Name of the Bundle	Advanced Bundle V2	Subject	System Administration
Topic	Computer Software & Firmware	Last updated on	06 January 2025

1. What is computer software?
    a. Hardware components of the computer
    b. Instructions that tell the computer what to do
    c. The physical structure of the computer
    d. The internet network

Ans: b. Instructions that tell the computer what to do

Explanation: Computer software consists of programs or instructions that allow the hardware to perform specific tasks.

2. What is the main purpose of software?
    a. To connect the computer to the internet
    b. To help the computer perform tasks and solve problems
    c. To make the computer more expensive
    d. To increase the computer's storage

Ans: b. To help the computer perform tasks and solve problems

Explanation: Software enables a computer to perform a wide range of tasks,from basic operations to complex problem-solving.

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3. What is a software update?
    a. A new computer
    b. A hardware upgrade
    c. A fix or improvement to the software
    d. A new version of the computer hardware

Ans: c. A fix or improvement to the software

Explanation: A software update fixes bugs and may add new features to improve performance.

4. Which of the following is a type of software that manages computer hardware?
    a. Application software
    b. System software
    c. Utility software
    d. Database software

Ans: b. System software

Explanation: System software manages and controls the hardware components of the computer. Examples include operating systems like Windows and macOS.

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5. Which software is used to maintain and optimize a computer system?

    a. System software

    b. Utility software

    c. Application software

    d. Device drivers

Ans: b. Utility software

Explanation: Utility software helps perform maintenance tasks such as file management and system optimization (e.g., Disk Cleanup, antivirus software).

6. Which of the following is an example of system software?

    a. Adobe Photoshop

    b. Microsoft Excel

    c. Linux

    d. Google Chrome

Ans: c. Linux

Explanation: System software includes programs like operating systems (e.g., Linux, Windows) that manage the hardware and software resources of a computer.

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7. Which of the following software helps the computer perform specific tasks for the user, such as editing images or creating presentations?

    a. System software

    b. Utility software

    c. Application software

    d. Firmware

Ans: c. Application software

Explanation: Application software is designed for end-users to perform specific tasks, such as image editing (Photoshop) or creating presentations (PowerPoint).

8. Which type of software is used to communicate with hardware devices, such as printers and scanners?

    a. Application software

    b. System software

    c. Utility software

    d. Device drivers

Ans: d. Device drivers

Explanation: Device drivers allow the operating system to communicate with hardware devices like printers, scanners, and video cards.

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9. What is the primary purpose of utility software?

    a. To help the user perform tasks like creating documents

    b. To manage system resources

    c. To maintain and optimize system performance

    d. To create new software

Ans: c. To maintain and optimize system performance

Explanation: Utility software performs tasks that help maintain or improve system performance, such as disk cleanup or antivirus programs.

10. Which of these is an example of operating system software?

    a. Google Docs

    b. Adobe Reader

    c. Windows 10

    d. VLC Media Player

Ans: c. Windows 10

Explanation: Operating systems like Windows, Linux, and macOS manage the hardware and software resources of a computer.

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11. Which software category includes programs for video editing, word processing, or web browsing?

    a. System software

    b. Utility software

    c. Application software

    d. Network software

Ans: c. Application software

Explanation: Application software helps users perform specific tasks, such as creating documents, editing videos, or browsing the web.

12. Which of these is an example of application software?

    a. Microsoft Word

    b. Windows

    c. Linux

    d. BIOS

Ans: a. Microsoft Word

Explanation: Application software is designed to help the user perform specific tasks, like writing documents in Microsoft Word.

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Topic	Computer Software & Firmware	Last updated on	06 January 2025

13. What is firmware?

    a. A type of application software

    b. A hardware component

    c. A type of system software stored in hardware

    d. A program for browsing the internet

Ans: c. A type of system software stored in hardware

Explanation: Firmware is a special type of software that is stored in hardware (like a computer's ROM or flash memory) and is responsible for controlling hardware devices.

