Course Name: O Level (2ⁿᵈ Sem)   **Subject: ICT**
Topic: Viruses and Antivirus   **Date: 21-04-20**

Viruses: Viruses are computer programs that are written with an intention to damage something. Usually file of specific extensions are the targets of viruses but today the variety has grown much wide. Many different types of viruses are active these days that can damage a file, a program, an operating system or even a network.

Viruses are of many types but some of the popular categories are as under:

1. **Worms:** A worm is a true virus. These are small programs that target a particular type of file (for example- .pdf, .docx etc). Worms are also capable to replicate themselves.

2. **Malwares:** Malware is a kind of virus that compels a normal program to malfunction. User and system programs are the target of these viruses.

3. **Spyware:** These are the kind of viruses that work like a spy. A spyware runs silently in the system and keeps sharp notice on Log-In data.

4. **Ransom ware:** A ransom ware converts all the files to some unknown extensions and then demands a typical ransom to revert those files.

5. **Logic Bomb:** Logic bombs are designed to destroy a particular logic in a system so that the beneficiaries of that system suffer.

6. **Mailer:** Mailers are those viruses that are spread through E-mail attachments.

7. **Trojan horse:** These are one of the most popular viruses spread day by day. Trojan Horses, spoof their identity. They appear to the user as a very useful file but are extremely hazardous in nature.

Antivirus program:

An antivirus program is software that is designed to detect viruses and is authorized to delete/lock/heal them. Antivirus works in collaboration to our OS and scans every file that exists on our HDD. Every suspicious file is caught and user's intuition is asked to perform on that file.

Working of an antivirus: Every antivirus program is equipped with a detailed comprehensive database commonly referred to as "virus definitions". This database contains the definitions of all the viruses built till the date of release of that antivirus. When scanned, all the files (in the computer) are compared to the definitions. Every match makes a doubt of being a virus in the system. All these suspicious files are marked, listed and shown to the user when finished.

Antivirus Update: Since the database of an antivirus is a collection of virus definitions, it has to be updated on regular intervals. An updated database is capable enough to catch the latest viruses. Every antivirus company runs a web service that can provide definitions of the latest viruses. As a user we need to connect to the web service of our antivirus and keep it updated periodically.

Scan schedule: An antivirus can be scheduled to start its scanning process automatically on a predefined time. Although, most of the antivirus software provides a boot time scan feature which is, when scheduled, can detect viruses more intensely.

Assignments:

1. What is a computer virus? What are the major types of these viruses?
2. How does an antivirus program work? Why should it be updated?