**Chemical Engineering 374**

**Reading Questions 26—Chapter 15.1, 15.3**

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

1. How is an unstructured grid different from a structured grid in terms of…
   1. The shape of the cells
   2. The numbering of the cells
   3. Ease of creating the grid for complex geometries
2. What property of a grid most closely defines the “quality” of that grid?
3. At what kind of “wall” (give an example) would the “no-slip” condition not be specified?
4. Why would we not specify the pressure at a “velocity inlet?”
5. How are the velocities specified differently along symmetry boundary conditions compared with periodic boundary conditions?
6. Why are turbulent flows difficult to simulate?
7. What are three major types of turbulent flow simulation approaches? What is the major characteristic of each?