NIRMA UNIVERSITY
Institute of Technology
B.Tech./M.Tech/MCA Computer Science and Engineering
Practical List
Semester-V

2CSDE54	Information and Network Security	[2-0-2-3]

Sr. NO	Practical Title	Hours	CLO
1.	Implementation and crypt-analysis of shift-based ciphers- Caesar Cipher, ROT-13 cipher)	02 Hours	2
2	Implementation of Transposition ciphers (Single as well as Multilevel)	02	2
3	Exploration of various tools to perform encryption and decryption	02	2
4	Cryptography-implementation using block-cipher DES	04	2
5	Implementation of random number generation techniques: linear congruential and blum-blum shub generator.	04	2
6	Asymmetric Cryptography- Creation of RSA key, RSA encryption and decryption	04	2
7	Simulating the Key Distribution Scenario for Symmetric Key Cryptography using the simulator of your choice.	02	3
8	Implementation of Hash modules- SHA and MD5, MAC, and use of hash-functions to form digital certificates	04	3
9	Demonstration of secure data storage, transmission, and creation of digital signatures (PGP and X.509 certificates) using GPG4win tool	02	3
10	Use of Snort/Wireshark tool for Network Intrusion Detection Systems to monitor network traffic and analyze attack patterns	04	3

Sign : Sunil Gautam