KNOWLEDGE PROBE 4: MICRO & EMBEDDED CONTROLLERS
Part 1: Microcontroller Technology Update
I/O Interfaces

Learning Objectives
- Identify important new architectures and features of micro and embedded controllers.
- Describe popular buses and I/O interfaces.

1. I/O circuits are usually on-chip in an embedded controller.
   a. True
   b. False

2. How many bits does a typical parallel I/O port in an embedded controller have?
   a. 1
   b. 2
   c. 8
   d. 16

3. Why are serial ports preferred in an embedded controller?
   a. Fewer IC pins required
   b. More external circuits require serial
   c. They are faster
   d. They are simpler

4. Which of the following is NOT a common serial port in an embedded controller?
   a. I^2C
   b. RS-485
   c. SPI
   d. UART

5. PWM is a form of
   a. Amplitude modulation
   b. Duty cycle modulation
   c. Frequency modulation
   d. Phase modulation

6. An A/D converter is commonly available on-chip in some MCUs.
   a. True
   b. False