

KNOWLEDGE PROBE 3: PROGRAMMABLE LOGIC DEVICES

How Programming Is Accomplished

Learning Objectives

1. Identify difference between fuse and antifuse PLDs.
2. Describe differences in PLD programming methods.
 1. In a fuse-type OTP PLD, all fuses are initially
 - a. Open
 - b. Shorted
 2. An anti-fuse, after it is programmed, is a(n)
 - a. Open
 - b. Short
 3. If the floating gate in an EPROM-type MOSFET is NOT charged, the MOSFET can be turned on.
 - a. True
 - b. False
 4. An EEPROM is an OTP device.
 - a. True
 - b. False
 5. Flash memory is an EEPROM that is
 - a. A FF
 - b. A floating gate MOSFET
 - c. A kind of SRAM
 - d. Erased faster and in segments
 6. To disconnect a logic input from the AND input in a RAM programmable PLD, the control FF must be
 - a. Reset
 - b. Set
 7. A disadvantage of a RAM programmed PLD is that
 - a. It is slower than EEPROM programming
 - b. It is too expensive
 - c. It is used only in SPLDs
 - d. Programming is lost when power is removed
 8. Which type of programming is used in most CPLD and FPGAs?
 - a. Antifuse
 - b. EEPROM
 - c. Fuse
 - d. RAM