Unit 19. Pre-Class Quiz Questions

1. True or false? The work term in the batch reactor energy balance is almost never negligible because there is typically an agitator to stir the reactor and that agitator adds a significant amount of energy to the system.
2. True or false? If a batch reactor operates isothermally, the heat input term ($\dot{Q}$) is equal to zero.
3. True or false? When a batch reactor operates isothermally at a known temperature, the mole balance design equations can be solved without solving the energy balance equation.
4. Which of the following is not typically involved when modeling a batch reactor (choose all that apply).
   a. Writing the appropriate design equations
   b. Gathering experimental data
   c. Making necessary substitutions into the design equations to put them in a form that can be solved mathematically
   d. Solve the resulting design equations, either analytically or using appropriate software
   e. Answer any questions about the performance of the reactor
5. True or false? The operation of a batch reactor often occurs in several stages and each stage must be analyzed separately.