

Study Guide for Final Exam in Evolution (Bio 213) Winter 2001

1. The final exam will consist of one (1) 20-point essay question (see below), one (1) 15-point cladogram problem (see below), one or two other problems for 5-10 points each, 3-8 short-answer questions each counting from 1-5 points, and 15-25 multiple choice or other objective questions, each counting two (2) points.
2. The essay question will be simply "Explain evolution." You need to write between 300 and 500 words. Please try to write as legibly as possible. I suggest you write out and more or less memorize your essay before the final. You need to say what evolution is, what the evidence is for evolution, explain the very basics of evolutionary genetics, adaptation and natural selection, classification and speciation, and macroevolution. I highly recommend you look at the prefaces to each of the 5 "Parts" of your book as you try to distill your thoughts for this essay. You may also memorize the essay that can be found on previous final exam answer keys (see <http://www.csupomona.edu/~shbryant/213keys.htm>).
3. The cladogram problem will be similar to the one worked in class. You will need to use the given data to construct a cladogram, and write the newly invented character states between the species.
4. The 1-2 problems may include a delta q/q transformation to a q vs. time graph (or vice versa), and perhaps another problem.
5. The 3-8 short answer questions will be objective-type questions, such as "List 5 different prezygotic isolating mechanisms" or "What is a synapomorphy and how is it used in cladogram construction?". The material covered by these questions may include both lecture material and reading assignments.
6. There will be 15-25 multiple choice questions on material covered since the second exam. The material covered by these questions may include both lecture material and reading assignments.
7. Read the assigned chapters, **especially studying the chapter summaries**. Assigned chapters covered since Test 2 are 14, 15, 16, 18, 20, 21, 22 and 23. Remember that the book has a glossary — you might read it over to get terms straight in your mind. If I ask for definitions of terms in the glossary, your answer should be very close to the glossary definition.
8. Chapter summary points from which objective questions (at least one per chapter) will be taken for Chapters 14, 15, 16, 18, 20, 21, 22 and 23 are listed below. Some of these objective questions may be definitions of terms used in the chapter summary points.

Ch. 14: 1, 2, 3, 4, 5, 6, 7.
Ch. 15: 1, 2, 3, 4, 5, 6, 7
Ch. 16: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12.
Ch. 18: 1, 2, 3, 4, 5, 6, 7, 8, 9.
Ch. 20: 1, 2, 3, 5, 7, 9, 10, 11.
Ch. 21: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14.
Ch. 22: 1: 1, 2, 4, 5, 6, 7.
Ch. 23: 1, 2, 4, 7, 8, 9, 10, 11, 12.