



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 : 19CS302 FUNDAMENTAL OF CRYPTOGRAPHY

II YEAR / III SEMESTER

Unit I-MATH BACKGROUND

Topic :ACTIVE AND PASSIVE ATTACKS



ACTIVE AND PASSIVE ATTACKS

Active and passive attacks are two categories of cyberattacks that describe different ways in which attackers can compromise the security of systems, networks, and data.

Passive Attacks

Passive attacks are characterized by the attackers attempt to gather information or data without altering the target system data or resources.

Eavesdropping: The attacker intercepts and listens to communication between two parties. This could involve monitoring network traffic or intercepting wireless transmissions.



Traffic Analysis: Attackers analyze patterns in network traffic to gain insights into the behavior, relationships, and potential vulnerabilities of the target.

Data Interception: Attackers capture data during transmission, aiming to obtain sensitive information, such as login credentials or personal data.

Active Attacks

Active attacks involve more direct interaction with the target system. In active attacks, the attacker may modify or disrupt the systems data or resources. These attacks are generally more noticeable and can have immediate impacts on the target.



Denial of Service (DoS) Attack: The attacker floods the target system with excessive traffic or requests, overwhelming its resources and causing it to become unavailable.

Distributed Denial of Service (DDoS) Attack: Similar to a DoS attack, but carried out from multiple sources simultaneously, making it more difficult to defend against.

Session Hijacking: The attacker takes control of an active session between a user and a system, potentially gaining access to sensitive information or performing actions on behalf of the user.