

Chemistry 431A Final Exam Guidelines

Instructions:

The final exam is CUMULATIVE and is scheduled for December 5, Wednesday, 8-10:30 am. Review your notes, and quizzes. 50% of the test will be similar to the quiz questions and 25% will be multiple choice and 25% will be problem solving. We will have a review session on Friday 3-4 pm as indicated in class.

The total weight of the final exam will be 65 points as indicated in the syllabus:

Below are some topics which may not have been emphasized in the quizzes but may be in the final exam (most likely in the problem solving section):

- 1) Know how to interpret sequencing data for DNA and for polypeptides.
- 2) Consider how to apply the chou-fasman rules to determine 2° structure of proteins.
- 3) Recall the noncovalent forces discussed in chapt. 2. Also, be prepared for acid-base type calculations involving buffers. Know chapt 4 Ramachandran Plot. The thermodynamics and process of protein folding.
- 4) Experiments involving proving role of DNA as the genetic molecule.
- 5) structure and function of O₂-carrier proteins as well as muscles.
- 6) Acids, bases and buffers. Discussion of proteins and amino acids with respect to the pH.
- 7) Membrane Transport: Know the various types of transport and be able to do thermodynamic calculations for both passive and active transport. Differentiate between passive diffusion and facilitated diffusion. Describe ionophores as well as the model of ATP coupled Na⁺/K⁺ pump.