
Section I. Short answer. Answer any 5 of the following questions. (3 points each).

1. As the human population grows, what are 3 things that these people require from Nature?

2. How does carbon dioxide affect the atmospheric energy balance?

3. What are 3 types of potentially-renewable resources?

4. When we speak of “sustainable behavior,” what does this mean?

5. What are 3 impacts you have on the environment each day?

6. What are 3 of Nature’s Services (Ecosystem Services)?

7. Why is the stratospheric ozone layer important?

Section II. Diagrams, labeled appropriately (include labels on arrows, boxes, etc). Answer 1 of the following. (5 points each).

1. Provide a generalized cycle that links carbon and energy. Remember to include sources, and flow paths. Annotate with text where necessary.

2. Diagram the Earth’s energy balance. How does CO₂ alter this balance?

Section III. Short Essay. Answers could be complete with 6 to 10 sentences. Answer 1 of the following. (10 points each).

1. Discuss two Ecosystem Services (i.e., pollination, water purification, regulation of the atmosphere, viable fisheries, etc.). What are two ways that each of these services is altered by human activity?

2. Describe two major changes in abiotic factors that will be a part of global warming and note how ecosystems (and the organisms in these systems) will be affected and how they will respond.