

### Questions:

1. Define the term **Linux Distribution**.

-> A Linux distribution (distro) is a complete operating system made up of the Linux kernel, system utilities, libraries, and application software. It is packaged in a specific way to provide a functional and user-friendly computing environment.

2. List and explain **two advantages** of installing a Linux distribution on your home computer or laptop.

➔ The 2 advantages of installing a Linux distribution on your home machine are:

Most Linux distributions are free and open-source, allowing users to view, modify, and distribute the source code. This fosters a collaborative and transparent development environment.

Linux distributions offer a wide range of customization options, allowing users to tailor the system to their specific needs. Users can choose desktop environments, package managers, and software components.

3. List and explain two things to consider prior to installing a Linux distribution on your home computer.

➔ Those 2 things are:

To ensure that the chosen Linux distribution is compatible with the hardware components of your computer, including graphics cards, Wi-Fi adapters, and peripherals.

To choose a distribution based on your intended use and preferred user interface. Different distributions cater to various purposes, such as general desktop use, server management, or specialized tasks.

4. Explain why installing **Multi-boot** for Linux is useful for **computer troubleshooting**.

➔ Multi-boot allows the installation of multiple operating systems on a single computer. It is useful for troubleshooting as it enables users to boot into different environments, including Linux and other operating systems, to diagnose and resolve issues without affecting the primary system.

5. Define the term **Virtualization**.

-> Virtualization is the process of creating a virtual (rather than actual) version of something, such as a virtual machine (VM) that emulates a complete computer system within another system. In the context of Linux, virtualization allows running multiple Linux instances on a single physical machine.

6. List the **steps** to start the Knoppix Linux distribution from your home computer.
  - Insert the Knoppix Live CD or USB drive into the computer.
  - Restart the computer.
  - Ensure that the computer is set to boot from the CD/DVD or USB drive in the BIOS/UEFI settings.
  - Follow on-screen instructions to start Knoppix
7. List **4 applications** that are contained in the Knoppix Linux Live distribution.  
->  
**OpenOffice.org**: Office suite for word processing, spreadsheets, presentations, etc.  
**GIMP (GNU Image Manipulation Program)**: Graphics editing software.  
**Mozilla Firefox**: Web browser for internet access.  
**Audacity**: Audio editing software.
8. Explain the difference between a **Live Linux distribution** and an **installed Linux distribution**.  
→ The actual difference is:
  - **Live Linux Distribution**: Runs directly from external media (CD, DVD, USB) without installation. It allows users to try Linux without making changes to the system.
  - **Installed Linux Distribution**: Installed on the computer's hard drive, providing a persistent and customized environment. It requires a partition or dedicated space on the hard drive.