Question 1

The transaction Merkle Tree root value in a Bitcoin block is calculated using ____.

- ○ previous block's hash
- ○ none
- ◉ hash of transactions
- ○ number of transactions

Question 2

Follow the steps given in the tool at this link to manually calculate the hash of the block #490624. You can obtain the details required in the tool from this link except for the timestamp. Please use the timestamp from this link .

What is the hash of the block #490624? Copy and paste the answer.

Enter answer here: 000000000000000000d4

Question 3

Follow the guidelines in the encryption tool at this link to better understand the concept of Public-Private key encryption and answer the question below.

When encrypting a message with the public key, which key is required to decrypt the message?

- ○ Both Public key and Private key
- ◉ Private Key
- ○ Public Key
- ○ Inverted Public Key

Question 4

What type of hashing algorithm does Bitcoin blockchain use to determine the hash of a block?

- ○ SHA-512
- ○ MD5
- ◉ SHA-256
- ○ SHA-1

Question 5

In Ethereum, which algorithm is applied to the private key in order to get a unique public key.

- ○ RSA
- ○ Keccak
- ○ SHA 256
- ◉ ECC

Question 6

Which of the following methods can be used to obtain the original message from its generated hash message using SHA-256?

- ○ Hashing the reverse of generated hash
- ○ Hashing the generated hash again, twice
- ○ Hashing the generated hash again
- ◉ Original message cannot be retrieved

Question 7

In Ethereum, hashing functions are used for which of the following?

1. Generating state hash.

2. Generating account addresses.

3. Decrypting senders message.

4. Generating block header hash.

- ○ 1,3,4
- ◉ 1,2,4
- ○ 2,3,4
- ○ 1,2,3

Question 8

What is the purpose of using a digital signature?

- ○ None of the above.
- ○ It supports the integrity of messages
- ◉ It supports both user authentication and integrity of messages
- ○ It supports user authentication

Question 9

Encryption of a message provides ____.

- ○ integrity
- ◉ security
- ○ authentication
- ○ nonrepudiation

Question 10

A public key is derived from the ____.

- ◉ private Key
- ○ a different public key
- ○ genesis block hash
- ○ hash of the first transaction by the account
