Q1. What is Bash?

#answer

Bash is a Unix shell and command language used in Linux and macOS. It allows users to interact with the system by executing commands.

Q2. How does the kernel interact with the shell?

#answer

The kernel manages system resources and hardware, while the shell acts as an interface between the user and the kernel. The shell sends commands to the kernel, which processes them.

Q3. What is a kernel?

#answer

The kernel is the core part of an operating system that manages system resources, hardware, memory, and processes.

Q4. What is the terminal?

#answer

The terminal is a text-based interface for interacting with the operating system via commands.

Q5. How is Linux different from Windows?

#answer

Linux is open-source, more customizable, and has better security. Windows is proprietary, user-friendly, and widely supported by software.

Q6. What are both Linux and Windows?

#answer

Both are operating systems that manage hardware, resources, and software applications.

Q7. What are Bash scripts?

#answer

Bash scripts are text files containing a series of commands executed by the Bash shell to automate tasks.

Q8. Who made Linux?

#answer

Linux was created by Linus Torvalds in 1991.

Q9. How does Linux work?

#answer

Linux operates using the kernel to manage system resources, with users interacting through shells or graphical interfaces.

Q10. What is a shell?

#answer

A shell is an interface that allows users to interact with the operating system, typically through text commands.

Q11. What is the purpose of Linux?

#answer

Linux's purpose is to provide an open-source, secure, and flexible operating system for a wide range of uses, from servers to desktops.

Q12. Examples of Linux OS and how they differ?

#answer

Examples include Ubuntu, Fedora, and Arch. They differ in package management, default environments, and user experience.

Q13. How does Ubuntu work?

#answer

Ubuntu is a Linux distribution based on Debian, offering a user-friendly interface with a focus on ease of use and community support.

Q14. What OS was used in the lab?

#answer

#answer (needs input based on lab details)

Q15. Linux directory/file system?

#answer

Linux uses a hierarchical directory structure starting from the root ("/") directory. Common directories include `/home`, `/bin`, `/var`, and `/etc`.

Q16. Why would people choose Linux over Windows?

#answer

Linux is chosen for its security, customization, performance, and open-source nature. It's commonly used in servers and development.

Q17. Where is Linux used (e.g., servers, home systems, etc.)?

#answer

Linux is used in servers, embedded systems, development environments, and desktop systems for specialized tasks.

Q18. How is Linux used in those areas?

#answer

In servers, Linux manages large workloads efficiently. In home systems, it's used for programming or as an alternative OS. In embedded systems, it controls devices.

Q19. What is a virtual machine?

#answer

A virtual machine is software that emulates an operating system, allowing users to run different OS instances on a host system.

Q20. Learn about Bash and terminal?

#answer

Bash is a command-line shell used for executing commands, while the terminal is the environment where users input these commands.

Q21. How does an OS work (kernel and shell)?

#answer

The kernel handles system operations like resource management, while the shell provides an interface for users to send commands to the kernel.

Q22. What is dual booting and partitioning (out of syllabus)?

#answer

Dual booting involves installing multiple OSes on separate partitions, allowing users to select one at startup. Partitioning divides disk space into isolated sections.
