

Advice for the MIT Physics Part III Oral Examination in Biophysics

The third (and final!) part of the qualifying exams is meant to test your general knowledge of biophysics and your ability to discuss the physics in the context of an oral examination. The first 30 minutes of the exam will be a discussion of a biophysics problem that you will receive a week before the exam. The remainder of the exam will consist of questions from the committee on biophysics more broadly.

This format is rather different from the written exams given as part of the first two qualifying exams, so the preparation should also be different. In particular, I recommend that you:

- Do a practice test with a few friends.
- Spend time in front of a board discussing biophysics with some friends.
- Solve the advance problem in a number of different ways. Make sure that you can present and discuss the simple intuitive solutions.
- It is best to avoid long mathematical derivations during the exam.
- Be prepared to present your solution without notes.
- Make sure that you listen to the questions being asked during the examination. Sometimes it helps to rephrase the question in your own words. This helps to ensure that you understand the question and it also gives you more time to prepare your response.
- After giving an answer, confirm that you have addressed the question.
- It is ok if you don't know all of the answers. It is better to say "I don't know" than to say something that is not true. Even better would be to say, "I don't know the answer to that question, but I could figure it out by doing..."
- Understand the experimental issues behind the question.
- Review using books such as "Biological Physics" by Phil Nelson.

Feel free to email me (gore@mit.edu) if you have any questions.