**Chemical Engineering 374**

**Reading Questions 17—Chapter 6.1-6.4**

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

1. To apply the Reynolds Transport Theorem to the conservation of momentum, what happens to the definition of B and b? What happens to the dB/dt term?
2. What kinds of forces are included in the term F?
3. In your own words, why is the “Momentum Flux Correction Factor,”  needed?
4. In Example 6.2, why is the effect of atmospheric pressure not included in the solution?
5. In Example 6.4, what was the advantage of drawing the control volume to include the plate?
6. In Example 6.5, what sign did the “reaction” force have when calculated from the momentum equation? How is that force related to the force exerted by the wind on the mast?
7. In Example 6.7, why was the momentum equation constructed twice? How did that affect the direction of the force of the flange?