

CHE 318 Lecture 35 & 36

Final Exam Q&A

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Collections of questions during the live Q&A session

1. How do I prepare for lectures 22 - 24 (two-phase mass transfer)?

Potential steps:

- Please use the **concept sheet** as a reference
 - How did we construct the equilibrium diagram?
 - What is the governing equation for the operating line?
 - Why do operating line have a minimal flow rate requirement?
 - Given the shape of the equilibrium chart, how can I understand the transport resistance in each phase?
2. **Example 1 Lecture 15** may have a typo in the solution.

Yes indeed. To reuse the hand-written notes solution, “flow in pipe 2 contains 45 mol% B.” has been corrected to ” while flow in pipe 2 contains **55 mol% B.**”, as $x_B = 1 - x_A$.

3. Are the concept sheets provided during the exam? What should I write on the extra hand-written formula sheet?
 - Yes all past concept sheets will be provided during the exam.
 - Physical constants, atomic mass, etc will be provided in the questions, if necessary. (Only exception maybe trivial ones like gas constant R)
 - During the preparation for final exam, you can use the extra hand-written formula sheet as a notes for concepts you find harder to remember. Examples may include:
 - Definition of different flow rates
 - Conversion between x_A , w_A and p_A
4. Will you provide sample formula sheets in Canvas?

- Yes we uploaded one sample formula sheet from previous instructor as a reference on Canvas. Also see the answers to question 3.
5. Do we expect derivation questions?
- Yes, derivation questions may appear. More likely, you will be asked to start from a known equation and arrive at a given expression.
 - Train yourself to ask: “How do I get to this form?” rather than trying to memorize derivations line by line.
6. Can I find a list of recommended problems from the textbook?
- Some selected numerical problems from past instructors have been uploaded to Canvas.
 - Skim them first and focus on the ones that expose gaps in your understanding, not on trying to finish everything.
 - If you are unsure about the solution procedure, use the provided Gemini Helper with some judgment.
7. From the final formula sheet from previous instructor, there are some formulae I have not seen in the lecture notes.
- Yes, there are some concepts we didn’t cover in this semester (like the Eddy diffusivity)
 - If you want to write down different re-arrangements of the equations in your sheet, feel free to do so.
8. For derivation problems, where should I start?
- As mentioned in Q5, for any equations you encounter during the preparation but unsure “where do they come from?”, this is the case where you can trace back to the concept sheets / lecture notes
 - We do have a search bar in course website that you can search for equations, so use it wisely