14. Which of the following devices typically uses firmware?

    a. Printer

    b. Smartphone

    c. Hard drive

    d. All of the above

Ans: d. All of the above

Explanation: Firmware is used in a wide range of devices like printers, smartphones, hard drives, and even in embedded systems to control hardware functions.

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15. What is the main purpose of firmware?

    a. To create documents and spreadsheets

    b. To control the hardware and provide low-level control of the device

    c. To browse the internet

    d. To run complex software applications

Ans: b. To control the hardware and provide low-level control of the device

Explanation: Firmware helps manage and control the device's hardware, ensuring it functions correctly, and acts as an intermediary between the hardware and the software.

16. Which of the following is a key feature of firmware?

    a. It is installed on a hard drive

    b. It can be easily modified by the user

    c. It is stored in non-volatile memory like ROM or flash memory

    d. It requires an internet connection to function

Ans: c. It is stored in non-volatile memory like ROM or flash memory

Explanation: Firmware is typically stored in non-volatile memory, such as ROM or flash memory, so it remains intact even when the device is powered off.

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17. Which of these is an example of firmware?

    a. Microsoft Word

    b. The operating system of a computer

    c. The BIOS of a computer

    d. A video editing software

Ans: c. The BIOS of a computer

Explanation: The BIOS (Basic Input/Output System) is a type of firmware that is responsible for booting the computer and managing hardware devices.

18. Can firmware be updated?

    a. No, it cannot be updated

    b. Yes, it can be updated, but with specific tools and processes

    c. Yes, it can be updated automatically by the operating system

    d. No, firmware is permanent and never changes

Ans: b. Yes, it can be updated, but with specific tools and processes

Explanation: Firmware can be updated, but the process is more complex than updating regular software. It often requires special tools and software provided by the device manufacturer.

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19. Where is firmware typically stored in a device?

    a. In the device's RAM

    b. In the device's hard drive

    c. In non-volatile memory like ROM or flash memory

    d. On the internet

Ans: c. In non-volatile memory like ROM or flash memory

Explanation: Firmware is stored in non-volatile memory, such as ROM or flash memory, so it remains intact even when the device is turned off.

20. What happens if firmware becomes corrupt or outdated?

    a. The device will work better

    b. The device may not function properly or fail to start

    c. The device will automatically fix itself

    d. Nothing happens

Ans: b. The device may not function properly or fail to start

Explanation: If firmware is corrupt or outdated, the hardware may not function as intended, and the device might fail to start or behave erratically.

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21. Which of the following is a characteristic of firmware compared to regular software?

    a. At is user-friendly and requires no technical knowledge

    b. At controls hardware directly and is stored in permanent memory

    c. It is easy to modify and update regularly

    d. It is used for word processing and gaming

Ans: b. It controls hardware directly and is stored in permanent memory

Explanation: Unlike regular software, firmware directly controls hardware and is stored in permanent, non-volatile memory, often requiring special tools for modification or updates.

22. What does BIOS stand for?

    a. Basic Integrated Operating System

    b. Basic Input Output System

    c. Binary Input Output System

    d. Binary Integrated Operating System

Ans: b. Basic Input Output System

Explanation: BIOS stands for Basic Input Output System and is firmware that helps the computer start up and provides communication between the operating system and hardware.

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23. What is the main purpose of BIOS?

    a. To manage applications

    b. To start the computer and initialize hardware

    c. To browse the internet

    d. To run video games

Ans: b. To start the computer and initialize hardware

Explanation: BIOS is responsible for the initial startup of the computer, checking hardware components, and loading the operating system.

24. What does UEFI stand for?

    a. Universal Enhanced Firmware Interface

    b. Unified Extended Firmware Interface

    c. Unified Extensible Firmware Interface

    d. Universal External Firmware Interface

Ans: c. Unified Extensible Firmware Interface

Explanation: UEFI stands for Unified Extensible Firmware Interface, which is a modern replacement for BIOS, providing more advanced features and a user-friendly interface.

