SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar
Programme & Subject : B.Sc. CA & IT
Semester – VI
US06CIIT27 : Information Security
(Syllabus Effective from June 2020)

Credits   **: 4**   **External : 70 Marks**

Contact Hrs per Week   **: 4**   **University Examination Duration: 3 Hrs**

All units carry equal weightage

Unit	Description in detail
I	**Introduction** Attacks, services and mechanism Security attacks Security services A model for network security
II	**Cryptography** Introduction Conventional encryption principles Basic terms : plaintext, ciphertext, cryptography, cryptanalysis Substitution ciphers vs. transposition ciphers Types of attack on encrypted messages Introduction to public key cryptography Applications for public-key cryptosystems
III	**System Security** Intruders Viruses and related threats : trap doors, logic bombs, trojan horses, viruses, worms, bacteria The nature of viruses Types of viruses Antivirus approaches : detection, identification and removal
IV	**Devices Network Security and Digital Asset Protection** Digital signatures Firewalls : introduction, design principles, characteristics, types, configuration An Introduction to Digital Rights Management Systems , Copy Protection Systems, Forensic Watermarking in Digital Rights Management , Person-Based and Domain-Based Digital Rights Management

Basic Text and Reference Books:

1. William Stallings: Network Security Essentials (Applications and Standards), Pearson Education India, 2001.
2. Tanenbaum A. S., Computer Networks, Prentice-Hall of India Pvt. Ltd., New Delhi, 1997.
3. Security, Privacy and Trust in Modern Data Management By Milan Petkovic, Willem Jonker, Springer, ISBN: 978-3-540-69860-9