1. What does computer architecture primarily focus on?
a) Software development
b) Hardware design
c) Network administration
d) Data analysis

Answer: b) Hardware design
Explanation: Computer architecture primarily deals with the design and organization of computer systems' hardware components, such as the CPU, memory, and input/output devices.

2. What is the main objective of multi-processing?
a) Reducing power consumption
b) Enhancing software compatibility
c) Improving system performance
d) Minimizing hardware costs

Answer: c) Improving system performance
Explanation: Multi-processing aims to increase system performance by utilizing multiple CPUs or cores to execute tasks concurrently, thus reducing processing time.

3. Which of the following is NOT a type of data transfer?
a) Serial
b) Parallel
c) Direct
d) Serial-Parallel

Answer: d) Serial-Parallel
Explanation: Serial-Parallel is not a standard type of data transfer. The other options refer to common methods of transferring data between components in a computer system.

4. What is the primary role of semiconductor memories in computer systems?
a) Long-term data storage
b) Temporary data processing
c) Input/output operations
d) Networking functions

Answer: b) Temporary data processing
Explanation: Semiconductor memories, such as RAM (Random Access Memory), are primarily used for temporary data storage during data processing operations. They provide fast access to data for the CPU.

5. Which semiconductor memory type retains data even when the power is turned off?
a) SRAM
b) DRAM
c) ROM
d) Flash memory

Answer: c) ROM
Explanation: ROM (Read-Only Memory) retains data even when the power is turned off, making it suitable for storing essential system instructions and data that should not be altered.

6. What distinguishes DRAM from SRAM?

a) DRAM is slower but cheaper
b) SRAM is slower but cheaper
c) DRAM is faster but more expensive
d) SRAM is faster but more expensive

Answer: a) DRAM is slower but cheaper
Explanation: DRAM (Dynamic Random Access Memory) is slower than SRAM (Static Random Access Memory) but is cheaper and more commonly used for main memory in computer systems.

7. Which memory type is commonly used in USB flash drives and memory cards?
a) SRAM
b) DRAM
c) EEPROM
d) Flash memory

Answer: d) Flash memory
Explanation: Flash memory is commonly used in USB flash drives and memory cards due to its ability to retain data without power and its non-volatile nature.

8. What is the primary characteristic of EEPROM (Electrically Erasable Programmable Read-Only Memory)?
a) Volatility
b) Non-volatility
c) Slow access speed
d) Limited rewrite cycles

Answer: b) Non-volatility
Explanation: EEPROM is non-volatile, meaning it retains data even when the power is turned off. It is commonly used for storing firmware and configuration data.

9. Which memory type offers the fastest access speed?
a) DRAM
b) SRAM
c) ROM
d) Flash memory

Answer: b) SRAM
Explanation: SRAM (Static Random Access Memory) offers the fastest access speed among the given options, making it suitable for cache memory and other high-speed applications.

10. Which of the following is NOT a characteristic of cache memory?
a) Volatile
b) Faster access speed than RAM
c) Expensive
d) Large storage capacity

Answer: d) Large storage capacity
Explanation: Cache memory typically has a smaller storage capacity compared to RAM but offers faster access speeds due to its proximity to the CPU.

11. What is the purpose of a cache memory?
a) To provide long-term data storage
b) To temporarily store frequently accessed data

c) To manage input/output operations
d) To execute arithmetic operations

Answer: b) To temporarily store frequently accessed data
Explanation: Cache memory stores frequently accessed data and instructions to reduce the time taken to access them from the main memory, thereby improving overall system performance.

12. Which of the following is a characteristic of ROM?
a) Read and write operations
b) Volatile
c) Non-volatile
d) Dynamic allocation

Answer: c) Non-volatile
Explanation: ROM (Read-Only Memory) is non-volatile, meaning it retains data even when the power is turned off. It is commonly used to store firmware and essential system instructions.

13. What distinguishes EEPROM from ROM?
a) EEPROM is faster
b) EEPROM is volatile
c) EEPROM is erasable and reprogrammable
d) EEPROM is used for temporary data storage

Answer: c) EEPROM is erasable and reprogrammable
Explanation: Unlike ROM, EEPROM (Electrically Erasable Programmable Read-Only Memory) can be erased and reprogrammed multiple times, making it suitable for applications requiring

frequent updates.

14. Which type of memory is commonly used for storing BIOS settings on a computer motherboard?
a) SRAM
b) DRAM
c) Flash memory
d) ROM

Answer: c) Flash memory
Explanation: Flash memory is commonly used for storing BIOS settings on a computer motherboard due to its non-volatile nature and ability to be rewritten.

15. What is the primary drawback of DRAM compared to SRAM?
a) Higher cost
b) Slower access speed
c) Limited rewrite cycles
d) Larger physical size

Answer: b) Slower access speed
Explanation: DRAM (Dynamic Random Access Memory) is slower than SRAM (Static Random Access Memory) due to its refresh cycle requirement, which slows down access speed.

16. Which memory type requires constant refreshing to maintain data integrity?
a) SRAM
b) DRAM
c) ROM

d) Flash memory

Answer: b) DRAM
Explanation: DRAM (Dynamic Random Access Memory) requires constant refreshing to maintain data integrity, as it stores data in capacitors that leak charge over time.

17. What distinguishes flash memory from traditional EEPROM?
a) Faster access speed
b) Higher rewrite cycles
c) Volatility
d) Non-volatility

Answer: b) Higher rewrite cycles
Explanation: Flash memory offers higher rewrite cycles compared to traditional EEPROM (Electrically Erasable Programmable Read-Only Memory), making it more suitable for applications requiring frequent updates.

18. Which memory type is commonly used for BIOS firmware on modern computers?
a) SRAM
b) DRAM
c) EEPROM
d) Flash memory

Answer: d) Flash memory
Explanation: Flash memory is commonly used for storing BIOS firmware on modern computers due to its non-volatile nature and ability to be rewritten.

19. Which memory type is typically used as cache memory in computer systems?

a) DRAM
b) SRAM
c) Flash memory
d) ROM

Answer: b) SRAM
Explanation: SRAM (Static Random Access Memory) is commonly used as cache memory in computer systems due to its fast access speed and lower latency compared to other memory types.

**20. What is the primary function

of cache memory in a computer system?**
a) Long-term data storage
b) Temporary data processing
c) Managing input/output operations
d) Optimizing CPU performance

Answer: d) Optimizing CPU performance
Explanation: Cache memory optimizes CPU performance by storing frequently accessed data and instructions closer to the CPU, reducing the time taken to retrieve them from the main memory.

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