



<b>Name of the Bundle</b>	Advanced Bundle V1	<b>Subject</b>	Technical Support Fundamentals
<b>Topic</b>	CPU	<b>Last updated on</b>	08 August 2024

1. What does CPU stand for?

- a. Central Processing Unit
- b. Central Programming Unit
- c. Control Processing Unit
- d. Computer Performance Unit

**Answer: a. Central Processing Unit**

**Explanation:** CPU stands for Central Processing Unit. It is the primary component of a computer that performs most of the processing inside a computer.

2. Which component of a computer is often referred to as its "brain"?

- a. Hard Disk Drive (HDD)
- b. Random Access Memory (RAM)
- c. Central Processing Unit (CPU)
- d. Graphics Processing Unit (GPU)

**Answer: c. Central Processing Unit (CPU)**

**Explanation:** The Central Processing Unit (CPU) is often referred to as the "brain" of a computer because it is responsible for executing instructions and processing data.



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3. Which of the following is NOT a function of the CPU?

- a. Executing instructions
- b. Performing calculations
- c. Managing memory
- d. Generating electricity

**Answer: d. Generating electricity**

**Explanation:** The CPU's functions include executing instructions, performing calculations, and managing memory. Generating electricity is not a function of the CPU.

4. Which part of the CPU performs arithmetic and logic operations?

- a. Control Unit
- b. Arithmetic Logic Unit (ALU)
- c. Memory Unit
- d. Register

**Answer: b. Arithmetic Logic Unit (ALU)**

**Explanation:** The Arithmetic Logic Unit (ALU) is the part of the CPU that performs arithmetic and logic operations.



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5. What is the role of the Control Unit in the CPU?

- a. To perform arithmetic operations
- b. To store data
- c. To manage and coordinate the activities of the CPU
- d. To generate graphics

**Answer: c. To manage and coordinate the activities of the CPU**

**Explanation:** The Control Unit manages and coordinates the activities of the CPU, directing the operation of the other units by providing control and timing signals.

6. Which feature of a CPU allows it to execute multiple instructions simultaneously?

- a. Hyper-Threading
- b. Overclocking
- c. Cache Memory
- d. Thermal Throttling

**Answer: a. Hyper-Threading**

**Explanation:** Hyper-Threading is a technology used by some CPUs to increase performance by allowing a single CPU core to execute multiple threads (instructions) simultaneously.



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7. What is the primary purpose of a CPU cache?

- a. To store the operating system
- b. To improve processing speed by storing frequently accessed data
- c. To cool down the CPU
- d. To manage power consumption

**Answer:** b. To improve processing speed by storing frequently accessed data

**Explanation:** CPU cache is a small, high-speed memory located inside the CPU that stores frequently accessed data and instructions, improving overall processing speed and efficiency.

8. What is a multi-core processor?

- a. A CPU with multiple memory slots
- b. A CPU that can execute multiple instructions simultaneously
- c. A CPU with multiple processing units on a single chip
- d. A CPU with integrated graphics

**Answer:** c. A CPU with multiple processing units on a single chip

**Explanation:** A multi-core processor is a CPU that has multiple processing units (cores) on a single chip, allowing it to perform multiple tasks simultaneously.



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9. Which feature of modern CPUs allows for the management and execution of virtual machines?

- a. Hyper-Threading
- b. Virtualization Technology
- c. Overclocking
- d. Thermal Throttling

**Answer: b. Virtualization Technology**

**Explanation:** Virtualization Technology in modern CPUs allows for the creation and management of virtual machines, enabling multiple operating systems to run concurrently on a single physical machine.

10. What type of instructions does the Control Unit decode?

- a. Machine language instructions
- b. High-level programming language instructions
- c. Pseudocode instructions
- d. User interface commands

**Answer: a. Machine language instructions**

**Explanation:** The Control Unit decodes machine language instructions, which are binary codes that represent the basic operations the CPU can perform.



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11. The Control Unit is a part of which larger computer component?

- a. Hard drive
- b. RAM
- c. CPU
- d. GPU

**Answer: c. CPU**

**Explanation:** The Control Unit is an integral part of the Central Processing Unit (CPU), where it coordinates the operations of the processor.

12. Which part of the CPU works closely with the Control Unit to perform calculations?

- a. Memory unit
- b. Register
- c. Arithmetic Logic Unit (ALU)
- d. Input/output unit

**Answer: c. Arithmetic Logic Unit (ALU)**

**Explanation:** The Arithmetic Logic Unit (ALU) works closely with the Control Unit to perform arithmetic and logic calculations as directed by the control signals.



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13. What is the primary function of a storage unit in a computer?

- a. To process data
- b. To store data and instructions
- c. To manage network connections
- d. To handle user input

**Answer: b. To store data and instructions**

**Explanation:** The primary function of a storage unit is to store data and instructions that can be retrieved and used by the computer's processor.

