



Practice Midterm Exam

Raven, Berg, Hassenzahl: Environment, 7th Edition
Chapter 17: Biological Resources

1. Ecosystem diversity is:
 - a) variety of interactions among organisms in natural communities
 - b) the number of different species in a given area
 - c) the variety of abiotic characteristics within a given area
 - d) the genetic variety within all populations of a given species
 - e) synonymous with ecosystem services

Ans: a

Difficulty: Easy

Response:

Biological Diversity; 17.1

2. Bacteria and fungi are important to humans because they:
 - a) help control weeds
 - b) pollinate crop plants
 - c) provide shelter.
 - d) deplete nutrient minerals in the soil
 - e) provide foods and antibiotics

Ans: e

Difficulty: Easy

Response:

Why We Need Organisms; 17.1.1

3. Insects are an important biological resource because they:
 - a) enrich the soil with nitrogen
 - b) help control weeds and insect pests
 - c) help control the severity of local flooding
 - d) prevent soil erosion
 - e) produce antibiotics

Ans: b

Difficulty: Easy

Response:

Why We Need Organisms; 17.1.1

4. The corn blight of 1970 was brought under control by:
 - a) crossing highly uniform U.S. corn varieties with genetically diverse ancestral varieties from Mexico
 - b) strange weather patterns resulting in a drought that killed the fungus
 - c) the accidental release of a genetically engineered fungus from a research lab
 - d) repetitive treatment with various chemical sprays
 - e) pollution that seemed to have a greater adverse effect on the corn blight fungus than on the corn itself

Ans: a

Difficulty: Easy

Response:

Why We Need Organisms; 17.1.1



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5. The continuous, low-level extinction of species that has occurred throughout the history of life on Earth is known as:
- a) mass extinction
 - b) evolution
 - c) background extinction
 - d) human impact extinction
 - e) biotic pollution

Ans: c

Difficulty: Easy

Response:

Extinction and Species Endangerment; 17.2

6. A species in imminent danger of extinction throughout all or a significant portion of its range is said to be:
- a) endemic
 - b) commercially extinct
 - c) endangered
 - d) threatened
 - e) invasive

Ans: c

Difficulty: Easy

Response:

Endangered and Threatened Species; 17.2.1

7. Most species facing extinction today are threatened because of:
- a) living in biodiversity hotspots
 - b) changing climate
 - c) the recent impact of a large comet
 - d) large quantities of dust in the atmosphere
 - e) human activity

Ans: e

Difficulty: Medium

Response:

Extinction and Species Endangerment; 17.2

8. Which of the following characteristics is known to make a species more vulnerable to extinction?
- a) herbivory
 - b) occupying a small (localized) range
 - c) living on a continent
 - d) population less than 1 million
 - e) high reproductive success

Ans: b

Difficulty: Easy

Response:

Endangered and Threatened Species; 17.2.1



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9. Endemic species:

- a) are commonly found on islands
- b) often have small populations
- c) have few natural defenses
- d) represent a high percentage of recently extinct (bird) species
- e) all of these

Ans: e

Difficulty: Easy

Response:

Endangered and Threatened Species; 17.2.1

10. Which of the following is an example of a species that was threatened historically due to overexploitation?

- a) Guam Rail
- b) American Bison
- c) Brown Tree Snake
- d) Nutria
- e) Water Hyacinth

Ans: b

Difficulty: Easy

Response:

Human Causes of Species Endangerment; 17.2.4

11. The single greatest threat to biological diversity is:

- a) the introduction of foreign species
- b) air pollution
- c) overexploitation
- d) habitat loss
- e) water pollution

Ans: d

Difficulty: Easy

Response:

Human Causes of Species Endangerment; 17.2.4

12. Biodiversity hotspots:

- a) house only 10% of all species of vascular plants
- b) are home to nearly 20% of the world's population
- c) are all located in tropical regions
- d) contain few endemic species
- e) all of these

Ans: b

Difficulty: Easy

Response:

Where is Declining Biodiversity the Greatest Problem?; 17.2.3



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13. The current conflict between humans and elephants is based on:

- a) biotic pollution
- b) over-hunting for ivory
- c) water pollution
- d) loss of habitat
- e) needs for shelter

Ans: d

Difficulty: Easy

Response:

Human Causes of Species Endangerment; 17.2.4

14. The introduction of a foreign species onto an island is an example of:

- a) commercial harvest
- b) biotic pollution
- c) commercial extinction
- d) background extinction
- e) endemism

Ans: b

Difficulty: Easy

Response:

Human Causes of Species Endangerment; 17.2.4

15. Which of the following affects organisms even in undisturbed, natural ecosystems?

- a) global warming
- b) ozone depletion
- c) acid precipitation
- d) thermal pollution
- e) all of these

