KNOWLEDGE PROBE 4: DATA ACQUISITION SYSTEMS
Data Acquisition System Applications

Learning Objectives
1. Describe how data acquisition is used in various industries.
2. Describe different methods of controlling temperature.

1. Which of the following is common to all DAQ applications?
   a. Digital signal processing
   b. Output control
   c. Sensor data measurement
   d. Use of counters

2. What is the sensor in a heat trace temperature control system?
   a. Relay
   b. RTD
   c. Thermistor
   d. Thermocouple

3. What is being controlled in a heat trace system?
   a. Liquid flow in a pipe
   b. Liquid temperature in the pipes
   c. On-off control of liquid flow
   d. Which pipe flow is off or on

4. Heat trace wiring is essentially a
   a. Cable connecting AC to the heating element
   b. Heating element in a cable
   c. Sensor cable
   d. Type of sensor

5. Wireless telemetry is not an option in automotive DAQ systems.
   a. True
   b. False

6. Automotive DAQ systems often use closed loop control.
   a. True
   b. False

7. Semiconductor manufacturing uses DAQs for
   a. Actuator control
   b. Closed loop feedback control.
   c. Sensor monitoring
   d. All of the above

8. A manufacturing application of a DAQ system is
   a. Automated testing
   b. Employee monitoring
   c. Production line control
   d. Statistical process control