Module 1 CS- Introduction

1.what is meaning of cyber security

Ans:

Cybersecurity is like a **lock for your computer and phone**. Just like you lock your home to keep it safe from thieves, cybersecurity keeps your **personal information, photos, passwords, and bank details** safe from people who try to steal or damage them on the internet.

Example:

If someone tries to hack your Facebook or bank account, **cybersecurity tools** stop them from getting in.

2.what are the main objectives of cyber security?

Ans:

1. Confidentiality

Keep information **private and secret**.
Example: Only you can see your emails or bank details.

2. Integrity

Make sure the information is **correct and not changed**.
Example: No one should be able to change your exam marks or messages without permission.

3. Availability

Keep systems **working properly and always accessible**.
Example: You should be able to use your bank app or website anytime.

3.What is offensive and defensive in cyber security?

Ans:

- **Defensive Cybersecurity**

  This is like **building a strong wall** to protect your home.
  It means **protecting systems from hackers**.

  Example:

  - Installing antivirus software
  - Using firewalls
  - Updating passwords
  - Monitoring for attacks

  Goal: Stop attacks and keep data safe.

- **Offensive Cybersecurity**

  This is like **finding weak spots in someone else's wall**.
  It means **finding and attacking weaknesses — usually done by ethical hackers or for military purposes**.

  Example:

  - Penetration testing (ethical hacking)
  - Tracking down cyber criminals
  - Hacking into a system to test its security

  Goal: Understand how hackers work and stop them.

4.what is cyberspace and low

Ans:

Cyberspace is the **virtual world of the internet**.
It includes everything that happens online — like websites, emails, social media, chats, and apps.

Think of it as the **"digital space"** where people communicate, share, and store information.

Example:

- Watching YouTube
- Chatting on WhatsApp
- Using Google or Facebook

What is Cyber Law?

Cyber law is the **law that protects people and systems on the internet**.
It deals with **crimes and rules** in cyberspace.

Just like there are traffic rules on the road, **cyber laws are rules for safe internet use**.

Example:

- Punishing someone for hacking
- Laws against online scams
- Protecting your online privacy and data

5. What is cyber welfare?

Ans:

Cyber welfare means making sure that **people are safe, protected, and treated fairly** in the online world.

It focuses on:

- **Helping people stay safe online**
- **Promoting digital rights and privacy**
- **Educating about cyber safety**

6.Explain the Types of Hacker?

Ans:

1. White Hat Hacker (Good Hackers)

These are **ethical hackers** who help protect systems.
They find and fix security problems.

Example: Cybersecurity experts who test websites for safety.

2. Black Hat Hacker (Bad Hackers)

These hackers **break into systems to steal or damage data**.
They do it for money, revenge, or fun.

Example: Someone who steals your bank info or hacks a website.

3. Grey Hat Hacker (In Between)

These hackers **don’t mean harm**, but they might break rules.
They find problems without permission and may report them—or ask for a reward.

Example: Hacking a system to show it's weak, then telling the owner.

7.What is the full form of SOC in cyber security

Ans:

SOC stands for **Security Operations Center**.

A **Security Operations Center (SOC)** is a **team and place** where cybersecurity experts **monitor, detect, and respond to cyber threats** — 24/7.

It's like a **control room** that keeps an eye on all network activities to protect against hacking, viruses, and attacks.

Example:

If someone tries to hack a company, the SOC team gets alerts and takes action to stop it.

Let me know if you want a diagram or paragraph format!

8.What are the Challenges of Cyber Security

Ans:

- **More cyberattacks** every day
- **Lack of awareness** among users
- **Insider threats** from employees
- **Fast-changing technology**
- **Advanced hacking tools**