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25. Which of the following is a key difference between BIOS and UEFI?

    a. UEFI can only run on old computers

    b. BIOS uses a graphical user interface

    c. UEFI supports larger hard drives (more than 2TB)

    d. BIOS can boot only Windows operating system

Ans: c. UEFI supports larger hard drives (more than 2TB)

Explanation: UEFI can support modern hardware and larger hard drives, such as those over 2TB, unlike BIOS, which has limitations in this area.

26. Which of these is true about BIOS?

    a. BIOS supports faster boot times than UEFI

    b. BIOS has a more modern interface than UEFI

    c. BIOS operates in 32-bit mode only

    d. BIOS supports faster hard drive speeds than UEFI

Ans: c. BIOS operates in 32-bit mode only

Explanation: BIOS typically operates in 16-bit or 32-bit mode, whereas UEFI operates in 32-bit or 64-bit mode, providing more advanced features.

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27. Which of the following systems is more commonly found on modern computers?

    a. BIOS

    b. UEFI

    c. Both are used equally

    d. Neither

Ans: b. UEFI

Explanation: UEFI has become the standard firmware for most modern computers because it provides better performance, security features, and support for larger drives.

28. Which of the following is an advantage of UEFI over BIOS?

    a. UEFI can only boot Windows

    b. UEFI supports Secure Boot for better security

    c. UEFI is slower than BIOS

    d. UEFI is more difficult to configure than BIOS

Ans: b. UEFI supports Secure Boot for better security

Explanation: UEFI includes Secure Boot, a feature that helps protect against malware by ensuring only trusted operating systems are loaded during startup.

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29. Which of the following features is supported by UEFI?

    a. Faster CPU speeds

    b. 64-bit mode

    c. No support for secure boot

    d. Limited memory support

Ans: b. 64-bit mode

Explanation: UEFI supports 64-bit mode, allowing for better performance and compatibility with modern hardware, while BIOS typically operates in 16-bit or 32-bit mode.

30. What happens if the BIOS/UEFI settings are misconfigured?

    a. The computer will boot into Windows

    b. The computer may fail to boot or experience errors

    c. The computer will automatically fix the issue

    d. The computer will display a blue screen of death

Ans: b. The computer may fail to boot or experience errors

Explanation: If the BIOS or UEFI settings are misconfigured, it can prevent the computer from booting properly or cause hardware and software issues.

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31. Which of the following is used to access the BIOS or UEFI settings on a computer?

    a. Right-click on the desktop

    b. Pressing a key (like F2 or Delete) during startup

    c. Double-clicking on the desktop icon

    d. Opening a web browser

Ans: b. Pressing a key (like F2 or Delete) during startup

Explanation: To access BIOS or UEFI settings, you usually need to press a specific key (like F2, F10, or Delete) during the computer's startup process.

32. What is the BIOS setup utility used for?

    a. To run applications

    b. To configure system settings like boot order and hardware options

    c. To manage files and folders

    d. To install new software

Ans: b. To configure system settings like boot order and hardware options

Explanation: The BIOS setup utility allows users to configure essential system settings, such as the boot sequence, enabling or disabling hardware components, and changing system time and date.

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33. What does MBR stand for?

    a. Master Boot Record

    b. Memory Backup Resource

    c. Modern Boot Router

    d. Multiple Boot Registration

Ans: a. Master Boot Record

Explanation: MBR stands for Master Boot Record. It is a special type of boot sector located at the beginning of a storage device (like a hard drive) that contains information about how the operating system is stored and how to boot it.

34. What is the primary function of the MBR?

    a. To store operating system files

    b. To perform system diagnostics

    c. To initiate the boot process by loading the bootloader

    d. To configure system hardware settings

Ans: c. To initiate the boot process by loading the bootloader

Explanation: The MBR contains the bootloader that helps the computer start the operating system. It is the first thing loaded when the computer is powered on.

