I. Human Interaction & Conservation Bio: Biodiversity Threats: (Ch 56)

1. List the 3 levels ecologists used to organize biodiversity.
2. Explain the 4 major threats to biodiversity and how it reduce biodiversity.
3. Explain how extinction vortex occurs.
4. Describe Two ways human activities can affect environment drastically. Provide suggestions using conservation biologist example.

II. Biosphere and Biomes (Ch 52)

1. Explain how climates affect biomes.
2. Give 2 examples of how global climate change can alter the current range of species.
3. Copy Graph 52.10 in your text and label the axes of the figure, identify the major terrestrial biomes based on the graph.
4. Give example of 2 aquatic biomes and how it is impacted by the changing climate.
5. What are some biotic factors that can affect distribution of species?

III. Population (Ch 53)

1. List the 4 factors to consider when studying a population.
2. Sketch the following graphs and provide examples to explain population changes:
    1. Logistic growth
    2. Exponential growth
    3. Survivorship curve
    4. Age structure
3. How does life history relate to population growth?
4. Explain the validity of population data collected using different sample techniques.

IV. Community (Ch 54)

1. Make a chart of the interspecific interactions and use +/- to demonstrate the relationship.
2. Apply the Competitive Exclusion Principle to explain the following: resource partitioning, character displacement, fundamental vs. realized niche.
3. Explain energetic hypothesis and dynamic stability hypothesis.
4. Predict the impact of when keystone or dominant species are removed from the community.
5. Explain how disturbance changes biodiversity.
6. Compare and contrast primary and secondary succession.
7. Describe island biogeographic factors.
8. How can pathogen be controlled within a community.

V. Ecosystems and Restoration Ecology (Ch 55)

1. Define gross primary production and net primary production.
2. Compare and contrast productivity in aquatic and terrestrial ecosystems.
3. Predict the amount of energy available when given the energy available for a given level.
4. Sketch the 4 nutrient cycles (pics!!) and highlight the key organisms within the cycles!
5. In the carbon and water cycle, write in equations of photosynthesis and respiration.
6. Use either bioremediation and bio augmentation to suggest a solution to a problem.