

**ORGANISMAL BIOLOGY**  
**SAMPLE FREE-FORMAT QUESTIONS for the SECOND EXAM**

Name (please print): \_\_\_\_\_

These questions have appeared on previous years' exams, and may well appear again.

**PART III. LONGER ANSWERS. Write your name** legibly on the next page and clearly answer

**ANY TWO** of the following. Drawings may help; please label them. (15 points each)

1. Explain Stanley Miller's experiment: what did he do, what did he find, and what were his conclusions? How did he make sure that the materials he found were the result of synthesis and not contamination?
2. Explain what vascular tissues are, how they work, and how they have made vascular plants so successful compared to nonvascular plants.
3. Explain the concept of endosymbiosis and the evidence for it.
4. With or without the aid of simple diagrams, outline (or summarize) the differences between the life cycles of mosses, ferns, and fungi.
5. Draw a cross-section of a leaf and describe what each part does.