Ans: e

Difficulty: Easy

Response:

Human Causes of Species Endangerment; 17.2.4

16. Which of the following have been linked to the dramatic global decline of amphibian populations?

- a) drainage of wetlands
- b) pollutants
- c) infectious diseases
- d) global climate warming
- e) all of these

Ans: e

Difficulty: Easy

Response:

Case in Point: Disappearing Frogs; 17.2.5



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17. Snow geese:

- a) are currently a threatened species under the ESA
- b) are experiencing a reduced range and decreasing population due to habitat destruction
- c) are commercially hunted throughout their migratory range
- d) have destroyed much of the Arctic's fragile coastal ecosystem due to increased foraging
- e) are negatively impacting the farm sites where they spend the winter

Ans: d

Difficulty: Easy

Response:

Management of Migratory Animals; 17.5.1

18. During the 19th and 20th centuries, many whale populations suffered:

- a) extinction
- b) endemism
- c) adaptive radiation
- d) biotic pollution
- e) commercial extinction

Ans: e

Difficulty: Easy

Response:

Management of Aquatic Organisms; 17.5.2

19. The global ban on commercial whaling:

- a) went into effect in 1946
- b) has allowed many populations of whales to recover
- c) defined the Northern Ocean Whale Sanctuary, where commercial whaling is prohibited
- d) resulted in the removal of the southern blue whale from the endangered species list
- e) all of these

Ans: b

Difficulty: Easy

Response:

Management of Aquatic Organisms; 17.5.2

20. Organisms that provide an early warning of environmental damage are known as:

- a) endemic species
- b) endangered species
- c) threatened species
- d) indicator species
- e) commercial species

Ans: d

Difficulty: Easy

Response:

Case in Point: Disappearing Frogs; 17.2.5



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21. The policy that provides a landowner to “take” a rare species if it does not threaten the survival or recovery of the endangered or threatened species on their particular property is the:
- a) Endangered Species Act
 - b) Habitat Conservation Plan
 - c) Commercial Extinction Privilege Policy
 - d) World Conservation Strategy
 - e) U.S. Biological Resources Discipline

Ans: b

Difficulty: Easy

Response:

Habitat Conservation Plans; 17.4.1

22. Before attempting a reintroduction of captive-bred animals into the wild, biologists must
- a) restore disturbed lands to create appropriate biological habitat
 - b) teach social skills to animals in the wild for acceptance of captive-bred animals
 - c) determine what factors originally caused the species to become endangered
 - d) identify and locate biodiversity hotspots
 - e) artificially inseminate the captive-bred animals

Ans: c

Difficulty: Easy

Response:

Zoos, Aquaria, Botanical Gardens, and Seed Banks; 17.3.3

23. Declining biological diversity in the U.S. is most serious in:
- a) Hawaii (63% of species are at risk) and California (29% of species are at risk)
 - b) Alaska (58% of species are at risk) and Washington (32% of species are at risk)
 - c) Montana (46% of species are at risk) and Texas (38% of species are at risk)
 - d) Florida (52% of species are at risk) and Louisiana (40% of species are at risk)
 - e) Oregon (49% of species are at risk) and Wisconsin (34% of species are at risk)

Ans: a

Difficulty: Easy

Response:

Where is Declining Biodiversity the Greatest Problem?; 17.2.3

24. Assisted colonization is being proposed as a method to prevent species extinction in response to what environmental threat?
- a) prevalence of invasive species
 - b) global climate change
 - c) habitat destruction
 - d) overexploitation
 - e) all of these

Ans: b

Difficulty: Easy

Response:

Energy and Climate Change: Assisted Colonization; 17.5



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25. Which of the following is a true statement about conservation of tigers in India?
- a) Establishment of National Parks has been successful in stopping population declines.
 - b) Poaching has been reduced due to strict enforcement and high fines.
 - c) Tigers are usually solitary animals that require large areas to obtain prey.
 - d) Tigers are not protected by any laws.
 - e) Humans and tigers rely on different prey species for food.

