

## **Biology 180 – Some notes about writing practice exams**

### **Document format**

Send to John in Word format; John will convert to web and reply with preview.

### **Questions**

The goal is questions that are as real-exam-like as possible, to give students practice for midterms.

Four questions are typical for these 30-minute exams (see below); students should have much more time per question than on midterms, so they can “practice” thinking about and answering such questions.

Since practice exams are open-book and taken online, students can search for information.

Avoid or minimize “content” questions, and if referring to a real study, change a few key words (such as species names or locations) so students can't look up answers.

Similarly, consider changing searchable details in questions from old practice exams.

Avoid tabs when writing questions and answers. They do not translate correctly to the web.

Practice exams typically cover the lectures (and related material from lab) since the last practice exam.

### **Answers**

Students answer online by typing in a text box, so they can't draw graphs or diagrams, nor can they type special characters such as  $\lambda$  and  $X^b$ . To reference those, use the full word "lambda" or the  $X^b$  notation for superscripts.

### **Sample answer and Grading rubric**

Students tend to focus on the sample answer, so avoid additional explanation that isn't necessary for credit. Just state the simplest complete answer. Include acceptable synonymous forms of the answer, for example, “four genotypes with equal frequency (or 25% each, or 1:1:1:1).”

For the rubric, assign whole numbers only (0, 1, 2, ...). Students choose scores from a drop-down menu; fractional scores aren't available.

Explicitly state what is needed for each possible score, including 0. If a “0” score isn't listed, students may assume that any answer gets at least one point.

Each practice exam must be worth 8 points. Typically, we use four questions of 2 points each, graded on a 0/1/2 point scale. But any integer value can be assigned, so you could have questions of 2+2+3+1=8 total.

Together, the Sample Answer and Rubric must be sufficiently clear and detailed that students can grade — they have no opportunity to ask for clarification.

