SRI KRISHNA INSTITUTE OF TECHNOLOGY

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#57, Chimney Hills, Hesaraghatta Main Road, Chikkabanavara Post, Bengaluru- 560090

Department of Computer Science and Engineering

Subject Name: Cryptography and network security **Subject Code: BCS703**

SEM : 7TH **DIV : A/B** **ACADEMIC YEAR : 2026-2027**

Faculty : SHWETA SINGH

Module-1 Question Bank

SL#	Question	CO	Level	Marks
1	Explain the model for Network Security with a neat diagram. Discuss the goals of network security.	CO1	L2	**10**
2	Explain the symmetric cipher model with a neat diagram.	CO1	L2	**5**
3	Compare substitution ciphers and transposition ciphers with suitable examples.	CO1	L2	**5**
4	Explain the Caesar cipher. Encrypt and decrypt the plaintext "SECURITY" using key 5.	CO1	L3	**10**
5	Explain the Monoalphabetic cipher. Compare it with the Caesar cipher.	CO1	L2	**5**
6	Explain the Playfair cipher algorithm. Encrypt the plaintext "HIDETHEGOLD" using the key "MONARCHY".	CO1	L3	**10**
7	Explain the Hill cipher algorithm. Encrypt the plaintext "HELP" using the key matrix [3 3 2 5].	CO1	**L3**	**10**
8	Explain the Vigenère (Polyalphabetic) cipher. Encrypt the plaintext "ATTACKATDAWN" using the key "LEMON".	CO1	L3 (Problem)	**10**
9	Explain the One-Time Pad. Why is it considered perfectly secure? State its advantages and limitations.	CO1	L2	**10**
10	What is Steganography? Explain its types, applications, advantages, and limitations.	CO1	L2	**5**
11	Explain the DES algorithm with a neat block diagram. Discuss its Feistel structure and the 16 rounds.	CO1	L2	**10**
12	Explain the strength of DES and discuss the design principles of block ciphers. Why is DES vulnerable to brute-force attacks?	CO1	L2	**10**

Faculty Signature