

Chapter 10 – Review Questions – Part 1

Read Chapter 10 and answer the following questions on a separate sheet of paper.

ANSWERS MUST BE HANDWRITTEN! Typed responses will not be accepted.

1. Evaluate the reintroduction of the gray wolf as a keystone predator species in the Yellowstone ecosystem.
2. Describe ways in which human activities have reduced the biodiversity of the world and of the United States.
3. Distinguish between the *intrinsic* and *instrumental* value of the earth's biodiversity. Distinguish between *existence*, *aesthetic*, and *bequest* values.
4. List seven important ecological services provided by forests and seven important economic benefits of forests.
5. Distinguish among *old-growth forests*, *second-growth forests*, and *tree plantations*.
6. Describe the rotation cycle for harvesting and managing a forest.
7. According to WRI estimates, how much of the world's forest cover have been removed in the past 8,000 years? How much has been removed since 1900? How much of the remaining forest is expected to be removed by around 2020?
8. What are three ways which the severity of the fuelwood crisis in developing countries could be reduced?
9. Describe three major ways of harvesting trees. List the advantages and disadvantages of clear-cutting forests.
10. List eight ways to use forests more sustainably.
11. Describe the benefits of certifying that timber has been produced sustainably.
12. Describe the good news and some bad news about the extent and condition of forests in the United States.
13. Distinguish among *surface*, *crown*, and *ground* forest fires. List two approaches used to protect forest resources from fire. How do some plants and animals benefit from forest fires?
14. List the advantages and disadvantages of reducing the chances of crown fires on public lands by (a) setting prescribed fires, (b) allowing most natural fires to burn, and (c) cutting trees to thin out forests.
15. What are the advantages and disadvantages of the *Healthy Forests Initiative* law passed to help reduce the threat of fire damages in U.S. national forests?
16. What are two conflicting views of how resources of the U.S. national forests should be used? Explain why timber harvesting in national forests usually loses money for the U.S. citizens who own these forests.
17. List the advantages and disadvantages of logging in U.S. national forests.
18. What are three advantages of making paper from tree-free sources such as rice straw and kenaf fibers?
19. How rapidly are tropical forests being cleared and degraded? Why is this viewed as a serious global environmental problem?

Chapter 10 – Review Questions – Part 2

Read Chapter 10 and answer the following questions on a separate sheet of paper.

ANSWERS MUST BE HANDWRITTEN! Typed responses will not be accepted.

20. List five basic and ten secondary causes of tropical deforestation and degradation.
21. List nine ways to prevent or reduce tropical deforestation and degradation and three ways to restore degraded tropical forests.
22. Describe ways to achieve more sustainable farming and logging in tropical forests. What are *debt-for-nature swaps*?
23. Describe Kenya's Green Belt Movement.
24. List four examples of ecological services provided by grasslands.
25. Distinguish between *rangelands* and *pastures*. Describe *overgrazing* and *under grazing* and how each can be harmful to grasslands. Describe *rotational grazing* and ways to protect *riparian zones*.
26. What are the major threats to national parks in the United States and in other countries? List eight ways to improve national park management in the United States.
27. According to scientists, what is the minimum percentage of the earth's land area that we should strictly protect from harmful human activities? What percentage has been strictly protected?
28. Describe *habitat corridors* and *buffer zones*.
29. Describe efforts by Costa Rica to establish reserves to protect its biodiversity.
30. What are *ecoregions*? What are the goals of *ecoregional* conservation?
31. How can GIS technology be used to understand and protect or manage ecosystems?
32. Explain the importance of protecting biodiversity in the world's biodiversity hot spots.
33. Define and give an example of *community-based conservation*.
34. What is *wilderness*, and why is it important? List the advantages and disadvantages of protecting wilderness. What percentage of the land area of the United States has been set aside as wilderness?
35. Distinguish among ecosystem *restoration*, *rehabilitation*, and *creation of artificial ecosystems*. List five-science based principles for carrying out ecological restoration or rehabilitation? Describe some concerns about widespread use for ecological restoration.
36. Describe efforts to restore a degraded tropical dry forest in Costa Rica. What is *biocultural restoration*?
37. List eight ways suggested by biodiversity expert Edward O. Wilson to protect most of the world's remaining ecosystems and species.
38. What are six ways in which individuals can help sustain terrestrial biodiversity?