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35. What is the maximum number of primary partitions that can be created with MBR on a single disk?

    a. 2

    b. 4

    c. 6

    d. 8

Ans: b. 4

Explanation: MBR supports up to 4 primary partitions. However, one of those partitions can be an extended partition, allowing for additional logical partitions.

36. Which of the following is a limitation of MBR?

    a. It cannot boot an operating system

    b. It can only support drives smaller than 2TB

    c. It supports an unlimited number of partitions

    d. It automatically installs the operating system

Ans: b. It can only support drives smaller than 2TB

Explanation: MBR has a size limitation of 2TB for disk drives. If a drive exceeds 2TB, it cannot be fully utilized with MBR, and a more modern system like GPT (GUID Partition Table) is required.

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37. What is stored in the MBR besides the bootloader?

    a. The file system structure of the OS

    b. Partition table

    c. System settings

    d. System memory configuration

Ans: b. Partition table

Explanation: In addition to the bootloader, the MBR also contains a partition table, which keeps track of the partitions on the disk, including their sizes and locations.

38. Which of the following is a modern alternative to MBR for larger storage devices?

    a. GPT (GUID Partition Table)

    b. NTFS

    c. FAT32

    d. EXT4

Ans: a. GPT (GUID Partition Table)

Explanation: GPT (GUID Partition Table) is a newer partitioning scheme that overcomes the limitations of MBR, such as supporting disks larger than 2TB and allowing more than 4 partitions.

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39. How many bytes does the MBR typically occupy on a disk?

    a. 512 bytes

    b. 1024 bytes

    c. 2048 bytes

    d. 4096 bytes

Ans: a. 512 bytes

Explanation: The MBR occupies the first 512 bytes of a disk, which includes the bootloader and the partition table.

40. Which of the following is TRUE about MBR and GPT?

    a. MBR is better for larger disks, while GPT is better for smaller disks.

    b. MBR supports more than 4 partitions, while GPT supports only 4.

    c. MBR is used primarily on older systems, while GPT is used on newer systems.

    d. MBR supports disks over 10TB, while GPT supports disks under 2TB.

Ans: c. MBR is used primarily on older systems, while GPT is used on newer systems.

Explanation: MBR is an older partitioning scheme, whereas GPT is a newer scheme designed for modern systems, especially those with large disks and more partitions.

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41. What does GPT stand for?

    a. General Partition Table

    b. GUID Partition Table

    c. Global Partition Table

    d. Global Unified Partition Table

Ans: b. GUID Partition Table

Explanation: GPT stands for GUID Partition Table. It is a modern partitioning scheme used to manage disk partitions and replace the older MBR (Master Boot Record) method.

42. How many partitions can be created on a disk using GPT?

    a. 4 partitions

    b. 16 partitions

    c. 128 partitions

    d. Unlimited partitions

Ans: c. 128 partitions

Explanation: GPT allows for up to 128 partitions on a disk, compared to MBR's limit of 4 primary partitions (or 3 primary partitions and 1 extended partition).

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43. What is the primary function of the GUID in GPT?

    a. To identify the partitions uniquely

    b. To create bootable disks

    c. To load the operating system

    d. To format the disk

Ans: a. To identify the partitions uniquely

Explanation: GUID (Globally Unique Identifier) is used in GPT to uniquely identify each partition on the disk, ensuring that there are no conflicts between partitions.

44. Which of the following is required to use GPT?

    a. 32-bit operating system

    b. UEFI firmware

    c. MBR partitioning scheme

    d. DOS operating system

Ans: b. UEFI firmware

Explanation: GPT requires UEFI firmware to function, as it does not work with the older BIOS system used in legacy hardware.

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45. What is the maximum size of a disk that can be used with GPT?

    a. 2TB

    b. 16TB

    c. 9.4 ZB (Zettabytes)

    d. 1PB (Petabyte)

Ans: c. 9.4 ZB (Zettabytes)

Explanation: GPT supports disks up to 9.4 Zettabytes in size, which is vastly larger than the 2TB limit of MBR.

