Module 5 : CS - Cryptography and Network Security

1. Explain Mitigation in reference to Cyber Security.

Ans: Mitigation in cyber security is a crucial element in safeguarding against potential cyber-attacks. Threat mitigation involves the adoption of processes, tools, and strategies by companies to reduce the severity and impact of a potential cyber-attack.

1. What are The difference between IDS & IPS ?

Ans: IDS: An Intrusion Detection System (IDS) is a security tool that monitors a computer network or systems for malicious activities or policy violations.

IPS: Intrusion Prevention System is also known as Intrusion Detection and Prevention System. It is a network security application that monitors network or system activities for malicious activity.

1. Explain NETWORK base IDS

Ans: An Intrusion Detection System (IDS) is a security tool that monitors a computer network or systems for malicious activities or policy violations. It helps detect unauthorized access, potential threats, and abnormal activities by analyzing traffic and alerting administrators to take action.

1. Explain How SSL & TLS work ?

Ans: Done.

1. What is Symmetric Key Cryptography and Asymmetric Key Cryptography.

Ans: [Encryption](https://www.geeksforgeeks.org/encryption-its-algorithms-and-its-future) is a process to change the form of any message to protect it from reading by anyone. In Symmetric-key encryption the message is encrypted by using a key and the same key is used to decrypt the message which makes it easy to use but less secure.

1. Explain How to Secure Server and Persional Computers.

Ans:

* Back up your data You should back up your data regularly.
* Use strong passwords and multi-factor authentication.
* Be aware of your surroundings.
* Be wary of suspicious emails.
* Install anti-virus and malware protection
* Protect your device when it’s unattended.
* Make sure your Wi-Fi connection is secure.
* Limit access to those who need it.

1. Explain the Suricata, and SolarWinds.
2. Describe the VPN and IPSec .

Ans: Done.