

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH



LESSON PLAN Session-2024-2025

Semester: 6th Discipline: CSE Engg.

Subject: CNS

Name of the Teaching Faculty: P. K. Satapathy

Subject: CNS No. of Days/per week class allotted : 04

Semester From Date : 4/2/25 To Date: 17/5/25 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
1st topic-1	1st	Introduction to N/w security
	2nd	Need of N/w security
	3rd	N/w security approach
	4th	Principle of N/w security
2nd topic-2	1st	Types of security attacks
	2nd	Introduction to cryptography
	3rd	Plain text vs cipher text
	4th	Caesar cipher and monoalphabetic cipher
3rd	1st	Playfair cipher & hill cipher
	2nd	Poly alphabetic cipher
	3rd	Transposition Tech & Rail fence Tech
	4th	Column Transposition and Improved Technique.


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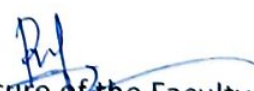
Week	Class Day	Theory /Practical Topics
4th	1st	Block cipher and running key cipher
	2nd	Encryption vs Decryption
	3rd	Symmetric Vs Asymmetric key
topic-3	4th	Symmetric key cryptography
5th	1st	Symmetric Key Algorithm
	2nd	AES with algorithm
	3rd	DES with algorithm
	4th	IDEA
6th	1st	RC4 and RC5
	2nd	RC6
	3rd	Advantage and Disadvantage of Asymmetric cryptography
	4th	Working principle of Asymmetric cryptography


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Week	Class Day	Theory /Practical Topics
7th	1st	RSA algorithm
	2nd	Problem solve on RSA algorithm
	3rd	Symmetric cryptography advantages
	4th	working principle of symmetric cryptography
8th	1st	Digital signature
	2nd	working principle of Digital signature
topic-4	3rd	Digital Certificate
	4th	Digital signature Vs Digital Certificate
9th	1st	Private key working principle
	2nd	public key working principle
	3rd	Challenges of private key encryption management
	4th	Introduction to PKIX.


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Week	Class Day	Theory /Practical Topics
10 th	1 st	Service and PKIX
	2 nd	PKIX Architectural Model
	3 rd	Public key cryptography standards
	4 th	RSA cryptography standards vs Password based cryptography
11 th (topic-5)	1 st	Internet security protocols
	2 nd	secure socket layer
	3 rd	SSL record protocol
	4 th	Handshake protocol
12 th	1 st	Alert protocol
	2 nd	Transparent layer security
	3 rd	Working of TLS
	4 th	Secure Hypertext transfer protocol(SHHTTP)


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Week	Class Day	Theory /Practical Topics
13 th	1 st	Time stamping protocol
	2 nd	Secure Electronic Transaction
topic 6	3 rd	User authentication Basic with examples.
	4 th	Password Vs Authentication tokens
14 th	1 st	Certificate based Authentication
	2 nd	Bio-metric authentication
topic 7	3 rd	VPN (virtual private network)
	4 th	Working with VPN
15 th	1 st	Firewall History
	2 nd	Types of firewall
	3 rd	TCP/IP protocols
	4 th	IP security


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