

*Test Bank for Linux Fundamentals 2nd
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Chapter: Chapter 01 - Quiz

Multiple Choice

1. The four main parts of a Linux system are the Linux kernel, _____, a user interface, and application software.

- A) a firewall
- B) memory management
- C) GNU utilities
- D) runlevels

Ans: C

Complexity: Easy

Ahead: What Is Linux?

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy: Remember

2. Which of the following is *not* a primary task of the Linux kernel?

- A) System memory management
- B) Hardware management
- C) Network address allocation
- D) Software program management

Ans: C

Complexity: Easy

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback: The four main functions of the Linux kernel are system memory management, software program management, hardware management, and filesystem management.

Taxonomy: Remember

3. When the kernel wishes to access a memory page and the page is not located in physical memory, where does it go to retrieve the page?

- A) File server
- B) Filesystem
- C) Disk
- D) Network

Ans: C

Complexity: Medium

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback: The kernel maintains a table of the memory pages that indicates which pages are in physical memory and which pages are swapped out to disk.

Taxonomy: Understand

4. You run the `meminfo` command on a Linux server and it reports the following results:

```
MemTotal:      3996421 kB
MemFree:       601133 kB
MemAvailable:  1984452 kB
```

Approximately how much physical memory is installed on the server?

- A) 4 GB
- B) 600 MB
- C) 2 GB
- D) 6 GB

Ans: A

Complexity: Medium

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback: The `MemTotal` line provides the total amount of physical memory installed on the server. In this case, it is approximately 4 GB.

Taxonomy: Analyze

5. Which of the following processes must start first on a Linux system?

- A) cron
- B) first
- C) init
- D) kswapd

Ans: C

Complexity: Medium

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback: The `init` process is the first process created by the kernel and is used to start all other processes running on the system.

Taxonomy: Analyze

6. You are creating a filesystem for a Linux system. It is based on a newer, high-performance filesystem that supports journaling and large files. Which filesystem are you using?

- A) ext

- B) ext2
- C) ext3
- D) btrfs

Ans: D

Complexity: Hard

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy: Understand

7. You are selecting a shell for your Linux system. You are concerned about the amount of memory used by the shell. Which of the following shells would be the best choice?

- A) bash
- B) ksh
- C) tcsh
- D) ash

Ans: D

Complexity: Medium

Ahead: Linux User Interfaces

Subject: Chapter 1

Title: Linux Basics

Feedback: The ash shell is a simple, lightweight shell that runs in low-memory environments but has full compatibility with the bash shell.

Taxonomy: Apply

8. What is the default shell used in most Linux distributions?

- A) bash
- B) ksh
- C) tcsh
- D) ash

Ans: A

Complexity: Medium

Ahead: Linux User Interfaces

Subject: Chapter 1

Title: Linux Basics

Feedback: Bash was developed by the GNU Project as a replacement for the standard Unix shell, called the Bourne shell (after its creator). The bash name is a play on this wording, referred to as the Bourne again shell.

Taxonomy: Remember

9. You are installing a Linux system for a customer who prefers the GNOME desktop. Which GNOME application will provide a graphical file manager?

- A) Amarok
- B) Dolphin
- C) Konqueror
- D) Nautilus (now called Files)

Ans: D

Complexity: Medium

Ahead: Linux User Interfaces

Subject: Chapter 1
Title: Linux Basics
Feedback:
Taxonomy: Understand

10. You are managing memory on a Linux system that does not have sufficient physical memory to run all of the applications you require. To augment the physical memory, you arrange to have locations on the computer's hard drive switch out the contents from this location to physical memory. What is the name of this location?

- A) Vlocks
- B) Managed memory
- C) Swap space
- D) Virtual memory

Ans: C

Complexity: Medium

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback: Virtual memory is memory that does not exist but is created on the hard drive and treated as real memory. It uses space on the hard disk called swap space. The Linux kernel swaps the contents of virtual memory back and forth from the swap space to the actual physical memory.

Taxonomy: Apply

11. You want to test a derivative Linux distribution on your computer without installing it to see if it will function properly on the PC's hardware. This specialized distribution should run the entire system. How will you do this?

- A) Use a LiveDVD version burned to a USB stick to boot the system to Debian.
- B) Use a LiveDVD version burned to a DVD to boot the system to Gentoo.
- C) Use a LiveDVD version burned to a USB stick to boot the system to Mint.
- D) Use a LiveDVD version burned to a DVD to boot the system to openSUSE.

Ans: C

Complexity: Hard

Ahead: Linux Distributions: Why So Many?

