			L	**T**	**P**	**C**
P23CST08	**SECURITY PRACTICES**		**3**	**0**	**0**	**3**

Pre-Requisites : None

Objectives:

- To learn the core fundamentals of system and web security concepts.
- To have through understanding in the security concepts related to networks.
- To deploy the security essentials in IT Sector.
- To be exposed to the concepts of Cyber Security and cloud security.
- To perform a detailed study of Privacy and Storage security and related Issues.

Course Outcomes:

Upon completion of the course, students would be able to

		BT Level (highest level)
CO1	Understand the core fundamentals of system security	K2
CO2	Apply the security concepts to wired and wireless networks	K3
CO3	Implement and manage the security essentials in IT Sector	K2
CO4	Explain the concepts of Cyber Security and Cyber forensics	K2
CO5	Be aware of Privacy and Storage security Issues.	K5

Course Contents

Unit I   SYSTEM SECURITY   9

Model of Network Security - Security Attacks, Services and Mechanisms - OSI Security Architecture - A Cryptography Primer - Intrusion Detection System - Intrusion Prevention System - Security Web Applications - Case Study: OWASP - Top 10 Web Application Security Risks.

Unit II   NETWORK SECURITY   9

Internet Security - Intranet Security - Local Area Network Security - Wireless Network Security - Wireless Sensor Network Security - Cellular Network Security - Mobile Security - IOT Security - Case Study - Kali Linux.

Unit III   SECURITY MANAGEMENT   9

Information Security Essentials for IT Managers - Security Management System - Policy Driven System Management - IT Security - Online Identity and User Management System - Case Study: Metasploit.

Unit IV   CYBER SECURITY AND CLOUD SECURITY   9

Cyber Forensics - Disk Forensics - Network Forensics - Wireless Forensics - Database Forensics - Malware Forensics - Mobile Forensics - Email Forensics - Best Security Practices for Automate Cloud Infrastructure Management - Establishing Trust In IaaS, PaaS, and SaaS Cloud Types - Case Study: DVWA

Unit V   PRIVACY AND STORAGE SECURITY   9

Privacy on The Internet - Privacy Enhancing Technologies - Personal Privacy Policies - Detection of Conflicts in Security Policies - Privacy and Security in Environment Monitoring Systems - Storage Area Network Security - Storage Area Network Security Devices - Risk Management - Physical Security Essentials.

Total Hours   45

Text Books:

1. John R. Vacca, Computer and Information Security Handbook, Third Edition, 2017, Elsevier.

2. Michael E. Whitman, Herbert J. Mattord, Principles of Information Security, Seventh Edition, 20: Cengage Learning,.

3. Richard E. Smith, Elementary Information Security, Third Edition, 2019, Jones and Barl Learning.

Reference Books:

1. Mayor, K.K.Mookhey, Jacopo Cervini, FairuzanRoslan, Kevin Beaver, Metasploit Toolkit Penetration Testing, Exploit Development and Vulnerability Research, Syngress publication Elsevier, 2007. ISBN: 978-1-59749-074-0.

2. John Sammons, "The Basics of Digital Forensics- The Primer for Getting Started Digital Forensics", 2012,Syngress.

Web URL(s):

1. https://nptel.ac.in/courses/106106199

Bloom's Taxonomy Level
K1 - Remember, K2 - Understand, K3 - Apply, K4 - Analyse, K5 - Evaluate, K6 – Create
Mapping PEOs, POs & PSOs

COs	POs						PSOs		
	1	2	3	4	5	6	1	2	3
CO1	1	2	1	1	2	1	1	2	-
CO2	2	1	3	1	1	2	1	2	-
CO3	-	-	2	3	3	3	1	2	-
CO4	2	2	1	2	1	3	1	2	3
CO5	1	-	1	1	2	3	1	2	3
3 – High; 2 – Medium; 1 – Low; - No Correlation									