Please Note How the Exam Questions Followed the Competencies!

- Students will be able to use basic engineering units in both SI and AES systems in solving problems, and be able to convert between unit systems by hand
- Students will be able to solve steady-state, overall material balances for systems which include one or more of the following: recycle, multiple units
- Students will be able to set up and solve simple transient material balances
- Students will be able to use a degree-of-freedom approach to assist in the solution of material balances
 Students will be able to able a simple fluid statice amplement (a.g.)
- Students will be able to solve simple fluid statics problems (e.g., manometers, fluid head, etc.)

Note: These concepts are fair game in future exams and on the final!

Hope for Those with Low Scores

- Person with highest score on the final receives an A
- There are lots of points still to be achieved on homework and the case study
- · 2 more exams and the final





Homework Hints

- Please see the homework hints for problem 4.50!
 - This is a workbook problem
 - DO the algebra by hand it is pretty easy





TA Note

- TA may move to the CAEDM computer lab on the 4th floor of the Clyde Bldg during TA hours
 - We want you to start using the computer for homework problems





Class Quiz: (a) What is the equation for the %excess of a reactant? (b) What is equation for the fractional conversion? (c) What is the equation for the extent of reaction?



3 Different Methods of Balances for Reacting Systems 1. Molecular Species Balances 2. Atomic Element Balances 3. Extent of Reaction



