14. What does the term "core" in a CPU refer to?

- a. The central part of the CPU
- b. A single processing unit within the CPU
- c. The storage capacity of the CPU
- d. The power consumption of the CPU

**Answer: b. A single processing unit within the CPU**

**Explanation:** A core in a CPU refers to a single processing unit capable of executing instructions. Modern CPUs often have multiple cores, allowing for parallel processing.



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15. Which characteristic of a CPU determines its ability to handle multiple instructions simultaneously?

- a. Multithreading
- b. Clock Speed
- c. Cache Size
- d. TDP (Thermal Design Power)

**Answer: a. Multithreading**

**Explanation:** Multithreading allows a CPU to handle multiple instructions simultaneously by executing multiple threads within a single core, improving overall performance.

16. Which feature of a CPU improves performance by storing frequently accessed data for quick retrieval?

- a. Cache Memory
- b. Multithreading
- c. Bus Width
- d. Instruction Set

**Answer: a. Cache Memory**

**Explanation:** Cache memory is a small, high-speed memory located inside the CPU that stores frequently accessed data, improving overall performance by reducing access times to this data.





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17. What is the primary benefit of having multiple cores in a CPU?

- a. Lower power consumption
- b. Higher clock speed
- c. Improved multitasking and parallel processing
- d. Increased cache size

**Answer: c. Improved multitasking and parallel processing**

**Explanation:** Having multiple cores in a CPU allows for improved multitasking and parallel processing, enabling the CPU to execute multiple instructions simultaneously and handle more tasks efficiently.

18. Which CPU architecture is widely used in modern personal computers and laptops?

- a. SPARC
- b. MIPS
- c. x86
- d. ARM

**Answer: c. x86**

**Explanation:** The x86 architecture, developed by Intel, is widely used in modern personal computers and laptops due to its compatibility and performance.



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19. Which company originally developed the x64 architecture?

- a. Intel
- b. AMD
- c. IBM
- d. ARM Holdings

**Answer: b. AMD**

**Explanation:** AMD originally developed the x64 architecture, also known as AMD64, which was later adopted by Intel as Intel 64.

20. How many bits are used in the registers of an x64 CPU?

- a. 16 bits
- b. 32 bits
- c. 64 bits
- d. 128 bits

**Answer: c. 64 bits**

**Explanation:** x64 architecture uses 64-bit wide registers, which allows for more efficient processing and larger memory addressing.



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21. Which of the following operating systems support x64 architecture?

- a. Windows
- b. macOS
- c. Linux
- d. All of the above

**Answer: d. All of the above**

**Explanation:** Most modern operating systems, including Windows, macOS, and Linux, support x64 architecture.

22. What is a CPU socket?

- a. A type of cooling mechanism for CPUs
- b. A connector on the motherboard for installing the CPU
- c. A software interface for CPU communication
- d. A storage device for CPU data

**Answer: b. A connector on the motherboard for installing the CPU**

**Explanation:** A CPU socket is a connector on the motherboard that allows for the installation and replacement of the CPU.



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23. Which of the following is a commonly used socket type for Intel CPUs?

- a. AM4
- b. LGA 1151
- c. TR4
- d. FM2+

**Answer: b. LGA 1151**

**Explanation:** LGA 1151 is a commonly used socket type for Intel CPUs, particularly in the mainstream consumer market.

24. What does the term "LGA" stand for in CPU sockets?

- a. Low Grid Array
- b. Large Grid Array
- c. Land Grid Array
- d. Linear Grid Array

**Answer: c. Land Grid Array**

**Explanation:** LGA stands for Land Grid Array, a type of socket where the pins are located on the motherboard socket, and the CPU has flat contact points.



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25. What is the main difference between PGA and LGA sockets?

- a. PGA sockets have pins on the motherboard; LGA sockets have pins on the CPU
- b. PGA sockets have pins on the CPU; LGA sockets have pins on the motherboard
- c. PGA sockets are used exclusively by Intel; LGA sockets are used exclusively by AMD
- d. There is no difference; they are the same

**Answer: b. PGA sockets have pins on the CPU; LGA sockets have pins on the motherboard**

**Explanation:** In PGA (Pin Grid Array) sockets, the pins are on the CPU, while in LGA (Land Grid Array) sockets, the pins are on the motherboard socket.

26. What does the term "BGA" stand for in CPU sockets?

- a. Ball Grid Array
- b. Ball Grid Adapter
- c. Ball Grid Assembly
- d. Ball Grid Attachment

**Answer: a. Ball Grid Array**

**Explanation:** BGA stands for Ball Grid Array, which is a type of packaging for integrated circuits where the chip is mounted on the motherboard with solder balls arranged in a grid pattern on the underside of the chip.



