BI328

CONSERVATION BIOLOGY

Fall 2020

REVIEW QUESTIONS: CONCEPTS, MEASURES, PATTERNS, DRIVERS

1. Briefly describe the role of a scientist vs an advocate in Conservation Biology and argue whether you think there is such a thing as a "objective scientist".

2. List the three major value systems for biodiversity.

3. Compare and contrast the systems of valuing biodiversity for its instrumental vs intrinsic value.

4. Briefly describe the three major arguments for the intrinsic value of biodiversity.

5. Explain how the relational value of biodiversity describes aspects not encompassed in the intrinsic/utilitarian value of biodiversity.

6. Briefly describe the four main categories to describe the instrumental value of biodiversity.

7. Explain the difference in the ease of being able to assign monetary value for biodiversity with direct use value vs. Indirect Use Value/Option Value/Non-use value.

8. Briefly describe the value of genetic diversity.

9. Define the value of species diversity in terms of instrumental value.

10. Define the value of species diversity in terms of ecological/functional value.

11. Define the terms "flagship species", "umbrella species", "indicator species" and briefly explain how the groups of species have a strategic value for conservation.

12. Argue whether you think the intrinsic value of a species is higher if it is more unique/rare.

13. Argue whether you think the instrumental value of a species is higher if it has a more unique role within an ecosystem.

14. Briefly describe the instrumental value of an ecosystem in terms of goods & services.

15. Briefly explain how ecosystem diversity can have a strategic value for conservation.

16. Briefly describe each of the four major categories of ecosystem services and list examples for each.

17. Briefly describe the four ecosystem functions that constitute the supporting services and explain the relationship to the other three categories of ecosystem services.

18. Briefly describe the four major groups of provisioning services and explain how provisioning services differ from the other three categories (keyword: direct value).

19. Define what regulating services are, list the six major categories and briefly describe two of them in detail.

20. Define what cultural services are and describe two examples.

21. Species diversity plays an important role in stabilizing ecosystems and regulating supporting services. Use an example to explain this statement.

22. Briefly explain the role of biocomplexity in enhancing ecosystem functioning & ecosystem services (you may use an example).

23. List six ways markets have been established to trade ecosystem services. For two of them explain the benefits & drawbacks of using such a system.

24. Briefly describe what open-access and open-pool resources are. List an example for each. Explain why the market frequently fails this type of resources.

25. Briefly define the concept of the total economic value framework and explain how it captures the "full" utilitarian/instrumental value of biodiversity (use the key terms of direct use value, indirect use value, option value & existence value).