Subject: Chapter 1

Title: Linux Basics

Feedback: Most Linux distributions also have a LiveDVD version available. Depending on the distribution, the LiveDVD either contains a small subset of applications such as Debian, Gentoo, and openSUSE or, in the case of specialized distributions such as Mint or Ubuntu, the entire system. The benefit of the LiveDVD is that you can test it with your system hardware before going through the trouble of installing the system.

Taxonomy: Apply

12. What core Linux distribution is popular with Linux experts and is one of the original distributions?

- A) Fedora
- B) MX Linux
- C) Slackware
- D) Ubuntu

Ans: C

Complexity: Medium

Ahead: Linux Distributions: Why So Many?

Subject: Chapter 1

Title: Linux Basics

Feedback: Most distributions are customized for a specific user group. Slackware is one of the original Linux distributions popular with Linux geeks.

Taxonomy: Understand

13. When shell commands are grouped together so they can be executed as a program, they are called:

- A) C programming language.
- B) command-line interface.
- C) command prompt.
- D) shell scripts.

Ans: D

Complexity: Medium

Ahead: Linux User Interfaces

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy: Understand

14. Which of the following is true of the Linux KDE Plasma and GNOME 3 desktop environments?

- A) They require far fewer system resources to run than the Microsoft Windows desktop environment.
- B) They require about the same amount of system resources to run as the Microsoft Windows desktop environment.
- C) They require significantly more system resources to run than the Microsoft Windows desktop environment.
- D) They can run on a PC only if emulating Windows, such as the Linux fwm desktop.

Ans: B

Complexity: Medium

Ahead: Linux User Interfaces

Subject: Chapter 1

Title: Linux Basics

Feedback: In the early days of Linux, a hallmark and selling feature of Linux was its ability to operate on older, less powerful PCs that the newer Microsoft desktop products couldn't run on. However, with the popularity of KDE Plasma and GNOME 3 desktops, this has changed because it takes just as much memory to run a KDE Plasma or GNOME 3 desktop as the latest Microsoft desktop environment.

Taxonomy: Understand

15. You are building a Linux system for use by individuals familiar with the Windows environment and want to provide them with a familiar look and feel. What desktop environment was designed for this purpose?

- A) K Desktop Environment (KDE)
- B) X Window
- C) XFree86
- D) GNOME

Ans: A

Complexity: Easy

Ahead: Linux User Interfaces

Subject: Chapter 1

Title: Linux Basics

Feedback: KDE was first released in 1996 as an open-source project to produce a graphical desktop similar to the Microsoft Windows environment.

Taxonomy: Understand

16. You list the device files on a Linux system and the following results appear:

```
brw-rw----. 1 root disk      8,  0 Sep 10 16:27 sda
brw-rw----. 1 root disk      8,  1 Sep 10 16:27 sda1
brw-rw----. 1 root disk      8,  2 Sep 10 16:27 sda2
brw-rw----. 1 root disk      8,  3 Sep 10 16:27 sda3
brw-rw----. 1 root disk      8,  4 Sep 10 16:27 sda4
crw-rw----. 1 root dialout  4, 64 Sep 10 16:27 ttyS0
crw-rw----. 1 root dialout  4, 65 Sep 10 16:27 ttyS1
crw-rw----. 1 root dialout  4, 66 Sep 10 16:27 ttyS2
crw-rw----. 1 root dialout  4, 67 Sep 10 16:27 ttyS3
```

How many physical hard disks are present on this system?

- A) 1
- B) 4
- C) 5
- D) 8

Ans: A

Complexity: Hard

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback: The sda device is the only disk device on the system. Each of the numbered sda devices (i.e., sda1, sda2, sda3, and sda4) are partitions of that physical drive.

Taxonomy: Evaluate

17. Which of the following is *not* a component of the GNU coreutils package?

- A) Utilities for handling files
- B) Utilities for configuring firewalls
- C) Utilities for manipulating text
- D) Utilities for managing processes

Ans: B

Complexity: Easy

Ahead: The GNU Utilities

Subject: Chapter 1

Title: Linux Basics

Feedback: The GNU coreutils package consists of three parts: utilities for handling files, utilities for manipulating text, and utilities for managing processes.

