Reg. No. | | | | | | | | |

G. VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS), KOVILPATTI – 628 502.

PG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2025.

(For those admitted in June 2023 and later)

PROGRAMME AND BRANCH: M.Sc., COMPUTER SCIENCE

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
III	PART - III	CORE ELECTIVE - 3	P23CS3E3A	NETWORK SECURITY AND CRYPTOGRAPHY

Date & Session:12.11.2025/AN **Time : hours** **Maximum: Marks**

Course Outcome	Bloom's K-level	Q. No.	SECTION – A (10 X 1 = 10 Marks) Answer ALL Questions.
CO1	K1	1.	Which of the following is a symmetric key algorithm? a) RSA b) ECC c) DES d) Diffie-Hellman
CO1	K2	2.	DES stands for _____. a) Digital Encryption Standard b) Data Encryption Standard c) Data Evaluation System d) Direct Encryption Setup
CO2	K1	3.	Which algorithm is used in elliptic curve cryptography? a) RSA b) ECC c) Blowfish d) DES
CO2	K2	4.	Which of the following is a property of a good hash function? a) Large output b) Reversible c) Collision resistance d) Random length
CO3	K1	5.	Which of the following is a network authentication protocol? a) Kerberos b) IPsec c) SSL d) RSA
CO3	K2	6.	Which is a secure e-mail protocol? a) S/MIME b) DNS c) TCP/IP d) DHCP
CO4	K1	7.	Secure Electronic Transaction (SET) is used in _____. a) E-commerce b) Email encryption c) Social media d) DNS lookup
CO4	K2	8.	What does a firewall protect against? a) Data loss b) Unauthorized access c) Power failure d) Disk crash
CO5	K1	9.	What is forensic analysis used for in cyber security? a) Protecting passwords b) Encrypting emails c) Sending reports d) Investigating and analyzing digital evidence
CO5	K2	10.	A watermarking technique is used for_____. a) Copyright protection b) Firewall configuration c) Password management d) Virus detection

Course Outcome	Bloom's K-level	Q. No.	**SECTION – B (5 X 5 = 25 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K2	11a.	Elucidate the specific security mechanisms defined in X.800. **(OR)**
CO1	K2	11b.	Distinguish between the block cipher and stream cipher.
CO2	K2	12a.	Describe the need of number theory of cryptosystem. **(OR)**
CO2	K2	12b.	Summarize the advantages of RSA algorithm.
CO3	K3	13a.	Identify the format of S/MIME messages. **(OR)**
CO3	K3	13b.	Estimate the authentication services of Kerberos.
CO4	K3	14a.	Review the functions of Secure Electronic Transaction (SET). **(OR)**
CO4	K3	14b.	Illustrate the various types of firewalls.
CO5	K4	15a.	Express the importance of water marking. **(OR)**
CO5	K4	15b.	Analyse the basic concept of stenography.

Course Outcome	Bloom's K-level	Q. No.	**SECTION – C (5 X 8 = 40 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K4	16a.	Illustrate the requirements of RC5 encryption algorithm. **(OR)**
CO1	K4	16b.	Compare and construct the symmetric and asymmetric key cryptosystem.
CO2	K5	17a.	Describe the Diffie-Hellman key exchange algorithm. **(OR)**
CO2	K5	17b.	Analyze the approaches to message authentication.
CO3	K5	18a.	Determine the implementation of electronic mail security. **(OR)**
CO3	K5	18b.	Estimate the procedures of X.509 strong authentication.
CO4	K5	19a.	Discuss the secure socket layer in web security. **(OR)**
CO4	K5	19b.	Examine the techniques used for intrusion detection.
CO5	K6	20a.	Assess the requirements of Quantum cryptography. **(OR)**
CO5	K6	20b.	Predict the implementation of DSA cryptography algorithm.