46. What does UEFI stand for?

    a. Unified Enhanced Firmware Interface

    b. Universal External Firmware Interface

    c. Unified Extensible Firmware Interface

    d. Universal Extensible Firmware Interface

Ans: c. Unified Extensible Firmware Interface

Explanation: UEFI stands for Unified Extensible Firmware Interface, which is a modern firmware interface that replaces the older BIOS system.

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47. Which of the following is an advantage of UEFI over BIOS?

    a. UEFI supports faster boot times

    b. UEFI supports hard drives larger than 2TB

    c. UEFI supports graphical user interfaces (GUIs)

    d. All of the above

Ans: d. All of the above

Explanation: UEFI offers faster boot times, supports drives larger than 2TB, and provides a more modern graphical user interface (GUI), making it more advanced than BIOS.

48. Which of the following is required for UEFI to function?

    a. Legacy BIOS system

    b. 32-bit operating system

    c. 64-bit operating system

    d. UEFI-compatible motherboard and firmware

Ans: d. UEFI-compatible motherboard and firmware

Explanation: UEFI requires a UEFI-compatible motherboard and firmware. It is not compatible with the older legacy BIOS systems.

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49. Which type of system uses UEFI for booting?

    a. Older Linux system

    b. Modern systems with 64-bit operating systems

    c. Legacy systems with BIOS

    d. All types of systems

Ans: b. Modern systems with 64-bit operating systems

Explanation: UEFI is primarily used by modern 64-bit systems to boot the operating system, but some systems can also run in a 32-bit mode using UEFI.

50. What is the purpose of Secure Boot in UEFI?

    a. To manage disk partitions

    b. To encrypt data on the hard drive

    c. To prevent unauthorized software from loading during boot

    d. To speed up the boot process

Ans: c. To prevent unauthorized software from loading during boot

Explanation: Secure Boot is a feature of UEFI that ensures only trusted, signed software can load during the boot process, helping to prevent malware and unauthorized operating systems from being loaded.

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51. Which of the following is a key feature of UEFI?

    a. It has a command-line interface only

    b. It can boot from large storage devices over 2TB

    c. It does not support security features

    d. It only works on Windows operating systems

Ans: b. It can boot from large storage devices over 2TB

Explanation: UEFI can boot from disks larger than 2TB, unlike BIOS, which has a limitation on disk size. It supports advanced security features like Secure Boot as well.

52. How does UEFI differ from BIOS?

    a. UEFI is slower than BIOS

    b. UEFI supports only 32-bit systems

    c. UEFI can work with both 32-bit and 64-bit systems

    d. UEFI uses a simpler text-based interface

Ans: c. UEFI can work with both 32-bit and 64-bit systems

Explanation: Unlike BIOS, which is typically limited to 16-bit or 32-bit systems, UEFI supports both 32-bit and 64-bit systems, allowing for more efficient operation.

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53. Where is UEFI typically stored on a computer?

    a. Hard drive

    b. RAM

    c. ROM or flash memory on the motherboard

    d. External storage device

Ans: c. ROM or flash memory on the motherboard

Explanation: UEFI is stored in non-volatile memory, such as ROM or flash memory, on the motherboard, so it is not lost when the system is powered off.

54. Which partitioning scheme does UEFI use instead of MBR?

    a. GPT (GUID Partition Table)

    b. FAT32

    c. NTFS

    d. exFAT

Ans: a. GPT (GUID Partition Table)

Explanation: UEFI uses GPT (GUID Partition Table) as the partitioning scheme, which provides several advantages over the older MBR, including support for larger disks and more partitions.

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55. Which key is typically used to access UEFI settings during system startup?

a. F1

b. F2

c. Delete

d. All of the above

Ans: d. All of the above

Explanation: Depending on the manufacturer, different keys (such as F1, F2, Delete, or Esc) may be used to access UEFI settings during the startup of the computer.