

Philosophy of Biology
Philosophy 147
Winter, 2006

Directions and Sample Questions for First Exam

Bring **two** bluebooks available in the university bookstore with **nothing** written in or on them (not even your name). These may be redistributed at the time of the exam.

The exam will consist of the three parts, for which the instructions are as follows:

Part A. Answer each of the following six questions in two to three sentences each. Each question is worth up to 5 points (30 points total).

The following are *examples* of the kinds of questions that will appear on the exam:

What is meant by essentialism?

What does Bernard mean by an internal environment?

What about Lamarck's conception of evolution makes it progressive?

Part B. Address the following question in an essay (35 points).

On the actual exam, I will pick one of the following three questions for you to write on:

1. Compare and discuss the ways of conceptualizing living phenomena advanced by Xavier Bichat (traditionally seen as a vitalist) and Claude Bernard (traditionally seen as a mechanist). Discuss the implications of each of their frameworks for the development of biology as a science.

2. In advancing his theory of the cell, Theodor Schwann considered himself to be a mechanist. What features of his theory exemplify a mechanist viewpoint? What about his theory led others to view him as a vitalist? Explain how you would characterize his view in the context of the vitalist-mechanist controversy.

3. Fermentation was the focus of extensive investigation by chemists and biologists in the 19th century. Describe the different views that were taken by the major investigators and discuss the understanding each exemplifies as to how biological should be investigated and explained.

Part C. Write an essay on **one** of the following questions (35 points).

I will give you three questions from which to choose.