PARUL UNIVERSITY
FACULTY OF IT & COMPUTER SCIENCE
BCA/B.Sc.(IT) Summer 2022 – 2023 Examination

Semester: 4   **Date: 21/03/2023**
Subject Code: 05101258/05102258   **Time: 10.30am to 1.00pm**
Subject Name: Blockchain Technology - I   **Total Marks: 60**

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 **Answer the following.**

A. **Answer / Define the following in short.** **(05)**

1. What is the basic idea behind block chain technology?

2. How is blockchain changing the landscape of digitalization?

3. What are the benefits of using blockchain technology?

4. What are some industries that are being disrupted by blockchain technology?

5. Define Blockchain.

B. **Multiple choice type questions/ Give the sentence true or false. (Each of 01 marks)** **(10)**

1. What is the primary benefit of using blockchain technology?
A) Increased data security
B) Faster transaction processing
C) Lower transaction fees
D) Centralized control
2. Which of the following industries is being disrupted by blockchain technology?
A) Banking
B) Retail
C) Entertainment
D) None of the Above
3. What is a block in a blockchain?
A) A database that stores information in a linear, chronological order
B) A cryptographic algorithm used to secure the blockchain
C) A group of transactions that are added to the blockchain
D) A type of digital wallet used for storing cryptocurrencies
4. What is a private key in blockchain?
A) A key used to encrypt data on the blockchain
B) A key used to validate transactions on the block chain
C) A key used to access and manage cryptocurrencies
D) A key used to create new blocks in the block chain
5. What is the difference between a public and a private block chain?
A) A public block chain is accessible to anyone, while a private block chain is accessible only to authorized participants
B) A public block chain is owned by a single entity, while a private block chain is owned by a group of entities
C) A public block chain is decentralized, while a private block chain is centralized
D) There is no difference between a public and a private block chain
6. What is a smart contract in blockchain?
A) A legal agreement that is enforced automatically through the blockchain
B) A type of cryptocurrency
C) A type of consensus mechanism

D) A type of mining algorithm

7. What is the role of a node in a blockchain network?
A) To create new blocks in the blockchain
B) To validate transactions and add them to the blockchain
C) To encrypt data on the blockchain
D) To mine new cryptocurrencies

8. What is the purpose of a consensus mechanism in blockchain?
A) To ensure that all nodes in the network have the same copy of the blockchain
B) To validate transactions and add them to the blockchain
C) To prevent cyber attacks on the blockchain
D) To create new blocks in the blockchain

9. Blockchain technology is only used for creating and managing cryptocurrencies.

(A) True
(B) False

10. Once data is added to a blockchain, it cannot be modified or deleted.

(A) True
(B) False

Q.2   Answer the following. (3 Marks Questions.) (Any Five)   (15)

1. What is cryptography, and how does it provide security for information?

2. Explain the Difference Between Ethereum And Bitcoin Blockchain?

3. Explain Metamask with steps and explanation.

4. Write about the Blockchain with examples?

5. Explain any 3 types of Blockchains.

6. What is a node in Blockchain with examples?

Q.3   Answer the following. (5 Marks Questions)(Any three)   (15)

1. What is the difference between private and public blockchains, and what are some use cases for each?

2. What are Hashing Puzzles in the Blockchain?

3. Explain any 3 Ethereum Features?

4. What is Cryptocurrency and list with features?

Q.4   Answer the following in detail.

A.   Explain the Advantages or Disadvantages of Ethereum Blockchain with an Example?   **(05)**

B.(1)   Write down a solidity code for Circle And Rectangle with an Explanation.   **(05)**

B.(2)   Explain the Hash Puzzles with Example.   **(05)**

OR

B.(1)   List types of Block chain And Explain.   **(05)**

B.(2)   Explain four types of Block chain with examples?   **(05)**