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27. What does the term "ZIF" stand for in CPU sockets?

- a. Zero Insertion Force
- b. Zero Internal Frequency
- c. Zero Interface Fault
- d. Zero Instruction Function

**Answer: a. Zero Insertion Force**

**Explanation:** Zero Insertion Force (ZIF) refers to a type of CPU socket that allows the CPU to be inserted into the socket with minimal force. A ZIF socket has a lever or latch mechanism that lowers the CPU into the socket, reducing the risk of damaging the CPU or motherboard.

28. What does the term "PGA" stand for in CPU sockets?

- a. Pin Grid Array
- b. Printed Grid Array
- c. Package Grid Array
- d. Parallel Grid Array

**Answer: a. Pin Grid Array**

**Explanation:** PGA stands for Pin Grid Array. In a PGA socket, the CPU has pins that fit into holes in the motherboard socket. This type of socket allows for the CPU to be inserted and removed easily, making it possible to upgrade or replace the CPU.



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29. What is the primary purpose of a CPU cooler?

- a. To increase the CPU's clock speed
- b. To reduce the CPU's power consumption
- c. To dissipate heat and keep the CPU temperature within safe limits
- d. To enhance the CPU's storage capacity

**Answer:** c. To dissipate heat and keep the CPU temperature within safe limits

**Explanation:** The primary purpose of a CPU cooler is to dissipate heat generated by the CPU to keep its temperature within safe operating limits, ensuring stable performance and preventing overheating.

30. Which of the following is a common type of CPU cooling mechanism?

- a. Liquid cooling
- b. Solid-state cooling
- c. Mechanical cooling
- d. Vapor chamber cooling

**Answer:** a. Liquid cooling

**Explanation:** Liquid cooling is a common CPU cooling mechanism that uses a liquid coolant to absorb and transfer heat away from the CPU, often involving a radiator and fans to dissipate the heat.



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31. What is the purpose of thermal paste in CPU cooling?

- a. To electrically insulate the CPU
- b. To provide a thermal interface between the CPU and the cooler
- c. To enhance the CPU's processing speed
- d. To protect the CPU from physical damage

**Answer: b. To provide a thermal interface between the CPU and the cooler**

**Explanation:** Thermal paste, also known as thermal compound, is used to fill microscopic gaps between the CPU and the cooler, improving thermal conductivity and ensuring efficient heat transfer.

32. Which cooling method involves using a heat sink and a fan?

- a. Air cooling
- b. Liquid cooling
- c. Phase change cooling
- d. Thermoelectric cooling

**Answer: a. Air cooling**

**Explanation:** Air cooling involves using a heat sink (a metal component that absorbs heat) along with a fan to dissipate the heat into the air. It is one of the most common and straightforward cooling methods.





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33. In a liquid cooling system, what component is responsible for transferring heat away from the CPU?

- a. Radiator
- b. Pump
- c. Reservoir
- d. Water block

**Answer: d. Water block**

**Explanation:** In a liquid cooling system, the water block (or CPU block) is responsible for transferring heat away from the CPU to the coolant, which then circulates through the system.

34. Which component is commonly used to pull air into the case?

- a. Exhaust fan
- b. Power supply unit
- c. Intake fan
- d. Heat sink

**Answer: c. Intake fan**

**Explanation:** An intake fan is used to pull cool air into the computer case, which helps to cool down internal components.



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35. What is the role of an exhaust fan in case cooling?

- a. To bring cool air into the case
- b. To increase the CPU's processing power
- c. To expel hot air out of the case
- d. To cool the hard drives

**Answer: c. To expel hot air out of the case**

**Explanation:** An exhaust fan helps to expel hot air out of the computer case, promoting airflow and cooling the internal components.

36. Which type of fan configuration is best for a high-performance gaming PC?

- a. A single intake fan
- b. A single exhaust fan
- c. A balanced intake and exhaust fan setup
- d. No case fans

**Answer: c. A balanced intake and exhaust fan setup**

**Explanation:** A balanced intake and exhaust fan setup ensures efficient airflow, cooling both incoming and outgoing air, which is ideal for high-performance gaming PCs that generate significant heat.



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37. What is the function of air filters in case cooling?

- a. To reduce noise from the fans
- b. To block dust and debris from entering the case
- c. To increase the fan speed
- d. To cool the GPU

**Answer:** b. To block dust and debris from entering the case

**Explanation:** Air filters are used to block dust and debris from entering the computer case, which helps keep the internal components clean and functioning optimally.

38. Which of the following can negatively affect case cooling?

- a. Proper fan placement
- b. Good cable management
- c. Using dust filters
- d. Blocking airflow with cables or components

**Answer:** d. Blocking airflow with cables or components

**Explanation:** Blocking airflow with cables or components can negatively affect case cooling by impeding the movement of air, which can lead to higher temperatures inside the case.