

**BHADRAK ENGINEERING SCHOOL & TECHNOLOGY (BEST), ASURALI, BHADRAK**

**CRYPTOGRAPHY AND NETWORK SECURITY (Th- 01)**

**TOPIC WISE DISTRIBUTION OF PERIODS & EXPECTED MARKS**

<b>Chapter No.</b>	<b>Topics</b>	<b>Periods as per Syllabus</b>	<b>Required period</b>	<b>Expected Marks</b>
01	POSSIBLE ATTACKS ON COMPUTERS	05	06	15
02	CRYPTOGRAPHY CONCEPTS	10	10	15
03	SYMMETRIC & ASYMMETRIC KEY ALGORITHMS	15	14	15
04	DIGITAL CERTIFICATE & PUBLIC KEY INFRASTRUCTURE	10	10	15
05	INTERNET SECURITY PROTOCOLS	10	08	15
06	USER AUTHENTICATION	04	05	10
07	NETWORK SECURITY & VPN	06	05	15
<b>TOTAL</b>		<b>60</b>	<b>58</b>	<b>100</b>

**Sign of Lect.**

**Sign of HOD.**

**Sign of AIC**

**Sign of Vice Principal**

## LESSON PLAN

<b>Discipline:</b> Computer Sc. & Engg.	<b>Semester:</b> Sixth (6 <sup>th</sup> )	<b>Name Of The Faculty:</b> Er Biswajit Moharana
<b>Subject:</b> Cryptography & Network Security	<b>No of days/ week class allotted:</b> Six(6)	<b>Semester from date:</b> 14. 02.2023 <b>to Date:</b> 23. 05.2023 <b>No of weeks:</b> 15
<b>WEEK</b>	<b>CLASS DAY</b>	<b>THEORY TOPICS</b>
1 <sup>st</sup>	1 <sup>st</sup>	<b>Chapter No.- 1: Possible Attacks On Computers</b> The need for security
	2 <sup>nd</sup>	Security approach
	3 <sup>rd</sup>	Principles of security
	4 <sup>th</sup>	Continue.....
	5 <sup>th</sup>	Types of attacks
	6 <sup>th</sup>	Continue....
2 <sup>nd</sup>	1 <sup>st</sup>	<b>Possible Question Answer Discussion</b>
	2 <sup>nd</sup>	<b>Chapter No.- 02 (Cryptography Concepts)</b> Plain text & Cipher Text
	3 <sup>rd</sup>	Substitution techniques
	4 <sup>th</sup>	Cont.
	5 <sup>th</sup>	Transposition techniques
	6 <sup>th</sup>	Continue
3 <sup>rd</sup>	1 <sup>st</sup>	Encryption & Decryption
	2 <sup>nd</sup>	Symmetric key cryptography
	3 <sup>rd</sup>	Asymmetric key cryptography
	4 <sup>th</sup>	Continue
	5 <sup>th</sup>	Symmetric & Asymmetric key cryptography difference
	6 <sup>th</sup>	<b>Possible Question Answer Discussion</b>
4 <sup>th</sup>	1 <sup>st</sup>	<b>Monthly Test- 1</b>
	2 <sup>nd</sup>	<b>Chapter No.- 03 (Symmetric &amp; Asymmetric Key Algorithms)</b> Symmetric key algorithm types
	3 <sup>rd</sup>	<b>Monthly Test- 1</b>
	4 <sup>th</sup>	Overview of Symmetric key cryptography
	5 <sup>th</sup>	Continue....
	6 <sup>th</sup>	Data encryption standards
5 <sup>th</sup>	1 <sup>st</sup>	Over view of Asymmetric key cryptography
	2 <sup>nd</sup>	Continue...
	3 <sup>rd</sup>	The RSA algorithm
	4 <sup>th</sup>	Problem using RSA algorithm
	5 <sup>th</sup>	Problem
	6 <sup>th</sup>	Symmetric key cryptography
6 <sup>th</sup>	1 <sup>st</sup>	Asymmetric key cryptography
	2 <sup>nd</sup>	Digital signature
	3 <sup>rd</sup>	<b>Possible Question Answer Discussion</b>
	4 <sup>th</sup>	<b>Chapter No.- 04(Digital Certificate &amp; Public Key</b>

