

**KNOWLEDGE PROBE 1: MICRO & EMBEDDED CONTROLLERS**  
**Part 2: Popular Microcontrollers and Software**  
**Popular 8 and 16-Bit Microcontrollers**

**Learning Objectives**

- Identify and distinguish between the most common and popular 8, 16, 32, and 64-bit microcontrollers.
- Identify reasons for using different types of processors.

1. The oldest but still very popular 8-bit MCU is the
  - a. 68HC11
  - b. 8051
  - c. AVR
  - d. PIC
2. Which is NOT a manufacturer of the 8051?
  - a. Freescale
  - b. Intel
  - c. Maxim
  - d. Philips
3. The 68HC11 is made by
  - a. Freescale
  - b. Intel
  - c. Maxim
  - d. Microchip
4. The PIC MCUs are made by
  - a. Freescale
  - b. Intel
  - c. Maxim
  - d. Microchip
5. The 68HC11 uses Harvard architecture.
  - a. True
  - b. False
6. The PIC processors are RISC designs.
  - a. True
  - b. False



7. What does the PIC processor use instead of separate computing registers?
  - a. A segment of RAM
  - b. Fast I/O
  - c. Harvard architecture
  - d. Two ALUs
  
8. Which of the following is NOT a 16-bit MCU?
  - a. Freescale 68HC12
  - b. PIC24
  - c. TI MSP430
  - d. Zilog Z8
  
9. The main reasons for using 16, 32, or 64-bit processors is they
  - a. Can address more memory
  - b. Can represent larger numerical values
  - c. Move more data faster
  - d. All of the above
  
10. Most 32 and 64-bit micros use the RISC design.
  - a. True
  - b. False
  
11. The most popular 32-bit embedded processor is the
  - a. ARM
  - b. MIPS
  - c. Pentium
  - d. Power PC
  
12. Most 32 and 64-bit processors are individual ICs rather than cores.
  - a. True
  - b. False