**Chemical Engineering 374**

**Reading Questions 16—Chapter 8.8**

**Name** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How do the 3 common types of obstruction meters—orifice, nozzle and venturi—compare in terms of friction head loss?
2. Which type of flowmeters are well suited for tracking the cumulative amount of fluid passing through it (as opposed to the rate of flow)?
3. For a vertical rotameter, what opposing forces influence the position of the float?
4. In what way do Doppler-effect ultrasonic flowmeters depend on impurities in the flowing fluid in order to make their measurement?
5. Why are electromagnetic flowmeters suitable to measure the flow rate of seawater, but not the flow rate of distilled water?
6. What parameter is varied to maintain the temperature of a hot-wire anemometer at a constant value? How does that parameter aid in determining the flow velocity?
7. What restrictions apply to the seeding particles used in LDV and PIV?