



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

1. What is the primary purpose of primary memory in a computer?

- a. To store data permanently
- b. To process data
- c. To store data temporarily while the computer is running
- d. To provide network connectivity

**Answer: c. To store data temporarily while the computer is running**

**Explanation:** Primary memory, or RAM, temporarily stores data and instructions that the CPU needs while the computer is running, allowing for quick access and processing.

2. Which of the following is an example of primary memory?

- a. Hard Drive
- b. Solid State Drive (SSD)
- c. Random Access Memory (RAM)
- d. Optical Disk

**Answer: c. Random Access Memory (RAM)**

**Explanation:** RAM is a type of primary memory that is used to store data and instructions that the CPU needs in real-time.



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### 3. Which type of primary memory is volatile?

- a. ROM
- b. Flash Memory
- c. RAM
- d. Hard Disk

**Answer: c. RAM**

**Explanation:** RAM is volatile memory, meaning it loses its data when the power is turned off.

### 4. What does RAM stand for?

- a. Read Access Memory
- b. Random Access Memory
- c. Real Access Memory
- d. Rapid Access Memory

**Answer: b. Random Access Memory**

**Explanation:** RAM stands for Random Access Memory, which is a type of computer memory used for storing data and instructions that the CPU needs in real-time.



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5. What is the main difference between RAM and ROM?

- a. RAM is read-only, while ROM is read-write
- b. RAM is volatile, while ROM is non-volatile
- c. RAM stores data permanently, while ROM stores data temporarily
- d. RAM is used for permanent storage, while ROM is used for temporary storage

**Answer:** b. RAM is volatile, while ROM is non-volatile

**Explanation:** RAM is volatile and loses data when power is lost, while ROM is non-volatile and retains data even when the power is off.

6. What does the term "volatile memory" refer to?

- a. Memory that can be rewritten multiple times
- b. Memory that loses its data when power is lost
- c. Memory that stores data permanently
- d. Memory that is used for long-term storage

**Answer:** b. Memory that loses its data when power is lost

**Explanation:** Volatile memory loses its data when power is lost, which is characteristic of RAM.



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7. Which type of memory is used to store the BIOS firmware?

- a. RAM
- b. ROM
- c. Cache Memory
- d. Virtual Memory

**Answer: b. ROM**

**Explanation:** The BIOS firmware is stored in ROM, which is non-volatile and retains its data even when the power is off.

8. Which type of RAM is used in most modern PCs?

- a. DRAM (Dynamic RAM)
- b. SRAM (Static RAM)
- c. ROM (Read-Only Memory)
- d. Flash Memory

**Answer: a. DRAM (Dynamic RAM)**

**Explanation:** DRAM is the most common type of RAM used in modern PCs due to its cost-effectiveness and sufficient speed for most applications.



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## 9. What is the function of Virtual Memory?

- a. To provide additional physical memory
- b. To act as a backup for data loss
- c. To use part of the hard drive as if it were additional RAM
- d. To store firmware and system software

**Answer: c. To use part of the hard drive as if it were additional RAM**

**Explanation:** Virtual memory uses a portion of the hard drive as an extension of RAM, allowing the system to handle more data than the physical RAM alone.

## 10. What does "DDR" in DDR RAM stand for?

- a. Dynamic Dual Read
- b. Double Data Rate
- c. Direct Data Read
- d. Dynamic Data Rate

**Answer: b. Double Data Rate**

**Explanation:** DDR stands for Double Data Rate, indicating that the RAM can transfer data on both the rising and falling edges of the clock signal, effectively doubling the data rate.



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11. Which type of memory is faster but more expensive: SRAM or DRAM?

- a. SRAM
- b. DRAM
- c. Both are equally fast
- d. Neither is expensive

**Answer: a. SRAM**

**Explanation:** SRAM (Static RAM) is faster but more expensive than DRAM (Dynamic RAM) due to its design and manufacturing complexity.

