

9. BASICS OF CYBER SECURITY

INTRODUCTION:

- Cyber security means protecting information, equipment, devices, computer, computer resource, communication device and information stored therein from unauthorised access, use, disclosure, disruption, modification or destruction.
- According to the IT Act, 2000, **"Cyber security means protecting information, equipment, devices computer, computer resource, communication device and information stored therein from unauthorised access, use, disclosure, disruption, modification or destruction."**

DATA AND FIGURES:

- **India has one of the highest numbers of cyber-attacks** and the country **ranks second** in terms of targeted attacks; India is placed on the 10th spot in the Global Cybersecurity Index; Total number of Internet subscribers increased from 743.19; million at the end of Mar-20 to 749.07 million.

MOTIVES BEHIND CYBER CRIME:

- Seeking commercial gain; To penetrate and attack critical assets; For strategic Advantages; Cyber Hacktivists with political and economic agendas.

METHODS OF CYBER CRIME/ATTACKS:

- Phishing; Cyber Stalking; Identity theft; Ransomware; Spoofing; Worms; Trojan horse.

COMPONENTS OF CYBER SECURITY:

- Application Security; Information security; Network Security; Disaster Recovery Planning

NEED/IMPORTANCE OF CYBER SECURITY:

- Individuals purpose for Photos, videos and other personal information; Business Organizations such as Companies have a lot of data and information on their systems; Government benefits; Critical Information Infrastructure Protection; Large scale digitization of public services; Large scale digitization of public services.

VARIANTS OF CYBER CRIME:

- Financial Frauds; Child Pornography; Cyber Bullying or Stalking; Copyright Infringement; Misuse of social media in fanning intolerance; Identity theft; Cyber phishing.

CYBER CRIME AGAINST WOMEN:

- Cyber stalking; Defamation; Picture Morphing; Trolling; Cyber Pornography

CYBER WARFARE:

- Involves units which are organized along nation-state boundaries; offensive and defensive operations, using computers to attack other computers or networks; Hackers and other individuals trained in software programming; According to CERT-In, cyber-attacks **increased by 89 per cent in 2019**.

FEATURES OF CYBER WAR AND TRADITIONAL WAR:

- Independent theatre of war; Borderless; Disguised attacker; Contactless war; Ease of location; maximum damage can be ensure; multidimensional impact and damage.

VULNERABILITIES OF INDIA TO CYBER THREATS:

- Lack of unified efforts; Shortage of trained and skilled workforce; Lack of advanced secured devices; Threat from imported software & hardware; Lack of awareness; Digital illiteracy.