

1. What is the meaning of Cyber Security?

Cyber Security means protecting **computers, networks, systems, and data** from unauthorized access, attacks, damage, or theft using technologies, processes, and practices.

2. What are the Main Objectives of Cyber Security?

The main objectives are based on the **CIA Triad**:

1. Confidentiality

- Protects data from unauthorized access

2. Integrity

- Ensures data is accurate and not altered

3. Availability

- Ensures systems and data are available when needed

Additional Objectives:

- Authentication
- Authorization
- Non-repudiation

3. What is Offensive and Defensive in Cyber Security?

Offensive Cyber Security

- Focuses on **identifying and exploiting vulnerabilities**
 - Used for penetration testing and ethical hacking
- Example:** Vulnerability scanning, penetration testing

Defensive Cyber Security

- Focuses on **protecting systems and preventing attacks**
 - Used to monitor, detect, and respond to threats
- Example:** Firewalls, antivirus, IDS/IPS

4. What is Cyberspace and Law?

Cyberspace

- A virtual environment formed by interconnected computer networks
- Includes internet, networks, cloud systems, and digital communication

Cyber Law

- Laws that govern activities in cyberspace
 - Protect users from cyber crimes such as hacking, identity theft, and fraud
- Example:** IT Act 2000 (India)
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5. What is Cyber Welfare?

Cyber Welfare refers to promoting **safe, ethical, and responsible use of cyberspace** to protect individuals, organizations, and society.

Includes:

- Cyber awareness programs
 - Protection of children and users online
 - Digital safety education
 - Preventing cyber abuse and cyber crimes
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6. Explain the Types of Hackers

1. White Hat Hacker

- Ethical hackers
- Help improve security

2. Black Hat Hacker

- Illegal hackers
- Cause harm and steal data

3. Grey Hat Hacker

- Hack without permission but no harmful intent

4. Script Kiddies

- Use ready-made tools
- Limited technical skills

5. Hacktivists

- Hack for political or social causes

6. State-Sponsored Hackers

- Work for governments
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7. What is the Full Form of SOC in Cyber Security?

SOC stands for **Security Operations Center**

SOC Functions:

- Continuous monitoring
 - Threat detection and response
 - Incident management
 - Log analysis
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8. What are the Challenges of Cyber Security?

1. Increasing cyber attacks
2. Lack of skilled professionals
3. Rapid technological changes
4. Malware and ransomware threats
5. Insider threats
6. Cloud and IoT security issues
7. Data privacy concerns
8. Weak passwords and human error