☐ EASY (Q1–Q10)

Q1. Linux is primarily classified as:
A. Application software
B. Programming language
C. Operating system kernel
D. Database system

Q2. Who originally developed the Linux kernel?
A. Richard Stallman
B. Linus Torvalds
C. Dennis Ritchie
D. Ken Thompson

Q3. Linux is distributed under which license?
A. MIT
B. BSD
C. GPL
D. Apache

Q4. Which component of Linux interacts directly with hardware?
A. Shell
B. File system
C. Kernel
D. User applications

Q5. Linux is best known for which characteristic?
A. Closed source
B. Vendor lock-in
C. Open source
D. GUI dependency

Q6. Which term refers to different Linux distributions?
A. Flavors
B. Forks
C. Distros
D. Versions

Q7. Which is an example of a Linux distribution?
A. Windows
B. Solaris
C. Ubuntu
D. MS-DOS

Q8. Linux supports which type of multitasking?
A. Cooperative

B. Preemptive
C. Single-tasking
D. Batch only

Q9. Which interface allows users to interact using commands?
A. GUI
B. Kernel
C. CLI
D. BIOS

Q10. Linux was initially developed for which architecture?
A. ARM
B. PowerPC
C. x86
D. SPARC

☐ **MEDIUM (Q11–Q25)**

Q11. Which philosophy strongly influenced Linux development?
A. Monolithic design
B. Proprietary control
C. Small tools doing one job well
D. GUI-first approach

Q12. Which layer sits between hardware and applications in Linux?
A. Shell
B. Kernel
C. File system
D. BIOS

Q13. Which feature allows multiple users to work simultaneously on Linux?
A. Multi-boot
B. Multi-threading
C. Multi-user capability
D. Virtual memory

Q14. Linux follows which file system structure philosophy?
A. Drive-based
B. Registry-based
C. Hierarchical tree
D. Flat file

Q15. Which of the following is NOT a core function of the Linux kernel?
A. Process management

B. Memory management
C. Device management
D. Text editing

Q16. Which command interpreter is commonly used in Linux?
A. CMD
B. PowerShell
C. Bash
D. Zsh only

Q17. Which Linux feature improves system reliability?
A. Single-user mode only
B. Modular kernel
C. Fixed memory allocation
D. Hard-coded drivers

Q18. Which environment variable defines the default shell?
A. $PATH
B. $HOME
C. $USER
D. $SHELL

Q19. Linux supports which type of file permissions?
A. Owner only
B. Owner and system
C. User, group, others
D. Admin and guest

Q20. Which organization maintains the Linux kernel today?
A. GNU Foundation
B. Linux Foundation
C. Apache Foundation
D. Red Hat

Q21. Linux is widely used in servers mainly because of:
A. High licensing cost
B. Stability and security
C. GUI features
D. Gaming support

Q22. Which Linux feature allows running multiple programs seemingly at once?
A. Virtualization
B. Multitasking
C. Paging
D. Spooling

Q23. Which type of OS is Linux?
A. Real-time only
B. Embedded only
C. General-purpose
D. Single-task

Q24. Which Linux component provides user interaction?
A. Kernel
B. Shell
C. Loader
D. Firmware

Q25. Linux kernel source code is written primarily in:
A. Java
B. Python
C. C
D. Assembly only

⬤ HARD (Q26–Q40)

Q26. Which design approach does the Linux kernel primarily follow?
A. Microkernel
B. Hybrid kernel
C. Monolithic kernel
D. Exokernel

Q27. Which statement best differentiates Linux from UNIX?
A. Linux is proprietary
B. UNIX is open source
C. Linux is UNIX-like but not UNIX
D. UNIX has no kernel

Q28. Which kernel feature allows dynamic loading of drivers?
A. Kernel threads
B. Loadable Kernel Modules
C. Virtual memory
D. Swap space

Q29. In Linux architecture, which layer provides system calls?
A. Shell
B. Application layer
C. Kernel
D. Hardware layer

Q30. Which scheduling approach is used by modern Linux kernels?
A. Round-robin only
B. First-come-first-serve
C. Completely Fair Scheduler
D. Priority-only scheduling

Q31. Which Linux capability enhances fault isolation?
A. Static linking
B. Process isolation
C. Single address space
D. Fixed memory blocks

Q32. Which Linux feature enables running different OS environments?
A. Paging
B. Multitasking
C. Virtualization
D. Spooling

Q33. Why is Linux preferred in embedded systems?
A. Heavy GUI support
B. Customizable kernel
C. High hardware requirements
D. Proprietary drivers

Q34. Which Linux concept ensures programs cannot access each other's memory?
A. Swapping
B. Paging
C. Memory protection
D. Caching

Q35. Which subsystem handles hardware abstraction in Linux?
A. Shell
B. HAL/Kernel drivers
C. User space
D. File system

Q36. Which Linux feature supports scalability from mobile to supercomputers?
A. Fixed kernel size
B. Modular architecture
C. Single-thread execution
D. Hard-coded resources

Q37. Linux kernel updates are typically managed using:
A. BIOS upgrades
B. Firmware flashing

C. Package managers
D. Shell scripts only

Q38. Which Linux characteristic improves security posture?
A. Open ports by default
B. Mandatory root usage
C. Permission-based access control
D. GUI-only administration

Q39. Which factor most contributed to Linux's enterprise adoption?
A. Gaming support
B. Free licensing & stability
C. Proprietary drivers
D. Desktop focus

Q40. Linux is considered "open source" because:
A. It runs on open hardware
B. Source code is publicly available
C. Anyone can modify binaries only
D. It has no copyright