

ORGANISMAL BIOLOGY
SAMPLE FREE-FORMAT QUESTIONS for the FINAL EXAM

Name (please print): _____

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

PART IV. LONGER ANSWERS. In the space below, clearly answer **ANY TWO** of the following.

Drawings may help; please label them. (15 points each)

1. Describe the way in which geographic speciation is usually thought to occur. Use some diagrams.
2. Draw a labeled diagram of a primitive mollusk, then describe the characteristics of the various classes of mollusks derived from this primitive kind.
3. Explain (A) why a body cavity can be advantageous, and (B) some of the various types of body cavities that characterize different types of animals.
4. Describe in as much detail as you can, with or without illustrations, the various classes and other subgroups that exist within the phylum Arthropoda, and explaining how they differ from one another.
5. Explain why the flatworm digestive system was inadequate for a larger animal, what evolved to replace it, and in what way were these innovations better.
6. Explain two ways in which insects are built that restricts them to small sizes.
7. Parasitism is a way of life for many animals. Choose at least **THREE** parasitic animals and describe their features and their lives. Name the phylum to which each belongs; they may belong to 3 different phyla, or several may belong to the same phylum.
8. Describe a lophophore; explain how it works; and briefly characterize the phyla in which it occurs.
9. List six or more adaptations shared by all primates but not present in most other mammals.