

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2023****Subject Code:3173211****Date:08-12-2023****Subject Name: System and Network Security****Time: 10:30 AM TO 01:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) What do you mean by Protocol? Explain TCP/IP.	03
	(b) Explain X.25 and ATM network.	04
	(c) Explain OSI security architecture in Detail.	07
Q.2	(a) Explain the terms diffusion and confusion.	03
	(b) Explain key distribution process using Key Distribution Center (KDC).	04
	(c) Explain RSA algorithm with suitable example	07
	OR	
	(c) Explain the Concept of Playfair Cipher with any example.	07
Q.3	(a) Briefly define the Caesar cipher with example	03
	(b) Explain Steganography in Details.	04
	(c) Explain the Diffie Hellman key exchange scheme in detail with an example.	07
	OR	
Q.3	(a) Distributed Denial of Service attacks	03
	(b) Explain the working on symmetric key algorithm?	04
	(c) What is Kerberos? How it works? Explain in detail.	07
Q.4	(a) What is role of SSL?	03
	(b) Explain IP Security Architecture in detail.	04
	(c) Draw and explain the single round of DES algorithm in detail.	07
	OR	
Q.4	(a) Write a note on Transposition technique.	03
	(b) Explain Intrusion detection and Prevention in details.	04
	(c) Explain the types of Firewall in detail.	07
Q.5	(a) Explain man in the middle attack.	03
	(b) Draw and Explain Feistel's structure for encryption and decryption.	04
	(c) Explain the Concept of PGP and S/MIME in detail.	07
	OR	
Q.5	(a) Explain digital signature concept in network security.	03
	(b) List and explain different types of viruses.	04
	(c) Define 3D Secure protocol. Discuss with example.	07
