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## SUB :- BLOCKCHAIN AND CRYPTO CURRENCY( 20CSE742 )

## QUESTION BANK FOR IA2

## Module 2 –Chapter 2:Cryptography

| SL. No. | QUESTIONS | Cos |
|---|---|---|
| 1 | Define Cryptography. Explain the four Primary Cryptographic primitives needed to achieve security in any network. | 2 |
| 2 | Define Symmetric Cryptography. Explain the two methods to generate the cipher text for encryption. | 2 |
| 3 | Briefly explain the following methods for encryption/decryption with suitable examples:<br>a. Caesar Cipher<br>b. Vegener Cipher | 2 |
| 4 | Using Vegener Cipher,<br>i. Encrypt and Decrypt the Message: JAVATPOINT given the Key: BEST<br>ii. Encrypt and Decrypt the Message: HYDERABAD given the Key: SPARROW | 2 |
| 5 | Write a short note on:<br>a. Examples of Block Ciphers –DES, AES<br>b. Examples of Stream Ciphers-RC4, A5/1 | 2 |
| 6 | Explain Integer Factorization Problem(RSA) with an example. | 2 |
| 7 | Explain Discrete Log Problem(Diffie-Hellman) with an example. | 2 |
| 8 | Numericas on RSA and Diffie-Hellman algorithms. | |
| 9 | What is Elliptic Curve Digital Signature Algorithm? How does it work? | 2 |
| 10 | Differentiate between Symmetric and Asymmetric Cryptography. | 2 |

## Module 3 –Consensus Mechanism, Ethereum

| SL. No. | QUESTIONS | Cos |
|---|---|---|
| 1. | What do you mean by Consensus Algorithm? How does it work? | 3 |
| 2. | Explain in detail various Consensus mechanisms used in Blockchain. | 3 |
| 3. | Explain the various Byzantine agreement based Consensus methods in detail. | 3 |
| 4. | Write and explain the steps involved in Lamport-Shostak-Pease Algorithm. | 3 |
| 5. | Explain the various components of Blockchain. | 3 |

| | | |
|---|---|---|
| 6. | What is Ethereum? What is the need of it? | **3** |
| 7. | Write the significance of EVM. | **3** |
| 8. | Explain the working of Ethereum, with detailed steps. | **3** |
| 9. | Write a short note on various Ethereum Clients. | **3** |
| 10. | Explain in detail Ethereum Key Pairs. | **3** |
| 11. | Give the steps for generating a public key in Blockchain. | **3** |
| 12. | Write a note on Etherium addresses. Also mention the three variations of an account identifier. | **3** |
| 13. | What do you mean by Etherium Wallets? Explain the two primary wallet types. | **3** |
| 14. | How do transactions take place in the Ethereum network. Explain with an example. | **3** |
| 15. | Explain the concepts gas, gasLimit in Ethereum. | **3** |
| 16. | Which are the primary languages used to write Ethereum Smart Contacts. | **3** |
| 17. | Explain in brief the prominent Ethereum development tools. | **3** |