**Review questions chapter 5**

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| 1. **What are the key properties of semiconductor memory?**   • It has two (semi)stable states which can be used to represent binary 1 and 0. • It supports read/write operations.   1. **What are two interpretations** <giải thích> **of the term random-access memory?**   • DRAM.  • SRAM.   1. **What is the difference between DRAM and SRAM in terms of <**về mặt**> applications?**   - SRAM is used for cache memory.  - DRAM is used for main memory.   1. **What is the difference between DRAM and SRAM in terms of characteristics such as speed, size, and cost?**   - Speed: SRAM is faster.  - Size: SRAM takes more space, DRAM is denser.  - Cost: SRAM is more expensive than DRAM.   1. **Explain why one type of RAM is considered to be analog and the other digital**.   - DRAM: analog device because it stores charge and uses a threshold to determine the binary value.  - SRAM: digital because it uses flip-flop logic gates.   1. **What are some applications of ROM?**   • Microprogramming.  • Library subroutines for frequently wanted functions.  • System programs.  • Function tables.   1. **What are the differences among EPROM, EEPROM, and flash memory?**   EPROM:  - Read/written electrically.  - Before writing, all cells must be erased by exposure to UV light.  - Price: $.  EEPROM:  - Can be written to any time, without erasing contents.  - Price: $$$.  Flash memoy:  - Electrical erasing (in seconds), faster than EPROM.  - Price: $$.   1. **Explain the function of each pin in Figure 5.4b. 182 CHAPTER 5 / INTERNAL MEMORY**      1. **What is a parity bit?**   A bit appended to an array of binary digits to make the sum of all the binary digits, including the parity bit, always odd (odd parity), or always even (even parity).   1. **How is the syndrome** <hội chứng> **for the Hamming code interpreted?**   Each bit of the syndrome is 0 or 1 according to if there is or is not a match in that bit position for the two inputs.   1. **How does SDRAM differ <khác> from ordinary DRAM?**   SDRAM:  - Synchronous, unlike traditional DRAM.  - Synchronized with the system bus. |