12. Which type of ROM is used to store firmware that can be updated?

- a. PROM (Programmable ROM)
- b. EPROM (Erasable Programmable ROM)
- c. EEPROM (Electrically Erasable Programmable ROM)
- d. Mask ROM

**Answer: c. EEPROM (Electrically Erasable Programmable ROM)**

**Explanation:** EEPROM can be electrically erased and reprogrammed, making it suitable for storing firmware that needs occasional updates.



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13. What does "DRAM" stand for?

- a. Dynamic Read-Only Memory
- b. Dynamic Random Access Memory
- c. Direct Random Access Memory
- d. Dual Read Access Memory

**Answer: b. Dynamic Random Access Memory**

**Explanation:** DRAM stands for Dynamic Random Access Memory, a type of RAM that stores data dynamically using capacitors.

14. Which type of memory is commonly used for cache memory?

- a. DRAM
- b. SRAM
- c. ROM
- d. Flash Memory

**Answer: b. SRAM**

**Explanation:** SRAM (Static RAM) is commonly used for cache memory due to its fast access speeds, though it is more expensive than DRAM.



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15. Which of the following is a characteristic of DRAM?

- a. It is non-volatile
- b. It stores data in flip-flops
- c. It requires constant refreshing to maintain data
- d. It is faster and more expensive than SRAM

**Answer: c. It requires constant refreshing to maintain data**

**Explanation:** DRAM (Dynamic RAM) requires constant refreshing to maintain data because it stores data in capacitors that leak charge over time.

16. Which of the following is not a type of RAM?

- a. DRAM
- b. SRAM
- c. ROM
- d. SDRAM

**Answer: c. ROM**

**Explanation:** ROM (Read-Only Memory) is not a type of RAM. It is a different type of memory used for permanent storage of firmware.





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17. What is the main difference between DDR2 and DDR3 RAM?

- a. DDR3 is slower than DDR2
- b. DDR3 has a higher clock speed and bandwidth compared to DDR2
- c. DDR2 is a newer technology than DDR3
- d. DDR3 uses different voltage levels than DDR2

**Answer: b. DDR3 has a higher clock speed and bandwidth compared to DDR2**

**Explanation:** DDR3 RAM offers higher clock speeds and bandwidth compared to DDR2, improving overall performance.

18. What is a "DIMM" in the context of RAM?

- a. A type of motherboard slot
- b. A type of RAM module
- c. A memory controller
- d. A type of cooling system

**Answer: b. A type of RAM module**

**Explanation:** DIMM stands for Dual Inline Memory Module, which is a type of RAM module used to expand a computer's memory.



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19. What type of memory is used for high-speed data access in a CPU?

- a. DRAM
- b. SRAM
- c. ROM
- d. Flash Memory

**Answer: b. SRAM**

**Explanation:** SRAM is used for high-speed data access in a CPU, such as in cache memory, due to its faster access times compared to DRAM.

20. Which of the following is a feature of DDR4 RAM compared to DDR3?

- a. Lower power consumption
- b. Higher latency
- c. Lower clock speeds
- d. Incompatibility with DDR3 motherboards

**Answer: a. Lower power consumption**

**Explanation:** DDR4 RAM features lower power consumption compared to DDR3, which helps to reduce overall energy usage and heat generation.



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21. What is "ECC RAM"?

- a. Error-Correcting Code RAM
- b. Extended Capacity RAM
- c. Enhanced Cache RAM
- d. External Connection RAM

**Answer: a. Error-Correcting Code RAM**

**Explanation:** ECC (Error-Correcting Code) RAM is a type of memory that can detect and correct errors, providing increased reliability, especially in servers and workstations.

22. What is the primary function of RAM in a computer system?

- a. To permanently store data
- b. To temporarily store data and instructions for the CPU
- c. To connect to external storage devices
- d. To manage network connections

**Answer: b. To temporarily store data and instructions for the CPU**

**Explanation:** RAM temporarily stores data and instructions that the CPU needs while the computer is running, allowing for quick access and processing.



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23. Which of the following tasks does RAM not perform?

- a. Storing operating system files
- b. Running applications
- c. Executing program instructions
- d. Managing long-term data storage

**Answer: d. Managing long-term data storage**

**Explanation:** RAM is used for temporary storage and running applications, but long-term data storage is managed by secondary storage devices like hard drives or SSDs.