		<b>Infrastructure)</b> Digital certificates
	5 <sup>th</sup>	Continue...
	6 <sup>th</sup>	Private key management
7 <sup>th</sup>	1 <sup>st</sup>	Continue
	2 <sup>nd</sup>	PKIX Model
	3 <sup>rd</sup>	Continue
	4 <sup>th</sup>	<b>Monthly Test- 2</b>
	5 <sup>th</sup>	Public key cryptography standards
	6 <sup>th</sup>	Continue...
8 <sup>th</sup>	1 <sup>st</sup>	<b>Possible Question Answer Discussion</b>
	2 <sup>nd</sup>	<b>Chapter No.- 05(Internet Security Protocols)</b> Basic concept
	3 <sup>rd</sup>	Secure socket layer
	4 <sup>th</sup>	Continue...
	5 <sup>th</sup>	Transport layer security
	6 <sup>th</sup>	Secure Hypertext transfer protocol (SHTTP)
9 <sup>th</sup>	1 <sup>st</sup>	Continue...
	2 <sup>nd</sup>	Time stamping protocol (TSP)
	3 <sup>rd</sup>	Secure electronic transaction (SET)
	4 <sup>th</sup>	<b>Possible Question Answer Discussion</b>
	5 <sup>th</sup>	<b>Chapter No.- 06(User authentication)</b> Authentication basics
	6 <sup>th</sup>	Password
10 <sup>th</sup>	1 <sup>st</sup>	Authentication Tokens
	2 <sup>nd</sup>	Continue
	3 <sup>rd</sup>	<b>Monthly Test- 3</b>
	4 <sup>th</sup>	Certificate based authentication
	5 <sup>th</sup>	Continue
	6 <sup>th</sup>	Biometric authentication
11 <sup>th</sup>	1 <sup>st</sup>	<b>Possible Question Answer Discussion</b>
	2 <sup>nd</sup>	<b>Chapter No.- 07(Network Security &amp; VPN)</b> Brief introduction of TCP/IP
	3 <sup>rd</sup>	Continue
	4 <sup>th</sup>	Firewall
	5 <sup>th</sup>	IP Security
	6 <sup>th</sup>	Continue
12 <sup>th</sup>	1 <sup>st</sup>	Virtual Private Network (VPN)
	2 <sup>nd</sup>	<b>Possible Question Answer Discussion</b>
	3 <sup>rd</sup>	Review Class for Chapter No.- 01
	4 <sup>th</sup>	Review Class for Chapter No.- 01
	5 <sup>th</sup>	Review Class for Chapter No.- 02
	6 <sup>th</sup>	Review Class for Chapter No.- 02
13 <sup>th</sup>	1 <sup>st</sup>	<b>Monthly Test- 4</b>
	2 <sup>nd</sup>	Review Class for Chapter No.- 03
	3 <sup>rd</sup>	Review Class for Chapter No.- 03
	4 <sup>th</sup>	<b>Possible Question Answer Discussion</b>

	5 <sup>th</sup>	Review Class for Chapter No.- 04
	6 <sup>th</sup>	Review Class for Chapter No.- 04
14 <sup>th</sup>	1 <sup>st</sup>	Review Class for Chapter No.- 05
	2 <sup>nd</sup>	Review Class for Chapter No.- 05
	3 <sup>rd</sup>	Review Class for Chapter No.- 06
	4 <sup>th</sup>	Review Class for Chapter No.- 06
	5 <sup>th</sup>	Review Class for Chapter No.- 07
	6 <sup>th</sup>	Review Class for Chapter No.- 07
15 <sup>th</sup>	1 <sup>st</sup>	Previous Year (S- 22) Question Answer Discussion
	2 <sup>nd</sup>	Previous Year (S- 22) Question Answer Discussion
	3 <sup>rd</sup>	Previous Year(S- 21) Question Answer Discussion
	4 <sup>th</sup>	Previous Year (S- 21) Question Answer Discussion
	5 <sup>th</sup>	Previous Year (S- 20) Question Answer Discussion
	6 <sup>th</sup>	Previous Year (S- 19) Question Answer Discussion

*Chapters covered up to IA: 1, 2 & 3.*