CHAPTER-10, CYBER THREATS & SECURITY

Q1. What is Cybercrime? Mention into how many categories it is divided.

Ans:- **CYBERCRIME:-** A Cybercrime is an illegal activities done through Internet, e.g. : Identity Theft, Internet Frauds, Forgery, Harassing others, etc. Cybercrime can be divided into three main categories:-

1. Crime against an Individual person.
2. Crime against Property.
3. Crime against an Organisation/Society

Q.2 Write short note on Cybercrime against an individual person.

Ans:- The offences that cause or attempt to cause harm or threat an individual. These crimes can be committed in the form of:

1. **EMAIL SPOOFING:-** means hoax or misleading. In it, a receiver received a bogus message from a sender in which he has to clicks on a link. As he click the virus enters in his computer system.
2. **Cyber Stalking:-** In it, an attacker harasses a victim through emails, social media, instance messaging, etc. In cyber stalking the person can:
   a. Harass and humiliate the victim by posting false information about him.
   b. Monitor or view a victim's online activities.
   c. Damage the victim's computer by sending Viruses.
   d. Threaten the victim or his family.
3. **Cyber Bullying:-** it is an act of harassing someone consciously. This includes insulting remarks, threaten messages, spreading rumors, posting embarrassing photos & videos, etc.

Q3:- What is Computer Virus? Briefly explain its types.

Ans:- A computer Virus is a program or set of programs that disrupts the normal functioning of a computer. A virus infect or destroys data. The full form of **VIRUS** is **Vital Information Resource Under Seize**. Virus programs are self-replicating programs. Creating a computer virus and spreading it is a crime.

TYPES OF VIRUSES:-

1. **BOOT SECTOR VIRUS**:- This type of viruses damage the boot sector of a hard disk. The first sector of the hard disk is called the boot sector, which is responsible for reading and loading the operating system. Boot sector virus become active at the time of booting the machine & destroy the data in hard disk. For Example:- **Disk Killer, Stone Virus**, etc.
2. **PROGRAM FILE VIRUS**:- This virus infects the executable files or programs , such as those with extension , like .com, .exe, .ovl, .drv, .sys, etc. . For Example:- **Sunday, Cascade**, etc.

3. **MULTIPARTITE VIRUS**:- A Multipartite virus is a hybrid of a Boot Sector and Program File virus that spread in multiple ways. This virus gets entry into a computer through some infected media and then infect boot sector and other executable files. For Example:- **Invader, Flip, Tequila**, etc.

4. **POLYMORPHIC VIRUS**:- As the name suggests (poly-many, morph-forms), this type of virus exhibits itself in different forms every time it infects a file and changes its binary pattern to avoid detection by an antivirus program. For Example:- **Elkern, Marburg, Satan Bug**, etc.

5. **NETWORK VIRUS**:- Network viruses rapidly spread through a Local Network Area (LAN), or Internet. Network viruses multiply through shared resources. When the virus finishes infecting that computer, it moves on to the next and the cycle repeats itself. For Example:- **Nimda and SQL Slammer**, etc.

6. **MACRO VIRUS**:- A macro virus is associated with application software, like Word, Excel, PowerPoint. When opening the infected document, it gets loaded into main memory & destroyed the data stored in hard Disk. Once a macro virus gets active on your computer, every document you made, will become infected. For Example:- **Melissa.A, Relax, Bablas**, etc.

Q 4:- What do you mean by Cyber Security?

Ans:-   Cyber security is a collection of technologies, processes, and practices designed to protect networks, computers, programs, and data from attack, damage or unauthorized access. It includes the use of :

1. Antivirus software
2. Firewalls
3. Encryption software

Q 5 :- What is the utility of Antivirus?

Ans:-   Antivirus is a computer program, that is designed to identify, prevent and remove viruses from a computer. **Some popular antivirus are:-   McAfee, AVG Antivirus, Quick Heal, etc.** It perform the following tasks :-

1. Scan computer files to look for known viruses from virus dictionary.
2. Identifies suspicious behavior of any computer program, which might indicate infection.
3. Scans incoming E-mails, which might contain virus in the attachment.

Q 6 :- Write short note on Following:-

1. **FIREWALLS:**- Firewall is a security system that protects your computer by preventing unauthorized users from gaining access to it through network or internet. It is implemented on the gateway of a network and follows a specific rules identified by the user or the network administrator. Based on these rules, it controls the incoming and outgoing network traffic.

2. **<u>ENCRYPTION SOFTWARE:-</u>** While transmitting data over network, we may lose data privacy. We can protect our data from unauthorized access by using the technique called Encryption. Encryption is the process of covering your electronic data into a form that cannot be easily understood by anyone. Encryption software is used to produce the encrypted text called "Cipher Text"**.** To read an encrypted message, it has to be decrypted with the same software on the receiver's side. This process is called decryption. The Software applications, such as GunPg or GPG can be used to encrypt data files and emails.

3. **<u>PHISHING:-</u>** It is an act of sending an Email to a user misleading him. The user is asked to visit a website in which he is asked to update or validate his personal details, such as user name, password, credit/debit card details, etc. and operator misused your identity for crime.

4. **<u>VISHING:</u>**- Vishing is the criminal practice of using social influence over the telephone system, most often using features facilitated by Voice over IP(VoIP), to gain access to sensitive information such as credit card details from the public. The term is a combination of "Voice" and "phishing".

5. **<u>HACKING:</u>**- Hacking refers to an illegal entry into a computer system or network. Some hacker do it just for enjoyment while other hackers steals credit/ debit card information and transfer money or steal sensitive information and extorting money from some corporate giants.