

## **EEB 2208 (Introduction to Conservation Biology)**

### **Sample Test Questions: Lectures 1-5**

Before attempting to answer these questions, make sure you read the document titled “Exam Format Information”, which will be posted on the web site under “Important course documents”. That document explains how to answer questions on my exams.

For the following sets of questions identify all answers that are correct. Each numbered item is worth 1 point.

**Which of the following things have been suggested as reasons why conservation is important? (5 points)**

1. People like nature.
2. Biodiversity is a source of building materials.
3. Human health can benefit from biological diversity.
4. Ecosystems provide important services to humans.
5. If too many species go extinct there might be an ecological catastrophe, like that on Easter Island.

**Based on what I have told you in lectures, which of these places are likely to be species richness hotspots?**

6. Alaska.
7. Madagascar.
8. The South American Andes.
9. Easter Island.
10. The ocean between Australia and SE Asia.

**Which of the following disciplines play an important role in conservation biology?**

11. Genetics.
12. Political science.
13. Geography.
14. Economics.
15. Environmental activism.

**Using only Figure 3 in Hahs et al. (in the exam I would give you the figure and the legend) determine which of the following statements is correct?**

16. The oldest cities have the highest extinction rates.
17. Extinction debt is lowest for Type III cities.
18. The number of extinctions is lowest for Type III cities.
19. Extensive transformation after 1600 causes relatively high extinction rates.
20. The youngest cities have highly variable extinction rates.

**Using data collected from vets, researchers have studied the mortality rate of cats that have fallen from buildings to see whether the height of the fall influences the chance that the cat will die. Surprisingly, they found that cats that fall from floors 1-5 were more likely to die than those that fell from higher up (floors 6-32). Why was this? (5 points)**

21. Falling from high up gives the cats time to position themselves so that they land safely.
22. The data are biased.
23. A mean is being compared to a median.
24. Fewer cats fall from high floors than low floors.
25. Vets don't see most of the cats that fall from higher floors.

**Which of the following statements about species richness are generally true? (5 points)**

26. Richness increases with increasing latitude.
27. Richness is highest in the tropics.
28. Richness is higher on islands than on the mainland.
29. Richness is highest at high elevations.
30. Richness is highest in hotspots.

**How does the current rate of extinction compare to the background rate? (5 points)**

31. They are about the same.
32. It is about ten million times greater.
33. It might be as much as ten thousand times greater.
34. It is estimated to be about 100-1000 times greater.
35. It is impossible to compare them.

**Which of the following could be considered keystone species?**

36. Wolves.
37. Beavers.
38. Puritan tiger beetles.
39. Humans.
40. Sea otters.

**Which of the following is a component of biological diversity?**

41. Interactions among species.
42. Species evenness.
43. Species richness.
44. DNA differences among humans.
45. Different species assemblages.

**Which of the following statements about extinction are correct?**

- 46. Mass extinctions have been very common throughout geological time.
- 47. Extinction rates were far higher during past mass extinctions than they are today.
- 48. Extinction is a natural process.
- 49. Extinction rates in marine species are much higher than for terrestrial species.
- 50. Extinction rates in birds are very similar to all other groups.

**PART 2:**

**51. Define the following terms, and give an example of each (8 points).**

- a) Keystone species
  
  
  
  
  
  
  
  
  
  
- b) Beta-diversity
  
  
  
  
  
  
  
  
  
  
- c) Endemic species
  
  
  
  
  
  
  
  
  
  
- d) Extinct in the wild

**52. Describe three ways in which conservation biology is similar to medicine (3 points).**

**53. Define the word “average” as completely as possible (3 points).**

**Answers will be posted soon.**