

Biology 130 – Midterm Sample Questions

Below I have given several practice questions that I have taken directly from the review sheets. These same questions may appear on the midterm (or questions similar to these). Each question on the midterm will have a specific point value – the higher the point value, the more detailed your answer should be (you will also be able to get a feel for the amount of explanation I expect based upon the space provided to answer the questions).

1. How does the process of natural selection result in change in populations over time? (Brief description please)
2. Classification of major vegetative formations on a global scale is by biome designation. **A)** What is the utility of the biome concept? **B)** What are the limitations? **C)** Describe *one terrestrial* and *one aquatic biome* with regard to: Climatic features; Vegetation; Geographic location; and Comparative species diversity.
3. Below, I have provided **the rate equation** for ***exponential growth***. Graph that equation on the plot below. Is this a realistic prediction of natural populations? Who was Thomas Malthus? (I will give you some axes to graph the function.)
4. What is meant by metapopulations? What features in the environment might lead to this pattern? With geographically structured populations, what are the two factors that determine the number of occupied patches