24. What happens to the data in RAM when a computer is powered off?

- a. The data is saved to a hard drive
- b. The data is preserved and remains accessible
- c. The data is lost
- d. The data is transferred to the CPU

**Answer: c. The data is lost**

**Explanation:** RAM is volatile memory, meaning that it loses all its data when the computer is powered off or restarted.



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25. What is the effect of adding more RAM to a computer?

- a. It reduces the system's processing speed
- b. It increases the computer's ability to handle more applications and data simultaneously
- c. It decreases the storage capacity
- d. It improves the power supply efficiency

**Answer:** b. It increases the computer's ability to handle more applications and data simultaneously

**Explanation:** Adding more RAM increases the computer's capacity to handle multiple applications and large amounts of data simultaneously, improving overall performance.

26. What does ROM stand for?

- a. Random Operation Memory
- b. Read-Only Memory
- c. Random-Only Memory
- d. Rapid Operation Memory

**Answer:** b. Read-Only Memory

**Explanation:** ROM stands for Read-Only Memory, which is non-volatile memory that stores data permanently and cannot be modified easily.



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27. Which of the following is a characteristic of ROM?

- a. Volatile
- b. Can be written to frequently
- c. Non-volatile
- d. Used for temporary storage

**Answer: c. Non-volatile**

**Explanation:** ROM is non-volatile, meaning it retains its data even when the power is turned off, unlike RAM which is volatile.

28. What type of data is typically stored in ROM?

- a. User documents
- b. Operating system files
- c. BIOS or firmware
- d. Application software

**Answer: c. BIOS or firmware**

**Explanation:** ROM typically stores BIOS or firmware, which are essential for booting up the computer and hardware initialization.



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29. Which of the following is not a type of ROM?

- a. PROM
- b. EPROM
- c. EEPROM
- d. DRAM

**Answer: d. DRAM**

**Explanation:** DRAM (Dynamic RAM) is a type of volatile memory used for temporary storage, not a type of ROM.

30. Which of the following is an advantage of ROM over RAM?

- a. ROM is faster
- b. ROM is volatile
- c. ROM is non-volatile and does not lose data when power is turned off
- d. ROM can be written to as often as needed

**Answer: c. ROM is non-volatile and does not lose data when power is turned off**

**Explanation:** The primary advantage of ROM is that it is non-volatile, meaning it retains data even when the computer is turned off, unlike RAM which loses data when power is lost.

31. What does SDRAM stand for?



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- a. Synchronous Dynamic Random Access Memory
- b. Sequential Dynamic Random Access Memory
- c. Static Dynamic Random Access Memory
- d. Simultaneous Dynamic Random Access Memory

**Answer: a. Synchronous Dynamic Random Access Memory**

**Explanation:** SDRAM stands for Synchronous Dynamic Random Access Memory, which synchronizes with the system bus clock for faster performance.

32. Which of the following is a major advantage of using ECC RAM in servers?

- a. Lower cost
- b. Faster access times
- c. Error detection and correction
- d. Higher storage capacity

**Answer: c. Error detection and correction**

**Explanation:** ECC (Error-Correcting Code) RAM provides error detection and correction, which enhances the reliability and stability of servers by preventing data corruption.

33. What innovation does DDR4 bring to improve power efficiency compared to DDR3?





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- a. Increased voltage levels
- b. Decreased voltage levels
- c. Larger memory cells
- d. Reduced data transfer rates

**Answer: b. Decreased voltage levels**

**Explanation:** DDR4 RAM operates at lower voltage levels compared to DDR3, which improves power efficiency and reduces heat generation.

34. Which generation of DDR SDRAM supports speeds starting from 3200 MT/s (mega transfers per second) and above?

- a. DDR2
- b. DDR3
- c. DDR4
- d. DDR5

**Answer: d. DDR5**

**Explanation:** DDR5 SDRAM supports speeds starting from 3200 MT/s and above, providing significant improvements in bandwidth and performance over previous generations.