EEB 2208 (Introduction to Conservation Biology)

Sample Test Questions

The test will consist of two parts. Part 1 will make up most of the test and will include a series of questions followed by several possible answers. You will need to identify whether each answer is correct or not. Part 2 will include a small number of questions that could require you to do things such as: give short written answers, match pairs, identify things on diagrams, give definitions, fill in the blanks, etc.

Part 1

The questions in this part of the test will NOT be typical multiple choice questions, in which you must pick one correct answer out of five. So read the instructions here (and on the test) to make sure that you know what is expected.

Questions will be organized in groups of five. In each case, there will be an initial question, followed by five potential answers. You must decide whether each answer is correct or not. Then, on the Scantron form, you need to mark "A" if the answer is correct, or "B" if it is incorrect. If you mark any other letter you will get the answer wrong.

THIS IS IMPORTANT: Each answer should be considered separately – whether one is right or wrong has no influence on whether the others are right or wrong. Within a set of 5 answers, it is possible for all to be correct, all to be wrong, or any combination in between.

So that we have a back-up, I recommend that you also mark your answers clearly on the actual test paper by circling the answers that you think are correct, and leaving the incorrect answers uncircled. We will collect these papers, but will not use them unless there is a problem with the scantrons.

One point will be assigned to each answer.

Here's an example:

Which of the following statements about this course are true (3 points)?

1. It is taught by Chris Elphick.
2. It is taught by Queen Elizabeth II.
3. It meets Monday and Wednesday at 2.
4. It is not as interesting as calculus.
5. Much of the course focuses on species extinctions and declines.

For full marks, on your Scantron form you should have marked "A" for 1, 3 and 5 (see the syllabus for the answers) and marked "B" for 2 (see the syllabus) and 4 (if you wanted to, you could try to persuade me that I'm wrong about this last one ….. but it will be difficult, and most of the students in the class will be on my side).

If your answers were 1-A, 2-B, 3-A, 4-A, 5-B then you would get 3 points out of 5. This is because your first three answers were correct, but your answers to 4 and 5 were both wrong.

If you're not sure that you understand how these questions will work, you can practice on the sample questions below. If you still don't get it, please talk to me or the TA.

The point of asking questions in this way is not to confuse you. Instead, by breaking multiple choice questions down into multiple separate parts, this approach makes it easier for you to demonstrate more of what you know. In a traditional multiple choice question where there is only one correct answer out of 5, you may know that 3 parts are wrong, but be unsure about the other two. If you guess based on that, you risk getting no credit for the fact that you had 3/5 (60%) of the answer correct. With my questions, you will get that credit. But, the system is probably different from what you've seen before, so I strongly encourage you to make sure you understand it before the exam.

Part 2

The second part of the test will include only a few questions. You will be asked to write very short answers (1-2 sentences maximum), label/explain diagrams, etc.

A couple of hints about answering this type of question:

First, none will require more than 1-2 sentences. So, do not write down everything that you know about the topic, whether it relates to the question or not. This approach will waste time and increase the risk that you write down something that is wrong – which will result in points being taken off. If you write five things, four of which are wrong, and one of which happens to be the answer, the grader will interpret it as a sign that you were not sure what the correct answer was and you WILL NOT get full points.

Second, write legibly – it is your responsibility to write something that can be read (and understood) easily by anyone; it is not the grader's responsibility to decipher hieroglyphics or sentence fragments. If the grader cannot understand what you mean from what you have written, you will not get full points.

Third, if the question says to use complete sentences, then that is what I want.

Finally, in all my questions (Part 1 and 2) I try really hard to write exactly what I mean. I am not trying to trick you (what would be the point in that – to show what a lousy teacher I am?). I am, however, trying to test what you know, and see if you can discern subtle points, so some of my questions are hard. But, please do not agonize over all the possible bizarre interpretations of my words. Over-thinking questions inevitably leads to mistakes. Almost always, I will be asking for what it seems like I'm asking for.

Asking questions during the exam is disruptive to other students, so please don't do it unless you think it is truly necessary. In the vast majority (>95%) of cases when students do ask questions during an exam my answer is either (a) "it means what it says" or (b) "I can't answer that without giving away the answer, which would be unfair to other students (and mean that the question no longer tests your knowledge)". So, if it seems like this is what I'm likely to say, you probably shouldn't ask the question. Of course, if there really is a mistake in the exam I will account for it in my grading.

SAMPLE QUESTIONS: PART 1

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.

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)

6. Falling from high up gives the cats time to position themselves so that they land safely.
7. The data are biased.
8. A mean is being compared to a median.
9. Fewer cats fall from high floors than low floors.
10. 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)

11. Richness increases with increasing latitude.
12. Richness is highest in the tropics.
13. Richness is higher on islands than on the mainland.
14. Richness is highest at high elevations.
15. Richness is highest in hotspots.

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

16. They are about the same.
17. It is about ten million times greater.
18. It might be as much as ten thousand times greater.
19. It is estimated to be about 100-1000 times greater.
20. It is impossible to compare them.

Climate change has been predicted to cause many future changes. Which of the following things are already happening? (5 points)

21. The length of growing seasons have declined.
22. The extent of permafrost in the Arctic has increased.
23. Globally, net primary production has decreased.
24. Major ocean currents have changed direction.
25. European butterflies have shifted their geographic ranges to the north.

Which of the following are examples of exotic species?

26. Mongoose in Hawaii.
27. Avian malaria in Hawaii.
28. European rabbits in France.
29. West Nile virus in North America.
30. A single house cat on Stephen's Island.

Look at Figure 3 in the second discussion paper (Orme et al.) [on the test I would simply give you the figure including the legend]. Which of these statements are true? (3 points)

31. A total of 1275 cells were classified as hotspots.
32. Overall, congruence was high.
33. Congruence was greatest between species richness hotspots and endemism hotspots.
34. Congruence increased over time.
35. Congruence decreased over time.

PART 2:

36. List five things that make a species especially vulnerable to extinction, and for each say briefly why it is important (10 points).

37. Define the following terms, and give an example of each (6 points).

a) Keystone species

b) Beta-diversity

c) Endemic species

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

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