN & CRYPTOCURRENCY

Subject Code : BTITCS 701-20

M.Code : 93971

Date of Examination : 16-12-2024

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) What is the need of blockchain?

   b) What is proof of work?

   c) Define cryptocurrency.

   d) What is mining in block chain?

   e) What is bit coin p2p network?

   f) Why do we need smart contracts?

   g) List two platform for public blockchains.

   h) What is digital signature?

   i) What is Ripple?

   j) Difference between public and private blockchain.

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SECTION-B

2. Discuss the difference between public and private blockchain.

3. Explain the term "*double-spending*" problem in digital currency systems. How does blockchain technology solve this problem?

4. How do Merkle trees enhance the efficiency and integrity of data storage in a blockchain?

5. What role do smart contracts play in BaaS, and how do they enhance the functionality of blockchain applications for enterprises?

6. What are the potential security risks associated with public blockchains, and how can they be mitigated?

SECTION-C

7. In what ways can blockchain technology streamline and improve cross-border transactions for enterprises? What challenges do enterprises typically face when implementing blockchain technology?

8. What is Hyperledger fabric? How does Hyperledger fabric works? Discuss with the help of example.

9. **Write short note on :**

   a) Digital Signature for blockchain

   b) Distributed Consensus.

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.