



# **SNS COLLEGE OF ENGINEERING**

Kurumbapalayam (Po), Coimbatore – 641 107

**An Autonomous Institution**

Accredited by NBA – AICTE and Accredited by NAAC – UGC with ‘A’ Grade  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING(IoT and  
Cybersecurity Including BCT)**

COURSE NAME : Fundamentals Of Cryptography

II YEAR / III SEMESTER

Unit I

Topic : Vulnerabilities



**Vulnerabilities** are weaknesses in a system that gives threats the opportunity to compromise assets. All systems have vulnerabilities.

### **1. Hardware Vulnerability:**

A hardware vulnerability is a weakness which can be used to attack the system hardware through physically or remotely.

For examples:

1. Old version of systems or devices
2. Unprotected storage
3. Unencrypted devices, etc.

### **2. Software Vulnerability:**

A software error happens in development or configuration such as the execution of it can violate the security policy. For examples:

1. Lack of input validation
2. Unverified uploads
3. Cross-site scripting
4. Unencrypted data, etc.



### **3. Network Vulnerability:**

A weakness happen in network which can be hardware or software.

For examples:

- 1.Unprotected communication
- 2.Malware or malicious software (e.g.:Viruses, Keyloggers, Worms, etc)
- 3.Social engineering attacks
- 4.Misconfigured firewalls

### **4. Procedural Vulnerability:**

A weakness happen in an organization operational methods.

For examples:

- 1.Password procedure – Password should follow the standard password policy.
- 2.Training procedure – Employees must know which actions should be taken and what to do to handle the security. Employees must never be asked for user credentials online. Make the employees know social engineering and phishing threats.