

Name \_\_\_\_\_  
Date \_\_\_\_\_

**TDP-801**  
**Controls, Level 1: Fundamentals**

1. What does DDC stand for?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. List the four different kinds of points for a control system and their use:

- a) \_\_\_\_\_  
\_\_\_\_\_
- b) \_\_\_\_\_  
\_\_\_\_\_
- c) \_\_\_\_\_  
\_\_\_\_\_
- d) \_\_\_\_\_  
\_\_\_\_\_

3. Open-loop control is simple and cost effective, while closed-loop control is truly automatic and more accurate in the resulting action. What is the fundamental difference between the control loops that brings about these feature differences?

\_\_\_\_\_  
\_\_\_\_\_

4. Name the control point that describes the following action:

- Reading the status of a supply fan \_\_\_\_\_
- Operating a cooling coil valve with a 4-20mA signal \_\_\_\_\_
- Constant volume pump start/stop \_\_\_\_\_
- Chilled water flow switch \_\_\_\_\_
- Duct static pressure \_\_\_\_\_

5. Name a few of the properties that are associated with a BACnet object.

\_\_\_\_\_  
\_\_\_\_\_

6. A typical DDC controller consists of:

- a) Front-end, actuators, and time clocks
- b) Memory algorithm library, and a microprocessor
- c) Valves, relays, and solenoids
- d) Sensors, switches, and relays

7. True or False? Algorithms are used in all control system types.

\_\_\_\_\_

8. Which of the following describes the function of an algorithm within a control system? (List all that apply). \_\_\_\_\_

- a) An algorithm solves recurrent mathematical computations.
- b) Each control loop contains an algorithm that takes the input error signal and computes an output value used to adjust the controlled device.
- c) A library of algorithms is used by the controller to take input data and properly compute output values for controlled devices to implement control strategies.

9. Review the Points List for the controller on exercise workbook 1. How many input and output points will be required on the control system controller(s)? \_\_\_\_\_

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