Ans: c

Difficulty: Medium

Response:

Chapter Opener; 17.0

26. Humans depend on other organisms for all of the following requirements except:
- a) carbon dioxide
 - b) food
 - c) shelter
 - d) medicines
 - e) clothing

Ans: a

Difficulty: Medium

Response:

Why We Need Organisms; 17.1.1

27. Genetic resources are important for the development of all of the following except:
- a) new fungicides from centipedes
 - b) new cancer treatments from marine organisms
 - c) new food sources like winged beans
 - d) new oils and lubricants from various plants
 - e) none of these, genetic resources are important for the development of all of these

Ans: e

Difficulty: Medium

Response:

Why We Need Organisms; 17.1.1

28. Which of the following is not an ecosystem service?
- a) decomposition
 - b) seed banks
 - c) pollination
 - d) maintenance of soil fertility
 - e) prevention of soil erosion

Ans: b

Difficulty: Medium

Response:

Why We Need Organisms; 17.1.1



Practice Midterm Exam

29. Which of the following is not characteristic of species that are vulnerable to extinction?

- a) endemic to islands
- b) high reproductive rates
- c) low reproductive success
- d) occupation of a large territory or region
- e) endemic to islands and low reproductive success

Ans: b

Difficulty: Medium

Response:

Endangered and Threatened Species; 17.2.1

30. Which of the following statements about tropical rain forests is false?

- a) Approximately 1% of tropical rain forests are being cleared or degraded every decade.
- b) Most species that live in tropical rain forests are endemic.
- c) The forest itself generates much of the rainfall in tropical rain forests.
- d) Tropical rain forests cover 7% of the Earth's surface and provide habitat for 50% of the Earth's species.
- e) Migratory birds that winter in tropical rain forests are declining.

Ans: a

Difficulty: Medium

Response:

Where is Declining Biodiversity the Greatest Problem?; 17.2.3

31. Which of the following is an example of biotic pollution?

- a) elephants in southern Africa
- b) black-footed ferrets in South Dakota, Wyoming, and Montana
- c) brown tree snake in Guam
- d) California condor in the United States
- e) passenger pigeons in North America

Ans: c

Difficulty: Medium

Response:

Human Causes of Species Endangerment; 17.2.4

32. An example of an invasive species is:

- a) the California condor
- b) the blue whale
- c) the water hyacinth
- d) the Tiburon mariposa lily
- e) Quinoa

Ans: c

Difficulty: Medium

Response:

Human Causes of Species Endangerment; 17.2.4



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33. Which of the following is a true statement about chytrid fungus?
- 1) Climate change may be increasing its effects on amphibians.
 - 2) It is responsible for die-offs in more than 500 species.
 - 3) Under certain circumstances, it has infected and killed more than 85% of the amphibians present.
- a) 1
 - b) 2
 - c) 3
 - d) 1 and 2 are both true
 - e) 1 and 3 are both true
 - f) 1, 2 and 3 are all true

Ans: e

Difficulty: Medium

Response:

Case in Point: Disappearing Frogs; 17.2.5

34. Which of the following has been especially successful in educating policymakers and the public about the importance of biological diversity?
- a) international conservation organizations
 - b) The Endangered Species Act
 - c) seed banks
 - d) species reintroduction efforts
 - e) habitat corridors

Ans: a

Difficulty: Medium

Response:

Conservation Organizations; 17.3.4

35. Poaching has led to the decline of all of the following species except:
- a) gorillas
 - b) wild turtles
 - c) caimans
 - d) black-footed ferrets
 - e) the American black bear

Ans: d

Difficulty: Medium

Response:

Human Causes of Species Endangerment; 17.2.4

36. Which of the following is a mismatch between the animal poached and the highly valued black-market product?
- a) rhinoceros – liver
 - b) bears – gall bladder
 - c) gorilla – bushmeat
 - d) caimans – skin
 - e) birds – pets

Ans: a

Difficulty: Medium

Response:

Human Causes of Species Endangerment; 17.2.4



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37. Which of the following statements about amphibians is true?
- a) Amphibians are represented by about 500 species of frogs, toads, and salamanders.
 - b) Populations of amphibians in a few local areas have declined dramatically in the last few decades.
 - c) Amphibians lay their eggs in dry, sandy areas close to a source of water.
 - d) Their moist, absorptive skin makes amphibians very susceptible to environmental contaminants.
 - e) Scientists increasingly perceive amphibians to be fair-weather species.

Ans: d

Difficulty: Medium

Response:

Case in Point: Disappearing Frogs; 17.2.5

38. Deformities in amphibians include all of the following except:
- a) extra legs
 - b) missing legs
 - c) eyes located on the shoulder or back
 - d) deformed jaws
 - e) none, all are deformities

Ans: e

Difficulty: Medium

Response:

Human Causes of Species Endangerment; 17.2.4

39. The practice of conservation biology uses information about all of the following variables except:
- a) habitat area
 - b) connectivity among habitats
 - c) accessibility to humans
 - d) degree of ecosystem degradation
 - e) economic value of biological resources

Ans: e

Difficulty: Medium

Response:

Conservation Biology; 17.3

40. In situ conservation occurs:
- a) in laboratories
 - b) in zoos
 - c) in parks and reserves
 - d) without human intervention
 - e) in seed banks

Ans: c

Difficulty: Medium

Response:

Conservation Biology; 17.3



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41. An example of ex situ conservation is:
- a) maintaining genetic diversity in a crop plant
 - b) protecting flyways
 - c) restoration ecology
 - d) sport hunting
 - e) charging fees for the use of genetic material

Ans: a

Difficulty: Medium

Response:

Conservation Biology; 17.3

42. One problem with protecting vulnerable habitat areas as a means of conserving species richness is:
- a) that there are so few of these areas, less than 500 worldwide
 - b) that multiple uses of the area sometimes conflict with the goal of preserving species
 - c) that there is enough money, but not enough expertise to manage them effectively.
 - d) that too much of the protection is located in tropical rain forests and not enough is in remote mountain areas.
 - e) that too often the protected areas are in highly populated areas.

Ans: b

Difficulty: Medium

Response:

In Situ Conservation: Protecting Habitats; 17.3.1

43. Which of the following represents an unsuccessful captive-breeding and reintroduction program?
- a) Guam rails
 - b) black-footed ferrets
 - c) thick-billed parrots
 - d) Golden toads
 - e) whooping cranes

Ans: c

Difficulty: Medium

Response:

Zoos, Aquaria, Botanical Gardens, and Seed Banks; 17.3.3

44. Which of the following is not a disadvantage associated with seed banks?
- a) the seeds of some types of plants do not tolerate being dried out
 - b) embryo transfer is ineffective in plants because it has a very low success rate
 - c) stored seeds do not evolve in response to changes in their natural environment
 - d) seeds do not remain viable indefinitely and must be periodically germinated
 - e) accidents, such as fires and power failures, can destroy the seeds

Ans: b

Difficulty: Medium

Response:

Aquaria, Botanical Gardens, and Seed Banks; 17.3.3



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45. One of the controversies associated with the Endangered Species Act is that it:
- a) has generated too many unresolved cases with developers, over 1000 to date
 - b) allows for no compromises between species protection and development or livelihood concerns
 - c) only enhances economic development in specific regions of the country
 - d) provides too much consideration of individual property rights
 - e) focuses on saving a few popular species rather than the larger number of less glamorous species

Ans: e

Difficulty: Medium

Response:

Conservation Policies and Laws; 17.4

46. Which of the following is not an economic incentive that would help to preserve biological diversity?
- a) political commitment to protect organisms
 - b) ecotourism
 - c) charge fees for use of genetic resources
 - d) reduce property taxes on land with protected wildlife habitat areas
 - e) none of these, all are economic incentives that support biological diversity

Ans: a

Difficulty: Medium

Response:

Why We Need Organisms; 17.1.1

47. Which of the following is a shortcoming of many of the world's protected areas?
- a) they are easily accessible to humans
 - b) they encompass one large area, rather than several small areas
 - c) they are in lightly populated areas
 - d) they are located too close to other protected areas
 - e) they are often created to protect specific species

Ans: a

Difficulty: Medium

Response:

In Situ Conservation: Protecting Habitat; 17.3.1

48. Which of the following is a true statement?
- a) Captive-release programs have been very successful in saving many endangered species from extinction.
 - b) We now have the ability to make genes.
 - c) The 20 best-selling prescription drugs are all synthetic.
 - d) There are less than 100 species that are endangered or threatened in the United States.
 - e) Very few species have been evaluated for their economic (i.e., medical, agricultural, industrial) potential.

Ans: e

Difficulty: Medium

Response:

Why We Need Organisms; 17.1.1



Practice Midterm Exam

49. Which of the following is a false statement?

- a) Genetic variation increases a species' resistance to disease.
- b) Pollution, ultraviolet radiation, and parasites have been implicated in the developmental abnormalities observed in amphibians.
- c) The present extinction rate is 10,000 times the background rate.
- d) Commercial extinction is permanent.
- e) Genetic diversity is important for agriculture.

Ans: d

Difficulty: Medium

Response:

Management of Aquatic Organisms; 17.5.2

50. Which of the following medicinal plants is correctly matched with its benefit to humans?

- a) horehound: AIDS treatment
- b) periwinkle: cancer therapy
- c) quinoa: antiviral drug
- d) winged beans: diabetes treatment
- e) cherry: birth-control potential

Ans: b

Difficulty: Medium

Response:

Why We Need Organisms; 17.1.1

51. All of the following are ecological benefits of habitat corridors except:

- a) facilitating exchange of genetic material among populations
- b) increasing the probability that suitable habitat will be recolonized after a local population goes extinct
- c) preventing the spread of disease among populations
- d) providing access to more food resources
- e) reducing encounters with humans

Ans: c

Difficulty: Medium

Response:

In Situ Conservation: Protecting Habitats; 17.3.1