Taxonomy: Remember

18. Which file defines the default runlevel for the Linux system?

- A) /etc/defaults
- B) /etc/inittab
- C) /etc/rc.d
- D) /etc/resolv.conf

Ans: B

Complexity: Medium
Ahead: The Linux Kernel
Subject: Chapter 1
Title: Linux Basics
Feedback:
Taxonomy: Remember

19. What Linux runlevel is also known as single-user mode?

- A) 0
- B) 1
- C) 3
- D) 5

Ans: B

Complexity: Medium
Ahead: The Linux Kernel
Subject: Chapter 1
Title: Linux Basics
Feedback:
Taxonomy: Remember

20. What allows developers to insert device driver code into a running kernel without having to recompile the kernel?

- A) Block device file
- B) Character device file
- C) Kernel code
- D) Kernel modules

Ans: D

Complexity: Medium
Ahead: The Linux Kernel
Subject: Chapter 1
Title: Linux Basics
Feedback:
Taxonomy: Understand

True/False

1. True or False? The kernel controls all of the hardware and software on the computer system.

Ans: True

Complexity: Easy
Ahead: The Linux Kernel
Subject: Chapter 1
Title: Linux Basics
Feedback:
Taxonomy:

2. True or False? The kernel manages physical memory but cannot create or manage virtual memory.

Ans: False

Complexity: Medium

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback: The kernel manages physical memory and can create and manage virtual memory.

Taxonomy:

3. True or False? The kernel keeps track of which memory pages are in use and automatically copies memory pages that have not been accessed for a period of time to the swap space area.

Ans: True

Complexity: Medium

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

4. True or False? The runlevel defines the state of the running Linux system and what processes should run in each state.

Ans: True

Complexity: Easy

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

5. True or False? In Linux, processes run only in the background.

Ans: False

Complexity: Easy

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback: A process can run in the foreground, displaying output on a display, or it can run in the background behind the scenes.

Taxonomy:

6. True or False? A distribution is a complete Linux system package.

Ans: True

Complexity: Easy

Ahead: Linux Distributions: Why So Many?

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

7. True or False? Any device that the Linux system must communicate with needs driver code.

Ans: True

Complexity: Easy

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

8. True or False? Linux represents hardware devices as special files called device files.

Ans: True

Complexity: Easy

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

9. True or False? The init process defines how the operating system stores data on storage devices.

Ans: False

Complexity: Easy

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback: A filesystem defines how the operating system stores data on storage devices.

Taxonomy:

10. True or False? The Linux kernel interfaces with each filesystem using the Virtual File System (VFS).

Ans: True

Complexity: Easy

Ahead: The Linux Kernel

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

11. True or False? GNU stands for GNU's Not Unix.

Ans: True

Complexity: Easy

Ahead: The GNU Utilities

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

12. True or False? The X Window software is a low-level program that works directly with the video card and monitor in the workstation and controls how Linux applications can present fancy windows and graphics on your computer.

Ans: True

Complexity: Medium

Ahead: Linux User Interfaces

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

13. True or False? KDE Plasma and GNOME are examples of desktop environments.

Ans: True

Complexity: Easy

Ahead: Linux User Interfaces

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

14. True or False? Kaffeine, KMail, and KOffice are applications native to the GNOME desktop environment.

Ans: False

Complexity: Medium

Ahead: Linux User Interfaces

Subject: Chapter 1

Title: Linux Basics

Feedback: Kaffeine, KMail, and KOffice are native to the KDE Plasma desktop environment.

Taxonomy:

15. True or False? The Epiphany web browser and Nautilus graphical file manager are native to the GNOME desktop.

Ans: True

Complexity: Easy

Ahead: Linux User Interfaces

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

16. True or False? Cinnamon is a type of Linux distribution.

Ans: False

Complexity: Easy

Ahead: Linux User Interfaces

Subject: Chapter 1

Title: Linux Basics

Feedback: Cinnamon is a type of Linux graphical desktop.

Taxonomy:

17. True or False? The Linux command-line interface (CLI) enables a user to start programs, manage files on the filesystem, and manage processes running in Linux.

Ans: True

Complexity: Medium

Ahead: Linux User Interfaces

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

18. True or False? A core Linux distribution contains a kernel, one or more graphical desktop environments, and just about every Linux application that is available.

Ans: True

Complexity: Medium

Ahead: Linux Distributions: Why So Many?

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

19. True or False? An ISO image file is a complete disk image of a DVD as a single file.

Ans: True

Complexity: Easy

Ahead: Linux Distributions: Why So Many?

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy:

20. True or False? A derivative Linux distribution is typically based on a core distribution but contains only a subset of applications for a specific area of use.

Ans: True

Complexity: Medium

Ahead: Linux Distributions: Why So Many?

Subject: Chapter 1

Title: Linux Basics

Feedback:

Taxonomy: